

CHAPTER 1

Purpose of and Need for Action

This Final Grand Teton National Park Transportation Plan/Environmental Impact Statement (Final Plan/EIS) addresses transportation related actions in Grand Teton National Park and the John D. Rockefeller, Jr. (JDR) Memorial Parkway. Grand Teton National Park and the JDR Memorial Parkway are located in the northwest corner of Wyoming, just south of Yellowstone National Park (YNP). Grand Teton National Park encompasses approximately 310,000 acres (125,550 ha) of land and the JDR Memorial Parkway comprises about 23,700 acres (9,591 ha) of land between the northern boundary of Grand Teton National Park and the southern boundary of YNP. For the purposes of this document, references to “Grand Teton National Park” or the “Park” hereafter refer to both Grand Teton National Park and the JDR Memorial Parkway.

This Final Plan/EIS evaluates and recommends a preferred system of transportation improvements within Grand Teton National Park including roadways and parking, development of a plan to evaluate whether there is a need for a pilot transit project within the Park, construction of improved road shoulders and multi-use pathways, improvements to developed areas, and development of traveler information systems. It also includes plans for testing several adaptive management strategies on the Moose-Wilson Road in order to gather information about the best way to maintain the existing character of the corridor while recognizing its sensitive wildlife, scenic, and historic values. This Final Plan/EIS also seeks to identify opportunities to develop transportation partnerships with neighboring communities (i.e., Jackson, Teton Village, and Teton County, Wyoming). The course of actions described in this Final Plan/EIS seek to improve and enhance the experience of park visitors and employees and address public safety concerns.

Project Background

Over the past several decades, Grand Teton National Park has worked to reduce the impacts of motor vehicles on core activity areas within the Park. The potential for additional impacts from future increases in visitation and motor vehicle traffic prompted park staff to undertake a transportation study (Charlier Associates 2001) to identify actions that would:

- Improve visitor experience by providing a broader range of choices for movement within and between key activity areas and destinations.
- Improve mobility within the Park with a better balance between motorized and non-motorized travel modes.
- Reduce the potential for congestion in key areas.
- Provide information to visitors to help avoid adverse impacts to park resources and to promote a variety of transportation options.

The transportation study relied on data gathered from visitor, staff, and concessioner surveys; analysis of trends in visitation and average daily traffic volumes; analysis of accident data; and interviews with staff from Jackson, Teton County, and private transit operators (Charlier Associates 2001). The transportation study made several recommendations that are included in the alternatives described in Chapter 2 of this Final Plan/EIS. The study recommended integrating proposed improvements, with plans adopted by the county and neighboring towns, as well as associated infrastructure improvements. Recommendations for and coordination with related planning efforts are addressed throughout this Final Plan/EIS. These related efforts include:

- *The Jackson Regional Transportation Plan*, adopted by Teton County and Jackson in January 2000 as part of the Regional Comprehensive Plan. The plan seeks to reduce and manage the impacts of traffic growth occurring in the valley and sets numerical goals for reductions in the share of single-occupant vehicle trips by 2020.
- *The Jackson/Teton County Transit Development Plan: 2000-2005 and Long Range*, adopted by Teton County and Jackson in June 2000. Specific transit development plan recommendations relevant to Grand Teton National Park include initiating public transit service between Jackson and Grand Teton National Park (Colter Bay) and developing a multi-agency transit center in Jackson.
- *The Jackson Hole Community Pathways Program*, a jointly-funded independent department of the Town of Jackson, under the Town Administrator, has built a network of off-road multi-use “pathways” radiating from Jackson. The Pathways Program has identified a



connection from the town north along U.S. Highway 26/89/191 to the south boundary of the Park as one of its highest priority segments.

Purpose of and Need for the Plan

The purpose of the Final Plan/EIS is to address and manage transportation-related issues in Grand Teton National Park. The need for the Final Plan/EIS results from a number of trends in park use and recreation preferences. While the overall number of recreational visits to the Park has remained relatively stable over the past decade, some of the most popular activity areas and trailheads are experiencing increased use. In these locations, parking areas are occasionally congested and impacts to natural resources (e.g., trampling of vegetation and the development of social trails) are evident in some areas. Furthermore, traffic between these key locations can be heavy at times.

Many visitors to Grand Teton National Park choose only to visit areas that can be easily reached from their vehicles. Particularly scenic and easily accessible areas, like South Jenny Lake, have become popular destinations, and their parking areas are sometimes crowded and congested during periods of peak visitation. Opportunities for visitors to enjoy the Park while minimizing impacts on resources can be enhanced by providing additional options for travel through the Park, as well as by providing better information about how to access key areas.

Although opportunities for recreational bicycling exist in the Park, there is the potential for conflicts between vehicles, bicyclists, and occasionally pedestrians. Bicyclists currently must share the roads with fast-moving traffic, and while the number of reported collisions is low, the speed and volume of traffic create both perceived and actual safety risks. Shoulder widths also vary on the Teton Park Road, and bicyclists and motorists can be caught off guard. Providing safer facilities for bicyclists and pedestrians would improve recreational opportunities while at the same time reducing some safety risks.

The Moose-Wilson Road is a popular destination for many park visitors due to its high scenic value and opportunities for viewing wildlife. The road runs between Moose and the Granite Canyon Entrance Station and provides access to destinations such as the Granite Canyon and Death Canyon Trailheads, the White Grass Ranch, and beginning in 2007, the Laurance S. Rockefeller (LSR) Preserve (formerly the JY Ranch). Traveling the Moose-Wilson Road provides a

more slow speed and intimate park experience than does driving on some of the Park's other main roads. The road is constructed to a relatively low standard (e.g., a section of the road is unpaved). Travel volumes are approaching the point where the road physically may not be able to handle the capacity, and congestion occurs because of the inability of motorists to get around vehicles that have stopped in the roadway to view wildlife. Increasingly, persons seeking a convenient connection between the Wyoming Highway 22 corridor, Wyoming Highway 390 (commonly referred to as the Teton Village access road), and points within the Park use the road as a through-route. Currently approved plans for expansion of Teton Village, as well as the growth in background traffic on Wyoming Highway 390, could increase the traffic on the Moose-Wilson Road.

The alternatives in this Final Plan/EIS call for testing several different management strategies over the next 5 to 10 years to determine how the National Park Service (NPS) can maintain the existing character of the road and protect its special wildlife, scenic, and historic values.

Transportation issues facing the Park and neighboring gateway communities of Jackson and Teton Village are connected. Community transit provided through Southern Teton Area Rapid Transit (START) exists outside of the Park but does not extend into it. Similarly, multi-use pathways have been constructed to encourage bicycling and hiking elsewhere in Teton County, but these pathways do not extend into the Park. This Final Plan/EIS examines opportunities for the Park to partner with these neighboring communities to develop an integrated transportation system that benefits all parties while preserving important park resources.

