

## CHAPTER 1

### PURPOSE AND NEED FOR ACTION

This Draft Transportation Plan/Environmental Impact Statement (Plan/DEIS) evaluates and recommends a preferred system of transportation improvements within Grand Teton National Park, including roadway shoulder improvements, separated multi-use pathways, traveler information systems, and a bus transit pilot project. It also includes the testing of several alternative 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 and scenic values. This course of action seeks to improve and enhance the experience of park visitors and employees, and address public safety concerns. This plan also seeks to enhance opportunities to develop transportation partnerships with neighboring communities (Town of Jackson, Teton Village, and Teton County).

#### Project Background

Over the past several decades, Grand Teton National Park has worked to reduce the impacts of motor vehicles on core activity areas. The potential for 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 richer set 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 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 the Town of Jackson, Teton Coun-

ty, and private transit operators (Charlier Associates 2001).

The transportation study made several recommendations that are included in the proposed action described in Chapter 2 of this Plan/DEIS. The study also recommended integrating proposed improvements with plans adopted by the neighboring towns and county, and with associated infrastructure improvements. These related efforts include:

- *The Jackson Regional Transportation Plan*, adopted by Teton County and the Town of 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 the Town of 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 Teton County/Town of Jackson *Pathways Program*, a joint office of the Town of Jackson and Teton County, has built a network of off-road multi-use “pathways” radiating from the Town of Jackson. The *Pathways Program* has identified a connection from the town north along U.S. 89/26 to Moose as one of its highest priority segments.

Recommendations and coordination with related planning efforts are addressed throughout this Plan/DEIS.

#### Purpose of and Need for the Plan

The purpose of the Grand Teton National Park Draft Transportation Plan is to proactively address and manage transportation-related issues. The need for the plan 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, such as trampling and the development of social trails, are evident in some areas.

Many visitors to Grand Teton National Park choose only to visit areas that can be easily reached from their vehicle. 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. Over half of the visitors polled in a 1998 survey (Littlejohn 1998) reported that the most popular destinations were difficult to visit because parking areas were full or congested during the peak summer season, and that had a negative impact on their experience. 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 sometimes pedestrians. Bicyclists share the roads with fast-moving traffic, and while the number of reported collisions is low, the speed and volume of traffic creates both perceived and actual safety risks. Shoulder widths also vary on Teton Park Road, and cyclists can be caught off guard. Providing safe facilities for cyclists and hikers would improve recreational opportunities while reducing 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 is located between Moose and the Granite Canyon Entrance Station and is used to reach destinations such as the Granite Canyon and Death Canyon trailheads, the Whitegrass Ranch, and the JY Ranch area. Traveling the Moose – Wilson Road provides a more slow-speed and intimate experience of the park than does driving on some of the park's other main roads. The road is constructed to a relatively low standard, and a section of it is unpaved. Travel volumes are approaching the

point where the road may not be able to physically withstand the use, 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 connection between the Highway 390 corridor and points within the park use the road as a shortcut. Currently approved and potential plans for expansion of Teton Village could significantly increase the amount of traffic on the Moose – Wilson Road. The alternatives in this transportation plan 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 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) has been encouraged, but does not extend into the park. Similarly, multi-use pathways were constructed to encourage cycling and hiking elsewhere in Teton County, but these pathways do not extend into the park. The segment of trail along Highway 390 (Teton Village Access Road) is complete and terminates near the Granite Canyon Entrance Station. This transportation plan intends to increase opportunities for the park to partner with these neighboring communities to develop an integrated transportation system that benefits all parties.

## Objectives of Taking Action

The following objectives were identified for this Plan/DEIS:

- Provide improved opportunities for visitors to safely enjoy the park 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.
- Improve cooperation between park and gateway communities to achieve complimentary transportation goals.



- Encourage alternative, sustainable transportation options that minimize consumption of renewable resources.
- Expand commuting options for park and concession employees.

