



**U.S. Department of Transportation
Federal Transit Administration**

**Paul S. Sarbanes Transit in Parks Program (Transit in the Parks Program)
Project Proposal for Fiscal Year 2009 Funds – Planning Project**

BASIC PROJECT INFORMATION		
Project Name (Please provide a 1-2 sentence description of the project): <i>Deschutes National Forest Alternative Transportation Feasibility Study.</i> The proposed study will develop a range of transportation alternatives for the Deschutes National Forest (DNF) on six key forest access highway corridors. Proposed study will expand and consolidate similar efforts completed by the surrounding individual communities. The proposed study will include: Traffic Study, Visitor Capacity Analysis, Natural Resource Condition Survey, Marketing Assessment, Transportation Alternatives, and Economic Analysis of Alternatives. The data and alternatives will be used to develop sustainable visitor and resource capacity and initiate further NEPA analysis through the subsequent development of a Comprehensive Transportation Plan.		
Proposed Funding Recipient: USDA Forest Service, Deschutes National Forest		
Public land unit(s) involved: Deschutes National Forest	<u>Location of Project</u> City: Bend, Sisters, Redmond, Sunriver, Tumalo, LaPine County: Deschutes State: Oregon Congressional District: 2	
Federal Land Management Agency managing the above unit(s): <input type="checkbox"/> Bureau of Land Management <input type="checkbox"/> Bureau of Reclamation <input type="checkbox"/> Fish and Wildlife Service <input checked="" type="checkbox"/> Forest Service <input type="checkbox"/> National Park Service <input type="checkbox"/> Other (e.g. Federal Trust) Describe:	Type of Planning Project: (Implementation projects, please use the alternate form) <input checked="" type="checkbox"/> Planning	
<input checked="" type="checkbox"/> Proposal is to plan for a possible new alternative transportation system where none currently exists. <input type="checkbox"/> Proposal is to plan for a possible expansion or enhancement of an existing alternative transportation system.		
Transit in Parks Program Funding Requested during FY 2009 \$367,000	Total Cost of Planning Project at Completion (All sources) \$437,000	
Were you awarded Transit in Parks Program funds for this project in the past? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If answer "Yes," please provide amount awarded: \$		
Do you plan to request additional Transit in Parks Program funds in future years? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Note: If you wish to compete for future Transit in Parks Program fiscal year funds you must reapply).		
If answer "Yes," please specify Transit in Parks Program proposed funding levels for out years below:		
FY 2010 \$500,000 Transportation Plan (NEPA)	FY 2011 Implementation need can not be realistically estimated at this time	FY 2012

FY 2009 Funding Amounts from sources other than Transit in Parks Program funds? Yes No
 If answer "Yes," please specify funding levels per source below:

State \$	Local \$	Federal (other than Transit in Parks Program) \$25,000 Appropriated Forest Funds	Private sources \$
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CONTACT PERSON

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OTHER PROJECT SPONSORS (in addition to funding recipient)

Listed are partners who support this project and plan to participate in this planning effort. They include: Oregon Department of Transportation (ODOT), Deschutes County, City of Bend, Bend MPO, City of Sisters, Community of Sunriver, Bend Area Transportation, Mount Bachelor Ski Area, Discover Your Northwest, Deschutes County Bicycle and Pedestrian Advisory Committee, Recreation Assets Committee, Winter Recreation Advisory Committee, and the High Desert Museum. Potential partners include: Bend Park and Recreation District, Sisters Organization for Activities and Recreation, resort owners off Cascade Lakes Highway, Central Oregon Intergovernmental Council, Central Oregon Trails Association, City of Redmond, Friends of the Metolius, Friends of Elk Lake Guard Station, and City of LaPine. (Letters of support are attached)

REQUIREMENTS

- If a State, Tribal, or local government entity is proposing the project, the applicant has contacted the manager of the Federal land unit(s) and has the consent of the Federal land management agency or agencies affected.
- The project is consistent with the metropolitan and statewide planning process.
- The project is consistent with agency plans.
- The planning project will analyze all reasonable alternatives, including a non-construction option.

