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United States Department of Agriculture

Forest Service

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Environmental Assessment

Crescent Ranger District Administrative Site Project

Crescent Ranger District, Deschutes National Forest
Klamath County, Oregon

Township 24S, Range 9E, Section 30 Willamette Meridian

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SUMMARY

The purpose of this analysis is to evaluate the current Crescent Ranger Station administration building and associated facilities for replacement. A combined workforce, public services and American Disabilities Act compliance, energy efficiency, deferred maintenance issues, and highway access and safety are some of the drivers behind the need for a new administration building and multi-bay engine building.

Many of the current structures on the six acre administrative site are past their service life. A new modern office complex with a focus on Leadership in Energy and Environmental Design (LEED) would reduce deferred maintenance and allow the Forest Service to become more energy efficient. Consolidation of the entire workforce onto a single administrative site would improve communications and increase safety by reducing the amount of time crews must travel on Highway 97 between the administrative site and the Rosedale work facility.

The project area is located in the community of Crescent, Oregon near the junction of County Road 61 (Crescent Cut-off) and State Highway 97. The legal location is Township 24S, Range 9E, Section 30, Willamette Meridian.

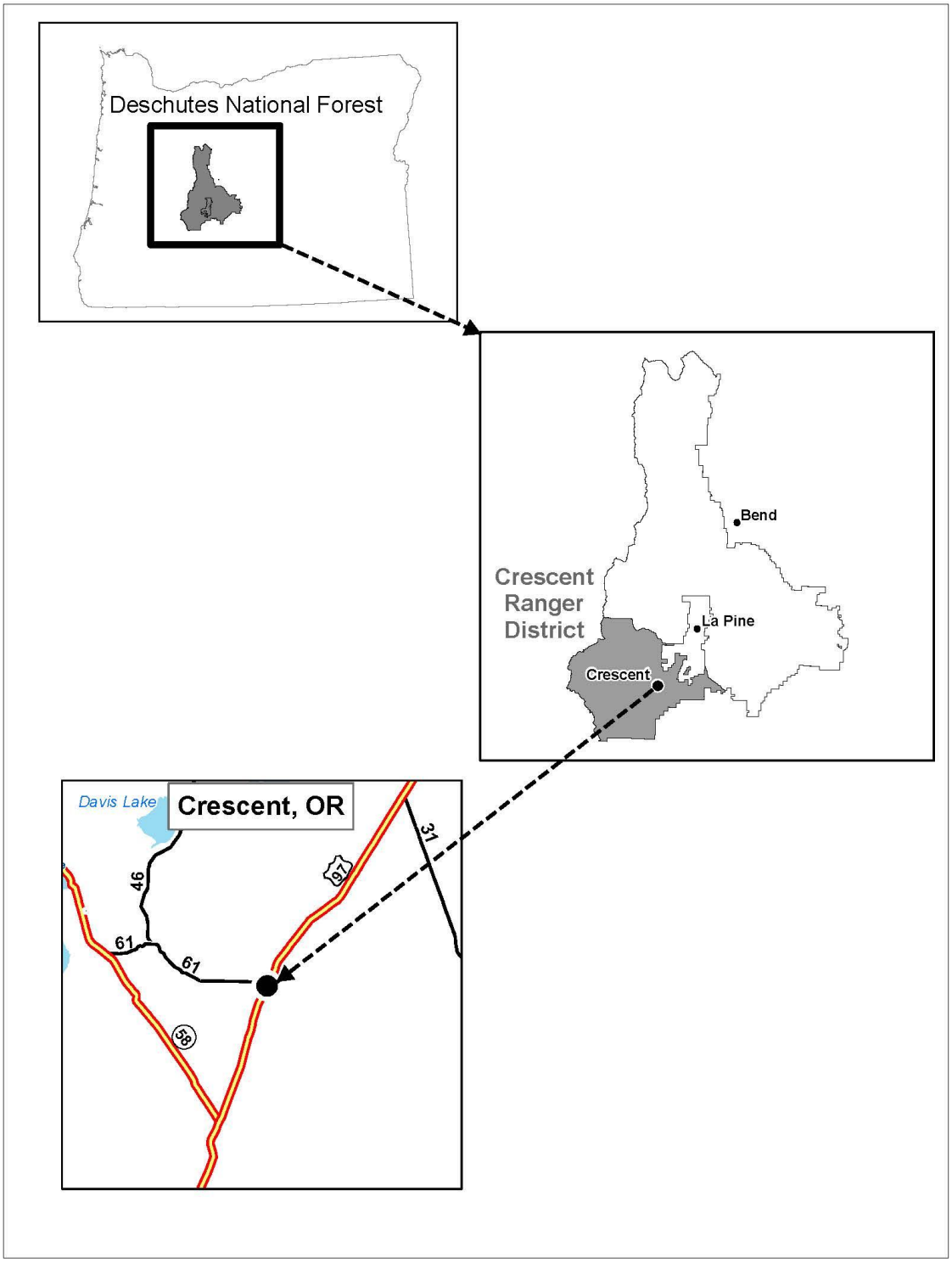

Figure 1. Crescent Ranger District Administrative Site Vicinity Map

INTRODUCTION

Document Structure

The Forest Service 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 alternatives. The document is organized into four parts:

- *Introduction:* 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 as well as alternative methods for achieving the stated purpose. These alternatives were developed based on issues raised by other agencies, other users, and the public.

- *Environmental Consequences:* This section describes the environmental effects of implementing the proposed action and other alternatives. 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 alternative that follows.

- *Agencies and Persons Consulted:* This section provides a list of preparers as well as agencies and individuals or businesses consulted during the development of the environmental assessment.

Additional documentation, including more detailed analyses of project-area resources, may be found in the project planning record located at the Crescent Ranger District Office in Crescent, Oregon.

Background

Crescent is the headquarters of the Crescent Ranger District, Deschutes National Forest (Figure 1). Crescent/Gilchrist, Oregon is an unincorporated community approximately 47 miles south of Bend, Oregon, surrounded by four smaller communities of Crescent Lake Junction, Schoonover and Vicinity, Two Rivers North/Little Deschutes River, and Jack Pine Village. Crescent/Gilchrist and the surrounding areas have approximately 2,000 residents with an additional 1,000 part-time residents in the Crescent Lake area. The Crescent Ranger District manages a broad range of resources such as forest products (matsutake mushrooms, pine cones, firewood), timber, and recreation opportunities. The Crescent Ranger District is currently home to approximately 43 full time, 26 seasonal, 31 temporary employees, and three Central Oregon Youth Conservation Corps crews consisting of students from Crescent/Gilchrist, Chemult, and LaPine (three crews of six, plus three crew leaders).

The history of the administration site is unique. In 1911 portions of what is now the Deschutes, Fremont, Umpqua, Crater (Rogue River), and Cascade (Willamette) National Forests were reapportioned to form the Paulina National Forest. The current site of the Crescent Ranger District was the Forest Supervisor's Office for the Paulina National Forest. In 1914 the lands of the Paulina National Forest were reincorporated into the Deschutes, Fremont, and Crater (Rogue River) National Forests and the site was renamed as the Crescent Ranger District. In 1961 the southern portion of the District (approximately 71,673 acres including Deer Butte Lookout, Miller Lake, Coral Springs, and Deer Creek) was transferred to the newly formed Winema National Forest.

The Crescent Ranger District Administrative Site is comprised of multiple building of varying ages. The oldest building still utilized on the site is the Lehman Building (#2341) which was built in 1932 and renovated in 1995. The current administrative building was built in phases, with the initial construction of the main building with a reception area in 1957 (Figure 2). As the need for resources grew, an additional four modular buildings were incorporated from 1963 to 1995. In 1980 a modular addition (Building 2014) was added on the east end of the original office. Twenty-five members of the community attended an open house held on November 21, 1980 to see the newly renovated office space. A modular addition was added on the south side of the original building in 1986 (Building 2004) followed by a second modular addition and connecting ramp in 1995 (Building 2016) (Figure 3).

Most recently the bunkhouse, which was built in 1934, was converted to a conference room to provide a larger meeting /work space with restrooms to accommodate the needs of the Ranger District personnel and the community, as the Lehman Building conference room did not contain adequate facilities to hold meetings.

The Forest Service also manages the Rosedale site approximately two miles south of the main office on Highway 97. Development of this site began in the mid 1960s as expansion at the main administrative site was confined to the taxlots within the community of Crescent. There was a housing need for seasonal employees and the first single family residence was constructed in 1965. From 1965 to 1975 a total of eight bunkhouses and single family residences were constructed to meet the need for employee housing. Other construction projects were implemented on the Rosedale Site, including a tree cooler and two warehouses, with the last building constructed on the site in 1997. Currently, the District Fire Engine bay is located at Rosedale, as are many of the District fire fighters.

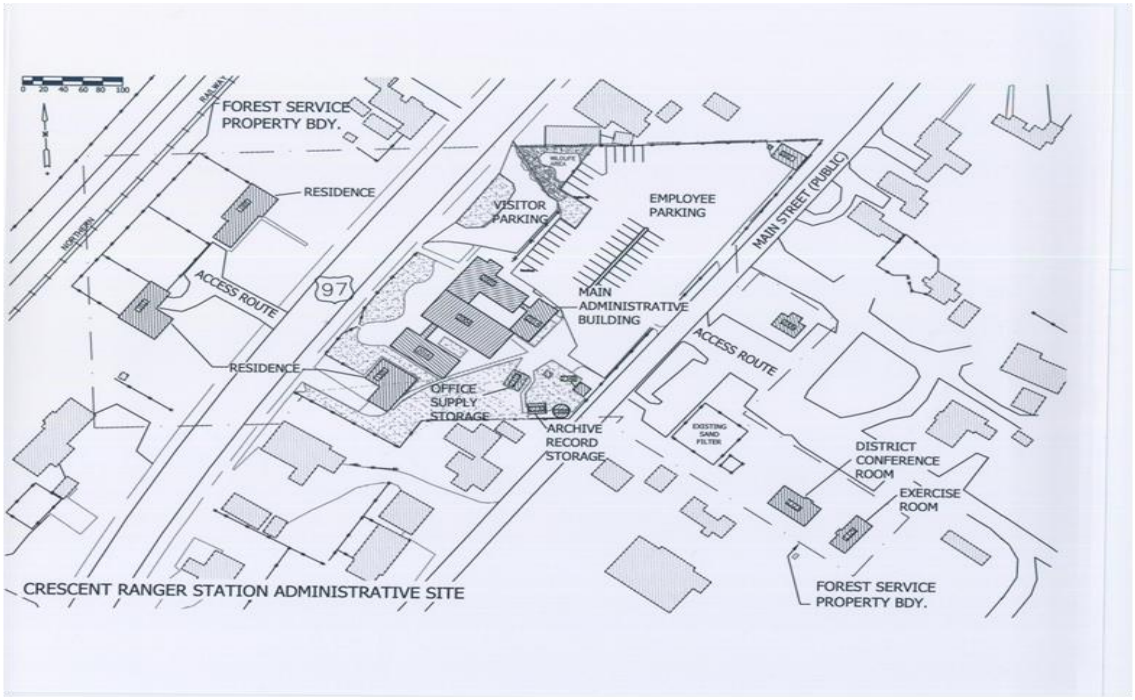

Figure 2. Existing Crescent Ranger District Administration Complex

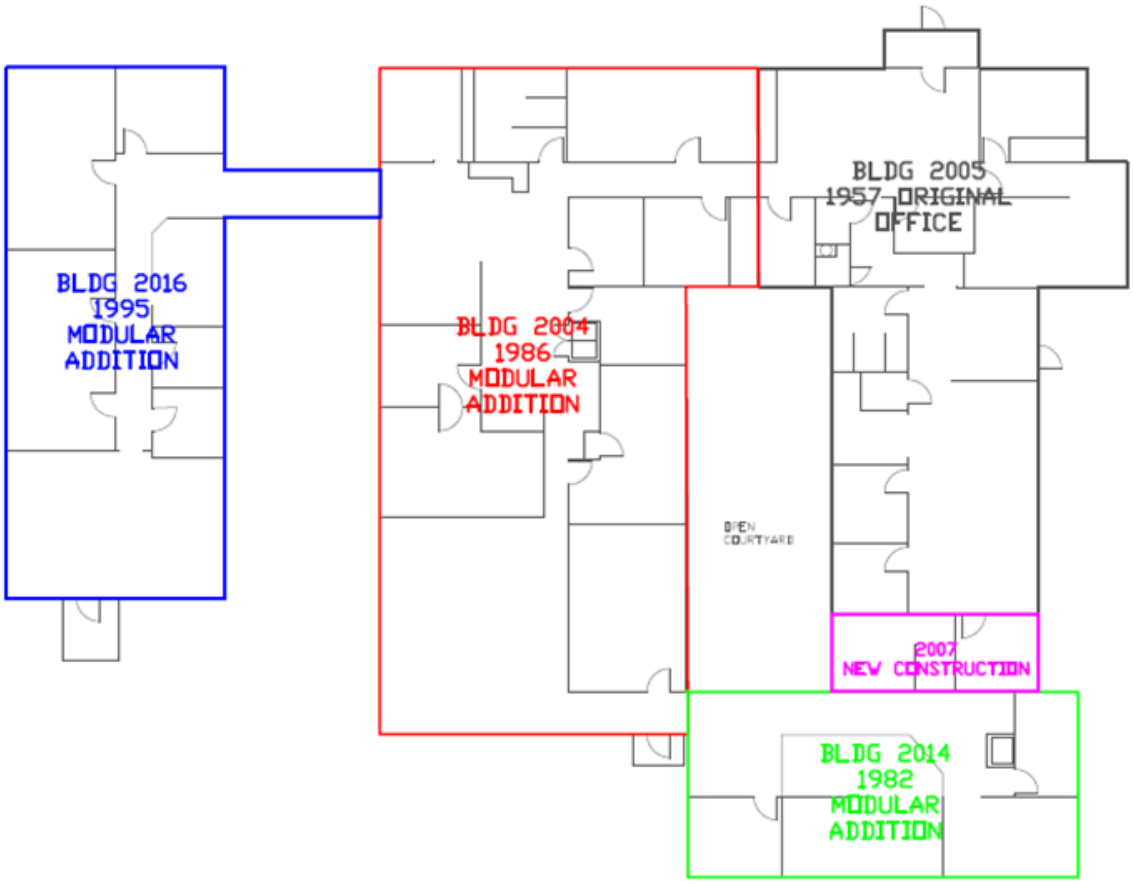

Figure 3. Current Layout of Crescent Ranger District Administration Office Building

Purpose and Need for Action

There is a need to replace the current Crescent Ranger Station administration building and associated facilities with a new energy efficient building or complex of buildings on the Forest Service Administrative site within the community of Crescent.

The purpose of this project is to 1) evaluate the current Crescent Ranger District administration facilities, focusing on health and safety of the employees and public and deferred maintenance issues, and 2) construct a new Ranger Station building(s) and facilities that better meets the needs of the visiting public, the community, and the employees, as well as reduces operation and maintenance costs for forest facilities.