The following objectives were identified for this Final Plan/EIS:

- Provide improved opportunities for visitors to enjoy the Park safely by providing additional travel/recreational options, both motorized and non-motorized.
- Reduce and manage the level of traffic and parking congestion at key locations.
- Reduce and minimize adverse impacts to park resources attributable to human use.
- Enhance cooperation between park and gateway communities to achieve complementary transportation goals.



Project Area Description and Location

Grand Teton National Park encompasses more than 333,000 acres (135,000 ha) in northwestern Wyoming, approximately 5 miles east of the Idaho state line and south of YNP. The current road system in Grand Teton National Park includes three primary highways: the Teton Park Road; U.S. Highway 26/89/191 (also known as the Outer Highway); and the North Park Road (Figure 1). The Teton Park Road links Moose to Jackson Lake Junction and provides access to major activity areas in the Park, including South Jenny Lake, Jenny Lake Lodge, and Signal Mountain. A regional route, U.S. Highway 26/89/191, parallels the Teton Park Road and serves as a more direct connection to YNP and eastern Wyoming. The North Park Road (U.S. Highway 89/191/287), which extends from Moran Junction through the JDR Memorial Parkway to the South Entrance of YNP, provides access to the Jackson Lake Lodge, Colter Bay, and Flagg Ranch activity areas. An important characteristic of Grand Teton National Park is its proximity to YNP and to numerous other public lands, including several large national forests and wilderness areas. A large portion of the Park's historic use has been drive-through sightseers visiting Jackson, YNP, and other destinations in the region.

Jackson and other developing areas within rural Teton County, Wyoming, represent the closest and most important communities in relation to transportation issues facing Grand Teton National Park. The Jackson Hole Airport is located within Grand Teton National Park, between Moose and Jackson. Regular passenger service is provided by several airlines, with as many as seven carriers providing service during the peak summer and winter seasons. Grand Teton Lodge Company provides limited shuttle service between Jackson, the Jackson Hole Airport (by advance reservation only), Jackson Lake Lodge, and Colter Bay Village. It also offers regularly scheduled bus tours of the Park and YNP during the summer. Similar tours are offered by at least one other operator from Jackson.

Grand Teton National Park provides visitors with an opportunity to experience two linked but distinct settings, the backcountry and frontcountry areas. The backcountry areas of the Park occupy a vertical landscape of towering peaks and deep, glaciated valleys. With wild and challenging terrain, the backcountry is laced with hiking trails but is largely roadless and only indirectly affected by visitor transportation needs and demands. The

frontcountry area occupies the valley floor with numerous lakes, a major river, and varying terrain. The valley floor is also a wild and scenic part of the Greater Yellowstone Ecosystem and contains important scenic, cultural, and wildlife resources. The frontcountry area is where most of the roads are located, visitor use is highest, and transportation issues addressed in this Final Plan/EIS are most relevant

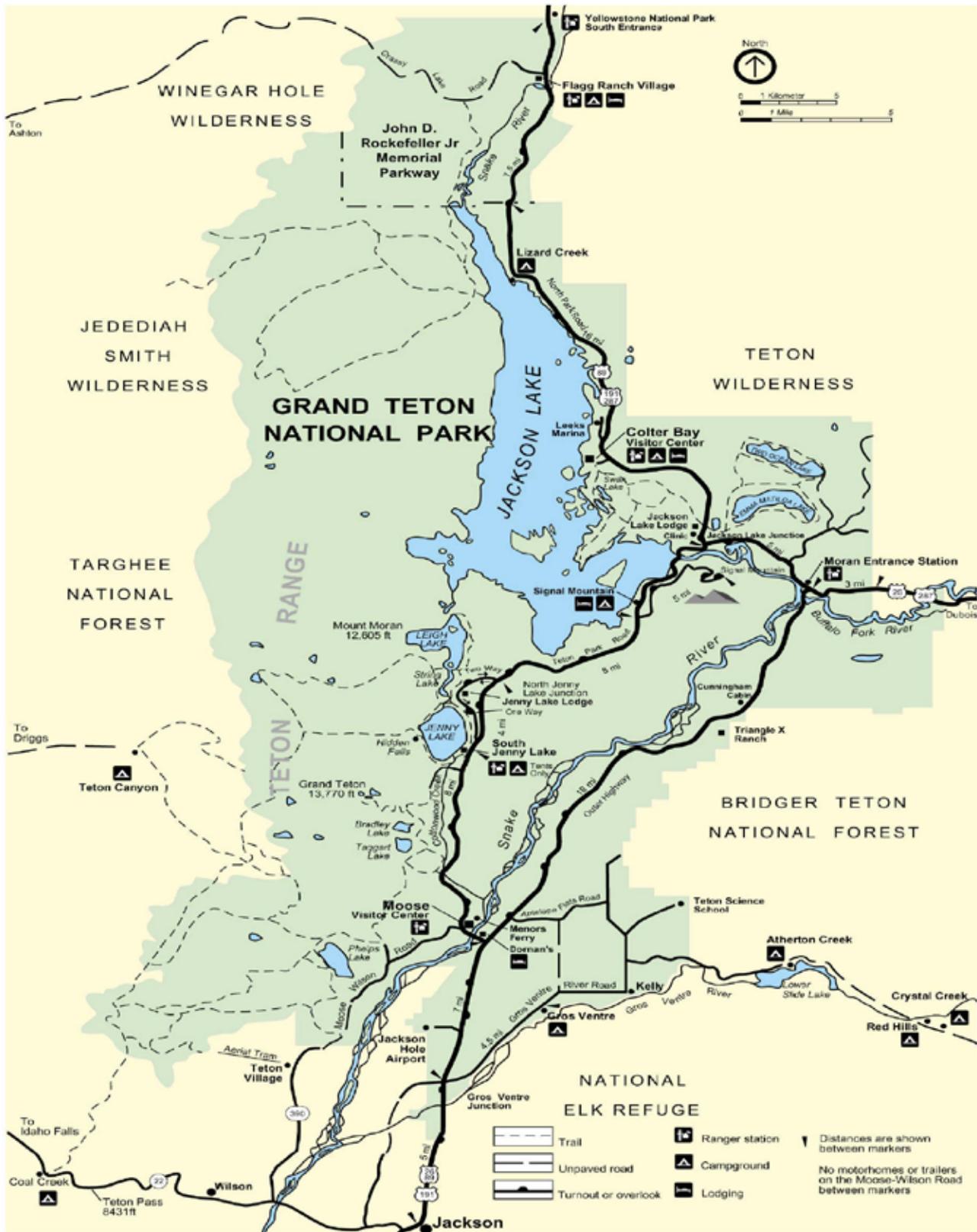
Scope of Plan

During the initial scoping phases of this planning effort, which included several public workshops, a number of alternatives were considered, including a comprehensive system of transit, pathways, intelligent transportation systems, and other transportation-related infrastructure (see Chapter 5 for a summary). As the planning effort progressed, it became apparent that these original alternatives would be operationally and financially infeasible to implement. In addition, the scope of the initial alternatives was disproportionate to the types of transportation-related issues that exist in the Park and were of a magnitude that would be inappropriate to address outside of a long-term planning effort that would provide guidance for overall management of the Park.