BASIC PROJECT DATA

Number of Visitors (Annual): 2,780,000 (Deschutes National Forest visitors)	Daily Number of Visitors (Peak season): Average winter season: 5,000 Average summer season: 10,000
Average Number of Vehicles per Day at Peak Visitation: <i>Based on 2007 Transportation Volumes provided by ODOT and Deschutes County</i> <u>US Highway 97 – (aka. Forest Hwy 19N)</u> Average Daily: 11,700 vehicles	

US Highway 20 – (aka. Forest Hwy 23)

Average Daily: 8,800 vehicles

State Highway 46 – (aka. Forest Hwy 46 & Cascade Lakes National Scenic Byway)

Average Daily: 2,500 vehicles

County Road 4601 (aka. Skyliner Road & Forest Hwy)

Average Daily: 662

State Highway 242 – (aka. Forest Hwy 22 & McKenzie Pass-Santiam Pass National Scenic Byway)

Average Daily (seasonal only): 400 vehicles

County Road 4182 (aka. Paulina Lake Road & Forest Hwy 93)

Average Daily: 469

Current Road Level of Service at Peak Visitation: Good
(Please consult guidance where available on determining this variable. You may use observational accounts or pictures to provide an assessment of this datum for FY 2009 proposals).

What time of the year does your land unit experience Peak Visitation?

Spring Summer Fall Winter

Current Carrying Capacity of Existing Roads: *Data provided by ODOT and Deschutes County*

US Highway 97: 32,000 (vehicles/day)	US Highway 20: 32,000 (vehicles/day)
State Highway 46: 32,000 (vehicles/day)	County Road 4601: 9,600 (vehicles/day)
State Highway 242: 32,000 (vehicles/day)	County Road 4182: 9,600 (vehicles/day)

What percent of that capacity is the site operating at during peak periods? *Based on data provided by ODOT and Deschutes County*

US Highway 97: 37%	US Highway 20: 28%
State Highway 46: 8%	County Road 4601: 7%
State Highway 242: 1%	County Road 4182: 5%

Current parking shortages during peak visitation: State Hwy 46 & US Hwy 97: all sites @ maximum capacity most weekends & holidays with 30% sites @ 10-20% above capacity. State Hwy 20 & 242 & County Rd 4601: most sites 75-90% of capacity most weekends & holidays with 10% of sites at 10-20% above capacity

Current Number of Persons who use the alternative transportation system (if one already exists) at peak visitation:

N/A

Estimated Annual Number of Persons who will use the alternative transportation system at project completion (anticipated number of riders or users/annually): 250,000 - this reflects 9% of our visitors which is based on a similar study conducted for the Mt. Baker-Snoqualmie National Forest.

Average number of auto collisions with wildlife in the area? *Data provided by Oregon Department of Fish & Wildlife*

State Highway 20: 1/05 to 12/06 = 62 wildlife collisions

US Highway 97: 10/05 to 7/08 = 172 mule deer collisions

No accurate collision data is available for the remaining corridors only anecdotal data, however there are known collisions on each of the remaining corridors.

Executive Summary

With almost 1.6 million acres that extend approximately 100 miles along the east side of the Cascade Mountain crest, the Deschutes National Forest (DNF) receives 2.78 million visitors annually¹. The DNF is the third most heavily visited forest unit in the USDA Forest Service Region 6 which encompasses the Pacific Northwest. However, the DNF has less than 200,000 people in the surrounding area. There are eight other national forests within Region 6 located next to larger populations with less use than the DNF. Approximately half of the visitors come from the two local communities and 75% of the visitors come from within the State of Oregon. The DNF has identified their Recreational Niche as "FUN in the SUN!", due to our 300+ days of sunshine a year. DNF is the hub of incredible recreational opportunities in diverse settings within close proximity to one another and the surrounding communities, facilitating four season day-use recreation opportunities. Over 75% of the visitors to the DNF are classified as day-use which lends itself to various transportation alternatives. The majority of our visitors only need to transport a backpack, skis, a fly-rod and/or possibly a bicycle to facilitate their recreational experience at the "Gems" of Central Oregon. These "Gems" include Mount Bachelor Ski Area, the High Desert Museum, the Metolius Basin, Newberry National Volcanic Monument, Lava Lands Visitor Center, the Lava River Cave, the High Cascade Lakes, and Benham Falls. The DNF and Central Oregon are considered a premier, destination location, with pressures of increased visitation and the promotion of tourism to support the local economy, there is concern that continuing to build for increased capacity (e.g. road and parking infrastructure) will attract more vehicles without reducing congestion in the long term.