There is a need to construct a new administration building as the current arrangement is a collection of modular buildings connected to the original administration building (Figure 3). This eclectic and inefficient layout can no longer accommodate the current workforce and mission of the Crescent Ranger District or adequately serve the public during key times such as matsutake mushroom season. Several key factors support the need for a new office building including; a) increasing costs associated with building maintenance on the existing aging facility, b) creating a better design for employee workstation efficiency and comfort, c) becoming more energy efficient, d) housing all employees, including the fire personnel, under one roof, and e) better serving the public (i.e. with an

attached public meeting room, and more visibility and space at the front office for visitors). Additionally, the current building does not meet Americans with Disabilities Act (ADA) requirements for access into the building and inside maneuverability is limited by narrow hallways and steps.

The current facility of five modular buildings has numerous outdated heating, ventilation, and cooling (HVAC) systems, old electrical wiring, and an outdated mechanical system. Removal of the current facility and several of the small outbuildings, combined with construction of a new, more efficient facility, would result in considerable savings to the agency over time. Annual maintenance and energy costs would be reduced, and nearly $768,000 of deferred maintenance would be eliminated.

Safety is also a primary driver behind the need for a new administration building and multi-bay engine building. Currently, the main conference room is a converted bunkhouse located across the main employee parking lot and across Main Street, approximately 400 feet away. During the winter, ice and snow berms create hazardous conditions, making travel between the two buildings perilous. In addition, the main conference room has exceeded its serviceable life. Additionally, building a facility that can accommodate all District personnel, including those currently working from the Rosedale site, would improve safety through reduced vehicle time on Highway 97 traveling between sites.

Proposed Action

The Proposed Action was designed to provide a new energy efficient, modern office complex for the current workforce of the Crescent Ranger District. Proposed site-specific changes would include:

- Construction of a new modern office building (approximately 12,000 ft^2) on the current Crescent Administrative Site.
- Removal of the current arrangement of buildings on the site.
- Construction of a multi-bay engine building.
- Installation of new security fencing to enclose all of the non-public areas of the site.
- Redesigning the parking lot for fleet vehicles and employee parking.
- Redesigning the public parking (off Highway 97) to improve visitor services.
- Limited removal of vegetation across the six acre site, as all of the ground is previously disturbed.

The consolidation of the entire workforce onto a single administrative site would improve communications and increase safety by reducing the amount of time crews must travel on Highway 97 between the administrative site and the Rosedale work facility. In addition, modern construction would enable the District to reduce deferred maintenance and become more energy efficient. Project development would include a focus on Leadership in Energy and Environmental Design (LEED) certification. The rating of certification (silver, gold, or platinum) feasible on the project would be determined by the overall scope and budget, and would be evaluated during design review.

Decision Framework

Given the Purpose and Need, the deciding official, the Crescent District Ranger, reviews the proposed action and the other alternatives in order to decide:

1. Whether to authorize a new facility, improving health and safety, increasing energy efficiency, and allowing for future collocation; or remodel the current building.
2. Which Project Design Features or Mitigation Measures may apply to the project.

Public Involvement

On September 2, 2011, a letter announcing the proposed project was sent to organizations and individual citizens on the Crescent Ranger District mailing list requesting their comments on the project. An article ran in *The Bulletin*, Bend, Oregon, on September 17, 2011 and the project also appeared in the Fall 2011 and Winter/Spring 2012 issues of the *Schedule of Proposed Actions for the Deschutes National Forest*, which also appears on the Deschutes National Forest's website.

There were two responses to this scoping; one respondent was in favor of the proposal. Another respondent asked the Forest Service to ensure that its responsibilities under Section 106 of the National Historic Preservation Act were complied with.

The opportunity to comment on the Crescent Ranger District Administrative Site Project Preliminary Environmental Assessment was provided in accordance with 36 CFR 212.5. Interested citizens were provided an opportunity to comment through a letter and a legal notice published in *The Bulletin*, Bend, Oregon on December 14, 2011. It was also posted on the Deschutes National Forest website: http://www.fs.usda.gov/main/centraloregon/landmanagement/projects.

The comment period ended January 13, 2012. During this period, the Forest Service received two comments, one that was supportive of the new facility and the second respondent wanted to inform us of the economic, environmental, and community advantages of utilizing a pellet boiler to heat the new facility.

Tribal consultation for the Crescent Ranger District Administrative Site project was initiated on August 30, 2011. The Forest Service initiated government-to-government contact with the Tribal Chairs and Cultural Staffs of the Burns-Paiute Tribe, the Klamath Tribes, and Confederated Tribes of Warm Springs.

Issues

Using the comments from the public and other agencies, the District Ranger determined there were no key issues that would lead to development of additional alternatives to be considered in detail. Other issues such as the potential for introduction of invasive plant species are addressed in the Environmental Consequences section of this document.

CHAPTER TWO - ALTERNATIVES, INCLUDING THE PROPOSED ACTION

This chapter describes and compares the alternatives considered regarding the new District office building for the Crescent Ranger District. Alternative A, the "No Action" Alternative, is developed as a baseline to display consequences of a status quo scenario where facility upgrades are not authorized.

Resource Protection Measures

The following features are incorporated into the design of all activities included in the Crescent Ranger District Administrative Site Project proposal. These are features that are considered routine, and are either incorporated into contract provisions or accomplished between appropriate resource specialists, and have proven to be effective. Mitigation Measures are those that are site specific, usually have a specific unit(s) assigned to them, are used to avoid, minimize, rectify, or compensate for an impact (40 CFR 1508.20). Project Design Features (PDF) and Mitigation Measures are used as a basis for determining and disclosing effects in the Environmental Consequences discussions.

Project Design Features

Cultural Resources

1. Monitoring by a professional archeologist is required for new soil disturbance such as trenching for utilities and blading of surfaces beyond that which has been previously disturbed.

2. If, prior to, or during construction work, items of archeological or historical value, or human remains are reported or discovered, or an unknown deposit of such items is disturbed, the contractor would immediately cease activities in the area affected. The Forest Service would be notified and ground disturbing activity would not resume until written authorization is provided.

Soils/Hydrology

1. Where soil disturbance would occur during construction, erosion control measures would be taken. All material brought in from outside the construction area would be certified by the Forest Service as clean and weed-free.

2. Promote and apply approved best management practices, as described in General Water Quality Best Management Practices (USDA FS 1988), to all management activities as the method for control of non-point sources of water pollution, and for compliance with established state or national water quality goals (USDA FS 1984). The Deschutes Forest Plan states that BMPs will be selected and designed into project plans in accordance with the Clean Water Act for protection of waters of the State of Oregon (Forest Plan 4-69).

Invasive Plants

This project would adhere to the Standards and Guidelines outlined by Forest Direction in the Region 6 Invasive Plant Record of Decision and Final Environmental Impact Statement (2005):

1. Noxious weed risk assessment and management will be considered in all NEPA planning activities where soil disturbance or invasive plant introduction or spread could result from the

activity. Prevention will be emphasized as the preferred strategy for invasive plant management.

2. All known weed sites would be treated by manual/hand pulling prior to any ground disturbing activities.

3. All gravel, fill, sand stockpiles, quarry sites and borrow materials used for this project would be inspected for invasive plants before such material is transported and used within Forest Service lands. Any infested sources must be treated before use of pit material. Only gravel, fill, sand, and rock that are judged to be weed-free by District or Forest weed specialists would be used for this project.

Wildlife

1. The objective is to minimize harm to any bat species that potentially reside in any of the buildings on the administrative site that may be removed. Surveys for bats would be conducted prior to dismantling. If evidence of bats is found, then demolition of buildings can occur when they seasonally vacate the building.

Mitigation Measures

The following mitigation measures are an integral part of each of the action alternatives. These are different from Project Design Features in that they are typically tied to a specific unit and they are used to avoid, minimize, rectify, reduce, or compensate an impact (40 CFR 1508.20). They are listed here separately to avoid repeating them in each alternative description.

The effectiveness of each measure is rated at high, moderate, or low to provide a qualitative assessment of how effective the practice would be in preventing or reducing resource impacts. These mitigation measures and design elements are considered in the effects discussions of Chapter 3.

Effectiveness ratings of High, Moderate, or Low are based on the following criteria: a) Literature and Research, b) Administrative Studies (local or within similar ecosystem), c) Experience (judgment of qualified personnel by education and/or experience, d) Fact (obvious by reasoned, logical, response).

High*:* Practice is highly effective (greater than 90 percent), meets one or more of the rating criteria, and documentation is available.

Moderate*:* Documentation shows that practice is 75 to 90 percent effective; or logic indicates that practice is highly effective, but there is no documentation. Implementation and effectiveness of this practice needs to be monitored and the practice will be modified if necessary to achieve the mitigation objective.

Low*:* Effectiveness is unknown or unverified, and there is little or no documentation; or applied logic is uncertain and practice is estimated to be less than 60 percent effective. This practice is speculative and needs both effectiveness and validation monitoring.

Wildlife

1. To protect potential maternity/roosting bats, the buildings with current bat use would be sealed at least one winter prior to demolition to prevent any future bat use and eliminate the need for demolition restrictions. This applies to house #1305. *High*

Alternatives Considered but Eliminated from Further Detailed Analysis

Federal agencies are required by NEPA to rigorously explore and objectively evaluate all reasonable alternatives and to briefly discuss the reasons for eliminating any alternatives that were not developed in detail (40 CFR 1502.14). Public comments received in response to the Proposed Action provide suggestions for alternative methods for achieving the purpose and need. Some of these alternatives may duplicate the alternatives considered in detail or may be determined to be unable to meet the project's Purpose and Need. Alternatives that were considered but dismissed from detailed consideration and the reasons for dismissal are summarized in the following:

Move Office Location to Rosedale Compound
An alternative was considered to move the Ranger Station two miles south of the town of Crescent to the Forest Service Rosedale Compound where the current residential area and warehouses are located. This location was considered as it is owned by the Forest Service, and has land available to build on. However, this alternative was considered but eliminated from further detailed analysis as the Forest Service is a part of the Crescent community, and moving south of town would reduce the visibility and interaction with local businesses. Part of the new facility design is with the local community in mind as it includes a large conference room with outside access to be used by both the Forest Service and the community for town meetings, group functions, mushroom season orientation, and training events.

Additionally, staying at the current location at the intersection of Highway 97 and County Road 61 (Crescent Cut-off), which is a key traffic access point, maintains high visibility and easy highway access for the public. The current location also has the benefit of a lower speed limit (40 mph) and an existing turn lane for public safety. Access into Rosedale is from Highway 97, which has a posted speed limit of 55 mph, and is acknowledged by the Oregon Department of Transportation (ODOT) as a major transportation throughway, thus a traffic revision would be needed for safety. The revision would include a turn lane (and possibly an acceleration lane) to allow for safe public and employee ingress and egress. The Forest Service would be responsible for funding the highway improvements associated with the Rosedale location.

Relocate the Ranger Station to Crescent Lake Junction
An alternative was considered to relocate the Ranger Station 16 miles west to Crescent Lake Junction. Many visitors to central Oregon arrive from the Willamette Valley and Eugene, Oregon via Highway 58, and thus public access for them would increase under this alternative. However, for Forest visitors utilizing Highway 97 (the main north/south corridor east of the Cascade Mountain Range) access and assistance that could be provided by the Forest Service would decrease. This site was considered but eliminated from further detailed consideration as it does not meet the criterion for continued presence in the community of Crescent or consolidation of facilities in one location, and also due to the increased costs associated with the remote location (i.e. - lack of infrastructure for computer services, utilities, water, and waste removal). In addition, there would be increased commuting time and distance as many employees must travel to attend meetings at the Forest Headquarters in Bend, work with Resource Specialists on the other Districts, and participate in local partnerships/community education programs with the school districts. Distance between the office and tree cooler, warehouses, and residential housing/bunkhouses would increase, as additional buildings to be included on this site would have to be phased-in as funding became available.

Gilchrist Mall
The Gilchrist Mall has an existing building that is currently vacant and available for lease. This alternative was considered but eliminated from further detailed consideration due to the fact that the building would require extensive renovations, as the existing configuration does not match that

required for District operations. There is also insufficient parking for public and employee needs, and limited room for future expansion.

Other Non-Forest Service locations in Crescent, Oregon
Within the Crescent community there are currently no existing structures available for purchase or lease that would meet the requirements needed for a consolidated District Office. There is the possibility of a private entity building a facility for the district to lease that could meet its needs; however, the goal for the Forest Service is to own its own building for long-term financial reasons. Thus, this alternative was considered but eliminated from further detailed consideration.

Alternatives Considered in Detail

Alternative A - No Action
As required by the National Environmental Policy Act (NEPA), the No Action Alternative forms a basis for describing and comparing the effects of the proposed action. Under the No Action Alternative, current management plans would continue to guide management of the project area. There would be no consolidation of the work force in a new administration office building and the District would continue to use the existing stick and modular configuration for workspace. Several of the small outbuildings would continue to be utilized for storage. Deterioration of the buildings (as many are past their service life) would increase resulting in rising maintenance costs.

Alternative B - The Proposed Action
Alternative B is described in detail under the "Proposed Action".

CHAPTER THREE - ENVIRONMENTAL CONSEQUENCES

This section summarizes the physical, biological, social and economic environments of the affected project area by resource area and the potential changes to those environments due to implementation of the alternatives.

Cultural Resources

Management Direction
Management direction for the cultural resources is found in the Deschutes National Forest Land and Resource Management Plan, in the Forest Service Manual section 2360, in Federal Regulations 36 CFR 64 and 36 CFR 800 (amended December 2000), and in various Federal laws including the National Historic Preservation Act (NHPA) of 1966 (as amended), the National Environmental Policy Act and the National Forest Management Act.

In general, the existing management direction is to determine the effects on cultural resources when considering projects that fall within the Forest's jurisdiction. Further direction indicates that the Forest will determine what cultural resources are present on the forest, evaluate each resource for eligibility to the National Register of Historic Places (National Register), and protect or mitigate effects to resources that are eligible.

Relevant Forest Plan Standards and Guidelines include:

- **CR-2,** which states that cultural resource properties located during inventory will be evaluated for eligibility to the National Register.
- **CR-3,** which states that in concert with inventories and evaluations, the Forest will develop thematic National Register nominations and management plans for various classes of cultural resources.
- **CR-4,** which indicates that the project level inventories or intent to conduct such shall be documented through environmental analysis for the project.

Desired Condition
The desired condition of the Crescent Administrative Site is not clearly stated in the Forest Plan but can be derived from the implied goals of the Standards and Guidelines. It would be desired to know the location and extent of all cultural resources, to have evaluated each one for eligibility to the National Register, and to have developed management plans for all eligible properties that would provide protection or mitigate effects that would occur to the resources.

Existing Condition
A complete inventory of the Crescent Ranger District Administrative Site was completed (including two residences west of Highway 97). Following guidelines in the 2003 Regional Programmatic Agreement (PA) among the USDA-Forest Service, the Advisory Council on Historic Preservation, and the State Historic Preservation Office, a finding of *"No Historic Properties Affected"* was determined under Stipulation III(B)1 of the PA. The Forest finds that there are historic properties but the undertaking would have no effect on them as defined by 36 CFR 800.16(i), (Federal Register Vol. 65, No. 239; Tuesday, December 12, 2000; page 77738).