Over the last year, while revising the Draft Plan/EIS, the Park initiated several studies to provide professional guidance on adaptively managing certain road segments (e.g., the Moose-Wilson Road), assessing the feasibility of transit within the Park, and monitoring the impacts of construction and use of the first phase of multi-use pathways proposed from Dornan's to South Jenny Lake Junction (see Chapter 2).

As a result of these changes, this Final Plan/EIS addresses actual implementation measures over the next 5 to 10 years. The alternatives presented in this document reflect focused and achievable actions that can be accomplished over the next 5 to 10 years, provided that funding is available. While the activities proposed herein will take place over that period, monitoring their effects, and subsequent decisions based on these effects, would extend beyond this implementation period. Future park planning efforts, potentially including a new long-range plan, will provide an opportunity to examine further and more comprehensively the transportation-related issues not addressed in this Final Plan/EIS, within the context of overall park management.

**FIGURE 1
PROJECT AREA**



Because of this focus, this Final Plan/EIS consists of a comprehensive environmental analysis of potential effects on the Park's natural, cultural, and social resources that would result from implementing new transportation management actions. This Final Plan/EIS analyzes resource impacts associated with the enhancement of pedestrian pathways, signs, and way-finding resources in developed areas; the construction of multi-use pathways inside and outside of existing road corridors; realignment of entrance ways; construction of information kiosks; road shoulder widening; road realignment; and the placement or construction of other limited facilities and signs that would accommodate these improvements.

As described above, this Final Plan/EIS provides for studies and monitoring that would provide input to future decisions. The NPS would review and evaluate the extent to which the actions are meeting the stated objectives after the initial phases of implementation of the Final Plan/EIS. Based on this evaluation, the NPS may consider whether additional transportation-related actions or improvements are warranted, including public transit, multi-use pathways, parking availability, intelligent transportation systems, and roadway management practices.

Park Purpose, Significance, and Mission

The Park's purpose statement is based upon legislative history and historic trends. It reiterates why the area was set aside as a national park unit, thus helping to define management priorities for the protection of those resources and values.

Purpose and Significance

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.

The original Grand Teton National Park (approximately 96,000 acres [39,000 ha]) was established by Congress on February 29, 1929, "...and dedicated and set apart as a public park or pleasure ground for the benefit and enjoyment of the people of the United States under the name of the Grand Teton National Park of Wyoming" (45 Stat. 1314).

Congress enlarged the Park to its present size on September 14, 1950 (Public Law 81-787, 64 Stat. 849), "...for the

purpose of including in one national park, for public benefit and enjoyment, the lands within the present Grand Teton National Park and a portion of the lands within Jackson Hole National Monument."

Geologists regard the Teton Range as one of the most impressive examples of fault-block mountains in the world. The peaks of the range, which tower 3,000 to 7,000 ft (900 to 2,100 m) above the sagebrush flats of Jackson Hole and culminate in the Grand Teton (13,770 ft [4,197 m]), dominate the Park landscape. Mountains within the Teton Range, which began to rise about 9 million years ago, are the youngest mountains of the Rocky Mountain chain, although the Teton Range also includes some of the oldest rocks on Earth.

The Park's physiographic and biologic features fall within the central Rocky Mountain region and include features representative of the themes of mountain systems, works of glaciers, geologic history, alpine tundra, boreal forest, lakes and ponds, and rivers and streams.

Several piedmont lakes, rimmed by moraines from the last glaciation, lie adjacent to the range and form part of the scenic foreground. The Park also includes 25.5 miles (41.0 km) of the Snake River. In addition to being an outstanding recreational resource, the Snake River is one of the last remaining natural habitats of the native Yellowstone cutthroat trout (*Oncorhynchus clarkii bowvieri*).

The flora and fauna of the Park are typical of the central Rocky Mountain region. The forested areas include a mixture of limber pine (*Pinus flexilis*), lodgepole pine (*Pinus contorta*), whitebark pine (*Pinus albicaulis*), Englemann spruce (*Picea engelmannii*), subalpine fir (*Abies lasiocarpa*), and Douglas-fir (*Pseudotsuga menziesii*). Scattered patches of aspen (*Populus tremuloides*) are found at lower elevations. Narrowleaf cottonwood (*Populus angustifolia*), willow (*Salix* sp.), and Colorado blue spruce (*Picea pungens*) line the Snake River and its tributaries, and sagebrush (*Artemisia* sp.) dominates the valley floor.

At least 61 species of mammals inhabit the Park. Elk (*Cervus elaphus*), moose (*Alces alces*), pronghorn antelope (*Antilocapra americana*), mule deer (*Odocoileus hemionus*), and bison (*Bison bison*) are common, and bighorn sheep (*Ovis canadensis*) can be found in higher elevations. Other mammals include beaver (*Castor canadensis*), muskrat (*Ondatra zibethicus*), coyote (*Canis latrans*), pika (*Ochotona princeps*), and Uinta ground squirrel (*Spermophilus armatus*). Black bears (*Ursus americanus*) are common in forested areas. The grizzly bear (*Ursus arctos horribilis*),

a threatened species, occurs throughout most of Grand Teton National Park as the ecosystem's population expands in number and distribution, but currently inhabits the northern part of the Park in higher densities.

Bird life in the Park is varied and includes peregrine falcon (*Falco peregrinus*), bald eagle (*Haliaeetus leucocephalus*), white pelican (*Pelecanus erythrorhynchos*), great blue heron (*Ardea herodias*), trumpeter swan (*Cygnus buccinator*), Canada goose (*Branta canadensis*), sandhill crane (*Grus canadensis*), sage-grouse (*Centrocercus urophasianus*), golden eagle (*Aquila chrysaetos*), common raven (*Corvus corax*), several species of woodpecker, and a variety of songbirds.

Park Mission Statement

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. Human interaction with the landscape and ecosystem has resulted in an area rich in natural, cultural, and historic resources representing the natural processes of the Rocky Mountains and the cultures of the American West.