## **Project Area Description and Location**

Grand Teton National Park encompasses more than 310,000 acres in northwestern Wyoming, approximately 5 miles east of the Idaho state line and south of Yellowstone National Park. The current road system in Grand Teton National Park includes three primary highways: Teton Park Road, U.S. Highway (U.S.) 26/89/191 (also known as the Outer Highway), and North Park Road (Figure 1). 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. 26/89/191, parallels Teton Park Road and serves as a more direct connection to Yellowstone and eastern Wyoming. North Park Road (U.S. 89/26) extends from Moran Junction through the John D. Rockefeller, Jr. Memorial Parkway to the south entrance of Yellowstone National Park, and provides access to Jackson Lake Lodge and Colter Bay activity areas.

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 airlines providing service during the peak summer and winter seasons. The Grand Teton Lodge Company provides limited shuttle service between Jackson, the Jackson Hole Airport, Jackson Lake Lodge, and Colter Bay Village. The Lodge Company also offers bus tours of the park and Yellowstone National Park on a regular schedule during the summer. Similar tours are offered by at least one operator from Jackson.

The Town of Jackson, Wyoming, 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. Other communities are more distant from the park and take most of a day or more than one day's travel to access.

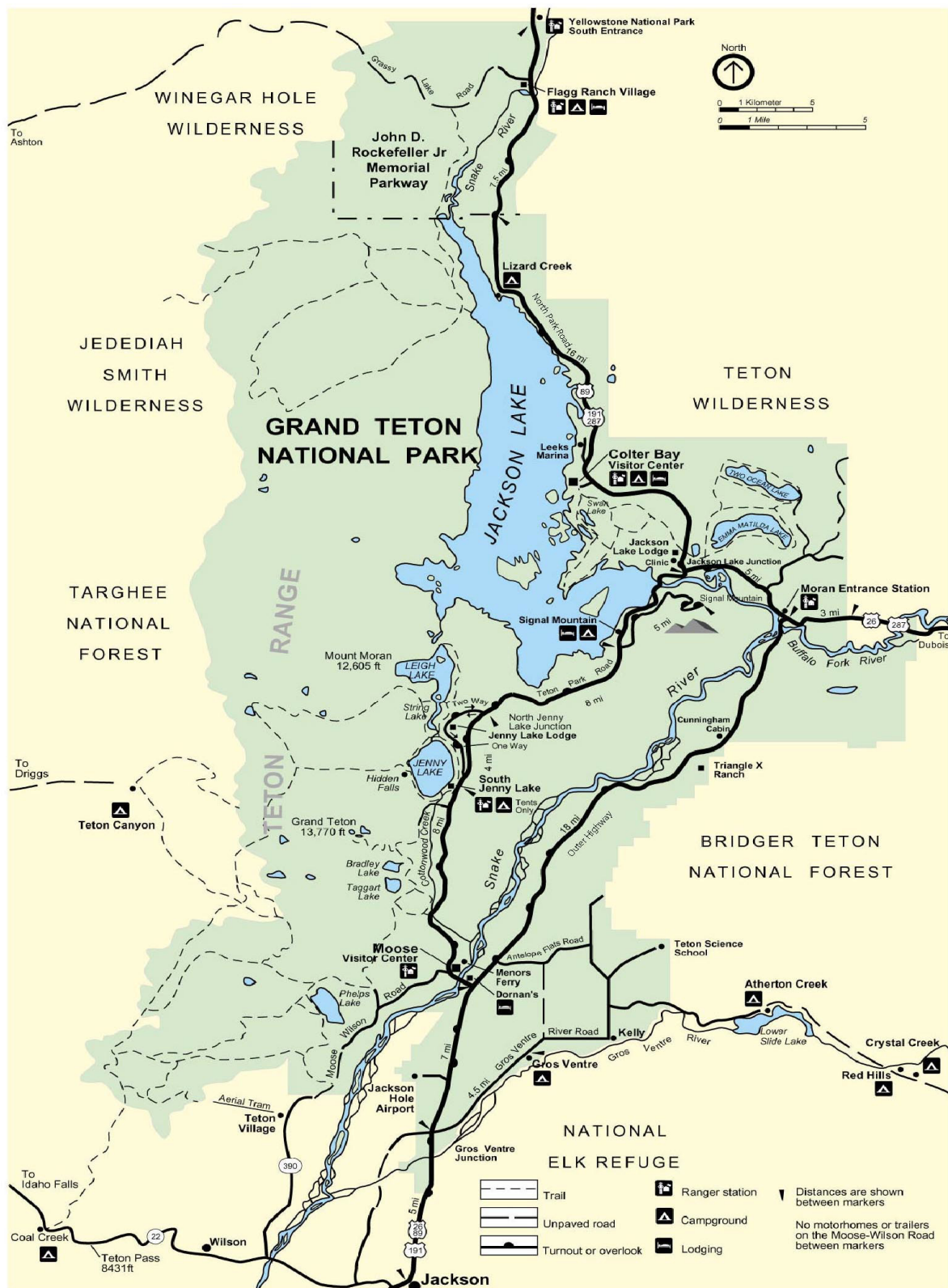
Another important characteristic of this park is its proximity to Yellowstone National Park and to numerous other public lands, including several large national forests and wilderness areas. A large portion of the park's historic use has been drive-through sightseers visiting Jackson, Grand Teton National Park, Yellowstone National Park, and other destinations in the region.