Direct and Indirect Effects
Under the No Action Alternative, Alternative A, there would be no effects to any historic properties on the Administrative Site as current management direction would not change. Several of the small outbuildings would continue to be utilized for storage areas.

Under Alternative B there would be no effects to historic properties because the proposed project activities would not alter the culturally important characteristics. There are Project Design Features in place that require if previously unknown artifacts, human remains, or items of historical value are found during project implementation, to be flagged and operations in that area would cease immediately and the area avoided until an archaeologist is consulted. In addition an archaeologist would monitor any new ground disturbing activities.

Cumulative Effects
The zone of influence is defined as the six-acre Administration site. There are no projects that are foreseeable actions that have the potential to overlap in time and space with those of the Crescent Ranger District Administrative Site Project; therefore there would be no cumulative effects on historic properties.

Wildlife

Introduction

A Biological Evaluation (BE) has been prepared in compliance with the requirement of Forest Service Manual (FSM) 2630.3/ FSM 2670-2671, FSM W.O. Amendments 2600-95-7, and the Endangered Species Act (ESA of 1973, as amended). Species classified as sensitive by the Forest Service are to be considered by conducting biological evaluations to determine potential effects of all programs and activities on these species (FSM 2670.32). The BE is a documented review of Forest Service activities in sufficient detail to determine how a proposed action may affect sensitive wildlife species. The document, signed October 5, 2011, is part of the analysis file.

The Deschutes and Ochoco National Forests completed a Joint Terrestrial and Aquatic Programmatic Biological Assessment (BA, USDA and USDI, 2010-2013) in July 2010 for Federal Lands within the Deschutes and John Day River Basin's administered by the Deschutes and Ochoco National Forests. A letter of concurrence was received from the U.S. Fish and Wildlife Service (USFWS) in September 2010 that agreed with the effects determination in the programmatic document. The programmatic document includes project design criteria (PDCs) applicable to listed, proposed or a candidate species. The PDCs set sideboards for projects that may affect the species. Following the PDCs eliminated the need for further consultation. If every PDC cannot be followed, additional consultation on the project would be needed. The BA covers the northern spotted owl (*Strix occidentalis*) as threatened species and the 2008 designation of Critical Habitat and the Oregon spotted frog (*Rana pretiosa*) that is currently a federal candidate for listing.

Threatened, Endangered and Sensitive Wildlife Species

Summary Conclusions for Alternatives A and B, Threatened and Endangered Species and Federal Candidates

1. The project would have **"No Effect"** on the northern spotted owl and northern spotted owl critical habitat.
2. The project would have **"No Impact"** on the Oregon spotted frog, Pacific fisher, and California wolverine.

   Note: Where there was a "No Impact" determination, it was concluded the New Office /Administrative Site construction project either does not have the habitat for a particular species, or the zone of influence and its activities do not have the potential to overlap the biological needs of an individual, or a combination of both.

Table 1. **Summary of Conclusion of Effects for Threatened, Endangered, and Federal Candidate Wildlife Species, Administrative Site Project Area**

Species/Habitat	Alt A	Alt B
Northern Spotted Owl	NE	NE
Northern Spotted Owl Critical Habitat	NE	NE
Oregon Spotted Frog	NI	NI
Pacific Fisher	NI	NI
North American Wolverine	NI	NI

NE = No Effect
NLAA = May Effect, Not Likely To Adversely Affect

BI = Beneficial Impact
NI = No Impact
MIIH = May impact individuals or hábitat, but would not likely contribute to a trend toward federal listing or cause a loss of viability to the population or species

Federally Listed Species

The federally listed species analyzed in this document include the northern spotted owl (*Strix occidentalis caurina*). The Oregon spotted frog (*Rana pretiosa*), Pacific fisher (*Martes pennanti*), and the North American wolverine (*Gulo gulo*) are federal candidates for ESA listing and are also on the Region 6 Regional Forester's Sensitive Species list.

Threatened, Endangered, and Federal Candidate Wildlife Species (Table 2) displays those species that are currently federally listed or candidates on the Deschutes National Forest and whether the species has been documented to occur within the project area.

Table 2. **Threatened, Endangered, and Federal Candidate Wildlife Species Documented to Occur or May Potentially Occur Within the Administrative Site Project Area**

Species	Listing Status	Habitat	Presence Within or adjacent to the Project Area
Northern Spotted Owl (*Strix occidentalis caurina*)	Federal Threatened	Old Growth Mixed Conifer Forest	Outside the Range
Oregon Spotted Frog (*Rana pretiosa*)	Federal Candidate and Regional Forester Sensitive	Ponds, Marshes	Habitat adjacent (600 feet)
Pacific Fisher (*Martes pennanti*)	Federal Candidate and Regional Forester Sensitive	Mixed Forest with Complex Structure	No Habitat
North American Wolverine (*Gulo gulo luteus*)	Federal Candidate and Regional Forester Sensitive	Mixed Forest, High Elevation Cirque Basins	No Habitat

Northern Spotted Owl, *Federal Threatened, Management Indicator Species* and Critical Habitat

In June 1990 the U.S. Fish and Wildlife Service (USFWS) listed the northern spotted owl as a threatened species and critical habitat was designated in 1992. Critical Habitat for the spotted owl was revised in 2008. Spotted owls generally require habitats of mature or old growth coniferous forest with complex structure. Nesting, roosting, and foraging (NRF) habitat includes stands of mixed conifer, ponderosa pine with white fir understory and mountain hemlock with subalpine fir. Nest sites are generally in cavities in the boles of dead or live trees however abandoned raptor nests, broken treetops, and mistletoe brooms can be used as nest structures but generally less frequently. Foraging habitat consists of relatively heavy canopy structure with a semi-open understory. Prey species include flying squirrels, wood rats, tree voles, and other small nocturnal or crepuscular creatures.

There is no habitat for the northern spotted owl within or adjacent to the project area. The proposed project is outside the range of the northern spotted owl. The northern spotted owl range boundary is over five miles north and west from the site, the closest nesting spotted owl pair is six miles to the northwest, and the nearest habitat located approximately five miles to the northwest.

Direct/Indirect/Cumulative Effects and Determination for Alternatives A and B
Because the proposed new office project is located outside the range of the northern spotted owl, project implementation would have no direct, indirect, or cumulative effects to the species or designated critical habitat. Therefore, the determination is **"No Effect"** to the northern spotted owl and designated critical habitat.

Oregon Spotted Frog, *Federal Candidate, R6 Sensitive Species*
The Oregon spotted frog (*Rana pretiosa*) is currently listed as federal candidate species by the USFWS. Spotted frogs have a historic distribution that covers a small part of western North America, from southern British Columbia to northeastern California, and from the west side of the Willamette Valley to the east side of the Klamath Basin in Oregon. They have been extirpated in much of their range by introduction of the bullfrog, (*Rana catesbeiana*) and habitat alteration or loss through intensified agriculture, grazing, and urbanization (USGS 2003). Pearl (pers. comm. 2008) remarked that central Oregon, including Big Marsh on the Crescent Ranger District and Sun River south of Bend, seem to represent strongholds for the species and have the largest populations in the state of Oregon.

Oregon spotted frogs are associated with relatively large wetland complexes greater than 10 acres in size with extensive emergent marsh coverage that warms substantially during seasons when Oregon spotted frogs are active at the surface. Sites always include some permanent water juxtaposed to seasonally inundated water (Pearl and Hayes 2004 cited in Cushman and Pearl 2007). They use shallow oviposition sites consistently across their range with average depths per site ranging from 2.3 to 10 inches in depth (Pearl and Hayes 2004). Oviposition usually occurs between mid-February and mid-April depending on water temperature. The diet of the Oregon spotted frog includes arthropods (e.g. spiders, insects), earthworms, and other invertebrate prey. In turn, they may be preyed upon by mink, river otters, herons, bitterns, ravens and crows, and garter snakes. Threats to the species were hypothesized by Cushman and Pearl (2007) to include direct loss and conversion of marsh habitat, interactions with non-native fishes, plant succession and other vegetation changes, livestock grazing, degraded water quality, isolation from other populations, and drought.

On the Crescent Ranger District, Oregon spotted frogs are known to occur in Big Marsh, Crescent Creek near Highway 58, Odell Creek, Ranger Creek, along portions of the Little Deschutes River and an unnamed tributary of Odell Creek. Surveys conducted on Spruce and Hemlock Creeks in 2001 did not detect the presence of Oregon spotted frogs in either system. It is currently hypothesized that cold water temperatures in these streams do not provide the warm water needed by this species (Branum pers. comm. 2008).

Direct/Indirect/Cumulative Effects and Determination for Alternatives A and B
There is potential habitat along the Little Deschutes River that runs within a meadow on private lands approximately 600 feet to the west of the project area. It is unknown if Oregon spotted frogs are present in this stretch of the Little Deschutes River. The Little Deschutes River is an important connectivity corridor connecting Oregon spotted frog populations on the Crescent Ranger District to the Sun River population. There is no habitat connection between the project area and the Little Deschutes River. Implementation of either alternative would not impact the habitat on the adjacent private land. There would be **"No Impact"** to Oregon Spotted Frogs with the implementation of the project.

Pacific Fisher, *Federal Candidate, R6 Sensitive Species*
The USFWS was issued a court order in April 2003 to conduct a 90 day finding on a petition to list a distinct population segment of the fisher. In July 2003 the USFWS published a 90 day finding that

substantiated a listing may be warranted and began a 12 month status review. In April 2004 the USFWS determined that the fisher in Washington, Oregon, and California is a "distinct population segment" of the entire fisher species. The USFWS also determined that the fisher faces significant biological threats that are sufficient to warrant listing but is precluded by other higher priority listing actions (Federal Register Vol. 69, No.68, April 8, 2004). Threats to the fisher include loss due to fragmentation of habitat, mortalities, and injuries from incidental captures, decreases in prey base, increasing human disturbance, and small isolated populations. An Interagency Fisher Conservation Assessment and Strategy document was completed in 2010 by the Interagency Fisher Biology Team with publication in late 2010. This document assesses the current status of fishers on the west coast, including synthesis of habitat and evaluation of threats. The goals of the strategy are to provide recommendations to restore and/or maintain habitat conditions that can support fishers, re-establish fisher populations, and restore connectivity by creating and managing for resilient landscapes throughout the west coast assessment area.

The fisher is a house-cat sized member of the Mustelidae family which includes weasels, mink, marten, and otters. Their occurrence is closely associated with low- to mid-elevation forests (generally <1250 m (4,101 feet)) with a coniferous component, large snags or decadent live trees and logs for denning and resting, and complex physical structure near the forest floor to support adequate prey populations (Powell and Zielinski 1994). Within a given region the distribution of fishers is likely limited by elevation and snow depth and fisher are unlikely to occupy habitats in areas where elevation and snow depth act to limit their movements (Krohn et al. 1997 cited by USFWS 2004). However, in mid-elevation areas with intermediate snow depth, fishers may use dense forest patches with large trees because the overstory increases snow interception (Weir 1995 cited by USFWS 2004). Aubry and Houston (1992) cited by (Powell 1993) felt that snow affected fisher distribution and population density in Washington State.

In Oregon, the fisher apparently has been extirpated from all but two portions of its historical range (Aubry and Lewis 2003). The one in the southern Cascade Range was established through reintroductions of fishers from British Columbia and Minnesota that occurred between 1961 and 1981. The other population in the northern Siskiyou Mountains of southwestern Oregon is presumed to be an extension of the population in northern California. Genetic testing has revealed the Oregon populations are isolated from each other (Aubry et al. 2002). The same study revealed juvenile male fishers are capable of long distance dispersal with one collared male relocating to the Crescent Ranger District in the summer of 1999, having traveled fifty-five kilometers (34 miles) from point of capture on the Rogue River National Forest. The radio signal from this animal was lost in December 1999 due to battery failure. This juvenile fisher was radio tracked for over six months in the Big Marsh Creek drainage that is approximately 13 miles northwest of Walker Mountain. Carnivore surveys were conducted on the Crescent District in 1993-1996, 1998, and 2011 using bait with camera sets, snow tracking and track plates. There were no detections of fishers or wolverines from these surveys.

Direct/Indirect/Cumulative Effects and Determination for Alternatives A and B
There is not the complex structure needed to support fisher in or adjacent to the project area. Implementation of either alternative would have **"No Impact"** on Pacific Fisher.

North American Wolverine, *Federal Candidate, R6 Sensitive Species*
In December 2010 the North American wolverine in the contiguous United States was determined by the USFWS to be a distinct population and warranted to be listed but precluded by higher priority actions. It was added to their candidate species list (Federal Register/Vol.75, No. 239/Tuesday, December 14, 2010 78030-78061). Wolverine in the contiguous United States is primarily threatened by loss of habitat due to the impact of climate change on their alpine habitat.

The wolverine is the largest terrestrial member of the mustelid family with males weighing 26 to 40 pounds and females 17 to 26 pounds. Wolverines are opportunistic feeders consuming a variety of foods depending on availability. Primarily a scavenger rather than a hunter, the wolverine forages where carrion can be found (Ruggiero 1994). In addition to carrion they also prey on small animals and birds and eat fruits, berries, and insects. Wolverines occupy a wide variety of habitats from the arctic tundra to coniferous forest. Copeland (2007) described wolverine habitat in the contiguous United States as consisting of small, isolated "islands" of high-elevation, alpine habitats containing sufficient depth of snow during the denning period, separated from each other by low valleys of unsuitable habitats. Wolverines occupy habitat in a high elevation band from 6,888 feet to 8,528 feet in the mountains of the lower 48 states (Federal Register/ Vol. 73, No. 48/ Tuesday, March 11, 2008). The intervening valleys in this area range from 3,198 feet to 4,920 feet and are unsuitable for long-term wolverine habitat because they do not have the snow conditions or other habitat features required by wolverines (Aubrey et al. 2007 in Federal Register/ Vol. 73, No. 48/ Tuesday, March 11, 2008). High elevation alpine wilderness areas appear to be preferred in summer, which tends to effectively separate most wolverine and human interactions. Aubrey et al. (2007) reported that virtually all of the wolverine records located in the Pacific states was within or near alpine areas. The essential component of wolverine habitat may be isolation and the total absence of disturbance by humans (Ruggiero 1994). However, Copeland et al. (2007) reported that unmaintained winter roads used for snowmobile access to trapping sites in the study area were frequently used for travel by wolverines.