Legal and Policy Framework

The legal framework supporting this Final Plan/EIS is defined by Grand Teton National Park's enabling legislation (64 Stat. 849, 1950) and by other legislation pertinent to the National Park System. Other laws and regulations that guide the Final Plan/EIS include the 1916 Organic Act, the National Historic Preservation Act (NHPA), the Clean Air Act, the Clean Water Act, and the Endangered Species Act (ESA). Policy guidance is provided by NPS Management Policies (2001). The alternatives in this Final Plan/EIS have been designed to comply with all legislative requirements and policy directives. Chapter 6, "Compliance with Federal or State Regulations," provides a more comprehensive list and more detail on the regulations that guide the development of this Final Plan/EIS. A summary of some of this legislation is provided below.

Organic Act, 1916

Under the 1916 Organic Act, the NPS is charged with stewardship of parks 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 a manner and by such means as will leave them unimpaired for the enjoyment of future generations."

Public Law 81-787, 1950

This law established Grand Teton National Park as a 310,521-acre (125,663-ha) entity that includes portions of both the Teton Range and Jackson Hole. The rights of residents and others legally occupying and using lands within the Park in 1950 were also specified in the law.

National Historic Preservation Act, 1966 (Section 106)

Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on cultural resources, either listed in or eligible to be listed in the National Register of Historic Places (NRHP), and afford the State Historic Preservation Office (SHPO), affiliated American Indian tribes (and, as appropriate, the Advisory Council on Historic Preservation [ACHP]), individuals with a demonstrated interest in the undertaking, and the general public, a reasonable opportunity to comment on such undertakings.

Clean Air Act, 1970 (including 1977 and 1990 amendments)

The Clean Air Act requires that the U.S. Environmental Protection Agency (EPA) set national health-based air quality standards to protect against common pollutants (e.g., ozone, carbon monoxide, sulfur dioxide, nitrogen dioxide, lead, and particulate matter) and national standards for major new sources of pollution, including automobiles, trucks, and electric power plants.

National Environmental Policy Act, 1969

The National Environmental Policy Act (NEPA) was passed by Congress in 1969 and took effect on January 1, 1970. This legislation mandates that every federal agency prepare an in-depth study of the impacts of "major federal actions having a significant effect on the environment" and alternatives to those actions, and requiring that each agency make that information an integral part of its decisions. NEPA also requires that agencies make a diligent effort to involve the interested and affected public before they make decisions affecting the environment.

Clean Water Act, 1972

The Clean Water Act gives the EPA the authority to set effluent standards on an industry basis and water quality standards for all contaminants in surface waters. Section 404 of the Clean Water Act establishes a program to regulate the discharge of dredged or fill material into waters of the United States, including wetlands. Proposed activities are regulated through a permit review process.



Endangered Species Act, 1973

The ESA provides for the listing and protection of endangered and threatened species and in some cases their critical habitat. The Act requires consultation under Section 7 if any listed species would be adversely affected. Federally listed species in Grand Teton National Park include grizzly bear, bald eagle, gray wolf (*Canis lupus*), and Canada lynx (*Lynx canadensis*). Habitat for the yellow-billed cuckoo (*Coccyzus erythrophthalmus*), a candidate species, also exists in the Park but the species has not been documented there to date. No specific plant species in the Park is listed as threatened or endangered.

NPS Management Policies, 2001

The NPS Management Policies describe how Grand Teton National Park will meet its management responsibilities under the 1916 Organic Act. Sections of particular relevance to this Final Plan/EIS include Section 9.2, “Transportation Systems,” and Section 9.2.5, “Parking Areas.” Section 9.2 encourages the NPS to “... find better transportation solutions, which will preserve the natural and cultural resources in its care while providing a high-quality visitor experience...” Section 9.2.5 provides guidance for the design of parking areas to minimize impacts on visitor experience, park resources, and values.

Relationship to Other Planning Studies

This Final Plan/EIS was developed to maintain consistency with, or directly reinforce, a number of planning studies undertaken by the Park or neighboring gateway communities, as described below.

Grand Teton National Park Master Plan, 1976

This plan identifies areas in the Park as different use zones, and notes that “...implicit in all efforts to accommodate visitors within Grand Teton’s various use zones is the fact that upper limits of use do exist, beyond which resource quality and/or the level of visitors’ enjoyment diminishes.”

Jenny Lake Development Concept Plan, 1977

The Final Plan/EIS offers recommendations for reducing conflicts between pedestrians and vehicles, for reducing the incidence of social trails, and for eventually integrating transit operations within this developed area to limit parking congestion.

John D. Rockefeller, Jr. Memorial Parkway General Management Plan, 1980

Goals of this plan include providing diverse recreational opportunities (within resource capability); promoting

and practicing cooperative regional planning; providing interpretive opportunities that do not duplicate those of Grand Teton National Park and YNP; identifying and preserving important natural and cultural resources; and facilitating wildlife management and backcountry quality through cooperation with adjacent agencies.

Signal Mountain Development Concept Plan, 1989

This plan offers recommendations for improving vehicular and pedestrian circulation and safety and for reducing the incidence of social trails. Recommendations for improved pedestrian circulation within the activity area, and between the campgrounds and activity area, are also provided.

Colter Bay Village/Jackson Lake Lodge Development Concept Plan, 1989

This plan offers recommendations for redesigning visitor circulation and parking to improve visitor experience and reduce way-finding confusion. Recommendations for improved pedestrian circulation within the activity area, and between the campgrounds and activity area, are also provided.

Teton Corridor Development Concept Plan/ Environmental Assessment-Moose to North Jenny Lake, 1990

Among other improvements, this plan recommends connecting developed areas within the corridor with a signed network of hardened pathways, and expanding the existing Moose Visitor Center area.

Grand Teton National Park Statement for Management, 1995

This document provides a statement of purpose and significance for the Park.

Moose Visitor Center and Area Plan/Environmental Assessment, 2002

This area plan provides recommendations for improving visitor facilities and experience at Moose, including a new visitor center and associated circulation improvements.

North Park Road Reconstruction/Environmental Assessment, 2002

This project provides for roadway widening and roadway shoulder improvements from Lizard Creek Campground to the YNP boundary.

Greater Yellowstone/Teton Clean Cities Coalition, 2002

After 5 years of effort, the Greater Yellowstone/Teton Clean Cities Coalition received official “clean cities” designation from the U.S. Department of Energy (DOE) in September

2002. DOE sponsors the National Clean Cities Program, whose mission is to reduce the nation's dependence on imported petroleum by advancing the use of cars and trucks powered by alternative fuels. The program helps all parties identify mutual interests while meeting their individual objectives, such as the need to improve air quality, comply with federal fleet regulations, or identify and create markets for vehicles or fuel.