Grand Teton National Park provides visitors with an opportunity to experience two linked but distinct settings. 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.

## **Scope of Plan**

During the initial scoping phases of this planning effort, including a number of public workshops, several alternatives were considered that included a comprehensive system of transit, pathways, intelligent transportation systems, and other transportation-related infrastructure. 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 General Management Plan (GMP), which is a comprehensive and integrated plan that guides the overall management of a unit of the National Park System. Therefore, while retaining some of the elements of the initial alternatives, the alternatives presented in this document reflect focused and achievable actions that could be taken over the next 5 to 10 years. The park is a high priority within the NPS for undertaking a new GMP, which will provide an opportunity to comprehensively look at transportation-related issues within the context of overall park management.

FIGURE 1 - PROJECT AREA





Consequently, this Plan/DEIS is a comprehensive environmental analysis of potential impacts or effects to the park's natural, cultural, and social resources as a result of implementing new management actions planned over the next 5 to 10 years for transportation activities.

Regardless of whether the park begins work on a General Management Plan, following the first five years of implementation of the transportation plan, the NPS will review and evaluate the extent to which the actions are meeting the stated objectives. Based on this evaluation, the NPS will consider whether other transportation-related actions or improvements are warranted, including transit, multi-use pathways, parking supply, intelligent transportation systems, and roadway management practices.

This Plan/DEIS analyzes resource impacts associated with the enhancement of pedestrian pathways, signs, and way-finding improvements in developed areas; the construction of separated multi-use pathways in a generalized area along existing roadways; the realignment of entrance ways; construction of information kiosks; road widening; operation of a pilot transit service; improved roadway shoulders; and the placement or construction of other limited facilities and signs that would accommodate these improvements.

Endangered Species Act (ESA) Section 7 (Threatened and Endangered Species) compliance is accomplished in this plan. However, compliance with Section 404 (Wetlands) and Section 106 (Cultural Resources) will be conducted on a site-specific basis, since all necessary surveys will need to be conducted in these areas. Consultation with the U.S. Army Corps of Engineers and the Wyoming State Historic Preservation Office (SHPO) will be conducted prior to construction activities that have the potential to affect wetlands or cultural resources.

## **Park Purpose, Significance, and Mission**

The park's purpose statement is based upon legislative history and historic trends, and 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) 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 feet above the sagebrush flats of Jackson Hole and culminate in the Grand Teton (13,770 feet), dominate the park landscape. They are the youngest mountains of the Rocky Mountain chain and began to rise about 9 million years ago.