The most critical and limiting habitat for wolverines seems to be acceptable natal denning habitat. Magoun and Copeland (1998) described two types of dens used by wolverines: natal and maternal. Natal dens are used during parturition[1] and occur more commonly in subalpine cirque basins associated with boulder talus slopes. Maternal dens are used subsequent to natal dens and before weaning occur and consist of a complex of dens associated with boulders or fallen trees. Home ranges for adult wolverines tend to be large, ranging from 38.5 square miles to 348 square miles (Banci 1994 in Federal Register Doc. 03-26475). Copeland (1996) radio collared wolverines in Idaho and reported annual home ranges of resident adult females averaging 148 square miles and an average of 588 square miles for resident adult males. Recent photographic evidence indicates wolverines are still present in California (Zielinski pers. comm. 2008). Aubrey et al. (2007) found no current records in Oregon despite concerted efforts to obtain verifiable evidence of wolverine occurrence using remote cameras, bait stations, and helicopter surveys in many areas of the Pacific states. However, five verifiable records of wolverine presence in Oregon were documented from 1961 to 1994 (Aubrey et al. 2007).

Direct/Indirect/Cumulative Effects and Determination for Alternatives A and B

The project area is not at a high elevation, it would not be considered alpine, and does not provide denning habitat. There is potential for dispersing wolverine to travel through the area, but it is highly unlikely due to the amount of human development and the availability of more remote habitat along the Cascade crest. Implementation of either of the project alternatives would have **"No Impact"** on the California wolverine.

Region 6 Sensitive Species

Species classified as sensitive by the Forest Service are to be considered by conducting biological evaluations (BE) to determine potential effects of all programs and activities on these species (FSM 2670.32). The BE is a documented review of Forest Service activities in sufficient detail to determine how a proposed action may affect sensitive wildlife species.

[1] The action or process of giving birth to offspring. Merriam-Webster 2012

Summary of Conclusions of Alternatives A and B for Sensitive Species

1. There is no habitat present and/or the following species are not expected to occur within or adjacent to the project area: horned grebe, red-necked grebe, bufflehead, harlequin, peregrine falcon, Lewis's woodpecker, white-headed woodpecker, western sage grouse, North American wolverine, pygmy rabbit, Townsend's big-eared bat, and Johnson's hairstreak.
2. There is potential habitat adjacent to the project area for the northern bald eagle, yellow rail, tricolored blackbird, northern waterthrush, Crater Lake tightcoil, and silver-bordered fritillary.

Table 3. Summary of Conclusion of Effects to Region 6 Sensitive Animal Species

Species	Alt A	Alt B
Bald Eagle	NI	NI
Horned Grebe	NI	NI
Red-necked Grebe	NI	NI
Bufflehead	NI	NI
Harlequin Duck	NI	NI
American Peregrine Falcon	NI	NI
Tricolor Blackbird	NI	NI
Lewis's Woodpecker	NI	NI
White-Headed Woodpecker	NI	NI
Northern Waterthrush	NI	NI
Western Sage Grouse	NI	NI
North American Wolverine	NI	NI
Yellow Rail	NI	NI
Pygmy Rabbit	NI	NI
Townsend's Big-Eared Bat	NI	NI
Crater Lake Tightcoil Snail	NI	NI
Silver-Bordered Fritillary	NI	NI
Johnson's Hairstreak	NI	NI

NI = No Impact
MIIH = May impact individuals or habitat, but would not likely contribute to a trend toward federal listing or loss of viability to the population or species
BI = Beneficial Impact

The Regional Forester's Sensitive Species list was updated in January 2008 and Table 4 includes all animal species documented or suspected to occur on the Deschutes National Forest and their status within the project area using the 2008 updated list.

Table 4. Regional Forester Listed Sensitive Animal Species for the Deschutes National Forest

Species	Listing Status	Habitat	Presence Within or Adjacent to Project Area
Bald Eagle (*Haliaeetus leucocephalus*)	Regional Forester Sensitive Management Indicator Species	Lakes, Reservoirs, Large Trees for Nesting	Observations, Habitat adjacent
Horned Grebe (*Podiceps auritus*)	Regional Forester Sensitive	Lakes	No Habitat
Red-necked Grebe (*Podiceps gisegena*)	Regional Forester Sensitive	Lakes	No Habitat

Species	Listing Status	Habitat	Presence Within or Adjacent to Project Area
Bufflehead (*Bucephala albeola*)	Regional Forester Sensitive	Lakes, Rivers, Snags	No Habitat
Harlequin Duck (*Histrionicus histrionicus*)	Regional Forester Sensitive	Fast Flowing Streams	No Habitat
American Peregrine Falcon (*Falco pergrinus anatum*)	Regional Forester Sensitive Management Indicator Species	Cliffs, Riparian	No Habitat
Yellow Rail (*Coturnicops noveboracensis*)	Regional Forester Sensitive	Marshes	Habitat Adjacent
Tricolored Blackbird (*Agelaius tricolor*)	Regional Forester Sensitive	Lakeside, Bulrushes	Habitat Adjacent
Lewis's Woodpecker (*Melanerpes lewis*)	Regional Forester Sensitive Management Indicator Species	Open woodland habitat (oak, ponderosa, or cottonwood) near water, burned forests	No Habitat
White-headed Woodpecker (*Picoides albolarvatus*)	Regional Forester Sensitive Management Indicator Species	Ponderosa pine or mixed conifer forests dominated by ponderosa pine	No Habitat
Northern Waterthrush (*Seiurus aurocapillus*)	Regional Forester Sensitive	Riparian hardwoods (willows)	Habitat Adjacent
Western Sage Grouse (*Centrocercus urophasianus phaeios*)	Regional Forester Sensitive	Sagebrush	No Habitat
North American Wolverine (*Gulo gulo luteus*)	Federal Candidate and Regional Forester Sensitive	Mixed Forest, High Elevation Cirque Basins	See Federally Listed Species
Pygmy Rabbit (*Brachylagus idahoensis*)	Regional Forester Sensitive	Sagebrush Flats	No Habitat
Townsend's Big-eared Bat (*Plecotus townsendii*)	Regional Forester Sensitive Management Indicator Species	Roost sites in abandoned buildings, caves and bridges	No Habitat
Crater Lake Tightcoil (*Pristiloma arcticum crateris*)	Regional Forester Sensitive	Riparian	Habitat Adjacent
Silver-Bordered Fritillary (*Boloria selene*)	Regional Forester Sensitive	Wet meadows, marshes, bogs and more open parts of shrubbier wetlands	Habitat Adjacent
Johnson's Hairstreak (C*allophrys johnsoni*)	Regional Forester Sensitive	Mostly in old growth coniferous forests with mistletoe presence	No Habitat

After a review of existing records, habitat requirements and existing habitat components, it was determined that there is potential habitat adjacent to the project area for the northern bald eagle, yellow rail, tricolored blackbird, northern waterthrush, Crater Lake tightcoil, and silver-bordered fritillary. There is no habitat for the remaining sensitive species within or adjacent to the project area.

Bald Eagle

Bald eagle nests are usually located in multi-storied stands with old growth components and are near bodies of water, which support an adequate food supply (USDI, USFWS 1986). Food sources consist of mammalian carrion, fish, ground squirrels, and birds. Nests are generally located in the largest, live trees in the area with the tree canopy covering nests to varying degrees. The species of tree doesn't seem to be as important as tree size, branch form, and location. Nest trees typically provide an unobstructed view of a body of water and are often located in prominent places on the topography. They have been known to be located on cliffs and man-made structures (USDI, USFWS 1986). The project area is not within a designated Bald Eagle Management Area (BEMA) and the nearest bald eagle nesting territory is located on Davis Lake about 10 miles to the north of the project area. While bald eagles have been seen flying over the project area, hunting in the adjacent meadow, and perching on large trees adjacent to the project area there are no perch trees within the project area. Implementation of either alternative would have "**No Impact"** on the bald eagle.

Horned and Red-necked grebes

Both the horned and red-necked grebes nest in lakes and ponds with tall vegetation or marshy habitats. There are no lakes or ponds in or adjacent to the project area that could potentially provide nesting habitat for either species. Implementation of either alternative would have "**No Impact"** on the horned grebe and red necked grebe.

Bufflehead

This duck species is North America's smallest diving duck. It winters throughout Oregon but is an uncommon breeder in the central and southern Cascades (Marshall et al. 2003). Known nest sites in central and southern Oregon include Hosmer Lake, Crane Prairie Reservoir, Twin Lakes, Wickiup Reservoir, Davis Lake, and along the Little Deschutes River in Deschutes County. Broods have also been reported in small lakes near the crest of the Cascades in western Deschutes County. The bufflehead use tree cavities or artificial nest boxes in trees close to water. Nesting habitat is not present in the vicinity of the project area so negative impacts are not expected to occur. Implementation of either alternative would have **"No Impact"** to the bufflehead.

Harlequin

The harlequin nests along fast-flowing rivers and mountain streams in the Cascade Mountains of Oregon and Washington. There are no confirmed breeding sites in the east Cascades of Oregon with the exception of the Hood River basin (Marshall et al. 2003). In the western Cascades of Oregon, breeding pairs are observed on low to moderate gradient (1-7 percent) third to fifth-order streams in the western hemlock zone with simple channels and abundant in-stream rocks for loafing sites (Marshall et al. 2003). Bruner (1997 in Marshall et al. 2003) stated that 35 percent of his located nests were placed on exposed shelves of logs or root wads and 65 percent were found on natural ledges on slopes or cliffs within 1- 82.5 feet of water. Non-breeding adults can be found along the Oregon coast and the winter population includes migrant birds. There are no records of harlequins present on the Crescent Ranger District. There are no fast-flowing streams in or near the project area. Implementation of either alternative would have **"No Impact"** to the harlequin.

Peregrine Falcon

The peregrine falcon species occurs as resident and migratory populations. They nest on cliffs greater than 75 feet in height and within one mile of some form of water (Pagel 1992). Nesting occurs in xeric areas of eastern Oregon, marine habitats of western Oregon, montane habitats to 6,000 feet elevation, small riparian corridors statewide, and more recently urban habitats of the lower Willamette and Columbia Rivers. Peregrines are widely distributed in western Oregon and at least 15 pairs are known to occur in the Columbia River Gorge (Isaacs pers. comm. 2005). The Deschutes National Forest confirmed their first nesting eyrie on the Sisters Ranger District in 2008. There is no

suitable cliff habitat present within or near the proposed project area and there are no records of peregrines in this area. Implementation of either alternative would have **"No Impact"** to the peregrine falcon.

Yellow Rail

From information gathered over the last 7-8 years, nesting habitat for the yellow rail in Oregon has been described as marshes or wet meadows which have an abundance of thin-leaved sedges, a layer of senescent vegetation to conceal their nests, and an average water depth of 7 cm (2.8 inches; Popper 2001). Winter habitat is thought to occur along the California coast although more research is needed to confirm this (Popper 2001). A very small breeding population of yellow rails (2-5 pairs annually) is known to occur on Big Marsh on the Crescent Ranger District based on information gathered since 1997 (Popper 2005). There is potential habitat on private land to the northwest of the project area. It is unknown if water levels are sufficient during nesting season to support yellow rails or if yellow rails are present within the meadow. Within the project area there is no suitable habitat and implementation of either alternative would not affect potential habitat on private lands. This project would have **"No Impact"** on the yellow rail for either Alternative A or B.

Tricolored Blackbird

The tricolored blackbird is a highly gregarious colonial breeder largely endemic to California. However, breeding colonies are scattered and intermittent in Oregon. In Oregon they breed most consistently in southern Klamath County, in the southern part of the state. There are no records of nesting tricolored blackbirds in Deschutes County or northern Klamath County. Nesting occurs in fresh-water marshes of cattails, tules, bulrushes and sedge, or in thickets of willows or other shrubs. There is potential habitat on private land to the northwest of the project area. It is unknown if tricolored blackbirds are present within the meadow. There is no suitable habitat present in the project area. Implementation of either alternative would not affect habitat on private land. This project would have **"No Impact"** to the Tricolor blackbird for either Alternative A or B.

Lewis's Woodpecker

The Lewis's woodpecker is a medium-sized, vaguely crow-like bird that relies on fly catching during the spring and summer and stored mast and fruits in the fall (Marshall et al. 2003). It breeds in low numbers in open habitats along eastern Oregon rivers and stream valleys including the lower Deschutes River. The species is most common in open habitats (e.g. burns) in and near Cascade forests. Wisdom (2000) reported that burned ponderosa pine forest created by stand-replacing fires provides highly productive habitat as compared to unburned pine. They are not considered strong cavity excavators, but require large snags in an advanced stage of decay that are easier to excavate. Lewis's woodpeckers also use old cavities created by other woodpeckers. Forty-two percent of the nest trees on the eastern edge of the Mt. Hood National Forest were in ponderosa pine (typically snags) and 43 percent were in living and declining Oregon white oak. The mean diameter at breast height (dbh) of nest trees was 26 inches and mean nest tree height was 41 feet (Marshall et al. 2003). The closest known nest is nearly 10 miles to the northwest in the Davis Fire area. There is no suitable nesting habitat in or adjacent to the project area and implementation of the project would have **"No Impact"** to the Lewis's woodpecker for either Alternative A or B.

White-headed woodpecker

This woodpecker is a medium sized bird and unique because of striking plumage; a mostly white head with males having a red patch on the nape. They are a resident of montane forests from southern interior British Columbia south through central Washington, northern Idaho, east and southwest Oregon, north and central California, and the eastern edge of central Nevada to the mountains of southern California (Marshall et al. 2003). The presence of old growth pine is thought to be important to white-headed woodpeckers. Larger diameter pines provide bark crevices for the

invertebrate prey of white-headed woodpeckers and are good cone producers. During the winter months they rely on seeds from ponderosa pine and sugar pine. Old-growths stands also have greater densities of the large-diameter snags that white-headed woodpeckers appear to select for nesting (Frenzel 2002). They usually excavate nest cavities in snags, but other recorded substrates include stumps, leaning logs, and the dead tops of live trees. Frenzel's study area on the Deschutes and Winema National Forests (2002) determined nest trees ranged from 23.6 to 118.1 cm (9-46 inches) with an average dbh of 27 inches and 89 percent of the nest trees were in ponderosa pine. There is no large diameter old growth ponderosa pine habitat within or adjacent to the project area. Implementation of either alternative would have **"No Impact"** to the white-headed woodpecker.

Northern Waterthrush

This species is a small neotropical migrant and has been known to occur along Crescent Creek and the Little Deschutes River near the communities of Crescent and Gilchrist, Oregon since 1977 (Contreras 1988). Marshall et al. (2003) states the northern waterthrush is one of Oregon's rarest and most local breeders. Occupied sites during the breeding season have also been identified at Salt Creek and Gold Lake on the Willamette National Forest (Contreras 1988). The birds in central Oregon seem to prefer dense riparian willow thickets and were usually found in willow clumps 5 to 8 feet high, with some Sitka alder intermixed with small grassy patches and pools of water left in old stream meanders, although no nests have been found (Contreras 1988). Inventories conducted along the Little Deschutes River and lower Crescent Creek in 2011 have confirmed northern waterthrush at several sites on these stream systems. There is potential habitat on private land to the northwest of the project area. Surveys of this area during the summer of 2011 resulted in no detections. There is no habitat within or immediately adjacent to the project area. Implementation of either alternative would not affect potential habitat on private lands. This project would have "**No Impact"** on the northern waterthrush for either Alternative A or B.