Jackson/Teton County Transit Development Plan, 2003

Specific plan recommendations relevant to the Park include initiating public transit service between Jackson and Grand Teton National Park and developing a multi-agency transit center in Jackson that would also serve as a park transit staging area.

Teton County Comprehensive Plan, (Chapter 8 Transportation), 2003

Adopted by Teton County and Jackson in January 2000 as part of the joint County/Town Regional Comprehensive Plan, this plan focuses on reducing and managing the impacts of traffic growth occurring in the valley. The plan sets numerical goals for reductions in the share of single occupant vehicle trips and increases in the share of "alternative mode" (i.e., walking, bicycling, and transit) trips by 2020.

Laurance S. Rockefeller Preserve

On May 26, 2001, Laurance S. Rockefeller announced his intent to donate 1,106 acres (448 ha) of land to the NPS; the parcel was the remaining privately held portion of the JY Ranch that had been owned by the Rockefeller family since the 1930s. The transfer of ownership is expected to occur in 2007, after which the site will become the public LSR Preserve. The Preserve will include a system of trails and a visitor contact station.

Greater Yellowstone Rural Intelligent Transportation Systems Corridor Project

This effort addresses the feasibility of applying technologies from Intelligent Transportation Systems to solve travel and safety issues in a rural environment. The specific setting of the project encompasses the three major transportation corridors in the surrounding states of Idaho, Wyoming, and Montana, which travelers use to access the national parks.

Wyoming Department of Transportation (WYDOT) Planning and Construction Initiatives

The WYDOT routinely publishes an advance list identifying capital planning, design, and construction projects in the Jackson/Teton County area.

Draft Bison/Elk Management Plan for the National Elk Refuge and Grand Teton National Park Environmental Impact Statement

The U.S. Fish and Wildlife Service (USFWS) and the NPS are developing a plan for managing bison and elk in the National Elk Refuge and Grand Teton National Park. Management issues being addressed include numbers of elk and bison, population control measures, forage management, winter feeding, disease management, restoration of habitat, and management of other species of wildlife. The plan is expected to result in a Record of Decision (ROD) in 2007.

Moose Concept Master Plan

This plan consists of an on-going site analysis and several architectural design concepts that address issues such as visitor, employee, concessioner, and emergency services access; pedestrian, bicyclist, and vehicular circulation and parking; and the proper configuration of functional areas for residential, administrative, commercial, and recreational activities related to the Moose Visitor Center, post office, residential loop, administrative and maintenance buildings, and boat launch areas. The plan will also include traffic volume analyses and flow pattern recommendations, improved trail locations, and vegetative screening as mitigative measures.

White Grass Ranch Rehabilitation and Adaptive Use Environmental Assessment/Assessment of Effect

The NPS has prepared an environmental assessment and finding of no significant impact for rehabilitation and adaptive use of the White Grass Ranch Historic District in Grand Teton National Park as a western historic preservation center. The center will increase the capacity of the NPS to preserve and rehabilitate historic structures in the Intermountain West. White Grass Ranch is located off Death Canyon Road, which would be accessed by the Moose-Wilson Road. Future activities at the White Grass Ranch may slightly increase the level of motorized and non-motorized activity along the Moose-Wilson Road.



Teton Village Expansion

In this plan, Snake River Associates address development at three primary areas located on the southwest border of Grand Teton National Park, including:

1. The Village Core Expansion, which consists of a mixed-use core sub-tract and an associated spaces sub-tract that includes public areas, local and visitor services, pathways, parking, condominiums, townhouses, affordable housing, and employee housing.
2. A residential development south of McCollister Drive.
3. A golf course/Nordic ski area that establishes a continuous buffer to the south of the village.

Expansion and development in these areas has the potential to affect motorized and non-motorized traffic on the Moose-Wilson Road, and may impact wildlife habitat and backcountry use of adjacent areas.

Winter Use Plan

Limited snowmobile use is currently allowed in Grand Teton National Park under a temporary Winter Use Plan. The NPS has begun preparation of a long-term plan for managing winter recreational use in Yellowstone and Grand Teton National Parks. The purpose of the Winter Use Plan and EIS will be to ensure that park visitors have a range of appropriate winter recreational opportunities, while ensuring that these recreational activities are in an appropriate setting and do not impair or irreparably harm park resources or values.

Issues and Impact Topics

Issues and concerns were defined through the initial Transportation Study (Charlier Associates 2001) and further developed at internal and public scoping meetings, other public meetings, and working group meetings. These issues represented the range of opinions in regard to the purpose of and need for action and also addressed concerns about certain resources and values. Initial issues identified included visual quality, vegetation, soils, water quality and wetlands, threatened and endangered species, wildlife, cultural resources, transportation and traffic, visitor use and experience, employee use and experience, socioeconomics and local community impacts, and park operations.

Some issues were not carried forward as impact topics for detailed analysis in the Final Plan/EIS because impacts expected under any of the alternatives would not exceed negligible or minor adverse levels (see the “Impact Topics

Dismissed from Further Analysis” section in this chapter). Issues that were not carried forward, including floodplains, wild and scenic rivers, air quality, soundscapes, historic structures and cultural landscapes, ethnographic resources, museum collections, American Indian trust resources, land use, environmental justice, lightscape management, prime and unique agricultural lands, several wildlife species (whooping crane [*Grus Americana*], wolverine [*Gulo gulo*], harlequin duck [*Histrionicus histrionicus*], trumpeter swan, white-tailed deer [*Odocoileus virginianus*], bighorn sheep), fish, energy consumption, and wilderness, are discussed in the subsequent section.

The issues that were carried forward as impact topics are presented below, along with statements that describe the issue or area(s) of concern. Each impact topic is described in Chapter 3, and environmental consequences related to each topic are analyzed in Chapter 4.

Visual and Scenic Quality

Development actions within the Park have the potential to affect the visual quality of the scenic views for which the Park was established.

Vegetation

Certain park areas are presently being used disproportionately, causing impacts on vegetation as visitors create social trails and/or impromptu parking areas when lots are full in peak season. Additionally, introduction and/or expansion of invasive nonnative species is an ongoing concern in existing developed areas, roadsides, and potential pathways.

Soils

Certain park areas are presently being used disproportionately, causing impacts to soils as visitors create social trails and/or impromptu parking areas when lots are full in peak season.

Hydrology and Water Quality

Transportation-related improvements may affect hydrology or water quality to the degree that they increase impervious surface, storm runoff, and non-point source pollution, or where pathways increase levels of public use and activity near surface water features.