The proposed *Deschutes National Forest Alternative Transportation Feasibility Study* will analyze six access corridors, State Highway 46 (Cascade Lakes National Scenic Byway), State Highway 242 (McKenzie Pass-Santiam Pass National Scenic Byway), US Highway 97, State Highway 20 (Santiam Highway), County Road 4601 (Skyliner Road), and County Road 4182 (Paulina Lake Road) along with various access points for the Deschutes River. Five of the six corridors support year round vehicle passage and provide access to the "Gems" of Central Oregon. These corridors access additional Forest Service recreational sites including 42 campgrounds and picnic areas, 32 trails, 7 sno-parks, three wilderness areas, two concessions operated resorts, three Wild and Scenic rivers along with a State Fish Hatchery and numerous other State, county and local recreational sites. The six corridors provide over 145 miles of access to and through the DNF. Due to very limited winter transportation and no summer options, visitors primarily use personal vehicles to access recreational opportunities on the forest. Along these corridors, traffic congestion is heavier during winter and summer weekends and holidays.

The Central Oregon communities are strongly tied to the DNF and personally identify with the recreational uses and natural resources concerns recognized on the DNF. The report and recommendations developed by the Deschutes County Ad Hoc Committee on Recreation Assets created by Senator Ron Wyden in 2007 identified that the recreational opportunities in Central Oregon not only attracted businesses and new residents, but sustain the quality of life for current residents and they help define the character of communities within the region. Four of the five overarching principles identified by the committee included: Restore healthy forests in the high use recreation country bounded by the Deschutes River, Elk Lake and the proposed Skyline Forest; Promote accessible, dispersed recreation to diverse activities and skill levels; Promote connectivity between the towns; and implement the Green Print Plan Synergy and Coordination². The Bend Metropolitan Planning Organization in their 2007 Metropolitan Transportation Plan (MTP) stated the need to *use a balanced/multimodal approach to address long-term project transportation needs and provide for the consideration of impacts on the natural and human environment*. The MTP looked at all of Deschutes County and beyond counties borders as they connect to other communities and our local "Gems".

The Forest Service is committed to engaging urban and rural America by expanding opportunities to underserved communities (limited English speaking, senior citizens, individuals with disabilities, low-income groups, and the youth). Transportation alternatives can break barriers by providing affordable access to physical, recreational, and interpretive opportunities for educational institutions, youth programs, as well as other social and environmental service organizations.

Automobiles can negatively impact the forest ecosystem through reduced water quality, harm to vegetation and wildlife, access to historical resources, air pollution, and noise pollution. Watershed health is crucial in supporting redband and bull trout, which are ecologically, culturally and economically tied to Central Oregon. Portions of the watersheds provide drinking water to municipality of Bend and city of Sisters. Native vegetation can be trampled while invasive weeds can be dispersed through seeds tracked on vehicle tires. Direct mortality from collisions with motor vehicles is a major concern for wildlife vitality. As forest visitation grows, the potential for exposure of these sensitive areas also increases. A main source for greenhouse gases contributing towards global climate change can be attributed to vehicle emissions. Alternative transportation can reduce negative impacts to the ecosystem.

Project Description

The goal of this project is to develop a traffic study, visitor capacity analysis, natural resource condition survey, and marketing assessment to develop preliminary alternatives that will balance recreation and the protection of the forest ecosystem through an alternative transportation system. These alternatives will be used to initiate public involvement and conduct a NEPA analysis as a separate subsequent planning phase. The DNF presents an opportunity to serve as a model for implementing alternative transportation in a high-use “rural” forest.

The proposed *Deschutes National Forest Alternative Transportation Feasibility Study* will recommend innovative collaborative solutions to relieve traffic congestion, improve visitor access, enhance visitors experience, reduce pressure for increasing vehicle capacity, improve public safety, reduce contributions to global climate change and protect the forest ecosystem. A Traffic Study, Visitor Capacity Analysis, Natural Resource Condition Survey and Marketing Assessment will be completed as part of the proposed study and used to formulate potential alternatives. The Economic Analysis of each alternative will examine costs for each alternative. The alternatives will be used to initiate NEPA analysis for the next separate planning phase.