Western Sage Grouse

This species is found in foothills, plains, and mountain slopes where sagebrush is present and the habitat contains a mixture of sagebrush, meadows, and aspen in close proximity. Winter habitat containing palatable sagebrush probably is the most limited seasonal habitat in some areas (NatureServe 2008). While this habitat type and sage grouse are known to occur on the Deschutes National Forest, they do not occur on the Crescent Ranger District. Implementation of either alternative would have **"No Impact"** on the western sage grouse.

Pygmy Rabbit

The pygmy rabbit typically occurs in dense stands of big sagebrush growing in deep loose soils (NatureServe 2008). This habitat type does not occur within or adjacent to the project area and implementation of either proposal would have **"No Impact"** on the pygmy rabbit for Alternative A or B.

Townsend's Big-eared Bat

The Townsend's big-eared bat is a non-migratory bat that has very large ears, two large fleshy lumps on its snout and has darker and shorter wings than other subspecies (NatureServe 2010). Maternity and hibernation colonies are typically in caves and mine tunnels. Winter hibernation sites that provide cold winter temperatures (just above freezing) and maternity sites that provide high temperatures free from disturbance are critical components needed by this species. They roost almost exclusively in cavity roosts, both in human-made structures (that is, abandoned buildings, bridges and mines) and caves (Christy and West 1993). The Townsend's big-eared bat is highly vulnerable to disturbances and avoids or abandons areas of human activity. The species range extends from southwestern British Columbia, western Washington, western and central Oregon, and northwestern and west-central California. The project and adjacent areas have constant human disturbance. It does

not have any abandoned human structures, caves, or potential maternity, hibernation or roost habitat for the Townsend's big-eared bat. Implementation of either alternative would have **"No Impact"** on the Townsend's big-eared bat.

Crater Lake Tightcoil

The Crater Lake tightcoil may be found in perennially wet situations in mature conifer forests, among rushes, mosses and other surface vegetation or under rocks and woody debris within 10 meters (33 feet) of open water in wetlands, springs, seeps and riparian areas; generally in areas which remain under snow for long periods in the winter. Riparian habitats in the Eastern Oregon Cascades may be limited to the extent of permanent surface moisture, which is often less than 10 meters from open water (Duncan et al. 2003). There is only one confirmed occurrence of the Crater Lake tightcoil on the Crescent Ranger District, found at the confluence of Princess Creek and Odell Lake in 1999. There is potential habitat on private land to the west of the project area. It is unknown if the habitat supports Crater Lake tightcoil. Within the project area there is no suitable habitat and implementation of either alternative would not affect potential habitat on private lands. There would be **"No Impact"** on the Crater Lake tightcoil for either Alternative A or B.

Silver-bordered Fritillary

This butterfly has a holarctic range extending from northern Canada southward into the United States and as far south as New Mexico (NatureServe 2008). While the species is common and widespread in northeastern Washington and northern Idaho, colonies are extremely local and isolated southward, and are particularly vulnerable to local extinctions. Only two primary colonies are found in Oregon, one at Big Summit Prairie on the Ochoco National Forest and one in the Strawberry Mountains Wilderness on the Malheur National Forest (Miller and Hammond 2007). Suitable habitat for this species is described as mostly wet meadows, marshes, bogs, and more open parts of shrubbier wetlands (NatureServe 2008; Miller and Hammond 2007). This species is dependent on the maintenance of open and wet meadow habitats (Miller and Hammond 2007). Food sources for the adults include nectar sources such as composite flowers, including goldenrod and black-eyed Susan (Opler et al. 2006). There is potential habitat on private land to the west of the project area. It is unknown if the habitat supports the silver-bordered fritillary. Within the project area there is no suitable habitat and implementation of either alternative would not affect potential habitat on private lands. There would be **"No Impact"** to the silver-bordered fritillary for either Alternative A or B.

Johnson hairstreak

This butterfly is found from southwest British Columbia southward into the Coast Ranges to San Francisco in California; south in the Cascades and Sierra Nevada to Yosemite and also in the Blue Mountains of eastern Oregon. Opler et al. (2006) shows Johnson Hairstreak documentation for western and central Oregon, plus the Blue Mountains in northeastern Oregon. The species is suspected to occur on the Deschutes National Forest, but currently there is no confirmed documentation. Johnson's hairstreak is believed to feed generally on all dwarf mistletoe species throughout its range, and to perhaps specialize on locally available dwarf mistletoes in specific localities (Miller and Hammond per comm. 2008 cited by Schmitt and Spiegel 2008). The caterpillar food source is western dwarf mistletoe. Adults find nectar on low growing plants such as whitethorn ceanothus and Mt. Hood pussypaws (NatureServe 2008 and USDA, NRCS 2008). Dwarf mistletoes generally increase in incidence and intensity in older stands, although even young stands readily host dwarf mistletoes and maturing stands may be severely infected if they have been continually infected by a residual overstory (Schmitt and Spiegel 2008). The trees within and adjacent to the project area are generally young and healthy with little to no dwarf mistletoe present. With no habitat present there would be **"No Impact"** to the Johnson hairstreak for either Alternative A or B.

Management Indicator Species (MIS)

During the preparation of the Deschutes National Forest Land and Resource Management Plan (USDA 1990), a group of wildlife species were identified as Management Indicator Species (MIS). These species were selected because their welfare could be used as an indicator of other species dependent upon similar habitat conditions. Indicator species can be used to assess the impacts of management actions on a wide range of other wildlife with similar habitat requirements. The MIS species for the Deschutes National Forest are listed in Table 5.

The Crescent Ranger District administrative site, approximately six acres in size, would be the project area for this analysis. While habitat may generally be present in the project area, many species may not be present. The habitat becomes unusable to some species because of the amount of disturbance existing in the project area.

The project area is already heavily disturbed with little to no habitat for MIS species. The site is a mixture of buildings, parking areas, grassy openings with scattered aspen, lodgepole pine and ponderosa pine trees. There are areas landscaped adjacent to the buildings. There are approximately six snags 8-12 feet high, and one down log within the project area.

Table 5. Deschutes National Forest Management Indicator Species

Species	Habitat Association	Species Presence Within the Project Area
Three-Toed Woodpecker	Lodgepole, mixed conifer, mtn. hemlock trees >5-10 inches dbh	No
American Marten	Lodgepole 5-10 > inches dbh, mixed conifer >10-15 inches dbh, all dense canopy	No
Northern Goshawk	All conifer forests with trees > 10-15 inches diameter and closed canopy	No
Osprey	Snag habitat near lakes, reservoirs	No
Northern Bald Eagle	Late and old structure forest near lakes, reservoirs	See TES
Northern Spotted Owl	Late and old structure mixed conifer forests	See TES
Mule Deer	Habitat generalist	No
Elk	Riparian	No
Woodpecker Guild	Snag habitat	Yes
Great Blue Heron	Mature forests near water	No
Great Gray Owl	Mature conifer forest and openings, meadows	No
Peregrine Falcon	Cliff habitats and riparian	See TES
Wolverine	High elevation alpine and talus slopes,	See TES
Townsend's Big-eared Bat	Caves, mines, abandoned buildings	See TES
Waterfowl	Lakes, ponds, reservoirs	No
Golden Eagle	Open late and old structure conifer forest or cliff ledges	No
Red-tail Hawk	Late and old structure conifer forest	No
Cooper's Hawk	Even-aged conifer forests 30-70 years of age	Yes
Sharp-shin Hawk	Even-aged conifer forests 25-50 years of age	Yes

Potential effects to the northern spotted owl, northern bald eagle, peregrine falcon, wolverine, and the Townsend's big-eared bat are disclosed in the Threatened, Endangered and Sensitive section. Due to the characteristics and management of the administrative site there is little habitat for very few MIS species.

Direct/Indirect/Cumulative Effects for Alternatives A and B
There is no habitat present for American marten, northern goshawk, osprey, mule deer, elk, great blue heron, great gray owl, golden eagle, or red-tail hawk within the project area. There would be no direct, indirect or cumulative effects on these species with the implementation of either alternative. There would be no change in the contribution of this area toward the viability of these species on the Deschutes National Forest.

Cooper's Hawk and Sharp-shin Hawk
There are incidental sightings of Cooper's and sharp-shin hawks within the administrative boundaries, perching and flying through. The sharp-shin hawk nest sites in Oregon are characterized as dense, 40 to 60-year-old even-aged conifer stands while Cooper's hawk nest sites were 50 to 80-year-old conifer stands with somewhat larger, more widely spaced trees (Reynolds et al. 1982). The project area may be a small part of hunting territories for these species, but does not provide nesting habitat for either species.

Small birds, approximately 12 – 25 g, comprised greater than 95 percent of sharp-shinned hawk prey items in Oregon (Reynolds and Meslow 1984). The dominant prey items in this study were hummingbirds, flycatchers, chickadees and titmice, nuthatches, creepers, wrens, warblers, and finches. Depending on the season, warblers and finches are abundant species at the administrative site, and hummingbirds are present.

The diets of Cooper's hawks are diverse and vary geographically but in general, the most common prey is mid-sized birds and mammals that forage primarily on the ground (Rosenfield and Bielefeldt 1993). Typical prey items during the breeding season include American robins, jays, Northern flickers, European starlings, and chipmunks. All prey species are present on the administrative site, and starlings are abundant.

Direct/Indirect/Cumulative Effects for Alternatives A and B
Nesting habitat is outside the administrative site. Abundant foraging habitat is available outside the administrative site boundaries. Trees would still be available throughout the administrative site for perching, with open ground and prey species available. There would be no direct, indirect, or cumulative effects to the Cooper's or sharp-shin hawk with the implementation of either alternative. There would be no change in the contribution of this area toward the viability of these species on the Deschutes National Forest.

Three-toed Woodpecker and the Woodpecker Guild
The woodpecker guild is an indicator of snags and down wood. Because of the highly developed nature of the administrative site all but a few snags and down wood have been removed, leaving no habitat for most of the woodpecker guild. The table below gives a brief description of these preferences and if the species would be present within the analysis area.

Table 6. Woodpecker Guild Management Indicator Species

Woodpecker Species	Habitat Association	Species Presence
Black-backed Woodpecker	Lodgepole pine forests, burned forests	No
Downy Woodpecker	Riparian hardwood forests	No
Hairy Woodpecker	Mixed conifer and ponderosa pine forests	No
Lewis's Woodpecker	Ponderosa pine forests, burned forests	No
Northern Flicker	Variety of forest types but more associated with forest edges	Yes
Pileated Woodpecker	Mature to old growth mixed conifer forests	No
Red-naped Sapsucker	Riparian hardwood forests	Yes
Three-toed Woodpecker	High elevation and lodgepole pine forests	No
White-headed Woodpecker	Mature ponderosa pine forests; weak excavator	See TES
Williamson's Sapsucker	Mature or old growth conifer forests with open canopy cover; weak excavator	No

The northern flicker and red-naped sapsucker have been seen feeding within the project area. There are signs of sapsucker feeding on several of the aspen that are present. There are also several excavated cavities in the aspen that the starlings have taken over.

Direct/Indirect/Cumulative Effects for Alternatives A and B
There is no habitat for the Williamson's sapsucker, black-back, downy, hairy, Lewis's, pileated, or three-toed woodpeckers. While the northern flicker and red-naped sapsucker may frequent the project area, there is little there that would sustain a pair within or adjacent to the administrative site. Due to the highly developed nature of the administrative site there would be no direct, indirect, or cumulative effects on the woodpecker guild with the implementation of either alternative. There would be no change in the contribution of this area toward the viability of these species on the Deschutes National Forest.

Waterfowl
Waterfowl are associated with vegetation at the edges of rivers, streams, lakes or ponds. Vegetation is utilized for nesting, hiding cover and/or foraging. Some waterfowl, like the hooded merganser, utilize these edges just during breeding season and spend the rest of their time on the open water. Others like the Canada goose nest in and feed on lakeside vegetation and would venture farther upland to forage.

Direct/Indirect/Cumulative Effects for Alternatives A and B
The Crescent District Office administration site is more than 0.25 miles away from water. It is not associated with any waterfowl habitat; therefore, there would be no direct, indirect, or cumulative effects with implementation of either alternative. There would be no change in the contribution of this area toward the viability of these species on the Deschutes National Forest.

Table 7. Waterfowl Management Indicator Species

Waterfowl Species	Habitat Association	Species Presence
American Wigeon	Clumps of grasses or other vegetation near water	No
Barrow's Goldeneye	Cavity nester	No
Blue-winged Teal	Marshes, lakes, ponds, slow-moving streams	No
Bufflehead	Cavity nester	See TES
Canada Goose	Variety of habitats; shores of lakes, rivers, and reservoirs especially with cattails and bulrushes	No
Canvasback	Emergent vegetation	No
Cinnamon Teal	Cover of vegetation near shoreline	No
Common Goldeneye	Cavity nester	No
Common Loon	Edges of remote freshwater ponds and lakes	No
Common Merganser	Cavity nester	No
Eared Grebe	Open water with emergent vegetation	No
Gadwall	Concealed clumps of grasses in meadows or tall grasslands	No
Green-winged Teal	Freshwater marshes with emergent vegetation	No
Harlequin Duck	Shorelines of low gradient streams	No
Hooded Merganser	Cavity nester	No
Horned Grebe	Open water with emergent vegetation	See TES
Lesser Scaup	Dry grassy areas near lakes at least 10' deep	No
Mallard	Open water with emergent vegetation	No
Northern Pintail	Open areas near water	No
Northern Shoveler	Grassy areas near water	No
Pied-billed Grebe	Edge of open water in freshwater lakes, ponds, sluggish rivers and marshes	No
Redhead	Freshwater marshes and lakes concealed in vegetation	No
Red-necked Grebe	Lakes and ponds in forested areas	See TES
Ring-necked Duck	Thick emergent vegetation on shorelines	No
Ruddy Duck	Freshwater marshes, lakes, ponds in dense vegetation	No
Western Grebe	Marshes with open water and lakes and reservoirs with emergent vegetation	No
Wood Duck	Cavity nester	No

Rare and Uncommon Species

Pygmy Nuthatch and Flammulated Owl

Marshall et al. (2003) described the pygmy nuthatch as a resident of ponderosa pine dominated forests from the east slopes of the Cascades eastward into the Blue and Warner Mountains. Nesting is described to be in snags or dead portions of live trees and they reportedly can excavate nest cavities often using cracks to gain entrance to a hollow or decaying wood (Marshall et al. 2003). Their diet includes beetles, ants, bugs, and butterfly/moth larvae. Typical nest cavities in California were found in decaying pines that usually exceeded 20 inches in diameter and in one study from Arizona the mean dbh of nest cavities was 16 inches (Marshall et al. 2003).

