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ENVIRONMENTAL ASSESSMENT FINAL

CASCADE LAKES NATIONAL SCENIC BYWAY WELCOME STATION

**Bend-Ft. Rock Ranger District
Deschutes National Forest**

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Table of Contents

SUMMARY.....	1
DOCUMENT STRUCTURE	2
CHAPTER 1 – PURPOSE AND NEED	4
INTRODUCTION.....	4
DESIRED CONDITION.....	4
EXISTING CONDITION	4
PURPOSE AND NEED	4
PROPOSED ACTION	8
MANAGEMENT DIRECTION.....	8
PUBLIC INVOLVEMENT/SCOPING PROCESS USED.....	9
CURRENT LAWS	10
PROJECT RECORD.....	11
SCOPE OF PROJECT AND DECISION FRAMEWORK	12
CHAPTER 2 – ALTERNATIVES	14
INTRODUCTION.....	14
Precision of Information and Adjustments	14
ALTERNATIVE DESCRIPTIONS	14
Alternative 1 (No Action).....	14
Alternative 2 (Proposed Action)	14
CONNECTED ACTIONS	15
COMPARISON OF THE ALTERNATIVES	Error! Bookmark not defined.
RESOURCE PROTECTION MEASURES (MITIGATIONS)	Error! Bookmark not defined.
CHAPTER 3 – ENVIRONMENTAL CONSEQUENCES	23
INTRODUCTION.....	23
PAST, PRESENT, AND REASONABLY FORESEEABLE FUTURE ACTIONS	23
SCENIC VIEWS	24
RECREATION.....	26
FISH AND HYDROLOGY	28
SOILS.....	30
FORESTED VEGETATION	35
AIR QUALITY	36
WILDLIFE: Threatened, Endangered, and Sensitive Species	38
WILDLIFE: Management Indicator Species and Other Species and Habitat of Interest.....	43
Indicator Species and Habitats	44
Elk	45
Mule Deer	48
Special or Unique Associated Habitats	49
Snags and Down Wood/Green Tree Replacements	49
Late and Old Structural Stands and Connectivity	51
Focal Landbird Species	52
BOTANY: Invasive Plants.....	56
BOTANY: Threatened, Endangered, and Sensitive Species.....	58
HERITAGE	59
OTHER EFFECTS	60
MUNICIPAL WATERSHEDS.....	60
PRIME FARMLAND, RANGELAND, AND FORESTLAND.....	60
CIVIL RIGHTS AND ENVIRONMENTAL JUSTICE.....	60

Scenic Byway Welcome Station EA

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES.....	60
HUMAN HEALTH AND SAFETY	61
COMPATIBILITY WITH STATE AND LOCAL LAWS.....	62
EXECUTIVE ORDERS 11988 (FLOODPLAIN MANAGEMENT) AND 11990 (PROTECTION OF WETLANDS)	62
INVENTORIED ROADLESS AREAS AND WILDERNESS	62
LITERATURE CITED.....	63
CHAPTER 4 – COORDINATION AND CONSULTATION	67
INTERDISCIPLINARY TEAM MEMBERS.....	67
PUBLIC INVOLVEMENT.....	68
APPENDIX A – RESPONSE TO COMMENTS.....	72

List of Figures

Figure 1: Vicinity Map – Proposed Cascade Lakes National Scenic Byway Welcome Station	6
Figure 2: Welcome Station Location at Junction of Highway 46 and Forest Road 41	7
Figure 3: Proposed Cascade Lakes Scenic Byway Welcome Station Site (Looking Northeast from Forest Road 41 Junction).....	16
Figure 4: Proposed Cascade Lake Scenic Byway Welcome Station Site (Looking Northwest from Forest Road 41 Junction).....	17
Figure 5: Alternative 2 (Proposed Action) Scenic Byway Welcome Station	18

List of Tables

Table 1: Alternative 2 (Proposed Action) - Proposed Actions for the Cascade Lakes Scenic Byway Welcome Station.....	15
Table 2: Comparison of the Alternatives	19
Table 3: Threatened, Endangered, and Sensitive (TES) Fish Species Considered in Analysis	28
Table 4: Federally Listed and Proposed Species Occurring or Potentially Occurring on the Deschutes National Forest and Effects from the Project	39
Table 5: Regional Forester Sensitive Species Occurring or Potentially Occurring on the Deschutes National Forest and Effects from the Project	40
Table 6: Impact Conclusions for LRMP Management Indicator Species and Habitats, Birds of Conservation Concern, Landbird Focal Species, and High Priority Shorebirds.....	43
Table 7: Woodpeckers Found on the Deschutes National Forest	50
Table 8: Priority Habitat Features and Associated Focal Landbird Species for Central Oregon	53
Table 9: Respondents to 30-Day Draft Cascade Lakes National Scenic Byway Welcome Station Environmental Assessment.....	72
Table 10: Response to 30-Day Draft EA Comments.....	72

SUMMARY

This Environmental Assessment (EA) has been prepared to assess and document the environmental impacts of the proposed action for the construction of a Scenic Byway Welcome Station (Welcome Station) and associated parking area for the Cascade Lakes National Scenic Byway. The Welcome Station would provide scenic byway general recreation and Forest information and conservation education messages through interpretive displays. Parking would be provided for visitor services at the Welcome Station. One other alternative to the proposed action, Alternative 1 (No Action), as developed, analyzed, and compared to the proposed action.

One of the primary goals in the Byway's Corridor Management and Interpretive Plan for the Cascade Lakes National Scenic Byway is to provide information and interpretation at key locations through public and private partnerships. This project would be consistent with that Plan. The proposed location and development of a facility for this purpose is strategically located in an area of high use that is a central entrance to the Deschutes National Forest.

Based on the information contained in this EA, the responsible official will decide to select Alternative 1 (No Action) with no development of a Welcome Station or Alternative 2 (Proposed Action) and the associated proposed developments.

DOCUMENT STRUCTURE

The Bend-Fort Rock Ranger District of the Deschutes National Forest has prepared this Environmental Assessment in compliance with the National Environmental Policy Act (NEPA) and other relevant federal and state laws and regulations. This environmental assessment discloses the direct, indirect, and cumulative environmental impacts that would result from the proposed action and any other alternatives, including a no action alternative. The document is organized into four parts:

Purpose and Need: The section includes information on the history of the project proposal, the purpose of and need for the project, and the agency’s proposal for achieving that purpose and need. This section also details how the Forest Service informed the public of the proposal and how the public responded.

Comparison of Alternatives, including the Proposed Action: This section provides a more detailed description of the agency’s proposed action. This section also includes resource protection measures.

Environmental Consequences: This section describes the environmental effects of implementing the proposed action and any other alternatives that are analyzed. This analysis is organized by resource area. Within each section, the affected environment is described first, followed by the effects of the No Action Alternative that provides a baseline for evaluation and comparison of the other alternatives.

Agencies and Persons Consulted: This section provides a list the agencies consulted and of those involved in the preparation and development of the environmental assessment (EA).

Appendices: The appendices provide more detailedadditional information to support the analyses presented in the environmental assessment.

CHAPTER 1

PURPOSE AND NEED

CHAPTER 1 – PURPOSE AND NEED

INTRODUCTION

The location for the Cascade Lakes National Scenic Byway (Scenic Byway) Welcome Station is approximately five miles southwest of Bend, Oregon (Figures 1 and 2). The project area is located adjacent to the Scenic Byway (Highway 46, Century Drive) and directly across the highway from the junction with Forest Road 41. The legal location is in Township 18 South, Range 11 East, Section 21. Refer to the general vicinity map (Figure 1, page 6).

The location is within the Scenic Views management area as designated by the Deschutes National Forest Land and Resource Management Plan (LRMP). It is also within the Ryan Ranch Key Elk Area. It is east of the Northwest Forest Plan boundary. There are no water sources or threatened and endangered species of plants, animals, or fish. There are no archaeological sites, roadless areas, or wilderness. It is an area that has been heavily impacted by previous use.

DESIRED CONDITION

It is important that the Welcome Station be highly visible and easily accessible to a large number of byway travelers and residents. The location should be a gateway to the Scenic Byway and the Deschutes National Forest. The structure should be compatible with the surrounding environment, visible from the byway, and compliment the surrounding landscape character.

EXISTING CONDITION

Central Oregon is well known for its year-round recreational opportunities. Recreation demands have increased as the Central Oregon's population has grown. The popularity and use of the Scenic Byway corridor continues to grow. The Scenic Byway is accessed by Highway 58, its southern gateway, and from U.S. Highway 97 via Forest roads 40, 42, 43, and 61 from the east.

PURPOSE AND NEED

In 1998, the Cascade Lakes Highway (Oregon State Highway 46) was designated a National Scenic Byway. National Scenic Byways must possess outstanding qualities that exemplify the regional characteristics of our nation including one or more of six intrinsic qualities: natural, scenic, recreational, archaeological, cultural or historic. The most outstanding intrinsic qualities of the Cascade Lakes National Scenic Byway are scenic, natural, and recreational qualities, in order of significance. Scenic America, a non-profit conservation organization advocating for the protection of the visual environment and promotion and designation of scenic byways, selected Cascade Lakes Scenic Byway as one of its top ten scenic drives in the United States.

The vision of the Federal Highway Administration's (FHA) National Scenic Byways Program is "To create a distinctive collection of American roads, their stories and treasured places." Scenic byway designations are a grassroots collaborative initiative that sustain and promote the economic vitality of communities through tourism and protect their area's unique natural and cultural resources through conservation and education.

The vision for the Cascade Lakes National Scenic Byway and its surrounding area is to protect and preserve its intrinsic qualities for future generations by enhancing and maintaining its image, identity,

Scenic Byway Welcome Station EA – Chapter 1 – Purpose and Need

and integrity through collaborative partnerships and community connections. One of the vision elements from the Bend 2030 Community Vision is for a system of multi-modal alternative forms of transportation that balances recreation and protects the forest ecosystem. Both the FHA Vision and 2030 Community Vision work together to create connectivity between Central Oregon communities and public lands.

One of the primary goals in the Byway's Corridor Management and Interpretive Plan is to provide information and interpretation at key locations through public and private partnerships, providing byway travelers with a sense of arrival and orientation at the gateways to the Deschutes National Forest via the byway through byway facilities, interpretive signs and trails, and connective graphics. The Byway's Management and Interpretive Plan was originally developed in 1996 by the Travel Information Council, Oregon Department of Transportation, Bend Area Chamber of Commerce, and the Deschutes National Forest. . This plan was updated in 2010. The vision is to have "The convenience and quality of facilities and the interpretive centers, visitor centers and museums that provide environmental and historical background are renown."

The purpose of this facility would be to serve as an important visitor contact point for the Forest Service, also to provide high quality information.. With the relocation of the Forest Supervisor's and District offices to NE Bend, the Welcome Station would be located in a key location for the public. As a major gateway to the Deschutes National Forest via the Cascade Lakes National Scenic Byway, the Welcome Station would benefit the byway traveler and and central Oregon communities. With over 2.5 million annual visitors to the Deschutes National Forest, it would be a place for Forest Service staff and community volunteers to engage byway travelers with high quality interpretation and information and an enhanced portal to public lands.

Figure 1: Vicinity Map – Proposed Cascade Lakes National Scenic Byway Welcome Station

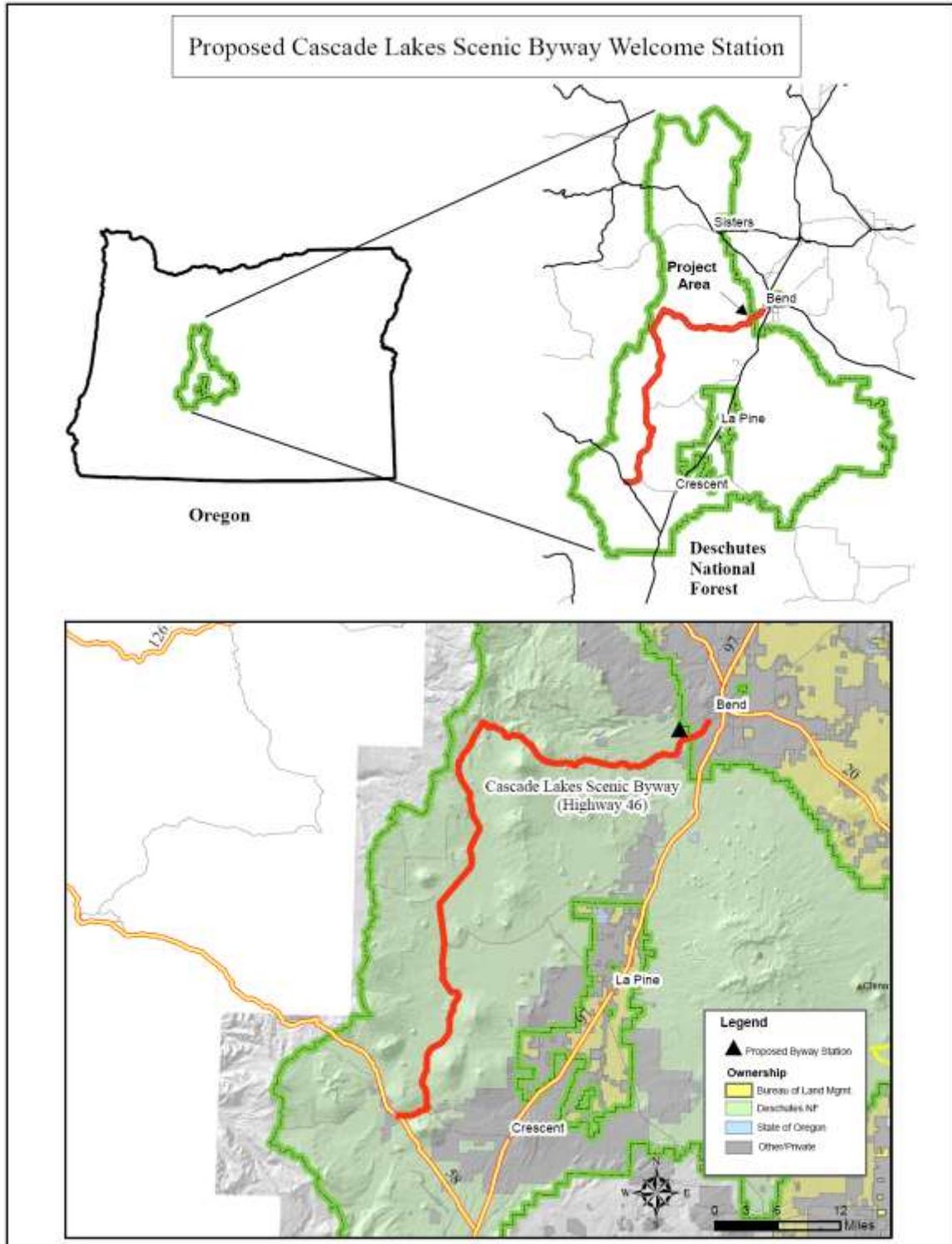


Figure 2: Welcome Station Location at Junction of Highway 46 and Forest Road 41



PROPOSED ACTION

Because of the high use that occurs in the Cascade Lakes Recreation Area and along the Deschutes River, this site provides a strategic location for the construction of a Scenic Byway Welcome Station (Figure 5). The following actions are being proposed:

- Construction of a rustic Cascadian rustic-style, one-story building, approximately 1,500 square feet.
- Construction of a drive-through parking area that would accommodate 25 cars and 2 to 5 recreational vehicles (RVs). The parking area would be intended for facility visitation only.
- Construction of an interpretive kiosk.
- A gate would be located at the entrance to prohibit parking for activities other than what the Welcome Station is intended for.
- The proposed building site would be located at an intersection and accessed by turn lanes coming from both directions; therefore, a speed reduction/turn lane would likely be constructed for safety concerns by the Oregon Department of Transportation (ODOT).

The facility would be Americans with Disabilities Act of 1990 (ADA) compliant, energy-efficient, and designed to have a low impact footprint on the site. Power would be supplied on-site or from a private utility source. For detailed information on the proposed action, refer to Chapter 2.

MANAGEMENT DIRECTION

Deschutes National Forest Land and Resource Management Plan (LRMP)

The Deschutes National Forest Land and Resource Management Plan (LRMP), 1990, provides management direction for the Forest. The project area is included within the Scenic View management area (MA-9). The project area is also within the Ryan Ranch Key Elk Area (KEA), which overlaps MA9 at this location.

Scenic Views (Management Area 9)

Provide high quality scenery representing the natural character of central Oregon. Landscapes seen from selected travel routes and use areas are to be managed to maintain or enhance their appearance. To the casual observer, results of activities either will not be evident, or will be visually subordinate to the natural landscape (LRMP, page 4-121). Foreground and midground scenic views are present.

M9-2: "Parking facilities, structures and other recreational facilities will normally be placed where they are not visible from significant viewer locations. Where it is not possible to screen recreational facilities, they will be designed to blend with the elements found in the natural landscape and will remain subordinate to the overall visual strength of the surrounding landscape.

Ryan Ranch Key Elk Area (KEA)

WL-43: Elk are found in certain key habitat areas. Within these areas, conditions will be provided to support... summering elk...wintering elk. Refer to Appendix 16-2 in the LRMP for the Ryan Ranch Key Elk Area.

WL-45: *Facilities will not be developed nor activities promoted which would encourage public use during the winter.*

PUBLIC INVOLVEMENT/SCOPING PROCESS USED

This project was made available for initial public comment on June 10, 2009 during a three week scoping period. A letter requesting public involvement was mailed to approximately 98 individuals, businesses, and organizations. Included in this mailing were the Confederated Tribes of Warm Springs, Burns Paiute Tribe, and The Klamath Tribes. Also included in the mailing was *The Bulletin*, the local newspaper of record that reported on the proposed project area. Announcement of the proposed action was included in the Schedule of Projects (Located on the Deschutes National Forest website) starting in the winter spring of 2009 issue.

In response to this scoping effort, comments were received from 1 individual, 1 State and 1 local agency, and 1 private organization. Comments received during scoping are a part of the Project Record. All comments received during the scoping period were read to ensure consideration during the analysis process. No written or verbal communication regarding the project was received from any of the three mentioned tribes. Comments received are supportive of this project.

Identification of Issues

Issues are points of discussion, debate, or dispute about environmental or social effects that may occur as a result of the proposed action. Issues provide focus and influence alternative development, including development of mitigation measures to address potential adverse effects. Issues are also used to compare the effects between the proposed action and the alternatives regarding a specific resource element. Issues are generally divided into Key Issues and Analysis Issues.

●**Key issues:** Issues used to develop alternatives or specific activities of the action alternatives. These are issues that respond to the Purpose and Need that cannot be resolved without some consideration of the trade-offs involved. Trade-offs can be more clearly understood by developing alternatives and displaying the relative impacts of these alternatives.

No key issues were identified during the scoping process. As a result, no additional alternatives were identified that would result in the development of another action alternative.

1.**Analysis issues:** Environmental components (resources) are considered in the Chapter 3 analysis. These issues: 1) are generally less focused on the elements of Purpose and Need, than Key Issues would be and 2) reflect the discussions of the effects of the proposed activities.