The proposed study also provides a unique opportunity to cooperate with, combine and consolidate state and local communities’ efforts to reduce traffic congestion, global climate change, and improve accessibility through the comprehensive planning for transit alternatives. The proposed study allows Central Oregon to proactively look for solutions and to identify opportunities to partner with existing transportation services. Forest Service has obtained Central Oregon regional support to explore alternative transportation on DNF.

We are currently in the process of scheduling an interagency Transportation Assistance Team (TAG) to conduct a preliminary study of our primary corridors in the spring/summer of 2009 to assist us in further focusing our proposed feasibility study. The DNF, along with its partners, desire to consolidate several individual planning initiatives into a single, strategic vision for connecting Central Oregon communities to their national forests. A feasibility study, such as this one, will fulfill a need which has been identified through several separate endeavors to facilitate uniting the various recreational, environmental, economical, and educational interests in our area.

Based on preliminary communications with the TAG team and using their findings and recommendations on similar projects, our feasibility planning study will include:

- 1. Traffic Study:** Evaluate the current transportation system including road and trail system along the corridors, circulation, infrastructure, seasonal variation, and physical capacity. The intent of the study is to use available Oregon Department of Transportation (ODOT), county and forest service transportation data. Additional data will be collected as time and money allow.
- 2. Visitor Capacity Analysis:** Analyze the results of the 2008 National Visitors Use Monitoring Report as it relates to the transportation system, visitor use levels within the six corridors, travel patterns, demographics, and visitor preferences as they relate to critical natural resource protection and alternative transportation.
- 3. Natural Resource Condition Survey:** Compile existing data and plans needed to delineate sensitive areas and resource issues within the six corridors and relationship to the existing transportation system. Generally assess potential environmental resource impacts and affects to the visitor experience associated with alternatives. Additional data needs will be evaluated and collected as time and money allow.
- 4. Marketing Assessment:** Identify potential collaborative opportunities with stakeholders (e.g. Mount Bachelor Ski Area, Bend Area Transit, ODOT, etc.). Analyze and review marketing strategies developed by partners and stakeholders and if time and money allow develop additional preliminary strategies to successfully market use of alternative transportation.
- 5. Range of Alternatives:** Utilize studies 1-4 to develop preliminary alternatives for managing transportation and visitor use on the Deschutes National Forest. Alternatives, including “No Action” Alternatives, could include ideas such as regulating travel on roads, possible expansions to the existing trail system, and utilization of alternative transportation ideas such as buses, vans, shuttles and bicycle lanes. These alternatives will be used to initiate a NEPA analysis for a future separate planning phase.
- 6. Economic Analysis:** Evaluate preliminary costs for operations, capital investments, impact mitigation, monitoring, and funding opportunities of each alternative to determine which alternatives to further develop through a planning initiative. As time and money allows the analysis will also incorporate options affordable to underserved communities.

Planning Justification

1. Demonstration of Need

a. **Visitor mobility and experience:**

The Forest Service is challenged with sustaining high quality outdoor recreation experiences to meet public requirements while maintaining the ecological integrity of our national forests. Deschutes National Forest is the third highest visited national forest in the Northwest region of the United States. The combination of the increasing Central Oregon population and tourism and continued decline of public access to privately owned forest land create extensive pressure on the DNF to provide more recreational opportunities. An alternative transportation system can support the USDA Forest Service Strategic Plan FY 2007-2012 Goal 4, "sustain and enhance outdoor recreation opportunities". The condition of land, recreation facilities, and transportation infrastructure must be considered to preserve high quality visitor experiences.

Mt. Bachelor ski area is privately owned and operated under the terms and provisions of a Special Use Permit (SUP) issued by the DNF. Currently, there is limited winter alternative transportation (e.g. private ski buses that provide transportation under an employee/visitor bus system) and no summer public transportation system to access DNF recreation sites. As a result of limited transportation options and a growing Central Oregon population, visitors must utilize private vehicles to access the forest. Unfortunately, this has limited recreation activities of the forest to individuals with access to automobiles. Nationally and locally the Forest Service is committed to engaging urban America³ expanding opportunities to underserved communities (limited English speaking, senior citizens, individuals with disabilities, low-income groups, and the youth). For the past three years, the USFS has emphasized connecting youth to nature, through the "More Kids in the Woods" Challenge Cost Share Program. Transportation alternatives can break barriers by providing affordable access to physical, recreational, and interpretive opportunities for educational institutions, youth programs, as well as other social and environmental service organizations.