The flammulated owl is one of the smallest owls in North America and is unique in that it preys almost exclusively on insects and is a neotropical migrant. The species winters in central and

southern Mexico, Guatemala, and perhaps El Salvador. In Oregon the species breeds on the eastern slope of the Cascades, Blue and Wallowa Mountains and in small numbers in the mountains of southwest Oregon (Marshall et al. 2003). They are most closely associated with ponderosa pine forest but also nests in mixed coniferous stands dominated by ponderosa pine. Marshall et al. (2003) reported that forested stands used for nesting tend to have moderate to high levels of canopy cover ranging from 31-94 percent (mean 67 percent) with a rather open understory or an open area adjacent. The species is a cavity nester and in northeastern Oregon ponderosa pine snags was the common nest tree (Marshall et al. (2003). Snags and trees used for nesting averaged 22 and 28 inches dbh in two Oregon studies (Goggans 1985; Bull et al. 1990 cited by Marshall et al. 2003).

Direct/Indirect/Cumulative Effects for Alternatives A and B

While ponderosa pine trees are in scattered pockets within the project area, the canopy cover is below 31 percent and would not be considered nesting habitat. There is no habitat at the administrative site for the pygmy nuthatch and flammulated owl. There would be no direct, indirect, or cumulative effects with the implementation of either alternative. There would be no change in the contribution of this area toward the viability of these species on the Deschutes National Forest.

Bats

The Townsend's big-eared bat was placed on the "sensitive" species list in the January 31, 2008 update. Effects to this species and habitat are disclosed in the Biological Evaluation. The following table displays the bat species that are known to occur or may potentially occur within the Crescent Ranger District. Data from the table below is from Perlmeter 1996-1997, Christy and West 1993, NatureServe 2010, and preliminary data results from T. Manning, Oregon State University 2006.

Most bat species roost and hibernate in crevices in protected sites. Sites commonly used by bats include caves, mines, snags and decadent trees, wooden bridges, and old buildings (USDA 1994 ROD C-43). While snag management guidelines were provided (USDA and USDI 2001 S&G-37-38) the authors of the plan determined that additional protection was needed for caves, mines, abandoned wooden bridges, and buildings. Surveys of these structures were recommended to determine bat presence including the fringed myotis, silver-haired bat, long-eared myotis, long-legged myotis, pallid bat, and Townsend's big-eared bat. The purpose of the standard and guideline is to protect these sites from destruction, vandalism, disturbance from road construction, blasting or any other activity that could change cave or mine temperatures or drainage patterns.

Sites commonly used by bats include caves, mines, snags and decadent trees, wooden bridges and old buildings. The bats in this group vary slightly on habitat use. The fringed myotis and the Townsend's big-eared bat focus on caves, abandon buildings and mines, and rock crevice habitat while the long-legged myotis, long-eared myotis, and the pallid bat will utilize abandoned buildings, caves, snags and hollow trees. The silver-haired bat relies heavily on standing snags and hollow trees in and adjacent to riparian areas that are used for foraging (NatureServe 2011). The little brown bat has adapted to using human-made structures for resting and maternity (NatureServe 2011) and does not appear to be as vulnerable to disturbance by human presence as the other bats.

Most of the myotis species and Townsend's big-eared bats are colonial breeders which can range from 12 to 500 individual individuals but generally contain less than 100 (Christy and West 1993). Silver-haired bats are generally considered solitary breeders though a few nursery colonies have been reported (Christy and West 1993). Most bat species are aerial foragers but a few (long-eared and fringed myotis) also glean insects from the ground or foliage and rely on vision as well as echolocation when hunting (van Zyll de Jong cited in Christy and West 1993). Most bat species in the Pacific Northwest probably undergo relatively short migrations to and from hibernacula each year although silver-haired bats are believed to migrate fairly long distances (Shump and Shump cited in

Christy and West 1993). Pacific Northwest bat species have many predators but are not a major prey item for any animal group, and consequently predation is not a major mortality factor. However, the influence of people may have negative effects on bats from disturbances to hibernacula from cave exploration.

Table 8. Bat Species Known or Suspected to Occur and Habitat Requirements Within the Crescent Ranger District

Species	Forage Substrate	Roost Site	Main Prey Species	Comments
California Myotis	Forest edges and over water	Cliff faces, tree crevices, caves and structures	Moths	One offspring per female/season
Western Small-footed Myotis	Ponderosa pine and mixed conifer forests	Rock crevices, under boulders, and beneath bark	Small insects	Will also forage over rocks
Yuma Myotis	Riparian, moist woodlands, and open forests	Abandon buildings, caves and bridges	Moths, midges, flies and termites	Closely associated with water and very sensitive to disturbance
Little Brown Myotis	Moist forests and riparian areas	Buildings, bridges, caves, mines, rock crevices, snags	Flies	Closely associated with water
Long-legged Myotis	Coniferous forests and riparian areas	Crevices, buildings and caves	Moths	Closely associated with forests
Long-eared Myotis	Forested habitats and forested edges	Snags, hollow trees or rock features	Moths	One offspring per female/season
Silver-haired Bat	Forested areas and over ponds and streams	Under bark	Wide variety of insects	Deforestation and loss of snags is a threat
Big Brown Bat	More common in deciduous forests versus coniferous forests	Structures	Beetles	Forages over open areas and uses hollow trees
Hoary Bat	Riparian and brushy areas	Trees	Moths	Solitary breeder and only foliage roosting bat in Pac. Northwest
Pallid Bat	Arid regions and open forest types	Cliff faces, caves, and buildings	Moths and grasshoppers	Forages on ground and very intolerant to disturbance
Townsend's Big-eared Bat	Arid regions and open forest types	Abandon buildings, caves, and bridges	Moths primarily, flies, bugs and beetles	Presence of suitable roosts more important than vegetation type; very intolerant of human disturbance
Fringed Myotis	Along forest edges, roads or open areas	Caves, rock crevices, abandon mines and buildings	Primarily moths	One offspring per season

There are no abandon human structures or caves, and few snags in the project area. The existing snags do not have cavities or loose bark at this time that would serve as roost sites. The only bat habitat within the project area is in employee housing, in building number 1305. The season of use for this building is spring and summer, generally May through August. Every season little brown bats

utilize spaces between the chimney and the house. By summer at least one adult or juvenile finds its way into the interior of the house. Efforts over the last five years have sealed off the cracks that lead into the house. Plans to seal the outside cracks are tentatively set for the 2011/2012 winter season. While building 1305 provides some habitat for the little brown bat, the majority of known roosting, and maternity habitat for cave dwelling bats exist in caves on the Bend Fort Rock District approximately 50 miles away from this site. Bats are not known to winter on the Crescent Ranger District. For tree/snag dwelling bats, sufficient forest exists on state lands approximately one mile to the east. There is one constructed bat house on the administrative site. It is in direct sunlight and would be too hot for bat use in the summer. There is no evidence of use of this structure. The structure is planned to be moved to a shaded location once plans for the new office and facilities are set.

Direct, Indirect, and Cumulative Effects for Alternatives A and B
Because little brown bats utilize building 1305 for maternity and roosting, removal of access to the building, and potential demolition of the building would force those bats to find a different location. Removal of the building would take place when bats are not present. Limiting access to building 1305 would happen regardless of the alternative selected. Implementing the move of the existing bat house to a shadier location would provide additional habitat and would also take place regardless of the alternative selected. Implementation of either alternative would not change planned actions, nor add any additional or cumulative effects for little brown bats.

With no habitat for any other bat at the administrative site there would be no direct, indirect, or cumulative effects with the implementation of either alternative.

Birds of Conservation Concern (BCC)

In January 2001, President Clinton issued an executive order on migratory birds directing federal agencies to avoid or minimize the negative impact of their actions on migratory birds, and to take active steps to protect birds and their habitat. A Memorandum of Understanding (MOU) with the U.S. Fish and Wildlife Service and the Department of Agriculture, Forest Service was signed in late 2008 to conserve migratory birds including taking steps to restore and enhance habitat, prevent or abate pollution affecting birds, and incorporate migratory bird conservation into agency planning processes whenever possible. Prior to the MOU being finalized several documents were produced for the conservation of migratory birds. These documents from the U. S. Fish and Wildlife Service included the Birds of Conservation Concern released in 2002 and the U.S. Shorebird Conservation Plan released in 2004.

The “Birds of Conservation Concern 2002” (BCC) revised in 2008 identifies species, subspecies, and populations of all migratory non-game birds that without additional conservation protection actions, are likely to become candidates for listing under the Endangered Species Act of 1973. While all of the bird species included in the BCC are priorities for conservation action, the list makes no finding with regard to whether they warrant consideration for ESA listing. The goal is to prevent or remove the need for additional ESA bird listings by implementing proactive management and conservation plans. The U.S. Shorebird Conservation Plan (USFWS 2004, revised 2007) updated the 2001 Plan with new information and developed a list of U.S. and Canadian shorebirds considered highly imperiled or of high conservation concern. Conservation measures were not included but these lists should be consulted to determine reasons for conservation concern.

Table 9. Bird Conservation Region 9 (Great Basin)

Bird Species	Preferred Habitat	Species Presence
Greater Sage Grouse (Columbia Basin DPS) (a)	Sagebrush dominated rangelands	No
Eared Grebe (nb)	Nests near shore on small freshwater lakes and reservoirs with emergent vegetation	No
Bald Eagle	Nests in large conifers usually near lakes, reservoirs	See Sensitive species
Ferruginous Hawk	Sagebrush-shrub steppe	No
Golden Eagle	Elevated nest sites in open country	No
Peregrine Falcon (b)	Cliffs	See Sensitive species
Yellow Rail	Marshes with shallow water	See Sensitive species
Snowy Plover	Alkaline playas east of the Cascades	No
Long-billed Curlew	Grasslands	No
Marbled Godwit (nb)	Marsh/Wet Meadows	No
Yellow-billed Cuckoo (w. U.S. DPS) (a)	Dense riparian/cottonwoods	No
Flammulated Owl	Ponderosa pine forests	No
Black Swift	Cliffs associated with waterfalls	No
Calliope Hummingbird	Open mountain meadows, open forests, meadow edges, and riparian areas breeding mainly at middle elevations	No
Lewis's Woodpecker	Ponderosa pine forests	See Sensitive species
Williamson's Sapsucker	Ponderosa pine forests	See MIS Woodpecker Guild
White-headed Woodpecker	Ponderosa pine forests	See Sensitive species
Willow Flycatcher	Breeding habitat is dense shrubs and/or tall herbaceous vegetation especially riparian willow thickets	No
Loggerhead Shrike	Open country with scattered trees/shrubs	No
Pinyon Jay	Juniper, juniper-ponderosa pine transition, and ponderosa pine edge forests	No
Sage Thrasher	Preferred breeding habitat is big sagebrush but will also use greasewood, shadscale and rabbitbrush.	No
Virginia's Warbler	Mountain Mahogany groves	No
Green-tailed Towhee	Vigorous shrub stands with high shrub species diversity and less abundant in big sagebrush habitat	No
Brewer's Sparrow	Sagebrush clearings in coniferous forests/bitterbrush	No
Black-chinned Sparrow	Dry slopes and hillsides covered with tall thick vegetation, SE and SW Oregon	No
Sage Sparrow	Sagebrush	No
Tricolored Blackbird	Cattails or tules	See Sensitive species
Black Rosy-Finch	Bare rock outcrops, cliffs and talus for breeding on Steens Mtns.	No
(a) ESA candidate, (b) ESA delisted, (c) non-listed subspecies or population of Threatened or Endangered species, (d) MBTA protection uncertain or lacking, (nb) non-breeding in this BCR		

Bird Conservation Regions (BCRs) were developed based on similar geographic parameters. One BCR encompasses the Crescent District Administrative site; BCR 9, Great Basin. Table 9 displays the BCR species for this area, preferred habitat and whether suitable habitat is present in the project area. Birds appearing in **bold** type are those considered critically important by the U.S. Shorebird Conservation Plan as of March 2007.

Direct, Indirect, and Cumulative Effects for Alternatives A and B

There is no habitat for any of the birds of conservation concern at the Crescent Ranger District Office construction site. There would be no direct, indirect, or cumulative effects with the implementation of either alternative. There would be no change in the contribution of this area toward the viability of these species on the Deschutes National Forest.

Landbird Strategic Plan

The Forest Service has prepared a Landbird Strategic Plan (January 2000) to maintain, restore, and protect habitats necessary to sustain healthy migratory and resident bird populations to achieve biological objectives. The primary 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, individuals from multiple agencies and organizations within the Oregon-Washington Chapter of Partners in Flight participated in developing a publication for conserving landbirds in this region. A Conservation Strategy for Landbirds of the East-Slope of the Cascade Mountains in Oregon and Washington was published in June 2000 (Altman 2000). This strategy has been used since its development in planning and projects analysis.

Table 10. Landbird Focal Species for Central Oregon

Habitat	Habitat Feature	Focal Species for Central Oregon	Habitat in the Project Area
Ponderosa Pine	Large patches of old forest with large trees	White-headed woodpecker	See Sensitive species
	Large trees	Pygmy nuthatch	No
	Open understory with regenerating pines	Chipping sparrow	No
	Patches of burned old forest	Lewis's woodpecker	See Sensitive species
Mixed Conifer Late-Successional	Large trees	Brown creeper	No
	Large snags	Williamson sapsucker	See MIS woodpecker guild
	Interspersion grassy openings/dense thickets	Flammulated owl	No
	Multi-layered/dense canopy	Hermit thrush	No
	Edges and openings created by wildfire	Olive-sided flycatcher	No
Lodgepole pine	Old growth	Black-backed woodpecker	See MIS woodpecker guild
Meadows	Wet/dry	Sandhill crane	No
Aspen	Large trees with regeneration	Red-naped sapsucker	See MIS woodpecker guild
Subalpine fir	Patchy presence	Blue grouse	No
Whitebark pine	Old growth	Clark's nutcracker	No

The Crescent District Administrative site falls within the Central Oregon subprovince. The species selected in the conservation strategy represent focal species for habitat types or features considered at risk. Table 10 shows the focal species for the habitats that occur within the project area.

The white-headed woodpecker and Lewis's woodpecker are discussed in the Sensitive species section and the black-backed woodpecker, Williamson and red-naped sapsucker are discussed in the MIS woodpecker guild section of this report. There is no habitat in the project area for any other landbird focal species of Central Oregon.

Direct, Indirect, and Cumulative Effects for Alternatives A and B
There is no habitat for pygmy nuthatch, chipping sparrow, brown creeper, flammulated owl, hermit thrush, olive-sided flycatcher, sandhill crane, blue grouse or Clark's nutcracker at the Crescent Ranger District Administration site. There would be no direct, indirect, or cumulative effects with the implementation of either alternative. There would be no change in the contribution of this area toward the viability of these species on the Deschutes National Forest.

Botany and Invasive Plants

The purpose of this biological evaluation is to comply with the requirements of the Endangered Species Act of 1973, as well as the Forest Service Manual (USDA Forest Service, 1995b) and the Land and Resource Management Plan for the Deschutes National Forest (LRMP) (USDA Forest Service, 1990). Forest Service direction states that habitat for sensitive plant and animal species shall be managed or protected to ensure that the species do not become threatened or endangered. The Forest Service Manual (FSM) states that habitats for all existing native and desired non-native plants, fish, and wildlife should be managed to maintain at least viable populations for each species (USDA Forest Service, 1995a).