Although the various environmental components did not result in the full development and analysis of another action alternative, they are important for providing the Responsible Official with complete information about the effects of the project.

Wildlife: The following items were analyzed and compared by alternative:

- Threatened, Endangered, Candidate and Sensitive Species
- Management Indicator Species and Habitats
- Landbird Focal Species
- Birds of Conservation Concern

Botany and Invasive Plants: Potential effects to Proposed, Endangered, Threatened, and Sensitive (PETS) plant species were considered and no PETS plants were found in the project area. Proposed management activities have the potential to introduce or spread existing populations of invasive plants and invader species. Potential spread of invasive plants is a concern across the project area.

Other resources that are analyzed for effects are Scenery, Cultural Resources, Soils, Silviculture, Fish and Hydrology, and Recreation. Discussions of surveys and potential effects are presented in Chapter

CURRENT LAWS

Analysis and documentation has been done according to direction contained in the National Forest Management Act, the National Environmental Policy Act, the Council on Environmental Quality regulations, Forest Service NEPA regulations, The Endangered Species Act, Magnuson-Stevens Fishery Conservation And Management Act of 2000, the National Historic Preservation Act, the Clean Air Act, and the Clean Water Act, and the Rescissions act, Public Law 104-19, Section 504.

The following is a brief explanation of each of these laws and their relation to the current project planning effort.

The American Antiquities Act of 1906: The American Antiquities makes it illegal to appropriate, excavate, injure, or destroy any historic, prehistoric ruin or monument, or any object of antiquity, situated on lands owned by the Government of the United States, without permission of the Secretary of the Department of the Government having jurisdiction over the lands on which said antiquities are situated.

The National Historic Preservation Act of 1966, as amended: The National Historic Preservation Act requires Federal agencies to consult with American Indian Tribes, State and local groups before nonrenewable cultural resources, such as archaeological and historic structures, are damaged or destroyed. Section 106 of this Act requires Federal agencies to review the effects project proposals may have on the cultural resources in the Analysis Area.

The Endangered Species Act of 1973, as amended: The Endangered Species Act is to “provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, to provide a program for the conservation of such endangered species and threatened species, and to take such tests as may be appropriate to achieve the purpose of the treaties and conventions set forth in subsection (a) of this section.” The Act also states “It is further declared to be the policy of Congress that all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of this Act.”

The National Environmental Policy Act (NEPA) of 1969, as amended: The National Environmental Policy Act is “To declare a national policy which will encourage productive and enjoyable harmony between man and his environment, to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nations; and to establish a Council on Environmental Quality” (42 U.S.C. Sec. 4321). The law further states “it is the continuing policy of the Federal Government, in cooperation, to use all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of the present and future

generations of Americans. This law essentially pertains to public participation, environmental analysis, and documentation.

The Council on Environmental Quality (CEQ) promulgated the regulations for implementing NEPA (40 CFR parts 1500-1508). The CEQ has recently provided guidance on considering past actions in cumulative effects analysis (Memo to Heads of Federal Agencies, June 24, 2005).

The National Forest Management Act (NFMA) of 1976: The National Forest Management Act guides development and revision of National Forest Land Management Plans and has several sections to it ranging from required reporting that the Secretary must submit annually to Congress to preparation requirements for timber sale contracts. There are several important sections within the act, including Section 1 (purpose and principles), Section 19 (fish and wildlife resources), Section 23 (water and soil resources), and Section 27 (management requirements).

Multiple-Use Sustained-Yield Act of 1960: The Multiple Use – Sustained Yield Act of 1960 requires the Forest Service to manage National Forest System lands for multiple uses (including timber, recreation, fish and wildlife, range, and watershed). All renewable resources are to be managed in such a way that they are available for future generations. The harvesting and use of standing timber can be considered a short-term use of a renewable resource. As a renewable resource, trees can be re-established and grown in again if the productivity of the land is not impaired.

Migratory Bird E.O. 13186: On January 10, 2001, President Clinton signed an Executive Order (E.O. 13186) titled “Responsibilities of Federal Agencies to Protect Migratory Birds.” This E.O. requires the “*environmental analysis of Federal actions, required by NEPA or other established environmental review processes, evaluates the effects of actions and agency plans on migratory birds, with emphasis on species of concern.*”

Executive Order 13112 (invasive species): This 1999 order requires Federal agencies whose actions may affect the status of invasive species to identify those actions and within budgetary limits, “(i) prevent the introduction of invasive species; (ii) detect and respond rapidly to and control populations of such species... (iii) monitor invasive species populations... (iv) provide for restoration of native species and habitat conditions in ecosystems that have been invaded;... (vi) promote public education on invasive species... and (3) not authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species... unless, pursuant to guidelines that it has prescribed, the agency had determined and made public... that the benefits of such actions clearly outweigh the potential harm caused by invasive species; and that all feasible and prudent measures to minimize risk of harm will be taken in conjunction with the actions.”

PROJECT RECORD

This EA hereby incorporates by reference the Project Record (40 CFR 1502.21). The Project Record contains Specialist Reports and other technical documentation used to support the analysis and conclusions in this EA. Chapter 3 provides a summary of the Specialist Reports in adequate detail to support the decision rationale; appendices provide supporting documentation.

Incorporating these Specialist Reports and the Project Record help implement the Council on Environmental Quality (CEQ) Regulations provision that agencies should reduce NEPA paperwork (40 CFR 1500.4), that the document shall be “analytic rather than encyclopedic,” and that the document “shall be kept concise and no longer than absolutely necessary” (40 CFR 1502.0). The objective is to furnish adequate site-specific information to demonstrate a reasoned consideration of

the environment impacts of the alternative and how these impacts can be mitigated, without repeating detailed analysis and background information available elsewhere. The Project Record is available for review at the Bend-Fort Rock District Office, 1230 NE Third Street, Suite A-242, Bend, Oregon, Monday through Friday 7:45 a.m. to 4:30 p.m.

SCOPE OF PROJECT AND DECISION FRAMEWORK

The scope of the project and the decision to make are limited to: the construction of a Welcome Station and the associated development of a parking area and picnic area for the Welcome Station. new Nordic trail construction, additional grooming of trails, lighting of a trail for night skiing, development of a staging area for Nordic events, construction of an informational kiosk, construction of a day use shelter, construction of a vault toilet, and expansion of the parking area. Chapter 2 details the designs of these actions. The project is limited to National Forest System lands within the project area.

The Responsible Official for this proposal is the District Ranger of the Bend-Fort rock Ranger District of the Deschutes National Forest. Based on response from the 30-day comment period, any changes made for the Final EA, and the disclosed analysis with mitigation, the Responsible Official will make a decision and document it in a Decision Notice and Finding of No Significant Impact. The Responsible Official can decide to:

- Select Alternative 2 (Proposed Action), the action alternative that has been considered in detail, or
- Modify an the action alternative, or
- Select the no-action alternative, and
- Identify what mitigation measures would apply.

The decision regarding which alternative to implement will be determined by comparing how each factor of the project purpose and need is met by and the manner in which each alternative responds to the analysis issues.

CHAPTER 2

ALTERNATIVES

CHAPTER 2 – ALTERNATIVES

Changes between Draft and Final EA

- Minor edits and clarifications throughout
- Added information on project costs and air quality

INTRODUCTION

This chapter describes and compares the alternatives that were considered for the Cascade Lakes Scenic Byway Welcome Station Pproject. A description of each of the actions, or design elements of those actions, that are proposed in varying degrees in the fully developed action alternative is provided. This relationship is further discussed under each resource in Chapter 3, “Environmental Consequences.”

Precision of Information and Adjustments

Quantifiable measurements, such as feet and acres used to describe the alternatives and effects are based on the best available information. The analysis presented in this EA is based on consideration of the full extent of the measurements depicted in the action alternative. Information used in designing the action alternative was generated from a mix of field reconnaissance, use of aerial photos, and various resource-specific databases.

ALTERNATIVE DESCRIPTIONS

Alternatives were developed by the Interdisciplinary Team to address the Purpose and Need. Two alternativess are analyzed in detail. The action alternative meets the purpose and need for action.

Alternative 1 (No Action)

Alternative 1 is the No Action alternative. This alternative is required by law and serves as a baseline for comparison of the effects of the alternatives. Under Alternative 1, there would be no new Welcome Station constructed. The same level of interpretation and information would remain.

No change would occur in current management direction or in the level of ongoing management activities, such as thinning and hazard tree removal.

Alternative 2 (Proposed Action)

Alternative 2 is the proposed action. This alternative was developed to address the purpose and need for the project. Table 1 displays the need for action and how that need would be addressed. Figure 5, page **Error! Bookmark not defined.** provides a visual display of the proposal for the project.

Table 1: Alternative 2 (Proposed Action) - Proposed Actions for the Cascade Lakes Scenic Byway Welcome Station

Need for Action	Proposal for Action
To provide a facility for the dissemination of Scenic Byway recreation information, conservation education, and interpretation.	An approximate 1,500 foot facility that promotes sustainable site practices and compliments the landscape character of the surrounding area
To accommodate visitors to the Welcome Station and provide designated parking.	Designate parking for approximately 25 cars and 3-5 recreational vehicles (RVs). Approximately 0.5 acres would be affected.
To provide maps and general information by constructing an informational and interpretive kiosk.	Roofed signboard adjacent to parking area

The facility and associated parking would be designed to leave trees in all areas that would not have disturbance activities.

CONNECTED ACTIONS

Connected actions are actions associated with other proposed activities. These activities would not occur unless the activities proposed in Alternative 2 (Proposed Action) occur. These connected actions are to discourage casual and recreational use within the Ryan Ranch Key Elk Area.

- **Deceleration (turn) Lane:** For those exiting Highway 46 to the Welcome Station from Bend. The turn lane would provide a measure of safety when turning from the highway by allowing through traffic to maintain the speed limit, reducing traffic congestion.
- **Split Rail Fence:** To delineate the facility and parking area from the surrounding area. The fence would provide visitors to the facility a specific area for use. A fence would also discourage recreationists from using the parking area for staging activities that would utilize the Key Elk Area, such as mountain biking, cross country skiing, or hiking. A fence would also discourage the development of additional user created mountain bike trails.
- **Gate:** A gate would be installed at the entrance to the Welcome Station from Highway 46. The gate would be closed and locked during non-operational hours throughout the year. This reduces the potential for visitors to use the parking lot to access the trails during evenings and early mornings and discourages potential winter recreational use from the facility.

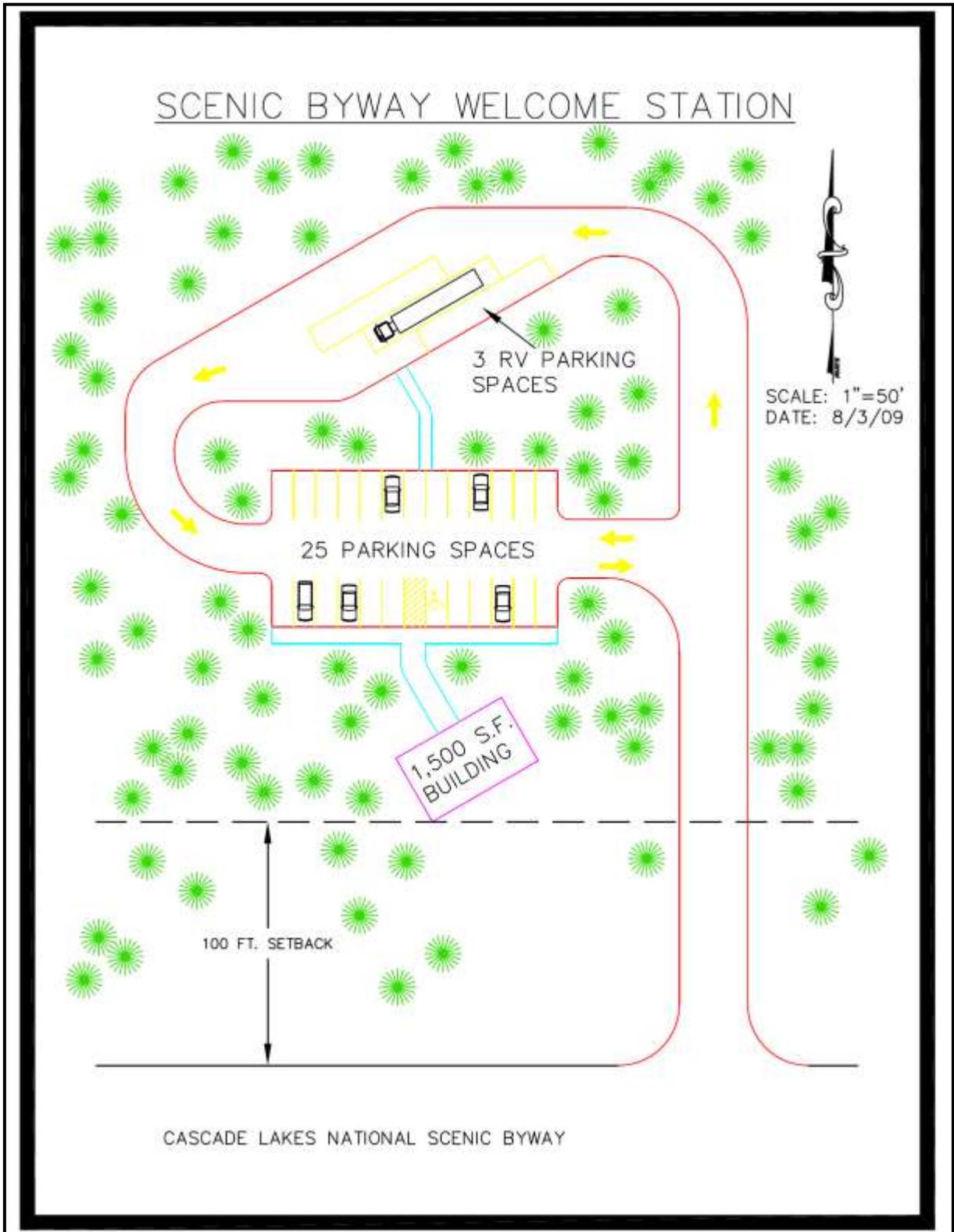
Figure 3: Proposed Cascade Lakes Scenic Byway Welcome Station Site (Looking Northeast from Forest Road 41 Junction)



Figure 4: Proposed Cascade Lake Scenic Byway Welcome Station Site (Looking Northwest from Forest Road 41 Junction)



Figure 5: Alternative 2 (Proposed Action) Scenic Byway Welcome Station



COMPARISON OF THE ALTERNATIVES

Table *** compares the alternatives, Alternative 1 (No Action) in relation to the activities proposed in Alternative 2 (Proposed Action). Measurements are approximate.

Table 2: Comparison of the Alternatives

Proposed Activity	Alternative 1 Existing	Alternative 2 Proposed
Entrance/Exit Road	None	200 feet
Parking Lot	None	27-30 spaces
Welcome Station	None	1,500 square feet
Informational Kiosk	None	Kiosk
Entrance Road Gate	None	1
Split Rail Fence	None	3 feet high, 1,400 feet in length
Trees Per Acre	100-120 Trees	25-45 Trees
Construction Costs		
Building Costs	None	\$450,000
Access Road and Highway Safety Improvements	None	\$210,000
Site Work	None	\$255,550

* Funding Source: Federal Highway = 80%; Forest Service = 20%.

RESOURCE PROTECTION MEASURES (MITIGATIONS)

Alternatives are designed to be consistent with the desired condition specified in the LRMP and the standards and guidelines contained therein. Mitigation measures are an integral part of the action alternative. The following would be applied to reduce potential adverse impacts of Alternative 2 (Proposed Action). Mitigation measures are considered in the effects discussions of Chapter 3.

The proposed action would comply with direction in relevant laws and policies, and the standards and guidelines in the Deschutes National Forest Land and Resource Management Plan as amended by the Eastside Screens.

Wildlife

1. If exterior lights are required for human safety at the welcome station, motion detector lights that stay on for a minimum time will be installed and directed away from ungulate habitat.
2. The welcome station will include interpretive information on maintaining ungulate winter habitat security, and will include ways to avoid potential negative effects from recreational use (i.e., keeping dogs on leash, staying on trails, observing or reducing vehicle speeds, observing area closures).
3. From December 1-March 31, signs will be installed at the visitor parking lot prohibiting parking to access the trails for dog walking, hiking, mountain biking, and cross-country skiing.
4. Design parking lot and facility so that outdoor public use, including dog walking, will occur away from the northern edge of the site to reduce potential disturbance to wildlife, primarily elk.
5. Signs in the visitor parking lot will limit parking time to approximately one-half hour.
6. The following seasonal restrictions will be implemented within ¼ mile of newly discovered nest sites or activity centers for MIS Raptors during welcome station construction related activities:
 Northern Goshawk and Red-tailed hawk: March 1 through August 31
 Cooper’s hawk and Sharp-shinned hawk: April 15 through August 31

Soils

1. Include Best Management Practices as part of the project design. Apply appropriate erosion-control measures to all ground disturbing activities associated with the construction and development of new facilities, as described in General Water Quality Best Management Practices (Pacific Northwest Region, 1988).
2. Facilities will be designed so that concentrated runoff from impervious surfaces such as the parking lot and roofs will be collected on-site using retention, dissipation, infiltration, and separation structures as measures to treat and control stormwater..

Botany – Invasive Species

1. Use clean-equipment contract clauses to minimize risk of introduction and spread of invasive plant species by contractors.
2. Any fill materials will be gathered only at weed-free quarries or other weed-free source sites.
3. Minimize soil disturbance and retain native vegetation, in and around project activity areas, to the extent possible consistent with project objectives.
4. To the extent feasible, manually remove all invasive plant species from the project site immediately prior to initiation of project-related ground-disturbing activities. As necessary, give priority to plants likely to flower and fruit during project implementation.

Scenic Views

1. Native vegetation will be used to provide a visual buffer between the visitor parking area and Highway 46.

Smoke Management

1. Burning will be conducted under the State of Oregon Smoke Management System to track smoke and coordinated through the Oregon Department of Forestry.

ALTERNATIVES CONSIDERED BUT NOT FULLY ANALYZED

Three other alternatives were considered and the following discussion provides rationale for why they were not analyzed further.

An alternative was considered that would have provided additional parking and a trailhead for connecting to a nearby mountain bike trail. There is currently no trailhead parking or existing trails that begin or end at the proposed site. The proposed development for parking at the Welcome Station would be short-term parking for byway visitors seeking interpretation and information for the Cascade Lakes National Scenic Byway and the Deschutes National Forest. The LRMP explicitly states for recreation management in the Ryan Ranch Key Elk Area (WL-45, page 4-56) that *“Facilities will not be developed nor activities promoted which would encourage public use during the winter.”* A trailhead would encourage dispersed recreational use that would originate from this site during the winter, primarily mountain biking and cross country skiing. Because that use would not be consistent with LRMP direction, it was not analyzed in detail.

An alternative was considered that would have developed a Welcome Station at the existing North Gateway interpretive site and viewpoint. This site is located two miles to the west past the junction

of Highway 46 and Forest Road 41 on the south side of Highway 46. This site was not selected because 1) most cars that are accessing the scenic byway from Bend would need to turn across traffic, 2) it is located at a higher elevation with the likelihood of more snow, and 3) if power from an existing power source is utilized, the cost to install power would be prohibitive.