In May 24, 2007 testimony before the US House of Representatives Committee on Natural Resources Chief Gail Kimbell explained the importance of connecting with the next generation of conservation leaders.

"...The National Forests and Grasslands are the natural backyards for many communities throughout the 46 States that have National Forest System lands. These lands and our infrastructure of trails, roads and recreation facilities provide opportunities for solace and solitude, challenge and risk, hunting and fishing opportunities, outlets for keeping physically fit, and represent an important conduit for society's connection to nature.

Yet, even with the resources that we are devoting to this issue we still see perhaps one of the biggest threats to our nation's forests and grasslands is environmental illiteracy. As our country becomes increasingly diverse and urban, most of America's children grow up with little connection to the natural world. Research showing us the benefits of connecting our children with nature and the health benefits of outdoor activities, requires us to examine approaches that will encourage greater participation in outdoor activities."

Within a winter period of five months, a majority of the Deschutes National Forest visitors use the State Highway 46 which includes Mt. Bachelor ski area. The combination of hazardous winter conditions, range of winter driving skills, lack of real-time traffic information, heavy traffic congestion, and pedestrians crossing highways can result in numerous vehicular accidents.

Parking at Mt. Bachelor can reach full capacity when skiing conditions are favorable on weekends and holidays. When parking is at capacity, thousands of visitors are forced to turn around, wait for a free spot, or continually drive through parking lots. This can cause traffic delays and negatively impact the visitors' experience.

Peak summer visitation is especially high during weekends and holidays when a large percentage of our visitors access the forest for a multitude of opportunities. When existing parking is at capacity at trailheads, visitors will park along roadsides (shoulder), trampling vegetation and compacting soil. These actions can negatively impact the forest ecosystem and visitor experience. In addition, safe access for other transportation modes – bicyclists riding on shoulders of highways and pedestrians crossing highways - are a concern along these corridors.

Designated as National Scenic Byways, Cascade Lakes Scenic Byway (State Highway 46) and McKenzie-Santiam Pass Scenic Byway (State Highway 242), have been recognized by the US Department of Transportation for their cultural, historical, natural, recreational, and scenic qualities. Due to the distinctive characteristics of these corridors, many visitors experience the Deschutes National Forest by driving along these scenic highways. The development of an alternative transportation system will assist agencies and partners to protect the qualities that make these corridors unique while providing an option for visitors to enjoy the scenery outside of their cars.

According to the Bend Metropolitan Transportation Plan, the population of the Bend area is expected to increase by nearly 60% over the next 20-25 years⁴. The increase in population will have a significant impact on the transportation system. The plan also points out that the transportation needs of the population will be changing as well since an aging population will be more reliant on alternative modes of transportation. The central Oregon region is an attractive location for retirees. Between 1990 and 2000, this age group more than doubled in Deschutes County and in Bend the 65 and over group comprises 12% of the population⁵. In addition to population trends, growth in tourism has had a significant impact on both the statewide and local economies. Due to its central location to many recreational activities, central Oregon is a major tourist destination. Deschutes County ranks fifth in the state for total travel expenditures⁴.

With a growing population and the pressures of increased visitation, there is concern that continuing to build for increased capacity (e.g. road and parking infrastructure) will attract more vehicles without reducing congestion in the long term. Alternative transportation can alleviate pressures to build capacity while improving safety, relieving congestion, improving access, and protecting the forest ecosystem. In 1997, based on a comprehensive evaluation of transit feasibility, the City Council of Bend declared that transit was feasible to build-out for the city and recommended developing a strategy as an initial method of providing public transportation for the general public but admitted that, in the last 10 years, this strategy was never pursued⁶.

b. Environmental condition as a result of the existing transportation system:

Watershed

According to Objective 1.5 of the USDA Forest Service Strategic Plan FY 2007-2012, the agency will restore and maintain healthy watersheds and diverse habitats. High vehicle use can threaten DNF watersheds through the potential release of chemicals and sediment into the watershed. Watershed health is crucial in supporting redband and bull trout, which are ecologically, culturally and economically tied to the Central Oregon area. Central Oregon communities have demonstrated their desire to restore watershed health through both the work being completed by the Upper Deschutes Watershed Council and the 2004 Deschutes Sub-basin Plan, and through the Whychus Creek Watershed Action Plan (2002) and Restoration Management Plan, to be completed in summer of 2009. These two plans encompass two of the Wild and Scenic rivers adjacent to the six corridors to be evaluated along with Tumalo Creek whose headwaters supply the drinking water to the City of Bend. The City of Bend has further demonstrated their commitment to watershed restoration and health in cooperating with the DNF in the Tumalo Creek restoration project both technically and financially by providing \$150,000 in city funds.

The Upper Deschutes Watershed Council, a long-term partner on watershed projects, has been working in conjunction with the DNF, state and local governments and various environmental groups

and is committed to protecting and restoring local rivers through collaborative projects in habitat restoration, community education and watershed monitoring. They have helped to identify several priorities for each watershed in the 2,000,000-acre Upper Deschutes River sub-basin, which includes Whychus Creek. (www.restorethedeschutes.org). In May 2007, more than 200,000 steelhead trout were reintroduced into Whychus Creek as part of a regional effort to restore anadromous fish runs above the Pelton Round Butte Dam. This reintroduction effort has brought anadromous fish to the upper basin for the first time in more than 40 years, and has led to a significant effort to restore habitat, eliminate fish passage barriers and improve water quality in Whychus Creek. Reductions of sedimentation, improved water quality, along with lessening human impacts on water quality have been preliminarily identified as priority treatments for watershed restoration.

Vegetation

The Chief of the USDA Forest Service has identified invasive species as one of the four critical threats to our Nation's ecosystems. According to the 2004 USDA Forest Service National Strategy and Implementation Plan for Invasive Species Management Plan, the first program element is to prevent the introduction and spread of invasive species. Invasive species such as spotted and diffuse knapweeds are abundant along these six corridors and are found adjacent to campgrounds throughout the forest. Many of these weeds can be dispersed through seeds tracked on vehicle tires. In addition, visitors can trample native vegetation and these disturbed sites are easily colonized by invasive plants if a seed source is nearby. Reducing the number of vehicles along roads and outside designated parking spots at trailheads, picnic sites and other points of interest would likely reduce the spread of invasive plants and is consistent with the Invasive Plant Treatments Final Supplemental EIS for the Deschutes and Ochoco National Forests and Crooked River National Grassland.

Wildlife

Loss and fragmentation of habitat, isolation of populations, and direct mortality from collisions with motor vehicles are major concerns for wildlife. Many studies have shown that highways and major roads can reduce viability of populations through decreased movement (barriers), mortality from motor vehicle collisions, increase in human disturbance (displacement and avoidance), and decreased availability of food or other resources. With expected forest use and expanded highways, more vehicles will increase the potential for collision with wildlife like mule deer, elk, and small mammals, result in greater loss of effective habitat, and decrease connectivity for a variety of species, many of which are sensitive or listed. Transportation planning can help identify key wildlife habitat and seek to decrease impacts by routing people and vehicles away from these areas, reducing traffic volume and providing effective crossings⁷. Extensive planning and mitigation measures, including Oregon's first ever wildlife crossing structure which will be built under US Highway 97 in 2010, demonstrate the commitment of the DNF, state, county, and local governments to facilitate connectivity and decrease traffic related mortality.

Air and Noise Pollution

Air pollution from emissions is especially high during periods of heavy congestion along the corridors (high peak use days in winter and summer). Gases contributing towards global climate change can be attributed to vehicle emissions. USDA Forest Service studies such as Warming and Earlier Spring Increase Western U.S. Forest Wildfire Activity are being conducted to analyze the correlation between global climate change and effects to forest fires and ecosystem health⁸. Industry and vehicle emissions can also contribute towards the development of acid rain harming vegetation and fisheries in mountain lakes and rivers. Noise pollution caused by traffic congestion and people can detract from the recreation experience and may impact wildlife. These issues also need to be addressed as part of the resource survey. An alternative transportation system can assist in reducing emissions and may help to minimize these impacts.