The park's physiographic and biologic features fall within the Middle Rocky Mountains natural 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 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 cutthroat trout.

The flora and fauna are typical of the Central Rocky Mountain Region. Forested areas are a

mixture of limber pine, lodgepole pine, white-bark pine, Englemann spruce, subalpine fir, and Douglas fir. Scattered patches of aspen are found at lower elevations. Cottonwood, willow, and Colorado blue spruce line the Snake River and its tributaries, and sagebrush dominates the valley floor.

Fifty-four species of mammals inhabit the park. Elk, moose, pronghorn, mule deer, and bison are common, and bighorn sheep can be found in the higher mountains. Other mammals include beaver, muskrat, coyote, pika, and Uinta ground squirrel. Black bears are common in forested areas. The grizzly bear, a threatened species, is known to occur occasionally throughout most of Grand Teton, but occurs in higher densities in the northern part of the park.

Bird life in the park is varied, and the endangered bald eagle and peregrine falcon nest in the park. Other prominent species are the white pelican, great blue heron, trumpeter swan, Canada goose, sandhill crane, sage-grouse, golden eagle, common raven, several species of woodpeckers, 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 that represents the natural processes of the Rocky Mountains and the cultures of the American West.

### **Legal and Policy Framework**

The legal framework supporting this plan 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 plan include the 1916 Organic Act, the National Historic Preservation Act, the Clean Air Act, the Clean Water Act, and the Endangered Species Act. Policy guidance is provided by *NPS Management Policies* (2001). The transportation plan alterna-

tives have been designed to comply with all legislative requirements and policy directives. Chapter 6, Compliance with Federal or State Regulations, provides more detail on the regulations that guide the development of both the plan and the EIS.

*1916 Organic Act.* 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 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 National Historic Preservation Act 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 and afford the State Historic Preservation Officer, affiliated American Indian tribes (and, as appropriate, the Advisory Council on Historic Preservation), 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, particulate matter, etc.) and national standards for major new sources of pollution including automobiles, trucks, and electric power plants.

*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.

*Endangered Species Act, 1973.* The Endangered Spe-



cies Act provides for the listing and protection of endangered and threatened species and their critical habitat. The act requires consultation under Section 7 if any listed species may be adversely affected. Federally listed species in Grand Teton National Park include grizzly bear, bald eagle, gray wolf, and Canada lynx. No specific vegetation is listed as threatened or endangered in the park.

*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 transportation plan include Section 9.2, Transportation Systems, and Section 9.2.5, Parking Areas. Section 9.2 encourages 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 Plan/DEIS was developed to maintain consistency with, or directly reinforce, a number of planning studies undertaken by the park or neighboring gateway communities.

*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."

*Grand Teton National Park Statement for Management, 1995.* This document provides a statement of purpose and significance for the park.

*Grand Teton National Park Strategic Plan, 2005.* The strategic plan provides a mission statement and long-term goals, and describes how those goals will be accomplished.

*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 Yellowstone National Park boundary.

*Jenny Lake Development Concept Plan, 1977.* The transportation plan 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.

*JY Ranch.* Plans are being developed for the conveyance of JY Ranch from the Rockefeller family to the NPS at Grand Teton National Park.

*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 Yellowstone National Park; 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.* The plan offers recommendations for improving vehicular and pedestrian circulation and safety, and reducing the incidence of social trails.

*Colter Bay Village/Jackson Lake Lodge Development Concept Plan, 1989.* The 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/EA – Moose to N. Jenny Lake, 1990.* Among other improvements, the plan recommends connecting developed areas within the corridor with a signed network of hardened pathways, and expanding the existing Moose Visitor Center area.

*Jackson/Teton County Transit Development Plan, 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 that would also serve as a park transit staging area.