Wetlands

Executive Order (EO) 11990, Protection of Wetlands, requires federal agencies to avoid, where possible, adversely impacting wetlands. Wetlands have been identified and mapped under the National Wetland Inventory Program

and roadway or pathway construction may directly or indirectly affect wetlands.

Threatened and Endangered Species/Species of Special Concern

Five species, listed as threatened, endangered, or candidate under the ESA, could be affected by transportation system improvements, including the bald eagle, grizzly bear, Canada lynx, gray wolf, and yellow-billed cuckoo. Other species of special concern may also occur in or near the project area and could be affected by actions included in the Final Plan/EIS alternatives.

Wildlife

Some resident and migratory animals within the Park may be affected by the introduction of new multi-use pathways.

Archeological Resources

A variety of archeological resources are found in Grand Teton National Park. Construction of transportation-related infrastructure may result in impacts to archeological resources, as well as visitation in areas of known archeological sites.

Transportation System and Traffic

Parking shortages sometimes occur at trailheads and selected activity areas during peak season.

Visitor and Employee Experience

Certain activity areas receive heavy use and are occasionally difficult to access in peak summer season because of parking capacity limitations. Real and perceived safety hazards exist for bicyclists using park roadways. Alternative travel modes (i.e., transit and multi-use pathways) are lacking in the Park. Many NPS and concession employees travel long distances daily by private vehicle because they have limited options to travel by other methods.

Social and Economic Environment

Jackson experiences heavy traffic to and from the Park, especially in the morning and early evening, creating congestion on town roadways and travel delays for local residents. The town and county have developed a shared use, off-road trail system; however, it ends at the Park boundary at the Granite Canyon Entrance Station. Visitors wishing to walk or bicycle into the Park must move from the trail to a roadway shoulder. The local economy in the Jackson-Teton County area may be temporarily affected by construction-related employment and business-related expenditures associated with construction of transportation-related infrastructure. Some actions

could also have an effect on area population, job growth, earnings, and demand for housing.

Local Communities

Local communities are beginning to experience traffic congestion as a result of growth in these communities and increased use of the Park. Opportunities for the Park to collaborate with gateway communities in the operation, management, and financing of such items as transit and multi-use pathways have not been fully developed.

Park Operations

The operation and construction of new multi-use pathways will increase NPS staff workloads and staffing needs, as well as associated capital costs.

Impact Topics Dismissed from Further Analysis

According to NPS policy, certain issues that were identified may be eliminated from detailed analysis if the expected adverse impacts are negligible to minor with implementation of the required mitigation across all alternatives. The following topics were eliminated from further analysis in this Final Plan/EIS for the reasons set forth.

Floodplains

The NPS manages floodplains in accordance with EO 11988, "Floodplain Management," and NPS Special Directive 93-4, "Floodplain Management Guidelines." Natural floodplain values and functions must be protected and risks to life and property must be minimized by avoiding use of the regulatory floodplain wherever there is a feasible alternative location. This Final Plan/EIS complies with these directives, and no proposed pathways or other improvements are located in the 100-year floodplain. Therefore, impacts to floodplains would be negligible, and this impact topic was dismissed.

Wild and Scenic Rivers

The Wild and Scenic Rivers Act (Public Law 90-542) initially designated eight rivers or river segments nationwide as initial components in the National Wild and Scenic Rivers System (National System). The Snake River was recommended for Congressional designation as a part of the National System on September 13, 1982; tributaries to the Snake were determined eligible in 2005, but these recommendations have not been formally acted upon. Although the Snake River is not formally a part of the National System, the Final Plan/EIS has avoided locating trail facilities in the Snake River corridor. Impacts



to the Snake River's outstanding resources and free flow are expected to be negligible; therefore, this impact topic was dismissed.

Air Quality

Implementation of any of the alternatives considered would cause minor impacts to air quality due to releases of pollutants from internal combustion engines and fugitive emissions during construction. Sources of emissions would include continued traffic in the Park, road maintenance activities, and construction-related impacts from the disturbance of soils during the addition of road shoulders and/or pathways. However, these actions would cause no more than minor adverse impacts to air quality in the Park. Traffic levels are not expected to increase more than slightly over the life of this Final Plan/EIS, and any construction-related impacts would be localized and short term. Dust abatement measures would be implemented to control fugitive emissions during construction.

Use of bicycles for park transportation rather than vehicles could have a beneficial impact on air quality by reducing emissions. Providing information about transit options and future transit within the Park would also indirectly benefit air quality. Improving trails, signage, and way-finding could reduce the use of vehicles for short trips in congested areas, consequently reducing emissions. While these actions would have a beneficial impact on the Class I Airshed of the Park, these impacts would be negligible. Further analysis of air quality impacts was dismissed because (1) adverse impacts to air quality under any alternative would be minor; (2) all construction-related impacts would be localized, minor, and short-term; and (3) beneficial impacts would be negligible.

Soundscapes

Actions taken to construct pathways and road improvements under the alternatives considered would cause impacts to the natural soundscape, but these impacts would be limited in scope and short-term. Noise from motor vehicles and visitors using the Park would continue under any of the alternatives, and long-term impacts would be minor and similar for all alternatives since no major changes in traffic or visitor use would be expected over the life of the Final Plan/EIS. None of the alternatives would cause more than short-term or minor changes to the natural soundscape, and most of the effects would be limited to frontcountry areas where minor or short-term additions to background noise levels are not as noticeable. Therefore, soundscapes was eliminated as an impact topic.

Historic Structures and Cultural Landscapes

The Draft Plan/EIS identified many historical structures and six areas as potential cultural landscapes within the action alternative locations in Grand Teton National Park. None of these would be directly affected by any action proposed under any alternative since they are not located immediately in or near the proposed areas of construction. Any indirect adverse impacts to those resources related to construction noise would be negligible to minor since construction noise would be limited in scope and duration and because distance from the historic features or cultural landscapes is great enough to mitigate noise levels. Continued use of the Park by visitors and park traffic would cause only negligible to minor adverse impacts to these landscapes, similar to what is currently experienced. Because visitation is expected to grow only modestly over the life of the Final Plan/EIS, long-term impacts would remain negligible to minor. For these reasons, historical structures and cultural landscapes were dismissed from detailed evaluation in the Draft Plan/EIS.

In response to public comment received concerning proposed changes to the Moose-Wilson Road described in the Draft Plan/EIS, the Park initiated a review of the road to determine its eligibility for listing on the National Register. Documentation was submitted to the SHPO for review for determination of eligibility and the SHPO concurred that the road is eligible for listing. Because the road has been determined eligible for the NRHP, the NPS would consult with SHPO before taking any action. Consultation may result in additional mitigation.