An alternative was considered that would have developed a Welcome Station on National Forest System land at the urban interface, which is closer to Bend. This site would have had a more urban setting, rather than a desired remote forest setting. Additional traffic could cause congestion in areas that already have more traffic use than the site for the Proposed Action. Therefore, it was not analyzed in detail.

CHAPTER 3

ENVIRONMENTAL CONSEQUENCES

CHAPTER 3 – ENVIRONMENTAL CONSEQUENCES

INTRODUCTION

This section summarizes the physical, biological, social, and economic environments of the affected project area and the potential changes to those environments due to implementation of the alternative. It also presents the scientific and analytical basis for comparison of the alternatives. For the cumulative effects analysis, consideration of past actions followed guidance provided by the Council of Environmental Quality (June 24, 2005 Memorandum from James L. Connaughton, Project Record). Where pertinent, analysis is tiered to the FEIS of the LRMP. Probable effects are discussed in terms of environmental changes from the existing condition and include qualitative and quantitative assessments of direct, indirect, and cumulative effects.

Direct effects: Those effects that occur at the same time and in the same general location as the activity causing the effects.

Indirect effects: Those effects that occur at a different time or different location than the activity to which the effects are related.

Cumulative effects: Those effects that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions.

PAST, PRESENT, AND REASONABLY FORESEEABLE FUTURE ACTIONS

The following is a summary of past, ongoing, or reasonably foreseeable actions that, when relevant to the environmental analysis of each resource, were considered during the cumulative effects analysis.

- Ongoing road maintenance
- Ongoing roadside danger tree removal
- Ongoing recreational use on nearby trails
- Personal Use Firewood CE: Roadkill sale, approximately 3 miles west of project area.
- Ryan Ranch Aspen and Willow Enhancement CE: 5 acres remaining on east side of Deschutes River. Expected completion 2010.
- Ryan Ranch Wetland Restoration CE: Expected implementation 2010.
- Sunriver to Bend paved trail system: Expected implementation 2010

Specialist reports, prepared for this project, are located in the Project Record (40 CFR 1502.21). The project record is available at the Bend-Ft. Rock Ranger District office in Bend, Oregon.

SCENIC VIEWS

MANAGEMENT DIRECTION

The Forest Plan for the Deschutes National Forest provides standards and guidelines for management areas. The Scenic Views management areas are used to describe the desired future conditions of various settings and how these are to be met by various activities or actions. In addition, there is scenic resource direction and protection for nationally designated areas such as Scenic Byways.

The Forest Service implementing regulations currently establish a variety of Scenic Integrity Levels for Scenic Views – MA9. Scenery Management Objectives are defined in terms of Scenic Integrity Levels which describe existing conditions and whether the landscape is visually perceived to be “complete” or not. The most complete rating, or highest rating, for Scenic Integrity Levels means having little or no deviation from the landscape character that makes it appealing and attractive to visitors and local residents. In addition to describing existing conditions, Scenic Integrity Levels also describe the level of development allowed and ways to mitigate deviations from the area’s landscape character. The standard for this project is: Natural Appearing Landscape with High Scenic Integrity Level (formerly Retention, MA 9, SV-1 Foreground, SV-3 Middleground) along both sides of Highway 46.

ANALYSIS METHODS

Methodology used for analyzing impacts to scenic resources is the Scenery Management System which uses “Landscape Aesthetics: A Handbook for Scenery Management” (1995). The Scenery Management System incorporates both the natural and human processes into the ideas of managing for ecosystems.

EXISTING CONDITION

The proposed scenic byway welcome station, access drive, and parking area would be located on approximately 2 acres. It is adjacent to the Scenic Byway (Highway 46) at the junction with Forest Road 41 that accesses Deschutes River recreation sites and Sunriver.

The existing views from Highway 46 to the project area are a recently thinned forest of blackbark ponderosa pine, planted approximately 40 years ago. The topography of the site is fairly level and there are no dramatic features visible from the road.

Views from the site are:

- To the east, the highway or across the highway to Forest Road 41. The intersection is a two-lane highway with a turning lane that provides access to Forest Road 41 from Bend.
- To the north, thinned black-bark pine plantation.
- To the west, unthinned ponderosa pine sloping down and away from the project area.
- To the south, thinned ponderosa black-bark pine that ends at larger, unthinned ponderosa pine.

ENVIRONMENTAL CONSEQUENCES

Alternative 1 (No Action)

Under this alternative, the project area would remain undeveloped. There would be no direct, indirect, or cumulative effects on scenic views. The byway traveler would need to proceed into Bend to obtain scenic byway and recreation information. Interpretive information would be limited to established areas along the scenic byway.

Alternative 2 (Proposed Action)

The project area would be developed with the construction of a Cascadian rustic style, one-story, approximate 1,500 square foot building. This facility would setback at least 100 feet from Cascade Lakes Highway. An informational kiosk would be constructed between the parking area and the welcome station facility. Short-term visitor parking would allow for an expected 25 cars and 2 to 5 recreational vehicles (RVs). The facility and associated parking would be designed to leave trees in all areas that would not have disturbance activities. The facility would be compliant with the Americans with Disabilities Act (ADA, 1990) and would be energy efficient with a low impact footprint on the site. A deceleration (turn) lane would be constructed on the highway for those exiting to the welcome station from Bend.

The architecture and elevation of the building would blend in with the surrounding landscape as much as possible. It would have some visibility from the highway with advance warning signing. The parking area would be screened from the highway with existing or new vegetation. A split rail fence would be constructed around the facility and parking area to provide a rustic feel, define the site, and limit visitor use to the areas within the fenced area.

This project would be consistent with LRMP standards and guides M9-1 and M9-2 (LRMP page 4-121).

- M9-1: New recreational developments and changes to existing developments are permitted as long as they are consistent with the desired visual condition. When viewed from significant viewer locations, recreational facilities will meet the established visual quality standards. For viewer locations within the recreational development being viewed, established visual quality standards may not always be met.
- M9-2: Parking facilities, structures, and other recreational facilities will normally be placed where they are not visible from significant viewer locations. Where it is not possible to screen recreational facilities, they will be designed to blend with the elements found in the natural landscape and will remain subordinate to the overall visual strength of the surrounding landscape.

There would be no negative direct or indirect effects on scenic views. Therefore, there would be no cumulative effects.

RECREATION

INTRODUCTION

This report specifically addresses the effects of the proposed Byway Welcome Station on the existing social character as well as on recreation opportunities and experiences for the project area.

EXISTING CONDITION

A developed and signed mountain bike trail is located within sight of the proposed Welcome Station. Across the highway from the southeast corner of the site, at the junction of Highway 46 and Forest road 41, is a graveled parking area that is used as a starting/ending point, primarily by mountain bikers, cross country skiers, and runners. This is also a recreation self-service pass outlet where fees are collected in a fee tube. Road 41 accesses many day use areas along the Deschutes River, including waterfalls and hiking, biking, and horse trails that parallel the river.

Highway 46 provides the main access to Mt. Bachelor, campgrounds, the many lakes and associated day use areas, as well as many Wilderness and non-Wilderness trailheads. Recreation use along all points of the Cascade Lakes Byway has increased since the early-1980s, when Bend and central Oregon became destination points for a variety of year-round outdoor pursuits. With over 2.5 million annual visitors to the Deschutes National Forest, this site would serve as a gateway for recreation and scenic byway information and interpretation to byway travelers. With abundant water, and the Cascade Mountains creating a spectacular backdrop, the greater Wickiup and Crane Prairie areas provide opportunities for camping (developed and dispersed), motorized and non-motorized boating, angling, and wildlife viewing. These are only a handful of the more popular activities that thousands of people come to experience and enjoy every year.

ENVIRONMENTAL CONSEQUENCES

Alternative 1 (No Action)

Direct and Indirect Effects: A Welcome Station would not be constructed. With the Deschutes Supervisor's Office and Bend-Fort Rock Ranger District office being relocated from their current locations to northeast Bend (old Bend-Pine Nursery site), most of the visiting public would need to obtain information, maps or other items at this location. Depending on which way visitors enter Bend, it is estimated that the public would add an additional 30 to 45 minutes to their travel time if required to go to the new office location.

Alternative 2 (Proposed Action)

Direct, Indirect, and Cumulative Effects: This location would serve the public that utilize Highway 46 as the main destination route to the high lakes area of the Bend-Fort Rock Ranger District. Even though the primary purpose of the facility would be to serve those that utilize the Scenic Byway, those that recreate along or access Bend from Forest Road 41 would also benefit from the Welcome Station as a facility for obtaining Scenic Byway or other Forest information and permits. For the visiting public utilizing the Cascade Lakes Scenic Byway to access Forest roads, resorts, lakes, trails or other destinations, this facility would better serve the public.

The Welcome Station would not provide other than short-term parking of approximately 30 minutes and only for those using the facility. Parking for the Welcome Station's intended use is for those

visitors that stop for a brief visit and continue on their way. It is not intended for uses other than the facility.

A mountain bike trail that is adjacent to the proposed site connects with a trail across Highway 46 that also crosses Road 41 very near this location. It is unlikely that a new facility would detract from their recreation experience.

FISH AND HYDROLOGY

SUMMARY OF FINDINGS FOR PROPOSED, THREATENED, ENDANGERED, AND SENSITIVE FISH SPECIES

Table 3 displays the species considered in the biological evaluation (BE) of this project. There are no threatened or endangered aquatic species or habitat present within the project area.

Table 3: Threatened, Endangered, and Sensitive (TES) Fish Species Considered in Analysis

Species	Scientific Name	Status ¹	Occurrence	Effects Determination ²
Columbia Basin Redband Trout	<i>Oncorhynchus mykiss gairdneri</i>	S	None	Alternative 1 – NI Alternative 2 – NI

1. S = Sensitive species from Regional Forester's list

2. NI = No Impact

Alternative 1 – NI – No Impact

Alternative 2 – NI – No Impact

EXISTING CONDITION

The proposed project area is approximately one mile northwest of the Deschutes River, a Wild and Scenic River and State Scenic Waterway. The project area is outside of the Wild and Scenic River corridor. The project area is within the 147,978 acre Pilot Butte watershed.

The project area lies within lands to be managed in accordance with the Inland Native Fish Strategy (INFISH), which amended the Deschutes National Forest Land and Resource Management Plan (LRMP) in 1995. Management direction within INFISH requires RHCAs to be delineated for watersheds. RHCAs are portions of watersheds where riparian-dependent resources receive primary emphasis, and management activities are subject to specific standards and guidelines. The project area is outside of any RHCAs. There are no perennial or intermittent streams, wetlands or riparian areas within the project area.

MANAGEMENT DIRECTION

DESCHUTES NATIONAL FOREST LRMP

Applicable Standard and Guideline: RP-8: Evaluate the cumulative effects of proposed projects on water quality, runoff, stream channel conditions, and fish habitat and adopt measures to avoid adverse effects to these resources.

ENVIRONMENTAL CONSEQUENCES:

Alternative 1 (No Action)

No activity would take place. There would be no change in the direct, indirect, or cumulative effects to water or fisheries resources by taking no action. This alternative would have **No Impact** to redband trout.

Alternative 2 (Proposed Action)

The nearest water resource or riparian area is approximately one mile away from the proposed project area. There would be no direct or indirect effects to water resources, fisheries, or riparian areas because of the distance from ground disturbance and the relatively flat topography to water. The small size of the project (less than 2 acres impacted, 0.001% of the watershed) would have no measurable effect to evapotranspiration of water within the watershed; there would be no cumulative effects to river flows in the Deschutes River. There would be no effects to Essential Fish Habitat (EFH), **No Impact** to redband trout and **No Effect** to threatened, endangered, proposed, or candidate fish species.

The Deschutes River is listed as a water quality impaired river (Oregon Department of Environmental Quality 303(d) list). This alternative would have no effects to the parameters for which it is listed. There would be no effects to any other 303(d) listed water body. There would be no effects to the INFISH Riparian Management Objectives, which for a forested system are pool frequency, water temperature, large woody debris, and stream width/depth ratio.

This alternative meets INFISH standards and guidelines as it maintains the Riparian Management Objectives. There would be no effects to Executive Order 11988 (Floodplains) and Executive Order 11990 (Wetlands). The effects analysis was done at the 5th field watershed scale.

SOILS

Project design would include appropriate Best Management Practices (BMPs) and resource protection measures to control soil erosion during the construction phase activities. The Forest Service would monitor and maintain these management facilities to avoid or minimize erosion problems where surface runoff from disturbed sites may occur in adjacent delivery areas.

MANAGEMENT DIRECTION

The Pacific Northwest Region developed soil quality standards and guidelines that limit detrimental soil disturbances associated with management activities (FSM 2520, R-6 Supplement No. 2500-98-1). This Regional guidance supplements the Deschutes Land and Resource Management Plan (LRMP) standards and guidelines and provides policy for planning and implementing management practices which maintain or improve soil quality. It is consistent with LRMP interpretations for standards and guidelines SL-3 and SL-4 that limit the extent of detrimental soil conditions within activity areas. Standard and Guideline (SL-4) directs the use of rehabilitation measures when the cumulative impacts of management activities are expected to cause damage exceeding soil quality standards and guidelines on more than 20% of an activity area. Standard and Guideline (SL-5) limits the use of mechanical equipment in sensitive soil areas.

The primary objective of this management direction is to ensure that management activities are planned and conducted so that on-site loss of soil productivity is minimized on lands which are not officially dedicated to permanent facilities necessary to achieve other land management objectives. Soil quality standards and guidelines do not apply to intensively developed sites, such as recreation facilities and administrative sites, because they could not be constructed to result in limited disturbance below specific thresholds. Soils dedicated to these land uses remove land from production and preclude other uses of the soil for as long as these facilities remain in use.

SCOPE OF THE ANALYSIS

The discussion of soil effects will be focused on the proposed location of the welcome station building and parking area facilities. A qualitative assessment of potential soil impacts was conducted to ensure that acceptable soil productivity is maintained for the growth of desired vegetation on undeveloped portions of the proposed site.

The analysis also considered the effectiveness and probable success in project design that includes Best Management Practices (BMPs) to control surface erosion during and following construction activities.

LANDSCAPE CHARACTERISTICS AND EXISTING CONDITION OF THE SOIL RESOURCE

The proposed development site is located on Soil Map Unit Code MK (Soil Resource Inventory, Deschutes National Forest, 1976). The landscape is characterized by gentle-to-moderately sloping glacial uplands and uneven lava plains which lie below cinder cones and buttes in surrounding areas. Mean annual precipitation averages between 12 to 15 inches. The proposed five acre parcel is located on flat to nearly level ground.

A moderately thick layer (20 to 40 inches) of volcanic ash and pumice deposits have covered glacial till and older soils derived from basaltic lavas. Soil surface layers consist of non-cohesive (loose),

loamy sands with very little structural development due to the young geologic age of the volcanic parent materials. The underlying glacial deposits consist of sands and gravels that have been reworked by running water. These glacial materials influence water transport and the growth of vegetation. Dominant soils are moderately deep (20 to 40 inches) and deep (greater than 40 inches) with moderate productivity potential. There are no steep slopes (greater than 30%) or sensitive soils with high ratings for surface erosion or potentially wet soils that would require site-specific mitigation. Soils on the proposed site meet criteria for land suitability that would allow them to be regenerated or resist irreversible resource damage.

These volcanic ash-influenced soils have sandy textures with high infiltration and percolation rates that account for low amounts of overland flow. Most of the water yielded from these lands is delivered to streams as deep seepage and subsurface flows that emerge at lower elevations. Surface erosion by water is generally not a concern because representative soils have low-to-moderate erosion hazards on gentle to moderately sloping terrain which is naturally stable. At the present time, soils are adequately protected by vegetation and organic litter layers to control erosion rates within tolerable limits. Dominant soil types are sufficiently resistant to erosion to permit limited and temporary exposure of bare soil. Soils derived from volcanic ash are easily eroded where water becomes channeled on or adjacent to previously compacted sites such as road surfaces and logging facilities.

The existing condition of the soil resource has mainly been influenced by existing logging facilities which were used for past timber harvest and biomass thinning activities. Most project-related impacts to soils occurred on and adjacent to temporary roads, log landings and primary skid trails where mechanical disturbances removed vegetative cover, displaced organic surface layers, or compacted soil surface layers. Research studies and local soil monitoring have shown that soil compaction and soil displacement account for the majority of detrimental soil conditions resulting from ground-based logging operations (Page-Dumroese, 1993; Geist, 1989; Powers, 1999; USDA, Deschutes Soil Monitoring Reports). Much of the random disturbance between main skid trails and away from log landings has decreased naturally over time. Frost heaving and freeze-thaw cycles have gradually restored soil porosity in areas with slight to moderately compacted layers near the ground surface. The establishment of vegetative ground cover and the accumulation of litter and organic matter continue to improve areas of displaced surface soil.

No classified system roads or recreation trails are currently located within the boundaries of the 2-acre parcel proposed for this project.

Adequate amounts of coarse woody debris and surface organic matter currently exist to protect mineral soil from erosion and maintain the soils ability to retain moisture and provide both short and long-term nutrient supplies for the growth of vegetation on undeveloped portions of the project area.

SOIL PRODUCTIVITY ISSUES OR CONCERNS

There were no scoping comments received from the public or other agencies regarding soil productivity issues associated with the development of the welcome station facilities. There are no soil-related issues or extraordinary circumstances because the construction of a new building and parking area preclude other uses of the soil for as long as these management facilities remain in use. None of the proposed activities would occur on landtypes that contain sensitive soils with a high hazard for surface erosion or potentially wet soils with high water tables that would require site-specific mitigation. Project design includes Best Management Practices (BMPs) to control surface erosion during and following ground disturbing activities.

ENVIRONMENTAL CONSEQUENCES

Alternative 1 (No Action)

Direct and Indirect Effects: No additional land would be removed from production to develop a welcome station building and parking area facilities. No trees or other vegetation would be cleared to accommodate the welcome station facilities. The extent of exposed mineral soil would not increase from construction activities, so erosion control measures would not be necessary.

Soil productivity would not change appreciably unless a stand-replacing wildfire causes intense ground-level heating long enough to detrimentally alter soil physical, chemical and biological properties.

Alternative 2 (Proposed Action)

Direct and Indirect Effects: There are no soil-related extraordinary circumstances associated with the proposed actions because construction activities would not disturb sensitive soils with a high erosion hazard or potentially wet soils that would require special mitigation. The proposed site is located on nearly level and very stable ground that is well suited for development. Surface erosion by water is not a primary concern because dominant soils have a low erosion hazard rating. Some loss of surface materials can be expected, but soils are sufficiently resistant to erosion to permit limited and temporary exposure of bare mineral soil during the initial construction phase.