*Town of Jackson/Teton County Comprehensive Plan, Chapter 8 (Transportation), January 2000.* Adopted by Teton County and the Town of Jackson in January 2000 as part of the joint County/ Town regional comprehensive plan, the 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” (walking, bicycling and transit) trips by 2020.

*Greater Yellowstone/Teton Clean Cities Coalition, 2002.* After five years of effort, the Greater Yellowstone/Teton Clean Cities Coalition received official “clean cities” designation from the U.S. Department of Energy in September 2002. The national Clean Cities program is sponsored by the U.S. Department of Energy, and was created with the mission of advancing the use of cars and trucks powered by alternative fuels, thereby reducing the nation’s dependence on imported petroleum. At local coalitions across the country, governmental agencies and private companies voluntarily come together under the umbrella of the Clean Cities Program. 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.

*Greater Yellowstone Rural Intelligent Transportation Systems (ITS) Corridor Project.* This effort addresses the feasibility of applying ITS technologies 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 Park.

*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 and the National Park Service are developing a plan for managing bison and elk in the National Elk Refuge and Grand Teton National Park. Management issues being addressed include bison and elk ecology, loss and degradation of elk winter range, numbers of elk and bison, population control measures, forage management, winter feeding, disease management, and the restoration of habitats damaged by elk and bison. The plan is expected to result in a record of decision in 2006.

*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 training and technology center. The center will offer instruction on the preservation and rehabilitation of historic structures in the Intermountain West. White Grass Ranch is located off Death Canyon Road, which may be accessed only by the Moose – Wilson Road. Future activities at the White Grass Ranch may affect the level of traffic or non-motorized activity along the Moose – Wilson Road.

*The Proposed 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: (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; and (3) A golf course/Nordic ski area that establishes a continuous buffer to the south of the village. Expansion and development in these areas have the potential to directly affect vehicle and non-motorized traffic on the Moose – Wilson Road, as well as impacts to wildlife habitat and backcountry use of the adjacent areas.





## 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 air quality, soundscapes, 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 of these issues were not carried forward as impact topics for detailed analysis in the Plan/DEIS, because impacts expected under any of the alternatives would not exceed negligible or minor adverse levels (see “Impact Topics Dismissed from Further Analysis” section in this chapter). The topics that were carried forward as impact topics in the Plan/DEIS 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 of this Plan/DEIS.

### *Visual and Scenic Quality*

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

### *Vegetation*

Certain park areas presently receive disproportionate use, creating pressure on vegetation resources as visitors create social trails or create impromptu parking areas when lots are full in peak season. Additionally, invasive nonnative species is also an ongoing concern in existing developed areas, roadsides, and potential pathways.

### *Soils*

Certain park areas presently receive disproportionate use, creating pressure on resources as visitors create social trails or create 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 nonpoint source pollution; or where pathways increase levels of public use and activity near surface water features.

### *Wetlands*

Executive Order 11990, Protection of Wetlands, requires federal agencies to avoid, where possible, adversely impacting wetlands. Wetlands have been identified and mapped for the project under the National Wetland Inventory program, and roadway or trail construction may directly or indirectly affect wetlands.

### *Threatened and Endangered Species/Species of Special Concern*

Four species, listed as threatened or endangered under the Endangered Species Act of 1973 as amended, could be affected by transportation system improvements. These include the bald eagle, grizzly bear, Canada lynx, and gray wolf. Other species of special concern may also occur in or near the project area, and could be affected by actions included in plan alternatives.

### *Wildlife*

Nesting and migrating animals may be affected by the introduction of new multi-use pathways.

### *Cultural Resources (Archeological Resources)*

Grand Teton National Park encompasses a variety of archeological resources. Construction of transportation-related infrastructure may result in impacts to archeological resources, as well as visitation in areas of known 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 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, such as transit and multi-use pathways, are lacking in the park.

Many NPS and concession employees travel many

miles daily by private vehicle and have limited options to travel by other methods.

#### *Social and Economic Environment*

The Town of 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, but it ends at the park boundaries. Visitors wishing to walk or cycle 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 stock.