Ethnographic Resources

There are no known ethnographic resources in the project area or its immediate vicinity. While locations of specific ethnographic resources are not known within the project area, it is known that American Indian people utilized the Grand Teton area over thousands of years for hunting and subsistence. Grand Teton National Park holds many resources important to these tribes, including wildlife, minerals, plants, and water. These resources do not always have a defined boundary and many may occur within the project area. Because many of these resources have not been identified, the NPS will continue to consult with the following tribes: Crow, Northern Arapaho, Northern Cheyenne, Eastern Shoshone, Shoshone-Bannock, Blackfoot, Flathead, Gros Ventre, Nez Perce, and others as may be identified.

If these tribes subsequently identify the presence of ethnographic resources, appropriate mitigation measures will be undertaken in consultation with the tribes. The location of ethnographic sites would not be made public. In the unlikely event that human remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act of 1990 (25 United States Code [USC] 3001) will be followed. For these reasons, ethnographic resources were dismissed from detailed evaluation in this Final Plan/EIS.

Museum Collections

NPS Management Policies (2001) and Director's Order #28, "Cultural Resource Management," (1997) require consideration of impacts on museum collections (i.e., historic artifacts, natural specimens, and archival and manuscript material). Because none of the alternatives would effect a change in location or conservancy of current museum collections, and since there is no evidence that any one alternative would serve to increase conservancy demands or requirements, this topic was dismissed.

American Indian Trust Resources

Secretarial Order 3175 requires that any anticipated impacts to Indian trust resources from a proposed project or action by Department of Interior agencies be explicitly addressed in environmental documents. The Federal Indian Trust Responsibility is a legally enforceable fiduciary obligation on the part of the United States to protect tribal lands, assets, resources, and treaty rights, and it represents a duty to carry out the mandates of federal law with respect to American Indian and Alaska Native tribes.

There are no American Indian trust resources in Grand Teton National Park. Therefore, American Indian trust resources are dismissed as an impact topic.

Land Use

A number of recent planning efforts, including the Park's 2001 *Grazing Use and Open Space Study* (Grand Teton National Park 2001a) and the 2000 *Jackson/Teton County Comprehensive Plan*, have focused on options for preserving open space, rural character, wildlife, and scenic resource values within the Jackson Hole valley.

This project is not expected to appreciably increase the land area developed within the Park nor is it expected to alter the mix of recreational, concession, or administrative uses and functions that occur on public lands. The proposed alternatives would not affect any grazing rights

presently in force on park lands, and inholders (i.e., persons with private property within the Park boundary) would maintain all access to their properties (as necessary) to conduct business or personal affairs.

None of the Final Plan/EIS alternatives is expected to directly alter the mix of land uses in adjacent communities of Jackson and Teton Village. Minimal increases in park visitation are projected as a result, so demand for additional overnight lodging and new developed facilities in these communities is not expected to increase appreciably. Because Final Plan/EIS impacts on land uses are expected to be negligible, both within the Park and within adjacent gateway communities, this impact topic was dismissed.

Environmental Justice

EO 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," requires all federal agencies to incorporate environmental justice into their missions. None of the alternatives would have disproportionate health or environmental effects on minorities or low-income populations or communities, as defined in the EPA's Final Guidance for Incorporating Environmental Justice Concerns (1998). Should any additional increase in fees be necessary, it would be applied to all visitors; therefore, no disproportionate adverse effects are anticipated. Because impacts are expected to be negligible, environmental justice was dismissed as an impact topic.

Lightscape Management

In accordance with NPS Management Policies (2001), the NPS strives to preserve natural ambient landscapes, which are natural resources and values that exist in the absence of human-caused light. Impacts from the direct glare of motor vehicle lights are currently low in the Park, and any changes in motor vehicle traffic as a result of this Final Plan/EIS would be negligible. In addition, Grand Teton National Park strives to limit the use of artificial outdoor lighting to only that which is necessary for basic safety requirements, and to ensure that all outdoor lighting is shielded to the maximum extent possible to keep light on the intended subject and out of the night sky. Impacts to lightscape management associated with new facilities and structures would be negligible. Therefore, lightscape management was dismissed as an impact topic.



Prime and Unique Agricultural Lands

The Farmland Protection Policy Act (7 USC 4201 et seq.) and the U.S. Department of the Interior Environmental Statement Memorandum No. ESM94-7 require an evaluation of impacts on prime or unique agricultural lands. Private inholdings of agricultural land exist within the boundaries of Grand Teton National Park. However, there are no designated prime or unique agricultural lands within Grand Teton National Park (Natural Resources Conservation Service [formerly the Soil Conservation Service], unpublished data). None of the actions proposed in the range of alternatives would affect such lands, access to them, or their agricultural properties; therefore, this topic was dismissed.

Threatened and Endangered Species: Whooping Crane

Whooping cranes are one of the rarest animals in North America and were listed as endangered under the ESA in 1967. This endemic North American species historically ranged from the Arctic coast south to central Mexico and from the Rocky Mountain region east to the Atlantic coast. Historical records show whooping cranes visited portions of Jackson Hole and the Greater Yellowstone Area (GYA) (Drewien 1989). However, as of the summer of 2002, the USFWS considers whooping cranes to be extirpated from Wyoming and no longer requires consultation on this species in Wyoming (P. Deibert 2002, pers. comm.). For this reason, this species was dismissed from further analysis.

Sensitive Species/Species of Special Concern: Wolverine, Harlequin Duck, and Trumpeter Swan

The USFWS was petitioned to list the wolverine under the ESA in 2000, but it was determined on October 21, 2003 that the petition did not provide substantial information to indicate that listing may be warranted. The Wyoming Game and Fish Department (WGFD) classifies the wolverine as a Category 3 species of special concern, and the U.S. Forest Service (USFS) and Bureau of Land Management (BLM) classify the wolverine as a sensitive species.

Wolverines occur in low densities in the Park. As part of a study by the Wildlife Conservation Society, several wolverines were captured and radio-marked in recent years. At least two reproductive females are known to have home ranges that include the Park (Wildlife Conservation Service, unpublished data). Radio-telemetry, tracks, and other observations have shown that wolverines spend the majority of their time in the higher elevations of the Park above the valley floor. Wolverine activity in the valley,

especially at the base of the Teton Range during winter, is not uncommon. Nevertheless, actions proposed in this Final Plan/EIS are not expected to affect the wolverine; therefore, this species was dismissed from further analysis.

Harlequin duck is currently listed by the USFWS as a “sensitive” species and by the WGFD as a Category 3 species of special concern. Although previously listed by USFWS as a Category 2 candidate species for ESA listing, this classification has since been removed. Harlequin ducks are known to be present in Grand Teton National Park, primarily in small, low gradient mountain streams, but are unlikely to be present within any areas that would be affected by actions considered under any alternative; therefore, this species was dismissed from further analysis.