Construction activities inevitably disturb soil properties and alter soil-hydrologic function by removing the natural vegetation, displacing the organic topsoil, and compacting subsoil materials. Excavation work exposes subsoil that is often used for backfill around the foundation perimeter and for grading the terrain around new facilities. These physical disturbances increase the potential for surface runoff and accelerated erosion. The greatest potential for accelerated soil erosion occurs during the construction phase when the largest area of disturbed soil is exposed to precipitation events. Once completed, the area of the footprint covered by the structure is no longer susceptible to erosion. The surrounding perimeter of exposed soil would require temporary or permanent erosion control measures to provide surface cover and prevent off-site impacts to soils in adjacent areas. The parking lot would be paved, so there is no potential for long-term erosion problems following the completion of this facility.

Best Management Practices (BMPs) are included as part of the project design to control surface runoff and soil erosion during the initial construction phase activities (General Water Quality Best Management Practices, Pacific Northwest Region, 1988). Application of these erosion-control BMPs are considered to be routine practices that have been used on numerous similar projects. They are tiered to the Soil and Water Conservation Practices Handbook (FSH 2509.22) which contains erosion control measures that have proven effective in protecting and maintaining soil and water resource values. The types and locations of soil disturbance are not expected to cause any indirect, off-site impacts to soils in adjacent areas, such as loss or burial of productive surface soils.

Cumulative Effects: The above discussion describes why there are no extraordinary circumstances associated with the combined effects of past and current disturbances and those anticipated from implementing the proposed construction activities.

No other ground-disturbing management activities are currently scheduled within the boundaries of the 2-acre parcel proposed for this project.

The Noxious Weed Control EIS would likely implement various treatments to control invasive plants in site-specific areas. These future activities are not expected to cause any detrimental changes in soil properties. Hand removal of individual plants would result in small areas of soil displacement or the mixing of soil and organic matter which would not meet criteria considered detrimental to soil productivity. It is also unlikely that herbicide treatments would cause any adverse direct or indirect effects to soil productivity (18 Fire Herbicide Treatment Environmental Assessment, Soils Report, 2005).

The Forest Access Management Plan will address travel management issues and the need to change current policy and management direction. The proposed new direction would identify a system of roads and trails for motorized travel and eliminate cross-country motorized travel except on designated routes. Future implementation of this new direction would have a beneficial effect on the soil resource because it would help prevent cumulative increases in the extent of detrimental soil conditions in random locations off authorized roads and trails.

Other foreseeable future activities include continued recreation use and standard road maintenance. Impacts from dispersed recreation activities are usually found along existing roads and trails where vegetation has been cleared on or adjacent to old logging facilities in past harvest areas. Future impacts from dispersed camping and incidental use by hikers and mountain bikers are expected to occur in similar locations. Soil disturbances from future recreation use are not expected to have a measurable effect on site productivity. Road maintenance activities would reduce accelerated erosion rates where improvements are necessary to correct road drainage problems.

The cumulative effects from the proposed actions combined with all past, present, and reasonably foreseeable future activities would maintain acceptable soil productivity for the growth of desired vegetation on undeveloped portions of the project area.

MANAGEMENT CONSISTENCY

Management allocation areas MA-9 and MA-11 do not contain specific standards and guidelines for the soil resource in this area.

The primary objective for the soil resource is to plan and conduct management activities so that on-site loss of soil productivity is minimized on lands which are not officially dedicated to permanent facilities necessary to achieve other land management objectives. Management direction for the soil resource applies to lands where vegetation and water resource management are the principle objectives.

Soil quality standards and guidelines do not apply to intensively developed sites, such as recreation facilities and administrative sites (FSM 2520, R-6 Supplement No. 2500-98-1) because they could not be constructed to result in limited disturbance below specific thresholds. Soils dedicated to these land uses remove land from production and preclude other uses of the soil for as long as these facilities remain in use.

Construction activities would not disturb sensitive soils with a high erosion hazard or potentially wet soils that would require special mitigation. Soils are sufficiently resistant to erosion to permit limited and temporary exposure of bare soil during development. The types and locations of soil disturbance are not expected to cause any indirect, off-site impacts to soils in adjacent areas, such as loss or burial of productive surface soils. Project design would include appropriate Best Management Practices (BMPs) to control surface erosion during and following construction activities. The parking lot would

be paved, so there is no potential for long-term erosion problems following the completion of this facility.

The proposed actions are not expected to create any impacts that would cause irreversible damage to soil productivity. There is low risk for the proposed activities to cause soil mass failures (landslides) due to the inherent stability of dominant landtypes and the lack of seasonally wet soils on steep slopes. Careful planning and the application of erosion-control Best Management practices would be used to minimize surface erosion problems and prevent irreversible losses of the soil resource.

The development and use of management facilities is considered an irretrievable loss of soil productivity until their functions have been served and disturbed sites are returned back to a productive capacity.

FORESTED VEGETATION

INTRODUCTION

There are no large, old trees on the project area. The site was planted with ponderosa pine seedlings approximately 40 years ago. In 2007 it was thinned from below to 125 to 150 trees per acre and brush on the site was mowed in 2007 to reduce the fire hazard. Residual tree size ranges from 10 to 14 inches diameter at breast height (dbh) with an average diameter of approximately 12 inches dbh. While many of the trees meet minimum merchantable diameter specifications, most of the trees do not meet the minimum merchantable height to consider selling them as sawtimber. There is presently an estimated 1,000 merchantable board feet per acre. Most trees on the site would meet both minimum merchantable diameter and height criteria in an estimated 10 to 15 years.

ENVIRONMENTAL CONSEQUENCES

Alternative 1 (No Action)

Direct and/or Indirect Effects: Management would continue to allow trees to grow for potential timber and wood fiber production. It is likely that trees would not be thinned to reduce stand density for approximately 10 years, maintaining the conditions that currently exist along this portion of the Cascade Lakes National Scenic Byway. The current stand condition of relatively uniform size, immature trees would remain unchanged.

Alternative 2 (Proposed Action)

Direct and Indirect Effects: The proposed action would remove approximately 2 acres of nearly 160,000 acres from timber production in Management Area 9. This is an insignificant number of acres that are considered suitable for timber production. Trees would be retained for aesthetic reasons where feasible to reduce the visual impact of the new parking facilities and building. Site productivity would be reduced once the building and parking facilities are constructed and would change the emphasis at the immediate site from timber production.

The proposed action would remove approximately 1,500 board feet of volume. Trees would be left in portions of the 2 acres that would not be impacted by the Welcome Station, parking area or access road. Much of the material could currently be sold as non-sawtimber. If a market exists when the project is implemented, trees not meeting merchantability specifications could be utilized as firewood or biomass.

Cumulative Effects: With the exception of the previous planting and the non-commercial thinning and mowing in 2007, there are no records of prior vegetation activities within the five acre site. Brush in the area to the east was mowed in 1997.

A 115 acre stand of trees to the south of Highway 46 is scheduled to be non-commercially thinned, handpiled, and mowed under the East Tumbull Environmental Assessment. This activity would open the stand up, with tree densities similar to the densities that are currently in the proposed project area. This would allow the trees to develop into large ponderosa pine and provide a desired condition as provided by the LRMP. Thinning stands adjacent to the Welcome Station could have a beneficial visual effect for the Welcome Station project. Removing 2 acres of trees would have no significant cumulative effect on the amount of forested area.

AIR QUALITY

The [Clean Air Act](#) requires EPA to set [National Ambient Air Quality Standards](#) for pollutants considered harmful to public health and the environment. The EPA Office of Air Quality Planning and Standards has set National Ambient Air Quality Standards for six principal pollutants, which are called "criteria" pollutants. These include Carbon Monoxide, Lead, Nitrogen Dioxide, Particulate Matter (solid material contained in smoke), Ozone, and Sulfur Dioxide.

National Ambient Air Quality Standards (NAAQS)

National Ambient Air Quality Standards include standards for total suspended particulates. Particulate matter (PM) is measured by two diameter classes: 10 microns in diameter or less (PM10), and 2.5 microns in diameter or less (PM2.5). Both classes contribute to regional haze and reduced visibility. Data from air monitoring stations has shown that fire has not been a predominant long-term source of visibility impairment in any Class I area, although emissions from fire are an important short-term contributor to visibility aerosols (Sandberg 2002).

In general, particulate matter from the smoke of hazardous fuels treatments is the major pollutant of concern to health. Particulate is a general term for a mixture of solid particles and liquid droplets found in the air. Particulate from smoke tends to be very small (less than 1 micron in diameter) and, as a result, is more of a health concern than the coarser particles that typically make up road dust. Particulate matter from wood smoke has a size range near the wave length of visible light (0.4 to 0.7 micron). This makes the particles excellent at scattering light and, therefore, excellent at reducing visibility.

A Smoke Sensitive Receptor Area (SSRA) is an area that receives the highest level of protection under the smoke management plan because of its past history of smoke intrusions, incidents, density of population, or other legal status related to visibility. The nearest SSRAs to the project area is Bend, approximately 3 miles to the city limits.

Class I visibility areas are areas that have very clean air and are subject to the tightest restrictions on how much additional pollution can be added to their airshed. In Class I visibility areas, the primary concern is protection of visibility. These areas are protected under the Oregon State Implementation Plan, which governs regional haze. The closest Class I Area to the project area is the Three Sister Wilderness with the nearest point being about 5 miles to the west/northwest

Emissions impacts to Class I airsheds and SSRAs are successfully avoided by implementing pile burning treatments during time periods of favorable winds and mixing heights as well as coordinating burning with Oregon Smoke Management. Prescribed fires contribute negligible amounts of air pollution in smaller controlled events that exceed air quality standards over smaller controlled areas.

Alternative 1 (No Action)

Direct and Indirect Effects: No pile burning would occur. There would be no effect..

Alternative 2 (Proposed Action)

Direct and Indirect Effects: If pile burning does occur, emissions would produce approximately 232 pounds of PM 2.5, and 267 pounds of PM 10. It is anticipated that burning treatments may take up to 1 day to complete, burning either 1 large landing pile or 2-4 piles in areas that will be impacted by the Welcome Station or parking area.

Emissions will not exceed air quality standards in Class I airsheds or any SSRA due to the proximity of these features and the project area. The greatest potential for emissions exceeding air quality standards will be limited to the immediate project area and fire personnel will be most vulnerable to smoke exposure. Mitigations will be in place to minimize smoke exposure to onsite resources.

Burning would be conducted in compliance with National Ambient Air Quality Standards and Oregon Department of Forestry Smoke Management regulations and restrictions. Burning would occur during favorable weather conditions, with the transport winds necessary to disperse smoke away from Smoke Sensitive Receptor Areas and Class I areas.

WILDLIFE: Threatened, Endangered, and Sensitive Species

SUMMARY

There would be no effects to any species listed or proposed for listing under the ESA from the proposed project due to a lack of habitat.

INTRODUCTION

This biological evaluation (BE), analyzes effects to federally listed or proposed species and impacts to Regional Forester Sensitive Species (USDA FS 2008) from implementation of the Cascade Lakes Scenic Byway Welcome Station on the Bend-Ft. Rock Ranger District (District) of the Deschutes National Forest (Forest). The BE meets the direction of the Forest Service Manual 2600, the Deschutes National Forest Land and Resource Plan (*LRMP*, USDA FS 1990) and amended Regional Forester's Forest Plan Amendment # 2 (*Eastside Screens*, USDA FS 1995), and the Endangered Species Act of 1973.

The Deschutes LRMP and amended Eastside Screens present standards and guidelines (S&Gs) for the maintenance of wildlife habitat. Short-term impacts are for 5 years while long-term project impacts are greater than 5 years.

A Forest Programmatic Biological Assessment (BA) for Section 7 informal consultation under the Endangered Species Act was completed in 2006 for projects proposed from 2006 to 2009 (USDA FS 2006) with two extensions granted. Re-initiation is anticipated for spring of 2010. The BA established project design criteria (PDC) to streamline consultation with the U.S. Fish and Wildlife Service (FWS). Project design criteria focus on habitat alteration and disturbance effects. The northern spotted owl, bald eagle, and Oregon spotted frog were included in the BA. The bald eagle was de-listed in 2007 but is under a five-year monitoring plan and managed according to the 2007 National Bald Eagle Management Guidelines. The Pacific fisher is a federal candidate species but was not included in the BA.

FEDERALLY LISTED OR PROPOSED SPECIES CONSIDERED

Northern Spotted Owl: *Federal Threatened, MIS*

The Northern spotted owl inhabits mature to old-growth mixed coniferous habitats. Functional nesting, roosting, and foraging (NRF) habitat for the spotted owl occurs in multi-storied canopies in mixed conifer stands and in riparian areas. The canopy cover is typically greater than or equal to 40% with an overstory comprised of at least 5% of trees greater than 21 inches dbh. Loss of large trees and fragmentation of habitat due to previous timber harvest, large-scale wildfires, and insect and disease mortality, along with competition with the barred owl (*Strix varia*) have reduced the habitat quantity and quality for the spotted owl on the Forest. The proposed project occurs outside of the range of the northern spotted owl.

Direct and Indirect Effects: Implementation of the proposed project would have "No Effect" on the Northern spotted owl or its habitat including NRF, designated critical habitat, or dispersal/connectivity due to the lack of habitat in or near the project area.

Pacific Fisher: *Federal Candidate, Sensitive*

Fisher populations are considered to be extremely low in Oregon, Washington, and parts of the Rocky Mountains. They occur in landscapes dominated by late-successional and mature forests. Fishers appear to use riparian areas disproportionately to what exists. Critical features of fisher habitat include forest physical structure and associated prey. Major prey species include small to medium sized mammals, birds, and carrion. There are only two known populations of fisher in Oregon—one on the Rogue River National Forest and the other in southwestern Oregon along the Oregon-California border. Winter surveys using Trailmaster baited cameras were conducted along the wilderness boundary in the Sisters Ranger District of the Deschutes during the winters of 1997, 1998, and 1999 according to the Ruggerio et al. (1994) protocol. No fishers were detected.

The project area consists of lower elevation ponderosa pine habitat which does not provide the complex structure in mixed coniferous forests needed by the fisher.

Direct and Indirect Effects: Implementation of the proposed project would have “No Effect” on the Pacific fisher due to the lack of habitat in or near the project area.

Oregon Spotted Frog: *Federal Candidate, Sensitive*

The Oregon potted frog inhabits small ponds, lake shorelines, and streams and is most often found in non-woody wetland plant communities of sedges, rushes and grasses. In Central Oregon, spotted frogs are found in lakes and marshes up to 5,200 feet in elevation, where snow and ice cover their habitat for four to six months out of the year (Pearl and Hayes 2004).

This species has declined 70-90% from its historic range due to wetland loss and degradation from development, predation by non-native fish and American bullfrogs, drought, exotic wetland plant invasion, woody vegetation encroachment, livestock grazing, and disease (Hayes 1997, Cushman and Pearl 2007). The project area is comprised of blackbark ponderosa pine and does not contain any wetland habitat.

Direct and Indirect Effects: Implementation of either alternative would have “No Effect” on the spotted frog due to the lack of habitat in or near the project area.

Table 4: Federally Listed and Proposed Species Occurring or Potentially Occurring on the Deschutes National Forest and Effects from the Project

Federally Listed and Proposed Species	Status	Effects	Rationale
Northern spotted owl (<i>Strix occidentalis caurina</i>)	Federal threatened, MIS	No effect due to lack of habitat.	Late-successional mixed conifer forests with multi-storied structure and downed wood. The project is east of the spotted owl line.
Oregon spotted frog (<i>Rana pretiosa</i>)	Federal Candidate, Regional Forester Sensitive	No effect due to lack of habitat.	Inhabits shallow edges of lakes and ponds and riparian areas
Pacific fisher (<i>Martes pennanti</i>)	Federal Candidate, Regional Forester Sensitive	No effect due to lack of habitat.	High elevation mixed coniferous forests.

REGIONAL FORESTER SENSITIVE SPECIES CONSIDERED

Regional Forester Sensitive Species were considered and impacts to two species are analyzed: Lewis's woodpecker and white-headed woodpecker. Short-term impacts are for 5 years while long-term impacts are greater than 5 years.

The bald eagle, bufflehead, harlequin duck, horned grebe, red-necked grebe, tricolored blackbird, yellow rail, northern waterthrush, Greater sage grouse, American peregrine falcon, Townsend's big-eared bat, pygmy rabbit, Pacific fisher, California wolverine, Crater Lake tightcoil, silver-bordered fritillary, and Johnson's hairstreak are all Sensitive Species that are known to occur or potentially occur on the Forest. However, there is no suitable habitat for any of these species in or near the project area. Therefore, these species have been given the determination of "No Impact" from implementation of the proposed project.

Table 5: Regional Forester Sensitive Species Occurring or Potentially Occurring on the Deschutes National Forest and Effects from the Project

Regional Forester Sensitive Species	Status	Effects	Rationale
BIRDS			
Bald eagle (<i>Haliaeetus leucocephalus</i>)	Regional Forester Sensitive, MIS	No impact due to lack of habitat.	Lakes, large rivers with nearby large diameter trees, usually ponderosa pine
Lewis' woodpecker (<i>Melanerpes lewisii</i>)	Regional Forester Sensitive, MIS	May impact but would not lead to a trend towards Federal listing.	Large diameter snags in open ponderosa pine, burned forests
White-headed woodpecker (<i>Picoides albolarvatus</i>)	Regional Forester Sensitive, MIS	May impact but would not lead to a trend towards Federal listing.	Large diameter snags in open ponderosa pine forests
Bufflehead (<i>Bucephala albeola</i>)	Regional Forester Sensitive, MIS	No impact due to lack of habitat.	Snags associated with lakes
Harlequin duck (<i>Histrionicus histrionicus</i>)	Regional Forester Sensitive	No impact due to lack of habitat.	Rapid streams, large trees
Horned grebe (<i>Podiceps auritus</i>)	Regional Forester Sensitive	No impact due to lack of habitat.	Lakes
Red-necked grebe (<i>Podiceps gisegena</i>)	Regional Forester Sensitive	No impact due to lack of habitat.	Lakes
Tricolored blackbird (<i>Agelaius tricolor</i>)	Regional Forester Sensitive	No impact due to lack of habitat.	Lakeside, bullrush
Yellow rail (<i>Coturnicops noveboracensis</i>)	Regional Forester Sensitive	No impact due to lack of habitat.	Marsh
Northern waterthrush (<i>Seiurus noveboracensis</i>)	Regional Forester Sensitive	No impact due to lack of habitat.	Riparian habitat with dense willows along streambanks
Greater sage grouse (<i>Centrocercus urophasianus phaeios</i>)	Regional Forester Sensitive	No impact due to lack of habitat.	Sagebrush flats
American peregrine falcon (<i>Falco peregrinus anatum</i>)	Regional Forester Sensitive, MIS	No impact due to lack of habitat.	Riparian and cliff habitat
MAMMALS			
Townsend's big-eared bat (<i>Corynorhinus townsendii</i>)	Regional Forester Sensitive, MIS	No impact.	Caves, mines, bridges, rock crevices, ponderosa pine and juniper forests. Very low foraging potential and no known roosts
Pygmy rabbit (<i>Brachylagus idahoensis</i>)	Regional Forester Sensitive	No impact due to lack of habitat.	Sagebrush flats
Pacific Fisher (<i>Martes pennanti</i>)	Regional Forester Sensitive, MIS	No impact due to lack of habitat.	Mixed conifer, riparian, complex physical structure
California Wolverine (<i>Gulo gulo</i>)	Regional Forester Sensitive, MIS	No impact due to lack of habitat.	Mixed conifer high elevation forests
INVERTEBRATES			
Crater Lake tightcoil (<i>Pristiloma arcticum crateris</i>)	Regional Forester Sensitive	No impact due to lack of habitat.	Perennial wet areas along streams

Regional Forester Sensitive Species	Status	Effects	Rationale
Silver-bordered fritillary (<i>Boloria selene atrocotalis</i>)	Regional Forester Sensitive	No impact due to lack of habitat.	Late-successional mixed conifer forests with dwarf mistletoe
Johnson's hairstreak (<i>Callophrys johnsoni</i>)	Regional Forester Sensitive	No impact due to lack of habitat.	Meadows and bogs

Lewis's woodpecker and White-headed woodpecker

Lewis's woodpecker

Habitat for the Lewis's woodpecker, a migrant in this part of its range, includes old-forest, single-storied ponderosa pine and to a lesser degree, cottonwoods. Lewis' woodpeckers feed on flying insects and are not strong cavity excavators. They require large snags in an advanced state of decay that are easy to excavate or they use old cavities created by other woodpeckers. Nest trees generally average 17 inches to 44 inches (Saab and Dudley 1998). Lewis' are an unusual woodpecker as they hawk aerially for insects or "flycatch" rather than probing their bills into trees. They nest in already excavated woodpecker holes, particularly from northern flicker and hairy woodpeckers. Non-overlapping home ranges for Lewis's woodpecker in eastern Oregon are approximately 2 to 12 acres (Thomas et al. 1979).