#### *Local Communities*

Local communities are beginning to experience traffic and congestion within these communities and en route to 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 pathways and transit facilities 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 the implementation of the required mitigation across all alternatives. The following topics were eliminated from further analysis in this Plan/DEIS for the reasons set forth.

*Floodplains.* The National Park Service manages floodplains in accordance with Executive Order 11988, *Floodplain Management*, and the National Park Service 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 the use of the regulatory floodplain wherever there is a feasible alternative location. This transportation plan complies with these directives, and no proposed pathways, transit stops, or other improvements described in this transportation plan are located in the 100-year floodplain. Therefore, impacts on floodplains would be negligible, and this impact topic was dismissed.

*Wild and Scenic Rivers.* The Wild and Scenic Rivers Act (P.L. 90-542) initially designated eight rivers or river segments 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, but this recommendation has not been formally acted upon. Although the Snake River is not formally a part of the National System, the transportation plan has avoided locating transit and trail facilities in the Snake River corridor. No direct or indirect increases in recreational use are expected to arise as a consequence. 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 the plan, and any construction-related impacts would be very localized and short term. Dust abatement measures would be implemented to control fugitive emissions during construction. In addition, the proposed pilot transit system would use clean fuel technology to limit air quality impacts. Since adverse impacts to air quality under any alternative would be minor, and all construction-related impacts would be very localized, minor, and short-term, this topic was dismissed from detailed analysis.



*Soundscapes.* Actions taken to construct pathways and road shoulders under the alternatives considered would cause impacts to the natural soundscape, but these impacts would be very 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 plan. None of the alternatives would cause more than short-term or minor changes to 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 park contains many historical structures and six areas that are potential cultural landscapes, but 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 related to construction noise would be short-term and negligible to minor, since distance from the historic features or cultural landscapes would help mitigate noise level, and would be limited in scope and duration. 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 plan, long-term impacts would remain negligible to minor. For these reasons, historical structures and cultural landscapes were dismissed from detailed evaluation in this Plan/DEIS.

*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 gathering subsistence and occupation. Grand Teton National Park holds many resources important to these tribes including wildlife, plants, and water. These resources do not always have a defined bound-

ary, 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, and others as may be identified through ethnographic studies now underway and due to be completed in 2005.

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 (25 USC 3001) of 1990 will be followed. For these reasons, ethnographic resources was dismissed from detailed evaluation in this Plan/DEIS.

*Museum Collections.* The NPS's Management Policies (2001) and Director's Order #28, Cultural Resource Management Guideline (1997) requires the consideration of impacts on museum collections (historic artifacts, natural specimens, and archival and manuscript material). Since 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. The lands comprising the park are not held in trust by the Secretary of the Interior for the benefit of Native Americans due to their status as American Indians. Therefore,

American Indian trust resources was dismissed as an impact topic.

*Land Use.* A number of recent planning efforts, including the park's *Grazing Use and Open Space Study* (2001) 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.

The transportation plan 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. Some additional staff may be added to support transit service or maintain pathways, but this increment is expected to be small and not sufficient to materially alter current uses and functions.

The proposed alternatives would not affect any grazing rights presently in force on park lands, and inholders would maintain all access to their properties as necessary to conduct business or personal affairs.

None of the transportation plan 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 transportation plan impacts on land uses both within the park and within adjacent gateway communities are expected to be negligible, this impact topic was dismissed.