Historic Resources

A transportation system has the ability to aid in the management of potential impacts to historical places, sacred sites, and traditional cultural practices. As forest visitation grows, the potential for exposure of these sensitive areas also increases. According to Executive Order No. 13007: Indian

Sacred Sites, Federal land management agencies will avoid adversely affecting the physical integrity of sacred lands. The transportation planning process will reduce potential impacts by steering forest access away from sites, while enhancing our partnerships with our local tribal communities.

Scope of Work and Methodology

2. Methodology for Assessing - Visitor Mobility & Experience Benefits of Project

a. Reduced traffic congestion:

The project's scope includes a Traffic Study, Visitor Capacity Analysis, and Marketing Assessment. The Traffic Study will examine the current infrastructure of transportation system, seasonal variation and physical capacity of the existing roads, trails and parking facilities within the six corridors and their primary access points. The Visitor Capacity Analysis will examine current visitor demographics, use, preferences, and travel patterns using the 2008 National Visitors Use Monitoring report. The Marketing Assessment will seek to obtain feedback from stakeholders concerning collaborative opportunities and marketing strategies. Based on information obtained, potential alternatives will be developed.

b. Enhanced visitor mobility, accessibility, and safety:

Reducing the number of vehicles on the corridors will improve safety for other drivers as well as pedestrians and bicyclists that utilize highways in midst of traffic. Year-round emergency access will be improved by reducing congestion. Due to minimal winter transit options and no summer options, access is limited to people with the economic means and knowledge of the forest. The study will consider potential connections to the Bend Area Transit as well as assess the limited winter transit options provided by Mount Bachelor Ski Resort. By exploring alternative transportation, the forest is committed to improving affordable accessibility to underserved populations (e.g. low-income, limited English speaking, individuals with disabilities, senior citizens and youth).

c. Improved visitor education, recreation, and health benefits:

An alternative transportation option of utilizing mass transit, either buses, vans and or a shuttle system, on the corridors to transport visitors will provide an excellent opportunity increase educational opportunities. The DNF can provide brochures and interpretive services for riders that discuss minimal recreation impact, riparian protection, trail information, wildlife, history, and invasive plant species. Improved education can enhance the visitor experience, help protect the forest ecosystem, and add value to the transportation option. By expanding access to the public, alternative transportation allows more people the opportunity to enjoy recreational and physical activities in the DNF. Alternatives such as additional and safer bike lanes also need to be evaluated as the need and desire for these bicycle routes has been demonstrated through numerous community efforts including the City of Bend: League of American Bicyclists 2009 Bike Friendly Community Application, City of Sisters Community Trails Plan, and the Deschutes County Bicycle and Pedestrian Advisory Committee. The Economic Analysis will need to take into account affordable transportation opportunities that can expand use to underserved communities. The Marketing Assessment will develop effective outreach methods that will attract alternative transportation ridership including cycling.

Over 97% of Americans participate in outdoor recreation activities with walking and hiking being two of the fastest growing activities. Outdoor recreation is expected to continue to expand in the future, placing more demands on water and land resources. Participation has increased in almost all outdoor recreation activities since 1990 and almost all outdoor

activities are forecast to grow in number of people participating with a significant increase in participation from a senior citizen population⁹. In addition, studies show that walking and hiking can have a considerable impact on lowering the risk of heart disease¹⁰. Providing access to the many trails and day use sites on the DNF will increase the health benefits and recreational experiences for this locally growing population.

3. Methodology for Assessing - Environmental Benefits of Project

a. Protection of sensitive natural, cultural, and historical resources:

The Natural Resource Condition Survey will compile existing resource data and research to identify ecological, historical, and cultural areas of concern. For example, an improved transportation system will route visitors away from critical wildlife habitat and sacred sites. The study will examine needed space and provide a preliminary review of environmental impacts of alternatives which explore the possibility of widening roads or installing separate trails for bicycles. Visitor Capacity Analysis and Condition Survey will be used to identify a level of visitation that ensures resource sustainability with consideration to current and expected use and consideration of Central Oregon's tourism economy.

b. Reduced pollution:

The Natural Resource Condition Survey will evaluate potential improvements to air and water quality and will also compare emissions between different modes of transportation based on data and research compiled. Visual quality impacts will be addressed in alternatives primarily as they relate to traffic congestion, roadside parking and any recommended traffic signage. Emphasis of the study will be placed on proactively seeking to reduce pollution before it reaches critical thresholds.