Summary of Findings

Alternative A "No Action" and Alternative B "The Proposed Action"
Threatened, Endangered and Sensitive Plant Species (TES)
There are no occurrences of Federal or Oregon State-listed plant species on the Crescent Ranger District administrative site. Therefore, Alternatives A and B would not impact individuals or habitat of TES plant species and would not contribute to a trend towards Federal listing or cause a loss of viability to any TES plant populations or species.

Invasive Plants
The proposed office construction would have a LOW to MODERATE RISK for the introduction and/or spread of invasive plant species, due to 1) presence of known weeds, 2) high level of disturbance, 3) low resource value, and 4) moderate introduction vectors.

Background
Pre-field Review and Field Survey
The purpose of a pre-field review is to determine if there are known occurrences of Threatened, Endangered, and Sensitive (TES) plant species within the proposed project area. A pre-field review for the Crescent Administrative site was conducted on August 25, 2011. This consisted of reviewing the following data sources for any documented occurrences of TES plants within the proposed project area: 1) NRIS Element Occurrence records, 2) Crescent botany files, and 3) Oregon Natural Heritage Program database.

In addition, a Habitat Review of all the TES plant species known or suspected to occur on the Deschutes National Forest were compared with habitats that occur within the project area. This was done using a collection of data, including the Deschutes TES Plant Species List and Deschutes Forest GIS corporate data layers. The result of this exercise was to determine which TES plant species were most likely to have potential habitat within the project area (Table 11). These species could then be focused on during the field survey of the project site.

A botanical survey of the project area was conducted on September 28, 2011. This survey focused on the terrestrial vascular and non-vascular plant species within the Crescent administrative site, including landscaping plants and those native and non-native plant species that grow naturally in the undeveloped areas of the site.

Existing Conditions

Plant Community – The vegetation around the Crescent Administrative site is characteristic of the lodgepole forest that surrounds the community of Crescent, and includes both native plants and non-native weeds (Table 12). The dominant trees at the site consist of lodgepole pine (*Pinus contorta*) and quaking aspen (*Populus tremuloides*), with common shrubs such as bitterbrush (*Purshia tridentata).*

In the mid-1990s a small pond and aspen garden were built on the north side of the visitor parking area to attract wildlife and birds. In 2009 and 2010, native plant species were incorporated into the existing landscaping in front of the District entryway and behind the rear modular. Because a native landscape and demonstration garden would be a part of the new building grounds, these plants would be incorporated and transplanted into any new landscaping. These plants include forest species that are found within the Crescent area and considered attractive in a landscape setting. These include dogwood (*Cornus nutallii*), Oregon grape (*Mahonia nervosa*) manzanita (*Arctostaphlyos patula*), Idaho fescue (*Festuca idahoensis*), sulfur buckwheat (*Eriogonum umbellatum*), and Oregon sunshine (*Eriophyllum lanatum*). Refer to Table 13 for a complete list of landscaping species found around the office buildings.

TES Plants - The results of the pre-field review showed there were no documented occurrences of TES plant species within the Crescent administrative site. The results of the Habitat Review (Table 11) also indicated there was very low habitat potential within the project site for any TES plant species. Because the administrative site is a highly disturbed and developed site, it was expected that there would be little potential for the occurrence of rare plant species.

The results of the botanical survey verified that there were no TES plant species within the administrative site. However, several non-native species were observed on the site grounds; these will be discussed in the Invasive Plant Risk Assessment Section.

Table 11. Pre-field Review Summary of Deschutes Forest Sensitive Plant List for the Crescent Administrative Building Site (Revised List January 31, 2008)

R6 Sensitive Plant Species Documented or Suspected on the Deschutes National Forest	Range	Habitat	Known occurrence on Crescent District? On Forest?	Probability of Occurrence in Project Area
Agoseris elata (vascular plant)	Washington and Oregon Cascades	Forest openings and forest edges adjacent to wet/moist meadows, lakes, rivers, and streams	No/Yes	None; no habitat present
Alpova alexsmithii (fungus)	Cascades, Central OR to WA	Associated with various Pinaceae sp., incl. Pacific silver fir, lodgepole, Engelmann spruce, and mountain hemlock	No/Yes	None; no habitat present
Arabis suffrutescens var. *horizontalis* (vascular plant)	South-Central Oregon	Meadows, woods, summits, ridges, and exposed rock outcrops	No/No	None; no habitat present
Arnica viscosa (vascular plant)	South-Central Oregon Cascades, California	Scree, talus gullies, lava flows and slopes w/ seasonal runoff. May be in moraine lake basins or crater lake basins	No/Yes	None; no habitat present
Astragalus peckii (vascular plant)	South-Central Oregon	Basins, benches, gentle slopes, and meadows.	No/Yes	None; no habitat present
Barbilophozia lycopodiooides (liverwort)	Circumboreal, south to Oregon and Idaho	High elevation peaks, peaty soil	No/No	None; no habitat present
Botrychium pumicola (vascular plant)	Central Oregon	Alpine-subalpine ridges, slopes, and meadows. Lodgepole forests in basins with frost pockets, pumice flats	Yes/Yes	None; no habitat present
Brachydontium olympicum (moss)	Alaska through Oregon, Cascade Mountains	Subalpine to alpine boulder fields, moraines and cliff faces	No/No	None; no habitat present
Calamagrostis breweri (vascular plant)	Oregon North Cascades and California	Non-forest moist-to-dry subalpine and alpine meadows, open slopes, streambanks, lake margins	No/No	None; no habitat present
Carex abrupta (vascular plant)	Oregon, California, Nevada	Montane, forests, meadows and open slopes. Usually dry soils	No/No	Low, habitat marginal
Carex capitata (vascular plant)	Circumboreal	Wet meadows, fens and bogs	Yes/Yes	None; no fen habitat present
Carex diandrus (vascular plant)	Circumboreal, south to California	Swamps, sphagnum bogs, peaty/marshy lake margins	No/No	None; no fen habitat present

R6 Sensitive Plant Species Documented or Suspected on the Deschutes National Forest	Range	Habitat	Known occurrence on Crescent District? On Forest?	Probability of Occurrence in Project Area
Carex lasiocarpa var. Americana (vascular plant)	S Cascades of Washington, Idaho, Montana, Utah, irregularly to Oregon	Mid elevation swamps and wet meadows	Yes/Yes	None, no fen habitat present
Carex livida (vascular plant)	Oregon Washington, California, Idaho	In peatlands, including fens and bogs; wet meadows with still or channeled water	No/No	Low, no fen or bog habitat present
Carex retrorsa (vascular plant)	Nevada, Oregon, Washington, Idaho, to the north and east	Bogs, swamps, wet meadows, stream margins	No/No	None; no aquatic habitat present
Carex vernacula (vascular plant)	Washington, Oregon, California, Idaho	Alpine, moist meadows, open slopes	No/No	None; no habitat present
Castilleja chlorotica (vascular plant)	Oregon east Cascades	LP-PP, mixed conifer forest openings. PP at lower and LP at mid, and mixed conifer at highest elevations	No/Yes	Low; no habitat present
Cheilanthes feei (vascular plant)	Widespread western states, barely in Oregon	Limestone rocky areas	No/No	None; no habitat present
Chyloscyphus gimmiparis (liverwort)	Oregon, Alaska, Utah	High elevation montane streams, aquatic	No/No	None; no aquatic habitat present
Collomia mazama (vascular plant)	South-Central Cascades, Oregon	Meadows (dry to wet, level to sloping); stream banks and bars, lakeshores and vernal pool margins; forest edges and openings; alpine slopes	No/No	None; no habitat present
Conostomum tetragonum (moss)	Circumboreal; from BC through California	Subalpine to alpine boulder fields, moraines, and cliff ledges	No/No	None; no suitable habitat
Cyperus acuminatus (vascular plant)	Western states, west cascades Oregon	Margins wet areas, lake edges	No/Yes	None; no aquatic habitat present
Cyperus lupulinus ssp.*lupulinus* (vascular plant)	Idaho, Eastern Washington, Oregon	Rocky slopes adjacent to streams, low elevation	No/No	None; no habitat present
Dermatocarpon luridum (lichen)	Oregon, Washington	On rocks or bedrock in streams or seeps, usually submerged or inundated for most of the year	No/No	None; no aquatic habitat present

R6 Sensitive Plant Species Documented or Suspected on the Deschutes National Forest	Range	Habitat	Known occurrence on Crescent District? On Forest?	Probability of Occurrence in Project Area
Elatine brachysperma (vascular plant)	Washington, Oregon, California, Nevada	Wet to drying muds	No/No	None; no habitat present
Eucephalus gormanii (vascular plant)	Northern West Cascades	Rocky ridges, outcrops, or rocky slopes	No/Yes	None; no habitat present
Gastroboletus vividus (fungus)	Rogue River N.F., Crater Lake NP, CA	Associated with the roots of Pinaceae sp. such as Shasta red fir and mountain hemlock	No/No	Low; host tree species not present
Gentiana newberryi var. *newberryi* (vascular plant)	Oregon east and west Cascades, California	Wet to dry alpine, subalpine, and mountain mixed conifer zones, in forest openings and meadows, commonly with tufted hairgrass	No/Yes	None; no habitat present
Helodium blandowii (moss)	Circumboreal, south through Cascades to Sierra Nevada, and through Rockies to Arizona	Montane fens with calcareous groundwater.	Yes/Yes	None; no fen habitat present
Heliotropium curassavicum (vascular plant)	Western United States	Alkaline, saline playas, receding ponds and clay soils	No/No	None; no habitat present
Helvella crassitunicata (fungus)	Cascades, central Oregon to northern WA	On soil, along trails in montane regions with sp. such as Pacific silver fir, grand fir, and mountain hemlock	No/No	Low; host tree species not present
Hygrophorus caeruleus (fungus)	Cascades, central Oregon (Jefferson Co.) to central WA	On soil in association with roots of Pinaceae sp. near melting snowbanks	No/Yes	Low; outside known range
Leptogium cyanescens (lichen)	Oregon, Washington	Generally riparian but recently documented in upland settings on vine maple, big leaf maple and Oregon white oak	No/No	None; no riparian or aquatic habitat present
Lipocarpha aristulata (vascular plant)	Washington, Oregon, California, Idaho	Low elevation streamsides, gravel bars	No/No	None; no streamside habitat present
Lobelia dortmanna (vascular plant)	Oregon East Cascades, Washington	Shallow water at margins of lakes, ponds, and rivers or in standing water of bogs and wet meadows	No/Yes	None; no aquatic habitat present

R6 Sensitive Plant Species Documented or Suspected on the Deschutes National Forest	Range	Habitat	Known occurrence on Crescent District? On Forest?	Probability of Occurrence in Project Area
Lycopodiella inundata (vascular plant)	Oregon, Idaho, California, Montana – Circumboreal	Deflation areas in coastal backdunes; montane bogs, including sphagnum bogs; less often wet meadows	Yes/Yes	None; no habitat present
Lycopodium complanatum (vascular plant)	Oregon, Idaho, Washington	Edges of wet meadows; dry forested midslope with >25% canopy cover	No/No	None; no habitat present
Muhlenbergia minutissima (vascular plant)	Western United States	Thin lava soils, associated with Typha, sedges	No/No	None; no habitat present
Ophioglossum pusillum (vascular plant)	Oregon, Washington, California, Idaho	Dune deflation plains; marsh edges; vernal ponds and stream terraces in moist meadows	No/No	None; no habitat present
Penstemon peckii (vascular plant)	Central Oregon east Cascades	PP openings, open PP forests; mixed conifer openings; recovering fluvial surfaces	No/Yes	Low; outside known range
Pilularia americana (vascular plant)	Oregon, California	Alkali and other shallow vernal pools, not recently used stock ponds, reservoir shores	No/No	None; no habitat present
Polytrichum sphaerothecium (moss)	East Asia-Western North America through Alaska to Oregon; highest Cascade peaks	Subalpine to alpine, forming green to brown sods on igneous rocks in exposed or sheltered sites.	No/No	None; no habitat present
Potamogeton diversifolius (vascular plant)	Oregon, Idaho, Nevada, California	Aquatic, pond edges	No/No	None; no pond habitat present
Pseudocalliergon trifarium (moss)	Circumboreal; British Columbia, Alberta, Montana, Oregon	Montane fens, submerged to emergent or on saturated ground, usually in full sunlight	No/No	None; no fen habitat present
Ramaria amyloidea (fungus)	Central OR Cascades (Willamette and DES NF); WA Cascades, NW CA	Mycorrhizal with true firs, Douglas fir, and western hemlock in humus or soil.	Yes/Yes	Low, host trees not present
Rhizomnium nudum (bryophyte)	Oregon, Washington	Moss found in moist coniferous forests. On DNF associates include lodgepole pine, Engelmann spruce, mountain hemlock, and western white pine	No/Yes	None; no habitat present

R6 Sensitive Plant Species Documented or Suspected on the Deschutes National Forest	Range	Habitat	Known occurrence on Crescent District? On Forest?	Probability of Occurrence in Project Area
Rorippa columbiae (vascular plant)	Oregon, California, Washington	Wet to vernally moist sites in meadows, fields, playas, lakeshores, intermittent stream beds, banks of perennial streams, along irrigation ditches, river bars and deltas, roadsides.	Yes/Yes	Moderate; suitable habitat present
Rotala ramosior (vascular plant)	Washington, Oregon, California, Idaho	Low elevation low gradient shores, pond edges, river bars	No/No	Low; no suitable habitat present
Scheuchzeria palustris var. *americana* (vascular plant)	Oregon, Washington, California, Idaho +	Open to canopied bogs, fens, and other wetlands where often in shallow water	Yes/Yes	None; no habitat present
Schistostega pennata (bryophyte)	Oregon, Washington, circumboreal	Mineral soil in crevices on lower and more sheltered parts of root wads of fallen trees near streams or other wet areas	Yes/Yes	None; no habitat present
Schoenoplectus subterminalis (vascular plant)	Oregon, Washington, California, Idaho	Generally submerged to emergent in quiet water 2-8 decimeters deep, in peatlands, sedge fens, creeks, ditches, ponds and lakes	No/Yes	None; no aquatic habitat present
Scouleria marginata (bryophyte)	Pacific Northwest endemic; Oregon, Washington, Idaho, northern California, southwestern British Columbia	Exposed or shaded rocks in streams; seasonally submerged or emergent	No/No	None; no aquatic habitat present
Splachnum ampullaceum (moss)	Circumboreal; from Alaska through Oregon, and Alberta	Peatlands, wetlands, on old ungulate dung	No/No	None; no fen habitat present
Texosporium sancti-jacobi (lichen)	Western North America	In Oregon, late seral dry shrub/grassland	No/No	Low; no habitat present
Tomentypnum nitens (moss)	Circumboreal, Alaska through Oregon	Montane fens at slightly elevated (stumps, logs, hummocks)	Yes/Yes	None, no fen habitat
Trematodon boasii (moss)	British Columbia through California, Japan, Newfoundland	Subalpine stream, trail and pond edges.	No/No	None; no suitable habitat present