The Lewis's woodpecker is identified in the *Conservation Strategy for Landbirds of the East-Slope of the Cascades Mountains in Oregon and Washington* as a landbird focal species for ponderosa pine forests with patches of burned old forest (Altman 2000). In unburned forests, biological objectives include maintaining or providing the following conditions where ecologically appropriate: (1) 24 trees per acre greater than 9 inches dbh, and of these, approximately six per acre should be greater than 20 inches dbh; (2) provide recruitment snags (e.g., fungal inoculation, topping, girdling), particularly in areas with high risk of stand-replacement fires; and (3) provide shrub understory with greater than 13% cover.

White-headed woodpecker

The white-headed woodpecker uses both live and dead ponderosa pines, often selecting the larger diameter pines because they have more seeds and make more suitable nesting habitat. However, having large ponderosa pine does not assure this species' presence as well-developed understory of trees and shrubs may encourage mammalian predation on woodpecker nests (Frenzel 1998). White-headed woodpeckers are usually absent from early seral ponderosa pine stands. These woodpeckers are poor excavators and generally select for a more moderately decayed or softer snag for nesting (Dixon 1995). Home ranges for the white-headed woodpecker are large, ranging from 257 to 793 acres (Dixon 1995).

The white-headed woodpecker is identified in the *Conservation Strategy for Landbirds of the East-Slope of the Cascades Mountains in Oregon and Washington* as a landbird focal species of large patches of old ponderosa pine forest with large snags (Altman 2000). Conservation issues include loss of large diameter ponderosa pine trees from timber harvest, grazing, and understory fir encroachment from previous fire suppression, and habitat fragmentation. Biological objectives include providing the following in ponderosa pine stands to promote late-seral conditions: (1) a mean of greater than 10 trees per acre greater than 21 inches dbh with at least two of the 10 trees greater than 31 inches dbh for foraging and replacement snags; (2) a mean of 1.4 snags per acres greater than 8 inches dbh with greater than 50% of the snags larger than 25 inches dbh in a moderate to advanced state of decay; and (3) a mean canopy closure of 10-40%.

ENVIRONMENTAL CONSEQUENCES

Alternative 1 (No Action)

Direct and Indirect Impacts: The project area consists of blackbark ponderosa pine that currently does not provide habitat for either Lewis' or white-headed woodpeckers. Long-term, this stand could provide large-diameter trees and snags suitable for both of these species as it matures. Due to the proximity of the stand to Highway 46 and the ongoing recreational use of the Cody mountain bike trail, foraging would likely be the primary use.

Alternative 2 (Proposed Action)

Direct and Indirect Effects: Alternative 2 would remove approximately 150-200 blackbark ponderosa pine trees from the 2 acre project site due to construction of a new entrance road, welcome station and parking lot. Approximately 40-90 trees will remain on site. Surveys were not conducted for either species; therefore, their occurrence in or near the project area is not known. If either of the species were to occur in the project area, use would likely be primarily foraging due to the close proximity of the site to the highway and the recreational trails. Although construction of the access road and building footprint would occur on two acres, it is likely that individuals would be displaced from additional habitat surrounding the new facilities. The remaining trees between the welcome station and the highway would be a very small isolated patch size and there would be increased disturbance from visitors, staff, vehicles, and lighting associated with the permanent facility. Therefore, there would be a loss of 5 acres of potential habitat for each species. Loss of these five acres would represent 1-2% of one home range for the white-headed woodpecker and 50% or more of one home range for the Lewis' woodpecker.

Cumulative Effects: Habitat is often limited in watersheds due to the lack of climax ponderosa pine associations as a result of previous timber harvest and encroachment of firs from wildfire suppression. District wide, nesting habitat has declined due to loss of large-diameter nest trees and competition for nest holes. Removing black bark pine would reduce the number of ponderosa pine from maturing into later-seral ponderosa pine. When adding this area to nearby areas that have been either thinned or had danger trees removed, there would be less than a 1% additive reduction of suitable habitat for either the Lewis's or white-headed woodpecker under Alternative 2.

The project does not meet the biological objectives of the Focal Landbird Strategy on the project site as 2 acres of potential late-seral ponderosa pine habitat would be removed. Population biological objectives are met on a watershed level.

Conclusion: Implementation of Alternative 2 (Proposed Action) may minimally affect 5 acres of Lewis' and white-headed woodpecker habitat due to the removal of approximately 150-200 ponderosa pine trees. The project would not lead to a trend towards federal listing.

WILDLIFE: Management Indicator Species and Other Species and Habitat of Interest

INTRODUCTION

This wildlife report analyzes effects from implementation of the Cascade Lakes Scenic Byway Welcome Station on the Bend-Ft. Rock Ranger District (District) of the Deschutes National Forest (Forest). The wildlife report meets the direction of the Forest Service Manual 2600, the Deschutes National Forest Land and Resource Plan (LRMP, USDA FS 1990) and amended Regional Forester's Forest Plan Amendment # 2 (*Eastside Screens*, USDA FS 1995), and the Endangered Species Act of 1973.

The wildlife report analyzes impacts to LRMP Management Indicator Species (MIS) and habitats, Landbird Focal Species, Birds of Conservation Concern, and High Priority Shorebirds. Analyses incorporated field reconnaissance, GIS data, current literature, and staff knowledge. The Deschutes LRMP and amended Eastside Screens present standards and guidelines (S&Gs) for the maintenance of wildlife habitat. Short-term impacts are for 5 years while long-term impacts project are greater than 5 years.

Table 6 lists these species and whether potential habitat exists in the project area. Species and habitats analyzed are in bold. Management Indicator Species analyzed in this wildlife report include elk and mule deer. Woodpeckers (cavity-nesters) are listed as MIS but are analyzed under the *Snags and Down Wood* section. Table 7, page 50, lists woodpecker species that occur on the Forest.

Table 6: Impact Conclusions for LRMP Management Indicator Species and Habitats, Birds of Conservation Concern, Landbird Focal Species, and High Priority Shorebirds

Species or Habitat	Impacts under Alternative 2 (Proposed action)	Rationale for Impacts Conclusions
Management Indicator Species		
Northern spotted owl (<i>Strix occidentalis caurina</i>)	No effect due to a lack of habitat.	Habitat is mature and old-growth mixed coniferous forest. The project is east of the spotted owl line.
Bald eagle (<i>Haliaeetus leucocephalus</i>)	No impact due to lack of habitat	Lakes and large rivers with nearby large diameter trees, usually ponderosa pine.
Golden eagle (<i>Aquila chrysaetos</i>)	No impact due to lack of habitat.	Elevated nest sites in open ponderosa pine or mixed conifer
American peregrine falcon (<i>Falco peregrinus anatum</i>)	No impact due to lack of habitat	Riparian and cliff habitat
Great gray owl (<i>Strix nebulosa</i>)	No impact due to lack of habitat	Mature and old growth forests with meadows and openings
Cooper's hawk (<i>Accipiter cooperi</i>)	No impact due to lack of habitat	Mature forests with high canopy closure/tree density
Sharp-shinned hawk (<i>Accipiter striatus</i>)	No impact due to lack of habitat	Mature and old-growth forests, especially in high canopy closure with large trees in addition to young, dense, even-aged stands
Red-tailed hawk (<i>Buteo jamaicensis</i>)	No impact due to lack of habitat	Large snags, open country interspersed with forests
Northern goshawk (<i>Accipiter gentiles</i>)	No impact due to lack of habitat	Mature and old-growth forests, especially with high canopy closure and large trees
Woodpeckers/cavity nesters	May impact Lewis' woodpecker, white-headed woodpeckers, and northern flicker but would not lead to a trend towards federal listing.	Large-diameter trees and snags in ponderosa pine and mixed conifer forests.

Species or Habitat	Impacts under Alternative 2 (Proposed action)	Rationale for Impacts Conclusions
Management Indicator Species		
Waterfowl	No impact due to lack of habitat	Lakes, ponds, and streams
Osprey (<i>Pandion haliaetus</i>)	No impact due to lack of habitat	Large snags associated with fish bearing water bodies
Great blue heron (<i>Ardea herodias</i>)	No impact due to lack of habitat	Riparian edge habitats (lakes, streams, marshes, estuaries)
American marten (<i>Martes americana</i>)	No impact due to lack of habitat	Mixed conifer of high elevation late successional forests with abundant down woody material.
Townsend's big-eared bat (<i>Corynorhinus townsendii</i>)	No impact due to lack of habitat	Caves, buildings, bridges, ponderosa pine and juniper habitats. No known roosts in or near project site. Low potential for foraging in area.
California wolverine (<i>Gulo gulo</i>)	No impact due to lack of habitat	Mixed conifer high elevation forests
Elk (<i>Cervus elaphus</i>)	May impact.	Project is in Ryan Ranch Key Elk Area.
Mule Deer (<i>Odocoileus hemionus</i>)	May impact.	Project is in mule deer biological winter range and in Tumalo Deer Winter Closure area.
Special or Unique Associated Habitats	No impact due to lack of habitat.	None in or near project area.
Snags/Green Tree Replacements/Down Wood and Log Associated Species	May impact due to removal of approximately 2 acres of blackbark ponderosa pine.	Green trees or snags > 21" dbh would not be removed. There would be no green tree replacements.
Late and Old Structural Stage Stands and Connectivity	No impact due to lack of habitat.	No LOS stands in project area. Project activities would not degrade connectivity between LOS stands.
Landbird Focal Species	May impact Lewis' and white-headed woodpecker, pygmy nuthatch and chipping sparrow.	Project is consistent with Forest LRMP for woodpeckers and the Landbird Conservation Strategy.
Birds of Conservation Concern	May impact Lewis' and white-headed woodpecker habitat minimally.	Project is consistent with Forest LRMP for woodpeckers.
High Priority Shorebirds	No impact due to lack of habitat	No wetland, wet meadow, or shrub/grass habitat occurs in or near project area.

The project site was not surveyed for raptor species and future surveys in the area are not planned. It is possible that the project site could be included in the overall home range for a raptor pair. If any nests or activity centers for the below species should be found during construction, seasonal restrictions would be implemented, as described in Chapter 2, Resource Protection Measures.

Management Indicator Species and Habitats

The Deschutes LRMP identified management indicator species (MIS) and habitats to assess impacts of management activities for a wide range of wildlife species with similar habitat needs. LRMP habitat categories include Special or Unique Associated Habitats, Snags and Down Wood, and Late and Old Structural Stage (LOS) stands and Connectivity.

Elk

The Deschutes LRMP established eleven Key Elk Areas (KEAs) to provide conditions needed to support at least 1,500 summering elk and 240 wintering elk. The project area is located in the Ryan Ranch KEA, which totals 21,462 acres.

Elk inhabit semi-open forest, mountain meadows, foothills, plains, and valleys on the Forest. They graze on grasses and forbs and browse woody vegetation shrubs and twigs. Under the Deschutes LRMP, elk management objectives are developed jointly with the Oregon Department of Fish and Wildlife.

EXISTING CONDITION

Bitterbrush provides winter forage for elk. Due to the proximity of the project area to Highway 46, ungulate use is likely primarily on the western half of the project area, close to a small east-west draw that provides hiding cover. Construction of the facilities would occur within the Ryan Ranch KEA, along the western boundary in the northern 10% of the KEA.

Hiding Cover

LRMP S&G WL-47: “Hiding areas must be present over at least 30% of National Forest lands in each KEA.” Hiding cover is defined as an area of at least 6 acres in size capable of hiding 90% of an adult animal from human view at a distance of 200 ft (Thomas et al. 1979).

The entire project area is within 400 feet of Highway 46, including a 100 foot setback from the highway, excluding the entrance road. The area just beyond the northern edge of the project site and into the small east-west draw behind the project site provides hiding cover for elk. This draw also contains a portion of the east-west Cody mountain bike trail, which is not part of the project area.

Due to the small size of the project area and the lack of trees along Highway 46 (100-120 black bark ponderosa pine trees per acre), and small cleared areas, the project area does not contain hiding cover. The existing hiding areas are present in 31-32% of the KEA.

Thermal Cover

LRMP WL-50 defines thermal cover for elk as an area of at least 10 acres with an average height of at least 40 feet and a canopy closure of 40%. The Deschutes LRMP S&G WL-50 states that: “Thermal cover must be present over at least 20% of National Forest land in each KEA.”

The LRMP S&G states that for thermal “to be suitable, a stand must be at least 10 acres, and have an average height of at least 40 feet.” The LRMP threshold minimum for thermal cover is 20% in the Ryan Ranch KEA. Existing thermal cover in the KEA is approximately 40%. Due to the small size of the impact area (2 acres), the lack of trees along Highway 46, and small cleared areas within the project area, thermal cover is not provided.

Open Road Density

LRMP S&G W1-46 states that: “Open road densities should not exceed an overall average between 0.5 – 1.5 miles per square mile within each key are, unless impacts to elk can be avoided or the proposed project would result in a net benefit to elk habitat.”

The Ryan Ranch KEA overall average road density is 3.8 miles per square mile, which exceeds the LRMP open road density S&G of 0.5 to 1.5 miles per square mile. When road closures are completed in association with the 2006 East Tumbull Hazardous Fuels Reduction EA and the 2007 Sunriver Healthy Hazardous Fuels EA, the open road density in the KEA would be 2.7 miles per square mile.

The proposed welcome station would add approximately 0.15 miles of new road with the entrance road and parking area, within approximately 250 feet of Highway 46. The addition of 0.15 miles would not change the overall open road density in the KEA.

Recreational Activities

LRMP S&G WL-45 states that for the Ryan Ranch KEA: “Facilities will not be developed nor activities promoted which would encourage public use during the winter.”

The project area is nearly adjacent to the north-south Cody mountain bike connector trail that begins at the parking area across Highway 46 at the junction of Forest road 41. This trail connects with the east-west Cody mountain trail, which is 7.8 miles long; with approximately 4 miles in the KEA. These trails are primarily used for mountain biking. Other less frequent use is hiking and, depending on snow levels, cross country skiing.

ENVIRONMENTAL CONSEQUENCES

Alternative 1 (No Action)

Direct and Indirect Effects: The existing blackbark pine does not provide adequate hiding or thermal cover. Over time (100-150 years), the site would likely develop into climax ponderosa pine, providing hiding cover. The shrubs currently provide winter forage habitat for elk; over time, they would senesce without thinning or fire (planned or unplanned), reducing winter forage habitat availability.

Alternative 2 (Proposed Action)

Direct and Indirect Effects: Approximately 150-200 blackbark ponderosa pine trees would be removed from approximately 2 acres that would be utilized for the construction of the proposed facility and associated parking area and entrance road. Hiding and thermal cover would not be reduced because the project area has none. The bitterbrush that provides winter forage opportunities for elk would also be removed from the impacted areas.

There would be increased traffic congestion on Highway 46 due to the construction of the welcome station across from Forest Road 41, which connects Bend and Highway 46 with the town of Sunriver. Two new turn lanes would be constructed to access the welcome station.

Ungulates that attempt to cross Highway 46 may seek to avoid an area larger than the 2-acre project site to also include the increased traffic congestion (two new turn lanes and cross-highway traffic) and the existing adjacent recreational trails. They could potentially be displaced from 5-7 acres of summer habitat and biological winter range habitat (ODFW) as a result of the project. This increased traffic

congestion would be greater during the summer season, when deer and elk are less likely to use this area.

Recreational trail use including hiking and mountain biking has been demonstrated to decrease ungulate feeding and resting times and increase flushing and travel time, thereby increasing energy expenditures and stress levels (Taylor and Knight 2003, Wisdom et al. 2004, Naylor et al. 2009). Energy expenditures are of higher concern for elk during winter when foraging opportunities are reduced and thermoregulation needs increase. Even though this project is not to promote recreation use within the KEA, due to the close proximity of the proposed facility to the existing and visible mountain bike trails, an increase in recreational use on these trails could occur throughout the year, including during the winter. Visitors may use these trails for hiking or walking their dogs. Use of the parking lot by mountain bikers to access the trail may occur sporadically. The degree of increase on these trails is likely to be small each year but is anticipated to occur annually throughout the lifetime of the permanent facility. Mitigation measures (EA page 18) would be implemented to reduce the potential for an increase in recreational use during winter in this KEA. The proposed gate would prevent users from parking in the parking area after hours and utilizing the surrounding forested area for mountain biking, cross country skiing and other recreation activities. The proposed split rail fence that would delineate the Welcome Station grounds would discourage visitors from utilizing the forested area for dog walking and other such uses. It would also discourage those that would prefer to utilize the Welcome Station as a starting-ending point for uses such as biking and cross country skiing.

Cumulative Effects: Several projects are occurring within the Ryan Ranch KEA or near the KEA. These projects (past, present, reasonably foreseeable, EA page 23) would likely have either a small or no cumulative effect when considering the Welcome Station and include ongoing recreational use on the nearby trails and other trails in the KEA, ongoing highway and road maintenance, ongoing danger tree removal, and the potential vehicle-strike mortality along Highway 46 and other roads.

The ongoing Ryan Ranch Aspen and Willow Enhancement project is occurring within the Ryan Ranch KEA several miles south of the project and will benefit elk habitat long-term by reducing conifer encroachment.

The proposed Ryan Ranch Wetland Restoration CE will occur in the Ryan Ranch KEA along the Deschutes River, approximately three miles south of the proposed welcome station facility site. Under this project, approximately 214 acres of meadow habitat would be converted to emergent wetland habitat during the irrigation season (April 15-October 15), precluding elk from utilizing it for resting and foraging and displacing elk during winter from 75 to 80 acres of winter habitat. The meadow restoration is anticipated to improve summer hiding cover due to screening with an anticipated increase in hardwoods and shrubs and to provide additional forage.