No trumpeter swan nesting habitat occurs within the project area. The section of the Snake River near the Moose Bridge does contain wintering habitat for swans, but this section would not be impacted by road maintenance or pathway construction. Trumpeter swan would not be affected by the proposal; therefore, this species was dismissed from further analysis.

Wildlife: White-tailed Deer, Bighorn Sheep, and Fish Species

A relatively small number of white-tailed deer reside year-round within Jackson Hole, primarily along the Snake River and its larger tributaries. Jackson Hole white-tailed deer are likely related to animals that have dispersed from Idaho. Numbers of deer present in or near the project area are expected to be small, and any adverse impacts would be negligible. For this reason, this species was dismissed from further analysis.

Bighorn sheep are sparsely distributed throughout the mountains surrounding Jackson Hole, with the highest densities occurring within the Gros Ventre Mountain Range, the mountains surrounding the Hoback River drainage, and in portions of the Teton Mountain Range in Grand Teton National Park and Targhee National Forest (WGFD, unpublished data). Winter habitat is confined primarily to the lower portion of the Gros Ventre River drainage, the Sheep Gulch/Curtis Canyon area east of the National Elk Refuge, near Camp Creek in the Hoback River drainage, and in the high elevations of the Teton Range. Bighorn sheep are not expected to occur within the project area. For this reason, this species was dismissed from further analysis.

Seven species of salmonids are present or possibly present within the project area (Kiefling 1978). Only two of these

species, the Yellowstone cutthroat trout and mountain whitefish (*Prosopium williamsoni*), are native to the area. The five remaining salmonids (brook trout [*Salvelinus fontinalis*], brown trout [*Salmo trutta*], rainbow trout [*Oncorhynchus mykiss*], lake trout [*Salvelinus namaycush*], and grayling [*Thymallus arcticus*]) are nonnative species that were introduced into Jackson Hole. In addition, three species of suckers (Utah [*Catostomus ardens*], bluehead [*Catostomus discobolus*], and mountain [*Catostomus platyrhynchus*]), two species of sculpins (Paiute [*Cottus beldingii*] and mottled [*Cottus bairdii*]), and five species of cyprinid minnows (Lahontan shiner [*Richardsonius egregius*], speckled dace [*Rhinichthys osculus*], longnose dace [*Rhinichthys cataractae*], leatherside chub [*Snyderichthys copei*], and Utah chub [*Gila atraria*]) are also present. The proposed project would have negligible impacts on fish or fish habitat; therefore, this topic was dismissed from further analysis.

Energy Consumption

Construction of multi-use pathways is not expected to have a substantial impact on traffic (and traffic emissions), although it would promote more non-motorized traffic in some areas. Encouraging the use of more energy efficient travel modes within the Park could reduce energy consumption and consumption of nonrenewable resources.

A public transit system may be proposed in the Park in the future pending the findings of a transit business plan studying that subject, but no decision on a transit system has yet been made. Following the ROD for the Final Plan/EIS, the NPS will complete a monitoring plan for collecting data on the effects of implementing a pilot transit program. If the Park chooses to implement a pilot transit program in the future, the NPS will strive to ensure that any vehicles purchased as a result of this Final Plan/EIS will meet EO 13149, which aims to reduce petroleum consumption by the government through improvements in fleet fuel efficiency and the use of alternative fuel vehicles and alternative fuels. If the Park partners with any entity to implement part of this Final Plan/EIS, the partner will be encouraged to meet this EO as well. Any pilot transit system within the Park would use clean fuel technology to limit air quality impacts. It is anticipated that if public transit occurs in the Park in the future, the effects to energy consumption would be beneficial; however, data relating to those potential impacts are not yet available. Because impacts on nonrenewable resources were considered negligible for all alternatives, this topic was dismissed from further analysis.

Wilderness

Grand Teton National Park has recommended that Congress include approximately 135,680 acres (54,908 ha) of the Park in the National Wilderness Preservation System pursuant to Public Law 88-577 (Grand Teton National Park 1984). This recommended wilderness area is about 44 percent of the Park's lands and includes most of the Teton Range within the Park and several of the lakes at its base. Along the eastern edge of the Teton Range, the wilderness line is drawn along the Bureau of Reclamation (BOR) withdrawal line from the north boundary to Spalding Bay. This roadless area provides a number of backcountry hiking trails as well as climbing opportunities. No improvements are proposed that would affect the backcountry wilderness area; therefore, backcountry wilderness impacts were considered negligible, and this impact topic was dismissed from further analysis.

Regulatory Compliance Process

The NPS is committed to continued public involvement as the decisions resulting from this Final Plan/EIS are implemented. This Final Plan/EIS, which describes the affected environment and analyzes environmental consequences, has been prepared with the best currently available data. However, as individual actions or projects from this Final Plan/EIS are implemented, it may become necessary to complete additional NEPA compliance (in accordance with 42 USC § 4321 et seq.) tiered from this Final Plan/EIS.

Site designs would be evaluated to determine the need for additional NEPA or other regulatory compliance (e.g., NHPA, ESA, and Clean Water Act). Additional environmental compliance (as appropriate) would be prepared and made available to the public. Chapter 6, "Compliance with Federal or State Regulations," provides more detail on the regulations that guide the development of the Final Plan/EIS.

Typically, everything in this Final Plan/EIS is covered by NEPA compliance, except in cases where project implementation would deviate from what is described in this document or is otherwise stated that future compliance would be necessary. Every implementation action proposed in this EIS will continue to be reviewed and monitored by the Park's interdisciplinary team of specialists to ensure compliance with all federal and state regulations. Additionally, the Park's NEPA specialists will continue to work with construction project leaders to ensure that all actions comply with NEPA and do not have an effect beyond what was analyzed in this Final Plan/EIS. Federal (Federal



Highway Administration [FHWA], USFWS, and U.S. Army Corps of Engineers [ACOE]) and state (SHPO, WGFD, and WYDOT) agencies will be consulted as necessary and best management practices (BMPs; see Appendix A) and other mitigation measures will be employed as much as possible.

Compliance with requirements of Section 7 of the ESA is completed through the analysis in this Final Plan/EIS.

Compliance with requirements of Section 404 of the Clean Water Act (Wetlands) and data collections for Sections 106 and 110 of the NHPA (Cultural Resources) will be accomplished through site-specific surveys once an alternative is selected and design is completed. Consultation with the ACOE and SHPO will be conducted prior to construction activities that have the potential to affect wetlands or cultural resources, respectively.

In the event that the Park decides to add or deviate from the Final Plan/EIS and subsequent ROD, further NEPA compliance would be required and would include a formal public participation process.