*Environmental Justice.* Executive Order 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 Environmental Protection Agency's Draft Environmental Justice Guidelines (July 1996). Should any additional increase in fees be necessary, it would be applied to all visitors; therefore, no disproportionate adverse effects are anticipated.

ed. 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 very low in the park, and any changes in motor vehicle traffic as a result of this plan 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 agricultural land in-holdings exist within the boundaries of Grand Teton National Park. However, there are no designated prime or unique agricultural lands within Grand Teton National Park (NRCS, 2000). Therefore, 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 (*Grus americana*).* Whooping cranes (*Grus americana*) are one of the rarest animals in North America and were listed as endangered under the Endangered Species Act 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 used portions of Jackson Hole and the Greater Yellowstone Area (Drewien, 1989). However, as of the summer of 2002, the U.S. Fish and Wildlife Service now considers whooping cranes to be extirpated from Wyoming and no longer consults



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: Wolverines, Harlequin Ducks, Trumpeter Swans*

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

Wolverines are common in the park but occur in very low densities. As part of an ongoing study by the Wildlife Conservation Society, several individuals have been 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. However, movements in the valley, especially at the base of the Teton Range in winter, are not uncommon. Nevertheless, actions proposed in this plan are not expected to affect wolverines; therefore, this species was dismissed from further analysis.

**Harlequin Ducks.** Harlequin ducks (*Histrionicus histrionicus*) are currently listed by the U.S. Fish and Wildlife Service as a “sensitive” species and by the Wyoming Game and Fish Department as a Category 3 species of special concern. Although previously listed by the U.S. Fish and Wildlife Service as a Category 2 Candidate species for listing under the Endangered Species Act, this classification has since been removed. Harlequin ducks are known to be present in Grand Teton National Park 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.

**Trumpeter Swans.** No trumpeter swan nesting

habitat is within the project area. The section of the Snake River near the Moose Bridge does contain wintering habitat for swans, but would not be impacted by road maintenance or pathway construction. It is therefore the opinion of NPS that trumpeter swans would not be affected by the proposal; therefore, this species was dismissed from further analysis.

*Wildlife: White-tailed Deer, Bighorn Sheep, Fish*

**White-tailed Deer.** A relatively small number of white-tailed deer (*Odocoileus virginianus*) 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 are expected to be very small and any adverse impacts would be negligible. For this reason, this species was dismissed from further analysis.

**Bighorn Sheep.** Bighorn sheep (*Ovis canadensis canadensis*) 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 on the west side of the Tetons. Bighorn sheep are not expected to occur within the project area. For this reason, this species was dismissed from further analysis.

**Fish.** Seven species of salmonids are present or possibly present within the project area (Kiefling 1978). Only two of these species, the Snake River fine-spotted cutthroat trout (*Oncorhynchus clarki*) and mountain whitefish (*Prosopium williamsoni*) are native to the area. The five remaining salmonids (brook trout, brown trout, rainbow trout, lake trout, and grayling) are nonnative species that were introduced into Jackson Hole. In addition, three species of suckers (Utah, bluehead, and mountain), two species of sculpins (Piute and mottled), and five species of cyprinid minnows (Bonneville redbside shiner, speckled and longnose dace, and leatherside and Utah chub) are also



present. The proposed project would have negligible impacts on fish or fish habitat; therefore, fish were dismissed from further analysis.

*Energy Consumption.* Encouraging the use of more energy efficient travel modes within the park could reduce energy consumption and consumption of nonrenewable resources. However, 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 (approximately 44 percent) of the park's backcountry in the National Wilderness Preservation System pursuant to Public Law 88-577 (Wilderness Recommendation, Grand Teton National Park, 1984). This recommended wilderness area 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 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 under this transportation plan. Therefore, backcountry wilder-

ness impacts were considered negligible, and this impact topic was dismissed.

## **Regulatory Compliance Process**

The NPS is committed to continued public involvement as the Grand Teton National Park Transportation Plan is implemented. This Plan/DEIS has been prepared with the current available data, describes the affected environment, and analyzes environmental consequences. However, as individual actions or projects from this plan are implemented, it may become necessary to complete additional National Environmental Policy Act (NEPA) compliance tiered from the Plan/DEIS.

Site designs would be evaluated to determine the need for additional NEPA or other regulatory compliance (e.g., National Historic Preservation Act, Endangered Species Act, Clean Water Act). Additional environmental compliance as appropriate will 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 EIS and final plan.