The 2009 Personal Use Firewood CE will allow firewood removal on 5,700 acres in the Ryan Ranch KEA within 150 feet of existing open roads. The project is not anticipated to impact hiding areas or thermal cover for elk. Use of roads for felling and collecting road may result in disturbance to elk, particularly during winter.

Less than 1% (0.0002) additive reduction in suitable elk habitat is anticipated from project implementation of the welcome station.

CONSISTENCY WITH THE DESCHUTES LRMP

The project is consistent with the Deschutes LRMP S&Gs WL-43 through WL-51 for elk. Mitigation measures are designed to reduce the potential for encouraging recreational use outside of the Welcome Station boundary during winter.

Conclusion: The project will have minor negative impacts to elk habitat through the potential loss of 5-7 acres (removal of 2 acres of blackbark ponderosa pine and avoidance of 3-5 acres). Indirect recreational disturbance may increase in winter range due to proximity of the project site to existing mountain bike trails. Mitigation measures would be implemented to reduce the potential for an increase in recreational use during winter in this KEA.

Mule Deer

The mule deer forages on grasses and forbs (non-woody, broad-leaved plants) and browse (leaves and twigs of woody shrubs) primarily in shrub habitats. Unlike elk, they select the most nutritious vegetative parts which means they have more specific foraging needs and a higher-quality diet (Hayden et al. 2008). Shrubs occur mostly in early successional habitats—those recently disturbed and those maturing to climax state. Disturbance events in forested areas including wildfire, prescribed fire, wind storms, insect infestation, tree disease, and timber harvest are key elements in maintaining these shrub components. Inadequate foraging habitats in or adjacent to summer range can be a limiting factor for winter conditioning and survival. Mule deer are migratory and move from high-elevation summer ranges to low-elevation winter ranges where foraging is easier under reduced snow depths. Where deer winter in forests with deep snow conditions, removal of forest canopy may have deleterious effects on deer survival due to increased snow depth.

Management direction regarding shrubs is provided by the LRMP. Recommendations for the management of shrubs are also provided by the Integrated Natural Fuels Management Strategy (IFMS 1998). The IFMS identified interim management goals of managing shrubs in shrub dominated landscapes (Deer Habitat) to have 33% of shrubs in an early seral condition, 33% in a mid seral condition, and 33% in a late seral condition. Bitterbrush is a major component of the potential natural vegetation, which is an important food source for deer during winter months. The project area is in biological winter range for mule deer and provides bitterbrush in early seral ponderosa pine.

The project area is within the Tumalo Deer Winter Closure area. This closure restricts motorized vehicles and equipment to specified roads from December 1-March 31 to reduce disturbance to mule deer on biological winter range.

ENVIRONMENTAL CONSEQUENCES

Alternative 1 (No Action)

Direct and Indirect Effects: The existing blackbark ponderosa pine does not provide adequate hiding cover. Over time (100-150 years), the site would likely develop into climax ponderosa pine, providing hiding cover. The shrubs currently provide winter forage habitat; over time, they would senesce without thinning or fire (planned or unplanned), reducing winter forage habitat availability.

Alternative 2 (Proposed Action)

Direct and Indirect Effects: Impacts to mule deer would be similar to those for elk.

Due to the proximity of the project area to Highway 46, ungulate use is probably limited to the western half of the project area, close to a small east-west draw that provides hiding cover. Approximately 150-200 blackbark ponderosa pine trees would be removed from 2 acres due to the construction of the proposed facility and associated parking area and entrance road. Hiding cover would not be reduced because the project area has none. The bitterbrush that provides winter forage opportunities for mule deer would also be removed from the impacted areas. There could be increased

traffic congestion on Highway 46 due to the construction of the welcome station across from Forest Road 41, which connects Bend and Highway 46 with the town of Sunriver. Two new turn lanes would be constructed to access the welcome station.

Mule deer that currently use the project area may avoid an area larger than the project footprint and surrounding vegetation (approximately five acres) to avoid increased traffic congestion that would be adjacent to existing adjacent recreational trails. They could potentially be displaced from 5-7 acres of summer habitat and biological winter range habitat (ODFW) as a result of the project. The increased traffic congestion would be greater during the summer season, when elk are less likely to use this area.

Due to the close proximity of the proposed facility to the existing and visible mountain bike trails, an indirect effect may be to increase recreational use on these trails throughout the year, including during the winter. Visitors may use these trails for walks. Use of the parking lot by mountain bikers to access the trail may occur sporadically. The degree of increase is likely to be small each year but is anticipated to occur annually throughout the lifetime of the permanent facility.

Recreational trail use including hiking and mountain biking has been demonstrated to decrease ungulate feeding and resting times and increase flushing and travel time, thereby increasing energy expenditures and stress levels (Taylor and Knight 2003, Wisdom et al. 2004, Naylor et al. 2009). Energy expenditures are of higher concern for ungulates during winter when foraging opportunities are reduced and thermoregulation needs increase.

The project site is within the Tumalo Deer Winter Closure area. This area is closed to motor-propelled vehicles from December 1 to March 31. This area will be excluded from the winter closure area by ODFW during the closure boundary update in 2010 (pers. comm., Steve George, ODFW, September 9, 2009).

Cumulative Effects: Cumulative impacts include ongoing recreational use on the nearby Cody mountain bike/connector trails and other recreational trails in the KEA, ongoing road maintenance, ongoing danger tree removal, poaching, habitat loss from private development, and vehicle-strike mortality along Highway 46 and other roads. Cumulatively, there would be less than a 1% (0.0002) additive reduction of suitable habitat from implementation of Alternative 2.

Consistency: The project is consistent with S&G WL-52 through WL-57 and WL-59. The project area is not presently consistent with WL-58 because a narrow strip of trees is not currently along Highway 46. Of the trees that are present, some would be removed for the entrance road. Other vegetation would be planted in areas that do not have vegetation for screening the parking area from Highway 46 (Mitigation, EA page 19).

Conclusion: The project will have minor negative impacts to mule deer habitat through the removal of 2 acres of blackbark ponderosa pine within biological winter range that provides winter forage. Indirect recreational disturbance may increase in winter range due to proximity of the project site to existing mountain bike trails.

Special or Unique Associated Habitats

There are no Special or Unique Associated Habitats in or near the project area. No impacts are anticipated for any species associated with these habitats from implementation of the proposed project.

Snags and Down Wood/Green Tree Replacements

A snag is defined as a dead tree that is over 10 inches dbh and taller than 10 feet. Coarse woody material (CWM) is considered to be dead and down material that is greater than 5 inches in diameter (Mellen et. al 2006). The most notable species using snags and CWM are the primary cavity nesters (e.g. woodpeckers and nuthatches) that excavate nest cavities in decayed wood in standing trees. Lists woodpecker species on the Deschutes National Forest. Vacated cavities are subsequently used by many other birds, bats, American marten, and small mammals (i.e., secondary cavity users).

Table 7: Woodpeckers Found on the Deschutes National Forest

Species	Habitat	Habitat and Presence in the Project Area
Lewis' Woodpecker	Ponderosa pine forests, burned forests	Potential habitat. Analyzed under Regional Forester Sensitive Species
Williamson's Sapsucker	Mature or old growth conifer forests with open canopy cover; weak excavator	No habitat
Red-naped Sapsucker	Riparian hardwood forests	No habitat
Downy Woodpecker	Riparian hardwood forests	No habitat
Hairy Woodpecker	Mixed conifer and ponderosa pine forests	Potential habitat. Analyzed under Snags and Down Wood.
White-headed Woodpecker	Mature ponderosa pine forests; weak excavator	Potential habitat. Analyzed under Regional Forester Sensitive Species
Three-toed Woodpecker	High elevation and lodgepole pine forests	No habitat
Black-backed Woodpecker	Lodgepole pine forests, burned forests	No habitat
Northern Flicker	Variety of forest types but more associated with forest edges	Potential habitat. Analyzed under Snags and Down Wood
Pileated Woodpecker	Mature to old growth mixed conifer forests	No habitat

Lewis's and White-headed woodpeckers are discussed under Wildlife BE discussion.

Logs provide organic and inorganic nutrients in soil development, provide microhabitats for invertebrates, plants, amphibians, and other small vertebrates, and provide structure for riparian associated species in streams and ponds. Size, distribution, and orientation may be more important than tonnage or volume. Small logs provide escape cover or shelter for small species. It is still unknown what levels of down woody material are needed to provide quality habitat for associated species.

Too much down material may impede travel by big game and present a fire hazard. Increased levels also provide cover for small invertebrates and may protect seedlings from browse and scorching. Orientation has also been shown to be important, where logs that lie along a contour are used more than those lying across contours. Larger sized logs are also used more and by more species than smaller logs (Bull et al. 1997).

The Forest lies on the eastside of the Cascades where there is limited availability of water and nutrients as compared to the west side of the Cascades. This, combined with overcrowded stand conditions due to fire suppression, has led to tree mortality above historic levels especially in smaller size classes. In particular, PAGs that tend to be drier (i.e., ponderosa pine and mixed conifer dry) may recruit a higher level of down wood today than did historically. It is also assumed that fire suppression in the watershed has decreased the consumption rate of down wood; while other human practices such as firewood gathering has removed down wood.

Sales planned west of the spotted owl line after 1994 utilized the Northwest Forest Plan standards and guidelines and followed Late-Successional Reserve Assessment guidelines by PAG, which ranged

from 4 to 13 snags per acre depending on the PAG and 120 linear feet of down wood at least 16 inches dbh and 16 feet long. Sales planned after 1995 east of the owl line utilized the Eastside Screens, which calls for 2.25 snags greater than or equal to 20 inches dbh per acre and 20 to 40 lineal feet per acre in ponderosa pine and 100 to 140 lineal feet per acre in mixed conifer.

ENVIRONMENTAL CONSEQUENCES

Alternative 1 (No Action)

Direct and Indirect Effects: The project area contains 2 acres of blackbark ponderosa pine, shrubs, and a small amount of downed wood. The area was recently thinned in 2007 to improve conditions for future large-diameter that would provide potential for snag and down wood recruitment over time. Long-term, the stand is anticipated to develop late-seral conditions that would provide more snags, green tree replacements, and downed wood.

Alternative 2 (Proposed Action)

Direct and Indirect Effects: Currently snags do not exist on the project site and a small amount of downed wood exists. An estimated 150-200 trees on the 2-acre project site would be removed to construct a permanent welcome station, entrance road and parking lot, preventing these acres from providing snag, down wood, or green tree replacements in the future.

Cumulative Effects: Danger tree removal activities occur annually along Highway 46, other roads, high use recreation areas, and facilities. This activity occurs approximately 160 feet (one site potential tree height) from either side of roads and from high use areas. Snags that pose a danger to the public or facilities are removed, contributing to a decline in snag levels around these roads and facilities. Small-sized snags are not limited on watershed level due to high levels of insect and disease mortality. However, large-diameter snags are limited due to previous fire suppression and white-fir encroachment that have suppressed the growth of large trees that provide large snags.

Recruitment for potential snags and downed wood on the five-acre project site would not exist due to the facility construction. Cumulatively, less than 1% additive reduction in suitable habitat for snags and down wood would occur.

Consistency with the Deschutes LRMP: The project is consistent with the Deschutes LRMP S&Gs WL-37 and WL-38.

Conclusion: The project would impact snags, downed wood, and green tree replacements on 2 acres due to the removal of 150-200 blackbark ponderosa pine trees that could provide future snag and down wood habitat but would not lead to a trend towards Federal listing for any species associated with snags or downed wood.

Late and Old Structural Stands and Connectivity

Currently, the project site does not currently include any LOS stands. Over time (100-150 years), the area may develop into a late-seral stand. The goal of late and old structural stage (LOS) stands is to provide representation of landscape ecology and habitat for plants and animal species associated with old growth forest ecosystems.

Late and old structural stages are defined by the Eastside Screens as multi-strata stands with large trees and single strata stands with large trees. Multi-stratum stands are comprised of two or more tree

canopy layers and two or more cohorts of trees. Medium and large sized trees dominate the overstory but trees of all size classes may be present. Stand structure and tree sizes are diverse. Single stratum stands are comprised of a single dominant canopy stratum consisting of medium or large sized trees. Large trees are common. Young trees are absent or few in the understory. The stand may appear “park-like.” Multi-stratum LOS conditions are favorable to those species that require or prefer more complex forested structure, such as the northern goshawk, while the single stratum LOS habitats are preferred by species such as the white-headed woodpecker and pygmy nuthatch.

Maintaining connectivity between habitats, particularly late and old structured habitat, is believed to be important for numerous wildlife species to allow free movement and interaction of adults and dispersal of young.

Management direction pertaining to maintaining connectivity between late and old structured stands, as well as allocated old growth management areas is provided by the Eastside Screens.

ENVIRONMENTAL CONSEQUENCES

Alternative 1 (No Action)

Direct and Indirect Effects: Two acres of blackbark ponderosa pine exist on the project site. Thinning in and around the site in 2007 favored the long-term growth of larger diameter trees. It is anticipated this site would develop LOS conditions over time (100-150 years).

Alternative 2 (Proposed Action)

Direct and Indirect Effects: There would be no direct impacts to LOS as the existing habitat is blackbark ponderosa pine. Implementation of the project would preclude the development of 2 acres into LOS due to the construction of a permanent building, entrance road, and parking lot. Connectivity would not be impacted due to the small amount of habitat that would be removed.

Cumulative Effects: Prior to the late 1980s, loss of suitable old growth and connectivity occurred due to timber harvest. Previous and ongoing fire suppression and mortality from insects and disease have affected connectivity and old growth stands by decreasing canopy cover and suppressing growth of large-diameter trees (from white fir encroachment). Recent harvest activities are aimed at reducing risk to existing habitat and promoting desired species composition to develop and maintain habitat. Cumulatively, 0% additive reduction in suitable habitat would occur from project implementation, as no LOS would be removed. As there are no direct impacts to LOS, there are no cumulative effects.

Conclusion: There is no LOS within the project area. Two acres would be precluded from potentially developing into LOS. Connectivity would not be affected.

Focal Landbird Species

The biological objectives of the Forest Service Landbird Strategic Plan (January 2000) are to maintain, restore, and protect habitats necessary to sustain healthy migratory and resident bird populations. Biological objectives are all based on “where ecologically appropriate,” meaning actions must occur in the proper habitat addressed to be consistent. The purpose of the strategic plan is to provide guidance for the Landbird Conservation Program and to focus efforts in a common direction.

On a more local level, the Conservation Strategy for Landbirds of the East-Slope of the Cascade Mountains in Oregon and Washington (Altman 2000) outlines conservation measures, goals and

objectives for specific habitat types found on the east-slope of the Cascades and the focal species associated with each habitat type. The Forest is in the Central Oregon subprovince. Table 8 lists specific habitat types, habitat feature needed and conservation focus, and the focal bird species for each. There is no meadow habitat, lodgepole pine, mixed conifer, or subalpine fir plant associations in the project area; therefore, brown creeper, Williamson’s sapsucker, flammulated owl, hermit thrush, olive-sided flycatcher, black-backed woodpecker, sandhill crane, and blue grouse are not analyzed.

The focal landbird species that have potential habitat in the project area are Lewis’ woodpecker, white-headed woodpecker, pygmy nuthatch, and chipping sparrow. Impacts to Lewis’ and white-headed woodpeckers were previously analyzed under *Regional Forester Sensitive Species* in the BE.

Table 8: Priority Habitat Features and Associated Focal Landbird Species for Central Oregon

Habitat	Habitat Feature	Focal Species for Central Oregon
Ponderosa Pine	Large patches of old forest with large snags	White-headed woodpecker
	Large trees of old forest with large snags	Pygmy nuthatch
	Open understory with regenerating pines	Chipping sparrow
	Large trees of old forest with large snags patches of burned old forest, cottonwoods	Lewis’ woodpecker
Mixed Conifer (Late-Successional)	Large trees	Brown creeper
	Large snags	Williamson’s sapsucker
	Interspersion grassy openings and dense thickets	Flammulated owl
	Multi-layered/dense canopy	Hermit thrush
	Edges and openings created by wildfire	Olive-sided flycatcher
Lodgepole Pine	Old growth	Black-backed woodpecker
Meadows	Wet/dry	Sandhill Crane
Aspen	Large trees with regeneration	Red-naped sapsucker
Subalpine fir	Patchy presence	Blue grouse

Lewis’s and White-headed woodpeckers are discussed on Draft EA page 37 under Wildlife BE discussion.

Pygmy nuthatch

The pygmy nuthatch (*Sitta pygmaea*) inhabits ponderosa pine forests and mixed conifer forest with a significant component of ponderosa pine. It is a focal species for large trees in open ponderosa pine forests and mixed conifer forests that have a significant ponderosa pine component (Altman 2000). It is a secondary cavity nester and uses large trees greater than 21 inches dbh for nesting and for foraging. Pygmy nuthatches will use snags greater than 10 inches dbh in a range of stand structural classes provided larger nest trees are available (Mellen et al. 2006). Nesting territory sizes range from one to three acres.

Conservation issues include loss of large diameter ponderosa pine trees to logging, lack of recruitment of young ponderosa pine due to wildfire suppression that has allowed understory encroachment of firs, increased fuel loads that predisposes ponderosa pine stands to stand-replacement wildfires, and habitat fragmentation that increases energy expenditure and risk of predation to individual nuthatches (Altman 2000). Biological objectives under the landbird conservation strategy include initiating actions in ponderosa pine forests to provide the following conditions: (1) a mean of greater than 10 trees per acre greater than or equal to 21 inches dbh, and at least 2 of the trees greater than 31 inches dbh for foraging trees and replacement snags and (2) a mean of greater than 1.4 snags per acre greater than 8 inches dbh with 50% greater than 25 inches dbh in a moderate to advanced state of decay.

Chipping sparrow

The chipping sparrow (*Spizella passerina*) nest in young ponderosa pine trees four to eight feet tall. Nesting territory size ranges from less than one acre to eight acres. It is a focal species for open understory forests with regenerating ponderosa pine (Altman 2000). Conservation issues are understory shrub and herbaceous cover removal from prescribed fire and grazing and brown-headed cowbird parasitism (Altman 2000). Biological objectives under the landbird conservation strategy are to provide the following conditions in ponderosa pine forests: (1) interspersed herbaceous ground cover with shrub and regenerating pine patches; (2) 20 to 60% cover in the shrub layer; (3) greater than 20% of the shrub layer in regenerating sapling conifers (especially pines); and (4) a mean canopy cover 10 to 30%.

ENVIRONMENTAL CONSEQUENCES**Alternative 1 (No Action)****Pygmy nuthatch**

Direct and Indirect Effects: Existing blackbark pine trees and shrubs on the project site do not currently provide habitat for pygmy nuthatch due to the lack of large-diameter ponderosa pine trees and snags. Long-term, this stand is anticipated to develop late-seral stand conditions that provide large-diameter trees and snags suitable for the pygmy nuthatch. Recent thinning implemented in 2007 favored future large diameter trees and potentially snag habitat for these species.