4. Methodology for Assessing - Operational Efficiency and Financial Sustainability

a. Operational efficiency:

The Deschutes National Forest Alternative Transportation Feasibility Study will develop alternatives that meet forest management objectives (e.g. watershed, wildlife, vegetation, partnerships, etc.). This will include a "No Action" alternative. In addition, alternatives must be consistent with cooperating agencies plans (e.g. Oregon Department of Transportation, local communities and Deschutes County Committee on Recreation Assets). Community focus groups will be held to ensure that alternatives consider the public's needs. The degree to which various alternatives meet management objectives will be studied through NEPA analysis within the subsequent planning phase. Ideally the subsequent study will help to identify "trigger" points, based on visitor use and/or resource carrying capacity, to prompt Central Oregon into the next phase of additional alternative transportation systems.

b. Financial feasibility:

The Economic Analysis component of this study will provide costs for alternatives including operations, capital purchases, implementation costs, and revenue sources.

c. Cost effectiveness:

Cost effectiveness will be addressed in the Economic Analysis of the alternatives. A key component of the analysis is to propose financially sustainable transportation system alternatives.

d. Partnerships and funding from other sources:

Several partners have provided letters of support for the proposed *Deschutes National Forest Alternative Transportation Feasibility Study*. The Forest Service has multiple agreements with agencies that have jurisdiction within Deschutes County and has cooperated with several of the local communities and non-profit partners in the past. These partners have participated in other studies by providing in-kind matching funds. Preliminary estimates of these in-kind matching funds based on anticipated participation in the TAG review and Feasibility study are estimated to be in excess of \$45,000. This estimate is based on participating organizations and number of days they have participated in recent USFS Travel Management Rule Implementation and other similar planning processes. DNF partners and stakeholders, which make up the Travel Management Working Group, have volunteered their time in excess of 1400 hours over the past three years in this planning project. The DNF partners have committed to provide assistance and support during subsequent planning.

¹ 2003 National Visitor Use Monitoring Study, 2008 data will be available in summer of 2009.

² Deschutes County Committee on Recreation Assets Report, dated June 2008.

³ Goal 6. Engage Urban America with Forest Service Programs, USDA Forest Service Strategic Plan 2007-2012

⁴ Chapter 5: Forecast Land Use, Bend Metropolitan Transportation Plan, 2007

⁵ Source: US Census Bureau (data for 1990 and 2000)

⁶ Chapter 8: Public Transportation, Bend Metropolitan Transportation Plan, 2007

⁷ Gaines, W.L., P.H. Singleton, and R.C. Cross. 2003. Assessing the Cumulative Effects of Linear Recreation Routes on Wildlife Habitats on the Okanogan and Wenatchee National Forests and Forman R.T.T. and D. Sperlberg. 2002. Road Ecology: Science and Solutions. Island Press.

⁸ Westerling, A.L.; Hidalgo, H.G.; Cayan, D.R.; Swetnam, T.W. 2006. Warming and Earlier Spring Increase Western U.S. Forest Wildfire Activity. Science, Vol. 313: 940-843.

⁹ Source: The National Survey on Recreation and the Environment (NSRE) 2002

¹⁰ Source: Journal of the National Medical Association, May 2001

-ATPPL Planning Proposal-
Deschutes National Forest Alternative Transportation Feasibility Study
Photos



Rocky Mountain Elk, a management indicator species, is just one example of wildlife that is impacted by increased vehicular traffic in the Deschutes National Forest. This concern has led to a plan to install the first 2 highway wildlife under crossings in the state which will be built under US Highway 97 south of Bend between Lava Lands Visitor Center and the Sunriver exit.



Road use peaks during weekend and holiday periods not only in the summer, but also in the winter due to the increasing popularity of winter activities especially on Highway 46 which leads to the Mt. Bachelor Ski Area. At times this can result in overcrowded parking lots and dangerous traffic conditions.



With over 130,000 visitors a year, the High Desert Museum often deals with overcrowding issues, including inadequate parking at the site, causing the museum to invest in shuttle bus service on some special event days. Without adequate alternate transportation options, the museum may need to expand it's current parking lot which can only accommodate 380 vehicles.