Chipping sparrow

Direct and Indirect Effects: Existing habitat on the project site may currently provide conditions suitable for the chipping sparrow due to the interspersed early seral ponderosa pine and shrub habitat. Due to the proximity of the project site to Highway 46, chipping sparrows that use this site for nesting may be at increased risk of nest failure due to brown-headed cowbird parasitism.

Alternative 2 (Proposed Action)**Pygmy nuthatch and Chipping Sparrow**

Direct and Indirect Effects: Alternative 2 would remove 150-200 blackbark ponderosa pine trees from 2 acres of the 5 acre project site, potential habitat loss for both of these species. Potential total habitat loss could be approximately five acres due to the degraded habitat that would remain after project construction (small habitat patch remaining combined with human disturbance).

Cumulative Effects: Loss of large-diameter open ponderosa pine forests has declined on a watershed level due to previous fire suppression and encroachment of white fir that has suppressed growth of large diameter ponderosa pine trees. The proposed project would remove two acres of ponderosa pine habitat and could result in the displacement of an additional three acres of habitat by each species due to the construction of a permanent facility and associated human use. The proposed project would remove two acres of ponderosa pine habitat. Cumulatively, less than 1% additive reduction in suitable habitat is expected from project implementation.

Consistency: The project is not consistent with the Focal Landbird Strategy biological objectives at the project site due to the removal of the existing ponderosa pine and shrubs but is consistent at the population level.

Conclusion: Alternative 2 may impact chipping sparrow and pygmy nuthatch nesting and foraging due to the permanent removal of habitat (ponderosa pine and shrubs) on the project site.

Birds of Conservation Concern

The Birds of Conservation Concern (BCC, USDI FWS 2008; Refer to Project Record Wildlife Report, Appendix 3, page 30) identifies species, subspecies, and populations of all migratory non-game birds that, without additional conservation actions, are likely to become candidates for listing under the ESA. The goal is to prevent or remove the need for additional ESA bird listings by implementing proactive management and conservations actions. Bird Conservation Regions (BCRs) were developed based on similar geographic parameters. BCR 9 (Great Basin) encompasses the District. Lewis's woodpecker and white-headed woodpecker are listed as BCC and were previously analyzed under *Regional Forester Sensitive Species*.

High Priority Shorebirds

The U.S. Shorebird Conservation Plan (USDI FWS 2004) identifies the conservation status of U.S. and Canadian shorebird populations (Refer to Project Record Wildlife Report, Appendix 2, page 29). The proposed project would not affect any of these species due to a lack of habitat.

BOTANY: Invasive Plants

SUMMARY OF FINDING

The project poses a HIGH risk of localized introduction or spread of invasive plant species.

A risk ranking of HIGH is appropriate for this project because invasive plant species occur both within and adjacent to the project area, and heavy equipment would be brought into the area to construct the welcome station, access drive, and parking lot. Mitigations (Chapter 2) would address this issue and reduce, but not eliminate, the risk.

NOXIOUS WEED RISK ASSESSMENT

Forest Service Manual (FSM) direction requires that Noxious Weed Risk Assessments be prepared for all projects involving ground-disturbing activities. For projects that have a moderate to high risk of introducing or spreading noxious weeds, Forest Service policy requires that decision documents identify noxious weed control measures that will be undertaken during project implementation (FSM 2081.03, 29 November 1995).

INVASIVE PLANT SPECIES

Invasive plant species include all non-native plant species currently causing, or capable of causing, local economic and/or ecological damage, regardless of their status on any particular state, county or federal agency list. Aggressive, non-native, invasive plant species can displace native plant communities causing long-lasting management problems. In displacing native vegetation, invasive plant species can increase fire hazards, reduce the quality of recreational experiences, poison livestock, and replace wildlife forage. By simplifying complex plant communities, weeds reduce biological diversity and threaten rare habitats.

EXISTING CONDITION

No sites of invasive plant species had been mapped within the proposed project area from previous surveys. A survey conducted on August 19, 2009 detected spotted knapweed (*Centaurea biebersteinii*) and cheat grass (*Bromus tectorum*) within the site.

Mapped sites of spotted knapweed, Dalmatian toadflax (*Linaria dalmatica*), medusahead (*Taeniatherum caput-medusae*) and oxeye daisy (*Leucanthemum vulgare*) occur within an approximate radius of 500 to 1,650 feet of the project boundary. A small population of St. Johnswort (*Hypericum perforatum*) was detected on the southern shoulder of Highway 46 that is adjacent to the proposed project area.

INVASIVE PLANT SPECIES RISK RANKING

Deschutes National Forest has developed a standardized invasive plant species risk assessment process to be conducted as a part of the project planning process. Risk rankings are based on the following sets of criteria.

Vectors ranked in order of weed introduction/spread risk:

1. Heavy equipment (implied ground disturbance).
2. Importing soil/cinders/gravel.

3. Use by OHVs.
 4. Grazing (long-term disturbance).
 5. Pack animals (short-term disturbance)
 6. Plant restoration.
 7. Use by recreationists.
 8. Presence of USFS project vehicles.
- High Risk results if each of the following applies:
 - Known invasive species in or adjacent to project area.
 - Any of vector numbers 1 through 8 in project area.
 - Project operations in or adjacent to invasive species sites.
 - Moderate Risk results if:
 - Any of vector numbers 1 through 5 are present in project area.
 - Low Risk results if:
 - Any of vector numbers 6 through 8 present in project area,
 - OR
 - Known invasive species present in or adjacent to project area, even if vectors lacking.

DISCUSSION OF RANKING

This project has been given a HIGH risk ranking for the introduction and spread of invasive plant species because known invasive plant species sites occur both adjacent to and within the proposed project area, and project activities include the use of heavy equipment within and adjacent to known sites of invasive plant species. Because of the small size of the proposed project area, this HIGH risk is anticipated to be very local in nature.

ENVIRONMENTAL CONSEQUENCES

Alternative 1 (No Action)

Direct and Indirect Effects: No effects have been identified, because no new activity would occur.

Alternative 2 (Proposed Action)

Direct, and Indirect and Cumulative Effects: It is possible that equipment brought to the site will carry in noxious weed seeds or parts and introduce them to the site. Making sure that the equipment is cleaned prior to project entry (Botany mitigation #1, Chapter 2) reduces this concern, but does not eliminate the risk. Additionally, use of heavy equipment within the project area may move seed of invasives species from infested areas within the project area to portions of the project area that are currently not infested.

BOTANY: – Threatened, Endangered, and Sensitive Species

SUMMARY OF FINDINGS

Alternative 1 (No Action) and Alternative 2 (Proposed Action): There would be no negative impact to Proposed, Endangered, Threatened, or Sensitive plant species.

EXISTING CONDITION

The 2 acre proposed project site has a vegetative cover dominated by ponderosa pine second growth, bitterbrush and/or greenleaf manzanita and Idaho fescue. During a survey of the site on August 19, 2009, a total of eight shrub/sub shrub species and 12 native herbaceous species were noted. The site has been recently thinned. The site is dry, and includes no perennial or intermittent water courses. The topography of the site is largely flat or slightly convex. Soils in the area are mapped as excessively to well drained sandy, pumiceous volcanic ash over buried soils.

No Threatened or Endangered plant species are documented on Deschutes National Forest. No Region 6 (R6) Sensitive species sites are mapped, or were observed during the site survey, within or adjacent to the proposed project site. Of the 60 R6 Sensitive plant species currently documented or suspected to occur on Deschutes National Forest (Refer to Project Record, Botany BE, pages 5-16), 58 are unlikely to have even marginally suitable habitat within the proposed project site. The known range of tall agoseris (*Agoseris elata*) does not extend south of the Metolius basin, some 25 miles to the north of the proposed project site. Habitat quality within the proposed project site for both tall agoseris and green tinge Indian paintbrush (*Castilleja chlorotica*) is low.

ENVIRONMENTAL CONSEQUENCES

Alternative 1 (No Action) and Alternative 2 (Proposed Action)

Direct and Indirect Effects: No TES plant species, or at least moderately suitable habitat, has been located within or adjacent to the proposed project area. No effects have been identified.

HERITAGE RESOURCES

It has been determined that this project complies with Section 106 of the National Historic Preservation Act, under the terms of the 2004 Programmatic Agreement (PA) for the State of Oregon. This project meets the criteria in the PA for a **No Historic Properties Affected** determination because there are no heritage sites located within project boundaries.

SCALE OF ANALYSIS

Analysis for cultural resources was conducted across 5 acres , of which approximately 2 contiguous acres will be impacted

EXISTING CONDITION

There are no eligible cultural properties within the project activity areas as determined by surveys.

ENVIRONMENTAL CONSEQUENCES

Alternative 1 (No Action) and Alternative 2 (Proposed Action)

Direct, Indirect and Cumulative Effects: Because there are no eligible cultural properties within the project activity areas, there would be no effect to the cultural resources.

OTHER EFFECTS

MUNICIPAL WATERSHEDS

There are no de-facto or designated municipal watersheds in the project area.

PRIME FARMLAND, RANGELAND, AND FORESTLAND

There are no lands within the project area that are classified as prime farm or rangelands. Prime forestland is not applicable to lands within the National Forest System.

CIVIL RIGHTS AND ENVIRONMENTAL JUSTICE

Civil Rights legislation and Executive Order 12898 direct an analysis of the proposed alternatives as they relate to specific subsets of the American population. The subsets of the general population include ethnic minorities, people with disabilities, and low-income groups.

There would be no effect to civil rights, including those of minorities and women. Activities associated with the action alternatives would possibly be governed by Forest Service permits, which are awarded to qualified permittees regardless of race, color, sex, religion, or other such factor. Forest Service permits also contain nondiscrimination requirements. The identified activities would not affect employment, would not provide consumer goods, and would not affect the civil rights, privileges, or status quo of consumers, minority groups, and women.

With implementation of any either of these alternatives, there would be no disproportionately high and adverse human health or environmental effects on minority or low-income populations. Nearby communities would mainly be affected by economic impacts as related to visitors that may use the services provided within those communities.

The effects of the proposal on the social context of the protected groups are within those described in the Deschutes National Forest LRMP. The benefits and risks associated with implementation of the alternatives are provided to all members of the public. The action alternatives provide opportunities for all groups, regardless of racial and economic composition.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

Irreversible commitments of resources are those that cannot be regained, such as the extinction of a species or the removal of mined ore. Irretrievable commitments are those that are lost for a period of time, such as the temporary loss of timber productivity in forested areas that are kept clear for use as a power line right of way or road.

The action alternatives would not be expected to create any impacts that would cause irreversible damage to soil productivity. There is low risk for the proposed actions to cause soil mass failures (landslides) due to the inherent stability of dominant landtypes and the lack of seasonally wet soils on steep slopes.

Soil quality standards and guidelines do not apply to intensively developed sites, such as recreation facilities and administrative sites (FSM 2520, R-6 Supplement No. 2500-98-1) because they could not be constructed to result in limited disturbance below specific thresholds. Soils dedicated to management facilities, such as the parking area and the proposed Welcome Station, are considered an irretrievable loss of soil productivity until their functions have been served and disturbed sites are returned back to a productive capacity.

HUMAN HEALTH AND SAFETY

No significant adverse effects to public health or safety have been identified. The effects of implementation of the alternative is well known, not highly controversial, and do not involve any unique or unknown risks. Although State air quality standards would be met or exceeded, some risk remains for forest workers.

The Clean Air Act lists 189 hazardous air pollutants to be regulated. Some components of smoke, such as polycyclic aromatic hydrocarbons (PAH) are known to be carcinogenic. Probably the most carcinogenic component is benzo-a-pyrene (BaP). Other components, such as aldehydes, are acute irritants. In 1994 and 1997¹, air toxins were assessed relative to the exposure of humans to smoke from prescribed and wildfires. The five toxins most commonly found in prescribed fire smoke were:

Particulate matter - Particulates are the most prevalent air pollutant from fires, and are of the most concern to regulators. Research indicates a correlation between hospitalizations for respiratory problems and high concentrations of fine particulates (PM_{2.5}, fine particles that are 2.5 microns in diameter or less). Particulates can carry carcinogens and other toxic compounds. Overexposure to particulates can cause irritation of mucous membranes, decreased lung capacity, and impaired lung function. Particulate matter is analyzed for Alternative 2 in the Air Quality section, page 35.

Acrolein - An aldehyde with a piercing, choking odor. Exposure severely irritates the eyes and upper respiratory tract.

Formaldehyde - Low-level exposure can cause irritation of the eyes, nose and throat. Long-term exposure is associated with nasal cancer.

Carbon Monoxide - CO reduces the oxygen carrying capacity of the blood, a reversible effect. Low exposures can cause loss of time awareness, motor skills, and mental acuity. Also, exposure can lead to heart attack, especially for persons with heart disease. High exposures can lead to death due to lack of oxygen.

Benzene - Benzene causes headache, dizziness, nausea and breathing difficulties, as well as being a potent carcinogen. Long-term exposure can cause anemia, liver and kidney damage, and cancer. The closest Designated Area to the analysis area is the city of Bend, Oregon; the communities of Crescent, Sunriver, and La Pine are closer to the analysis area but are not as highly populated.

The greatest risk of exposure to airborne toxins from prescribed fires or wildfires would be to firefighters and forest workers implementing the prescribed burning. It is unlikely the general public would be exposed to toxin levels adverse to human health during implementation of prescribed burning operations in the Deadlog analysis area because of the distance from populated areas and the

¹ Results of an April 1997 conference to review the results of health studies and develop a risk management plan for the protection of fire crews were published by Missoula Technology Development Center in Health Hazards of Smoke, Technical Report 9751-2836-MTDC.

application of prescriptions designed to lessen the release of particulate matter. People who suffer from breathing ailments may experience some difficulty during periods of prescribed burning, especially during atmospheric conditions that do not favor dispersion of smoke. The Forest Service voluntarily follows the guidelines assigned by Oregon Smoke Management to limit state-wide exposure on a cumulative basis, in compliance with the Clean Air Act.

COMPATIBILITY WITH STATE AND LOCAL LAWS

Implementation of all alternatives would be consistent with State and local laws, land use, and environmental policies. Action alternatives follow State of Oregon requirements in accordance with the Clean Water Act for protection of waters. There are no lakes or perennial streams within the project area. The nearest body of water is East Lake within the Newberry National Volcanic Monument, approximately 22 miles to the southeast of the project area.

EXECUTIVE ORDERS 11988 (FLOODPLAIN MANAGEMENT) AND 11990 (PROTECTION OF WETLANDS)

Executive Orders 11988 and 11990 direct Federal agencies to avoid, to the extent possible, both short-term and long-term adverse impacts associated with the modifications of floodplains and wetlands. All alternatives have no specific actions that adversely affect wetlands and floodplains. Proposed activities are compliant with the orders and USDA Departmental Regulation 9500-3. There are no floodplains or wetlands within the project area. Refer to discussions related to this topic in the soils and fisheries/hydrology resource sections in this EA, Chapter 3 for more information.

INVENTORIED ROADLESS AREAS AND WILDERNESS

The project area does not contain any Inventoried Roadless Areas or Wilderness. Activities would not directly or indirectly affect any of the resources or values of those areas.

The nearest IRA is in the Newberry National Volcanic Monument, the North and South Paulina IRA, approximately 20 miles to the southeast of the project area. The nearest Wilderness Area is the Three Sisters Wilderness, approximately 14 miles to the west-northwest. There would be no impacts from any alternative to this land allocation wilderness

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CHAPTER 4

**COORDINATION
AND
CONSULTATION**

CHAPTER 4 – COORDINATION AND CONSULTATION

INTERDISCIPLINARY TEAM MEMBERS

The following Forest Service individuals were involved in the preparation of this Environmental Assessment.

Robin Gyorgyfalvy	ID Team Leader, Landscape Architect, Scenic Byway Program Leader
Julie York	Wildlife Biologist
Rick Dewey	Forest Botanist
Rod Jorgensen	Soils Scientist
Janine McFarland	Cultural Resource Specialist Specialist
Tom Walker	Fisheries Biologist
Les Moscoso	Recreation Specialist
Paul Brna	Silviculturist
David Frantz	Writer/Editor

PUBLIC INVOLVEMENT

PUBLIC SCOPING (June 10 – July 1, 2009)

In response to the scoping notification, four written comments were received. Comments were used to help develop project design criteria. Those who contacted us include:

Deschutes County Planning Division, Community Development Department, Nick Lelack
Oregon Forest Resources Institute, Mike Cloughsey
American Forest Resource Council, Charles H. Burley
Les Joslin

The following headings provide a list of agencies, organizations, and individuals that were sent notification of the proposed action.

Tribes

Confederated Tribes of the Warm Springs Reservation of Oregon
Burns Paiute Tribe
The Klamath Tribes.

Federal, State, and Local Agencies

Senator Ron Wyden
Senator Jeff Merkley
Congressman Greg Walden
US Fish & Wildlife Service, Nancy Gilbert
Bureau of Land Management, Deborah Norton
Bureau of Indian Affairs, Jerry Lauer
Oregon Department of Fish and Wildlife -
Mark T. Kirsch, Glen Ardt, Tim Bailey, Bruce Eddy, Jeff Zakel, Tim Unterwegner, Russ Morgan;
Habitat Conservation Division
Oregon Department of Environmental Quality
Oregon State Division of State Lands, Fern Shank
U.S. Environmental Protection Agency, Region 10, Environmental Review Coordinator
US Fish & Wildlife Service, John Kinney
Oregon Department of Forestry, Stuart Otto
Oregon Department of Transportation, Rick Williams
Oregon Department of Transportation, Bob Bryant
Oregon Department of Transportation, Gary Farnsworth
Oregon Parks and Recreation Department, Jan Houck
Deschutes County Department of Public Works, Tom Blust
Deschutes County Community Development, Nick Lelack
Deschutes County Sheriff's Department, Jon Sholes
City of Bend, Roger Prowell
City of Bend, Wendy Robinson
City of Bend, Tyler Deke
Bend Metro Parks and Recreation, Don Horton
Bend Chamber of Commerce, Tim Casey
Visit Bend, Doug La Placa

Bend 2030, Ruth Williamson

Interest Groups

Blue Mountain Biodiversity Project, Karen Coulter
Inland Northwest Wildlife Council, Robert D. Panther, Executive Director
Northwest Environmental defense Center, Stephen Otto

Oregon Wild, Chandra LaGue, Eugene, OR
Oregon Wild, Tim Lillebo, Eastern Oregon Field Representative
Sierra Club, Asante Riverwind
Sierra Club, Marilyn Miller
Upper Deschutes Watershed Council, Ryan Houston
Upper Deschutes River Natural Resources Coalition, Don Mercer
Deschutes River Conservancy, Scott McCaulou
Northwest Environmental Defense Center
Friends of the Upper Deschutes, Lynda O'Neill
Deschutes Basin Land Trust, Brad Chalfant
Blue Mountains Biodiversity Project, Karen Coulter
Cascadia Wildlands Project, Josh Laughlin
Wanderlust Tours, David Nissan
Bigfoot Guide Service, Craig Vaage
Mickey Finn Guide Service, Pat Schatz
Crane Prairie Resort, Mr. and Mrs. Pat Schatz
Eastern Oregon Forest Protection Association, Lynne Breese
American Forest Resource Council, Chuck Burley
Upper Deschutes River Coalition, Jim Larson
Deschutes County 4-Wheelers
Bozarth's Offroad Service Specialties, Rick Bozarth
Wild Wilderness, Scott Silver
Sun Country Tours, Dennis Oliphant
Central Oregon Audubon Society, Larry Pecenka
Midstate Power Products
Central Oregon Running Club
Moon Country Snowmobilers, Bruce Cunningham
Mt. Bachelor, David Rathburn
Entrada lodge, Brad Everet
Cultus Lake Resort, Mr. and Mrs. Dan Campbell
Lava Lake Resort and Twin Lake Resort, Mr. and Mrs. Jim Frazee
Inn of the Seventh Mountain
Elk Lake Resort, Jim Bruce
Widgi Creek Homeowners Association
Tetherow Golf Club, Don Bauhauser
Qwest Corporation, Virginia Callister
Pine Mountain Observatory, Mark Dunaway

Individuals

Susan Jane Brown
Dr. Stuart Garrett
Paul Dewey

Les Joslin
Larry Ulrich
David Pitts

Wade Foss
Dyarle Sharkey
Mr. and Mrs. Scott O’Neill
Scott Odgers
Robert Speik
Fred Tanis

Robert Mullong
Patricia Moore
Billy Toman
Scott Walley
Jim Anderson
Vic Russel

News Organizations

The Bend Bulletin, Kate Ramsayer
KTVZ

APPENDIX A

RESPONSE TO COMMENTS

APPENDIX A – RESPONSE TO COMMENTS

The opportunity to comment on the Welcome Station project was provided in accordance with 36 CFR 215.5. A legal notice of the opportunity to comment was published in The Bulletin, Bend, Oregon on February 1, 2010. The comment period ended on March 2, 2010. A complete environmental assessment was mailed to 6 individuals, organizations, and agencies. All others were mailed a cover letter that summarized the project and associated proposed action.

During the public comment period, 13 responses were received. All comments are part of the project record and are available for review at the Bend/Ft. Rock District office. Substantive comments were addressed in the EA and by providing responses in this appendix.

Table 9: Respondents to 30-Day Draft Cascade Lakes National Scenic Byway Welcome Station Environmental Assessment

Letter #	Author
1	Sean Fletcher
2	William Sager
3	Scott Silver, Wild Wilderness
4	Terry Johnson
5	Charles Engle
6	Joy Newhart
7	Scott Phillips
8	Donna Davis
9	Judy and Pete Kershaw
10	Jim Kinney, Seventh Mountain Resort
11	Les Joslin
12	Doug Heiken, Oregon Wild
13	Dave Nissan, Wanderlust Tours

Table 10: Response to 30-Day Draft EA Comments

Letter and Comment #	Comments and Consideration
1-1	<ul style="list-style-type: none"> •....I read in the February 5, 2010 edition of the Bulletin that was to possibly get a five acre Forest Service Welcome facility. <p>Consideration: The Welcome Facility is correct. This facility would directly impact approximately 2 acres, not 5 acres.</p>
1-3 1-4 1-6 1-10	<ul style="list-style-type: none"> •The recreation areas on this scenic byway are special wild areas, and there are already very few left in this state. Adding yet another presence of civilization by placing parking, law enforcement, kiosks, stripes, doors, public restrooms, brochures, water fountains, official official's, ...right smack in the middle of this special area, only depletes whatever feeling of wildness one would get from traveling to such an area. One of the many reason's people travel to these such areas is to get away from this kind of congestion. PLEASE! NO MORE PAVING OUR FORESTS! We have enough of that already. Keep whatever wildness we have wild. This is the information age. There are no reasons to have kiosks on a five acre Forest Service facility with parking for ...smack in the middle of...The forest? <p>Consideration: The proposed site is located in an area that has been thinned with residual tree size</p>

Letter and Comment #	Comments and Consideration
	<p>of 12-14 dbh (Figure 3, page 16). No large trees would be removed to build this facility. The site is located immediately adjacent to Highway 46 (Cascade Lakes Scenic Byway) and junction of Forest Road 41. The facility will be built to blend with the surrounding environment as much as possible, in an area that has already been heavily impacted at the junction of Highway 46 and Forest Road 41. This is an area already heavily accessed by recreationists. The project location is not within a wilderness designation and does not have wilderness qualities. The parking area will impact less than 1 acre. It has not been determined if law enforcement will maintain an office in this facility.</p>
<p>1-7 1-8 9-3</p>	<ul style="list-style-type: none"> • <i>If you feel there is a need for yet another area to purchase forest service passes, get information of the local area, or to store law enforcement personnel, maybe you should consider locating it on hwy 97 between Bend and Sunriver where it would have considerably less of an impact to the natural landscape. However, it seems to me there are already ample opportunities for persons required to purchase forest passes to purchase them in Bend and surrounding areas.</i> • <i>We do not see a need for a center to accommodate the proposed twenty five cars and numerous large RV's. The Central Oregon area has plenty of information outlets for visitors.</i> <p>Consideration: This project is consistent with the Cascade Lakes Scenic Byway Corridor Management Plan (1996). This Welcome Station is consistent with both the Purpose and Need of this project, as stated on pages 4 and 5 of this EA.</p> <p>The Bend/Ft. Rock District and Forest Supervisor offices will be relocated from the present west and central Bend locations to NE Bend, at the previous Bend Pine Nursery site. However, this is approximately 5 miles and 8 miles further from the Byway, and less accessible to visitors from other areas of the state, country, or world to Central Oregon. For visitors the Welcome Station would provide visitor information and educational services for the Forest and, more specifically, for the areas adjacent to the Scenic Byway. Services would also be provided for those that utilize the Forest for various activities. By avoiding leasing office space, the annual savings will be considerable.</p> <p>There are other opportunities to gather information regarding the Deschutes National Forest. The Lava Lands Visitor Center (LLVC) is located adjacent to Highway 97 with the primary emphasis for Newberry National Volcanic Monument (NNVM). LLVC would not be a convenient location to provide information for the Scenic Byway, with costs in both time and vehicle emissions.</p>
<p>1-9 2-2 3-7 6-1 7-1 7-3 9-3</p>	<ul style="list-style-type: none"> • <i>Please use the resources you have to fund this outrageously unnecessary project for more constructive improvements to our fragile forests such as trail maintenance, research and restoration or public education of our ecosystems.</i> • <i>This is a total waste of tax dollars. The USFS cannot adequately maintain its trail systems and other current infrastructure. What sense does it make to build something new, and then maintain it, when the USFS is not adequately funded for its current obligations?</i> • <i>We ask whether better use could be made of this money, such as paying for trail upkeep and dealing with deferred maintenance on sites located throughout the Deschutes National Forest.</i> • <i>Call it a "Grant" or whatever you want, it is wasteful spending.</i> • <i>It is not needed and not fiscally appropriate. ...I strenuously oppose this new million dollar building. Every dime of such a center will be wasted and will be a debt and maintenance burden requiring non-stop collection of additional fees to pay it off.</i> <p>Consideration: Tourism is a major component for the Central Oregon economy. It is appropriate to provide enhanced visitor opportunities and the potential, associated improvement of the economy through tourism. There is business support for tourism facilities and associated information and educational opportunities at this location on the scenic byway and portal to public lands.</p> <p>Money for this project is not from appropriated funds that would otherwise go toward maintenance work (e.g. trails and recreation sites). Funding for the construction would primarily be from a Federal Highway grant that is made specifically for this particular type of project. Future funding will be provided to maintain and administer the Welcome Station.</p>

Letter and Comment #	Comments and Consideration
<p>3-1 thru 3-4 6-3 7-2 7-4 7-6</p>	<ul style="list-style-type: none"> • <i>Wild Wilderness has grave misgivings... We believe there is more to this story than was described in the agency's recently... We would not like to see this proposal given FS approval without this community having an opportunity to learn the rest of the story. ...the Forest Service still seeks to increase their profile, to turn people into customers and to deny access to those citizens unwilling or unable to afford the ever increasing price of admission to our National Forests and other public lands. We know, but the community does not, that the Forest service is exploring the possibility of requiring South Sister hikers to each carry a special recreation permit. "Plan B" involves selling special recreation permits and for this to be effective the Forest Service will need a convenient, customer friendly place where special recreation permits can be sole. And THAT...is the primary purpose for this proposed new, expensive and entirely unnecessary Welcome Center.</i> • <i>One of the stated purposes of the center is to "provide for the sale of maps, permits, and Forest passes." This is misleading. The center is a calculated attempt to further extend the intensely unpopular and oppressive fee program in Region 6.</i> • <i>This proposed center is only a thinly disguised and totally disingenuous mechanism to get between the citizens and their own Recreation opportunities.</i> • <i>An unnecessary "welcome center" would be just one more very expensive extension of this horrible fee charade.</i> <p>Consideration: The primary purpose of this Welcome Station is to provide information and educational opportunities for Byway visitors. Tourism is a major component for the Central Oregon economy. To better serve the visitors to the Deschutes National Forest in a high recreation area, having a presence where information can be obtained is important. It is appropriate to provide enhanced visitor opportunities and the associated improvement of the economy through tourism. The facility would also be a convenient location to obtain Forest use permits and passes. The potential requirement for permitted access to South Sister is not connected to this proposal and is outside the scope of this EA.</p>
<p>3-6 6-2 8-2</p>	<ul style="list-style-type: none"> • <i>...legislation has been introduced which seeks to repeal the current recreation fee collection...asks that it consider the implications that passage of this legislation will have upon the future of such a Welcome Center.</i> • <i>I believe that it is such grandiose ideas such as these that increase the 'need' to charge citizens for every visit to our forestlands.</i> • <i>... Spending public money on such a facility, and charging for a special recreation permit, would be a poor decision in a time of economic hardship.</i> <p>Consideration: Presently, recreation fee collection is occurring. No fee will be charged to enter this facility. Funding for construction of this facility would primarily be through Federal Highway Administration funds. Following construction, funding will be provided to maintain continued operation.</p>
<p>1-10 2-1 3-8 4-1 6-4 7-8 8-3 9-4 13-1</p>	<ul style="list-style-type: none"> • <i>There are no reasons to have kiosks on a five acre Forest Service facility with parking for...smack in the middle of...The forest?;</i> • <i>I just wanted to register my objection to the proposed Welcome Center on the Cascades Lakes Hwy.;</i> • <i>...we encourage the agency to adopt the No Action Alternative.;</i> • <i>I vote NO to any and all proposals for a Welcome Station.;</i> • <i>I do not feel we need a Welcome Center.;</i> • <i>I implore the Deschutes National Forest to select the NO ACTION alternative.;</i> • <i>Please include my comment in opposition to this proposal.;</i> • <i>This project is more wasteful spending...please drop it.;</i> • <i>I support Alternative 1, No Action.</i> • <i>I am opposed to the idea of another interpretive center.</i> <p>Consideration: No response is necessary.</p>

Letter and Comment #	Comments and Consideration
<p>10-1 10-3 10-5 10-8 11-1 12-1</p>	<ul style="list-style-type: none"> •...the Seventh Mountain Resort would like to offer our whole-hearted support of the proposed USFS Welcome Center on Century Drive. ... We would like to commend the USFS for its vision of serving the public with this proposed new facility. ...fully support this project knowing that it will enhance the visitor experience in our region.; Believe it is important to let you know, our hopeful new neighbors, know we fully support the proposed new USFS visitor center. •I am gratified that this project is moving toward accomplishment... •...supports low-impact recreation and interpretive uses of the forest, especially when they are compatible with the ecological values. <p>Consideration: We appreciate the recognition that this project is an important part of the services that the Forest Service attempts to provide to the local and visiting public.</p>
<p>5-1 5-2</p>	<ul style="list-style-type: none"> •...I see nothing that mentions the construction cost for such a facility, nor the cost for staff and upkeep...It certainly does smack of extravagance however. If you DO have the money for such a facility then why are so many of the trails that the tries to use still full of deadfall at the end of the summer? Why is there such a huge back log of maintenance projects across the forest? ... <p>Consideration: Total construction costs are estimated to be approximately \$915,550. It is expected that volunteers will provide many of the expected staff services. Funding for the project would be approximately 80% Federal Highway funds and 20% District matching funds.</p>
<p>5-3</p>	<ul style="list-style-type: none"> •As stated, the proposal is for a summer season facility only. If such is the case, and there is such a pressing need for a “gateway” interface with the public, then where is the proposal for a simple, economic trailer that could more than adequately fulfill the needs...? There is currently only one staff person dispensing such materials most every time I come into the Red Oaks Square office. If one person behind a small counter with limited office space can handle this load currently, why on earth would you build a facility as big as a house to accomplish the same thing? <p>Consideration: The facility would be open all year and will require about 1,500 square feet of office space, which is adequate for the purposes of a Welcome Station, including visitor information and public restrooms. Also as stated earlier, the District and Headquarters offices will be moving further from their current central locations.</p>
<p>5-4</p>	<ul style="list-style-type: none"> •As a side note, I do find it telling that when you sent out your request for comments to “Interest Groups”...your list included 17 environmental/land use organizations, 5 commercial outfitters and tour guides, 8 resorts and lodges, 2 motorized equipment manufacturers/sellers, 1 utility, 1 scientific facility, 1 non-motorized recreational club, and 2 off-road motorized vehicle clubs. But no horse organizations...and no mountain bike organization. Fully 43 percent of your “Interest Groups” can gain commercial benefit if this project comes to fruition. To include so many commercial interests but not some of your top trail user groups that have helped to build and maintain so many of the miles of trails ... can only be politely called a “skewed audience.”... <p>Consideration: Those receiving the EA have expressed an interest in receiving mailings for projects. Chapter 4 of the EA provides a list of those contacted for all project notifications. The intent of our mailings for scoping is to have an audience that is of widely varied interests</p>
<p>10-6</p>	<ul style="list-style-type: none"> •We are all aware of the remarkable geological features, origins and uniqueness of the Deschutes River in this area, and recognize the importance of local involvement in the sustainability and stewardship of the public lands, balancing forest user impact with environmental awareness. <p>Consideration: Many of the local population also recognize the natural beauty, geological intrigue, and historical importance of Central Oregon, including all that the Scenic Byway has to offer. It is with this in mind that we have decided to construct the Welcome Station.</p>
<p>12-2</p>	<ul style="list-style-type: none"> •Please make sure that this proposed new building does not increase the motivation to fight fire in this fire-dependent ecosystem. This proposal essentially inserts a little bit of urban

Letter and Comment #	Comments and Consideration
12-3	<p><i>infrastructure in an area where we want to allow natural processes to flourish.</i></p> <ul style="list-style-type: none"> <i>...assume that fire will come through and try to make this building transparent to fire, so that when fire occurs the FS can evacuate and not worry about the building. This may require some rethinking of the architecture, but the building and landscape design can itself be an interpretive feature of the project</i> <p>Consideration: The Cascade Lakes National Scenic Byway is an important travel route for both the local and visiting public providing ingress and egress to areas of wildland urban interface (Mt. Bachelor ski area and several resorts) and recreation (hiking trails, campgrounds, swimming beaches, hunting, fishing, horseback riding, sightseeing, firewood gathering areas). The facility would be located in an area that has been thinned. The area around the facility would be treated as necessary to reduce the overall fuels and associated fire risk. A wildfire that threatens any structures and potential for injury or death from wildfire would likely not be allowed to burn. The facility would only be abandoned in the event of risk of injuries from wildfire.</p>
13-3	<ul style="list-style-type: none"> <i>The center will cost the public by losing private sector jobs. Private enterprise can and does welcome the public to central Oregon.</i> <p>Consideration: This facility would provide onsite interpretive and educational information only, primarily regarding the Scenic Byway. The Forest Service values the role that the private sector plays in providing Central Oregon recreational opportunities. The Welcome Station will not compete with private enterprise.</p>
13-4 13-6	<ul style="list-style-type: none"> <i>If other Deschutes National forest service models are considered (Newberry Monument and Lava Lands), the welcome center will evolve to providing interpretive tours in the nearby region. Private outfitters can and do fulfill this role. ...already has an interpretive center on forest land at Lava Butte. This is a superb location to engage the public with your message. The forest service does not need another interpretive center a few trail miles from this one. Particularly because at present it is a constant struggle to maintain the Lava Lands facilities from a cost stand point. Over the years the forest service has threatened to shut the doors at Lava Lands. Only with another new tax, the Fee Demo Program, was the government able to keep these doors open. The result? The public has to pay additional "tax" dollars to support this government-run facility and the government jobs by paying to park there.</i> <i>The cost of the building, its maintenance, its employees and their associated costs are unacceptable from a tax cost perspective (in light of the financial troubles seen at Lava Lands) particularly for the less-than-convincing argument stated in your notice of public comment...</i> <p>Consideration: The Welcome Station is not intended to be as expansive as Lava Lands and no fees would be charged to the visiting public. This facility would not provide interpretive tours. The interpretive center at Lava Lands Visitor Center (LLVC) is focused on Newberry National Volcanic Monument. The Welcome Station would be focused on the Cascade Lakes National Scenic Byway. This facility will be located approximately 30-45 minutes from the LLVC. Lava Lands Visitor Center is financially stable.</p>
13-7	<ul style="list-style-type: none"> <i>Our community really needs to consider the cost to the local environment for this structure as well. Do we really need more of our forest land to be cut down for a building and paved over with asphalt? This would be built on top of an elk and deer migration corridor- is this wise?</i> <p>Consideration: This facility would be a "green" facility and would have a small impact on the local environment. This facility would be located in the Ryan Ranch Key Elk Area. This is not a migration corridor for deer or elk.</p>
13-8	<ul style="list-style-type: none"> <i>Do we want to encourage more RV and vehicular traffic up Cascade Lake Highway or should we be trying to reduce traffic by providing a viable public transit system up the highway with all the money planned to be spent on such an interpretive center and its ongoing costs?</i> <p>Consideration: This facility would not be built to encourage vehicular traffic on the Byway. Use is occurring and could have elevated gains in visitor use over time. Refer to EA Chapter 1, Purpose and Need.</p>

Letter and Comment #	Comments and Consideration
13-9	<p>•<i>I would encourage the forest service to utilize tax dollars to collectively affect the forest ecosystem in a way that private business cannot. A private business cannot and will not benefit by determining and maintaining the health of an ecosystem. Tax dollars need to support such an endeavor for the benefit of all- both human populations and everything that lives in the ecosystem.</i></p> <p>Consideration: This facility would be a “green” facility and would have a small impact on the ecosystem.</p>
13-10	<p>•<i>Please save money on building and maintenance costs of the proposed welcome center and divert these precious financial resources to interpretive education at Lava Lands, Lava River Cave and Newberry Caldera specifically for school children and non-profit groups. The general public does not need forest service interpretation, but both of these segments need the support of government funded programs to increase awareness about our forest habitat and ecosystems.</i></p> <p>Consideration: This facility would be developed to provide visitor information and educational services to the public, primarily for those utilizing the Scenic Byway as a travel route. This facility would provide an important part in providing interpretive and educational information to the public, particularly for those that do not reside in Central Oregon.</p>