R6 Sensitive Plant Species Documented or Suspected on the Deschutes National Forest	Range	Habitat	Known occurrence on Crescent District? On Forest?	Probability of Occurrence in Project Area
Tritomaria exsectiformis (liverwort)	Alaska through Oregon, to Montana, Wyoming and Colorado	Open to shaded coniferous forest along perennial flowing water from springs and seeps	Yes/Yes	None; no habitat present
Utricularia minor (vascular plant)	Western United states north through Canada	Aquatic plant of pools, ponds, bogs, marshes, wet meadows	Yes/Yes	None; no fen habitat present

Table 12. Plant Species List for the Crescent Ranger District Administrative Site

Trees	Grasses	Forbs
lodgepole pine (*Pinus contorta*)	hairgrass (*Aira* sp.)	western aster (*Aster* sp.)
quaking aspen (*Populus tremuloides*)	western needle grass (*Achnatherum occidentale*)	false salsify (*Trapogon dubius)**
	cheatgrass (*Bromus tectorum)**	spotted knapweed (*Centaurea biebersteinii)**
	California brome (*Bromus carinatus*)	prairie pepperweed (Lepidium densiflorum)*
Shrubs	bluegrass (*Poa pratensis*)*	spreading groundsmoke (*Gayophytum diffusum*)
rabbitbrush (*Chrysothamnus naseosus)*		yarrow (*Achillea millefolium*)
wax current (*Ribes cereum)*		toadflax (*Linaria vulgaris*)*
bitterbrush (*Purshia tridentata)*		waterleaf (*Phacelia hastata)*
mahala mat (*Ceanthosus prostratus)*		dwarf lupine (*Lupinus lepidus*)
goldenbush (*Ericameria bloomeri*)		wild strawberry (*Fragaria virginiana)*
		dusty horkelia (*Horkelia fusca)*
		dandelion (*Taraxacum officinale)**
		dock (*Acetostella rumex*)*
		willow herb (*Epilobium* sp.)
		cudweed (*Gnaphalium* sp.)
		cinquefoil *(Potentilla* sp.)
		blue fax (*Linum lewisii*)
		mullein (*Verbascum thapsus*)*

*non-native plant species

Table 13. Landscaping Plants Found Around the Administrative Site Buildings

Trees/Shrubs	Grasses	Forbs
Lodgepole pine	Kentucky blue grass (*Poa pratensis*)	pearly everlasting (*Anaphalis margaritacea*)
Quaking aspen	Ross's sedge (*Carex rossii*)	Aster, ornamental (*Aster* sp.)
sub-alpine fir (*Abies lasiocarpa*)	basin wild rye (*Leymus cinereus*)	red columbine (*Aquilegia formosa*)
Siberian pea shrub (*Caragana aborescens*)	bottlebrush squirrel tail (*Elymus elymoides*)	Oregon sunshine (*Eriophyllum lanatum*)
	Idaho fescue (*Festuca idahoensis*)	sulfur buckwheat (*Erigonum umbellatum*)
Shrubs	blue oat grass (*Helictotrichon sempervirens*)	meadow alum root (*Heuchera chlorantha*)
oceanspray (*Holodiscus discolor*)		Shasta daisy (*Leucanthemum shastensis*)
Oregon grape (*Berberis oregana*)		dwarf lupine (*Lupinus lepidus*)
wild rose (*Rosa woodsii*)		Russell lupine (*Lupinus polyphyllus*)
willow (Salix sp.)		rock penstemon (*Penstemon davidsonii*)
dogwood (*Cornus nutallii*)		self-heal (*Prunella vulagaris*)
golden current (*Ribes aureum*)		Violets, ornamental (*Viola* sp.)
serviceberry (*Amelanchier alnifolia)*		
chokecherry (*Prunus virginiana*)		
manzanita (*Arctostpahylos patula)*		
dwarf Japanese juniper (*Juniperus procumbens*)		
gold cypress (*Juniperus chinensis*)		
gold potentilla (*Potentilla fruiticosa*)		
mountain mahogany (*Cercocarpus montanus*)		

Direct, Indirect, and Cumulative Effects for Alternatives A and B
As there are no known occurrences of Threatened, Endangered or Sensitive (TES) plants within the project area; there would be no effects (direct, indirect, or cumulative) on TES plant species for either alternative.

Determination
The proposed action would not impact individuals or habitat of TES plants and would not contribute to a trend towards Federal listing or cause a loss of viability to TES populations or species.

Invasive Plant Risk Assessment

Non-native invasive plants are aggressive species capable of degrading environmental quality or causing economic harm. Invasive plants have developed many characteristics, such as rapid growth rates, high seed production, and extended growing periods that give them advantages over native plants. Such invasive plants are undesirable in forest ecosystems because they tend to displace native

plants, degrade habitat for wildlife species, contribute to soil erosion, and potentially reduce the value of recreational experiences.

Management Direction

National Direction

The National Forest Management Act (1976) specifies that National Forest System lands "provide for a diversity of plant and animal communities based on the suitability and capability of the specific land area in order to meet overall multiple-use objectives." The implementing regulations (36 CFR 219.26) for the National Forest Management Act state that "forest planning shall provide for diversity of plant and animal communities and tree species consistent with the overall multiple-use objectives." In addition, 36 CFR 219.27 (g) states that "management prescriptions shall preserve and enhance the diversity of plant and animal communities, including endemic and desirable naturalized plant and animal species, so that it is at least as great as that which would be expected in a natural forest, … reductions in diversity of plant and animal species from that which would be expected in a natural forest … may be prescribed only where needed to meet multiple-use objectives. Planned type conversions shall be justified by an analysis showing biological, economic, social, and environmental design consequences, and the relation of such conversions to the process of natural change."

The Noxious Weed Management Act (1974) contains provisions to prevent the dissemination of noxious weeds. Other provisions in the act authorize the cooperation of Federal agencies with agencies of State, districts, farmers' associations and similar organizations or individuals in carrying out operations or measures to eradicate, suppress, control or retard the spread of any noxious weed. In addition, 36 CFR 222.8 acknowledges the Agencies' obligations to work cooperatively in identifying noxious weed problems and developing control programs in areas where National Forest System lands are located.

Executive Order 13112 implemented on February 3, 1999 requires Federal agencies to use relevant programs and authorities to prevent the introduction of invasive species and not authorize or carry out actions that are likely to cause the introduction or spread of invasive species unless the agency has determined, and made public, documentation that shows that the benefits of such actions clearly outweigh the potential harm, and all feasible and prudent measures to minimize risk of harm will need to be taken in conjunction with the actions. The USDA Forest Service *Guide to Noxious Weed Prevention Practices* (July, 2001) supports implementation of Executive Order 13112 on Invasive Species.

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

Regional Direction

Region 6 of the Forest Service has prepared an Invasive Plant Environmental Impact Statement (R6 IP EIS). The Final Environmental Impact Statement (EIS) was released in June 2005, with the Record of Decision (ROD) signed in October 2005 amending all Forest Plans in Region 6. The R6 Invasive Plant EIS applies to non-native invasive plant species.

Forest Direction

The Deschutes National Forest Land and Resource Management Plan is amended to incorporate Standards and Guidelines from the R6 IP EIS. In 1998, the Deschutes National Forest Noxious Weed Control Environmental Assessment (DNF Weed EA) with its supplemental Deschutes National

Forest Integrated Weed Management Plan (IWMP) was completed in accordance with the Regional Vegetation Management FEIS and Mediated Agreement. The Decision Notice from the Deschutes National Forest Weed Environmental Assessment selected an alternative that allows a variety of noxious weed treatments, including herbicides (USDA Forest Service, Deschutes National Forest, 1998).

The Deschutes National Forest Weed Environmental Assessment and Integrated Weed Management Plan identify and promote actions within the noxious weed management strategies of prevention, early treatment, maintenance, and awareness. Implementation of management strategies include analyzing the risk of noxious weed invasion during the project planning process and developing tactics to avoid introduction or spread of noxious weeds, clean equipment provisions in contracts, actions to prevent weed introduction and spread, and suggestions for increasing awareness of noxious weeds and the risks they pose, both within the Forest Service and with the public.

Existing Conditions

Pre-field Review and Field Survey

A pre-field review for the proposed project was conducted in August 2011. This consisted of reviewing the following data sources for known occurrences of invasive plant infestations within and near the proposed project area: 1) NRIS Invasive Plant Occurrence records, 2) Crescent botany files, and 3) Oregon Weed Mapper.

Invasive plants were also included during the botanical survey of the project area conducted on September 28, 2011. The results of both the pre-field review and field survey indicated there were non-native plant species on the grounds of the Crescent administration offices (Table 14).

Table 14. Non-Native Plant Species Found Within and Adjacent to the Crescent Administrative Site

Common name	Scientific name	Invasive Species*
spotted knapweed	*Centaurea biebersteinii*	Yes
butter-n-eggs	*Linaria vulgaris*	Yes
false salsify	*Trapogon dubius*	No
prairie pepperweed	*Lepidium densiflorum*	No
clover	*Trifolium sp.*	No
cheatgrass	*Bromus tectorum*	No
mullein	*Verbascum thapsus*	Yes

*Invasive Species (also called noxious weeds) – A plant species listed on the State Noxious Weed List for the Oregon Department of Agriculture.

Risk Assessment Factors

The following factors are used to determine the level of noxious weed risk (low, moderate, and high) associated with the Crescent Administrative Site project:

1. Presence of known weed populations and whether or not those populations can be avoided – LOW

There are known weed occurrences on the perimeter of the District grounds; these are isolated plants that were found along the public roadway outside of the District and along the fence that borders the office property. Because these are individual plants, these weeds would be hand-pulled prior to construction activities for the new office building. Removing these weeds would eliminate the potential for these plants to be spread by either the deconstruction work or construction activities.

2. Level of Disturbance – HIGH
The amount of disturbance for the proposed project would be high, as the current office building and modulars would be demolished, and a new office building constructed at the site. It is expected that a similar footprint would be used for the new building, which would require the same amount of ground disturbance as was used for the original set of buildings. Because the grounds of the administrative site have already been disturbed and/or altered over the last 50 years, the construction of the new office building would not result in any additional ground disturbance.

Any type of ground disturbance increases the opportunity for invasive plants to become established, as these species generally favor open, freshly disturbed ground. However, any disturbed areas for this project would either have a structure upon them or would be landscaped with a combination of native plant species and ornamental vegetation.

3. Resource Value – LOW
As has been previously noted, the administrative grounds of the Crescent Ranger District have been either disturbed or altered over the past several decades for building construction, parking lot creation, septic installation, and lawn and landscaping installation. Because of the presence of structures and constant use, the land itself has a low resource value compared with the general forest areas that surround the community of Crescent.

4. Introduction Vectors – MODERATE
Vehicles are considered major vectors in the introduction and spread of invasive plant species. With the amount of deconstruction and construction work that would be involved with the new office construction, there is the potential for weeds to be introduced onto the project site by the construction equipment. However, this risk is greatly reduced by Forest Service policy (Prevention Standard 2 – 2005 ROD for preventing and Managing Invasive Plants) that requires all equipment used on contract projects be free of dirt and plant materials before entering Forest Service lands (Refer to Project Design Features listed in Chapter 2).

Risk Assessment
By combining risk factors 1-4, it is determined that the proposed project would have a **LOW to MODERATE RISK** for the introduction of invasive plants into the project area. Because of this moderate risk, Forest Service policy requires that weed prevention practices be identified and control measures undertaken during project implementation (Refer to Project Design Features listed in Chapter 2).

Soils
The zone of influence used to assess effects to the soil resource includes the site of the proposed construction of a new office building within the administrative site for the Crescent Ranger District and any overlapping activities. The site is located within the LaPine Basin physiographic area which is a nearly flat basin area at 4,200 to 4,500 foot elevation that has filled with lake and stream deposits (SRI 1976). A blanket of pumice and ash from Mount Mazama (Crater Lake) covers the entire analysis area to a depth of 10 feet.

Soils within the analysis area are mapped as Landtype 96, which occurs on smooth to nearly level outwash plains. The landtype includes excessively well drained soils derived from a thick to very thick layer of pumice and volcanic ash over an older soil on glacial outwash deposits. Surface soils are thin pumiceous loamy sands and subsoils are pumiceous sands. The buried soils are typically thin sandy loams and overlie gravelly glacial outwash. Landtype 96 may contain inclusions of Landtypes 15, 43, 44, 97, 9F and 2B but covers 70 percent or more of the area (SRI 1976).

Soils mapped in Landtype 96 have high infiltration rates and are well to excessively drained due to the presence of deep sands and/or gravels that have a high rate of water transmission even when thoroughly wetted. Landtype 96 is classified in Hydrological Group A and has a low surface runoff potential that results in a low potential for erosion of the surface soil and associated sediment yield from these sites.

Existing Condition
The existing administrative site is approximately six acres in size, of which an estimated 1.33 acres of the soil resource are committed to buildings and parking lots.

Alternative A: There would be no direct or indirect effects to the soil resource since there would be no change in the amount of the soil resource committed to building footprints and parking lots from the existing condition.

Alternative B: The majority of acres proposed for new buildings or parking lots are already cleared of vegetation and compacted as an irretrievable commitment to support existing building and parking infrastructure. Construction of a new office building would result in the continuation of this irretrievable commitment of the soil resource on an estimated 0.28 acres (12,000 ft^2) where re-construction would occur on the existing footprint. Construction of a multi-bay engine building would incur a new irretrievable commitment of the soil resource on approximately 0.07 acres (3,000 ft^2). An additional 0.78 acres (34,000 ft^2) of the soil resource would continue to be irretrievably committed following the re-design of parking lots within the approximately six acre administrative site. A small amount of the soil resource may be returned to a productive condition where other out buildings within the administrative site were torn down and removed. As a result, approximately 4.78 acres within the administrative site would be expected to remain in a productive condition contained within open areas, lawns and the sand filter leach field on the site following implementation of the proposed actions.

Fisheries and Aquatics

This Biological Assessment (BA) documents the review and findings of the Forest Service planned programs and activities for possible effects on species (1) listed or proposed for listing by the USDI Fish and Wildlife Service (USFWS) as Threatened or Endangered; or (2) designated by the Pacific Northwest Regional Forester as Sensitive; or (3) required consultation with the National Marine Fisheries Service (NMFS) under the Magnuson-Stevens Fishery Conservation Act (MSA). It is prepared in compliance with the requirements of Forest Service Manual (FSM) 2630.3, FSM 2672.4, and the Endangered Species Act of 1973, as amended (ESA) (Subpart B; 402.12, Section 7 Consultation).

The following analysis addresses the potential effects of constructing a new office building on the existing footprint on threatened, endangered, and sensitive fish species. This determination, required by the Interagency Cooperation Regulations (Federal Register, January 4, 1978), ensures compliance with the ESA. Changes to the R-6 Regional Forester's Sensitive Species List were instituted on November 28, 2000. Invertebrate species were not included and would not be covered under this BA.

Summary Conclusions for Threatened and Endangered Species and Federal Candidates
There is no threatened, proposed, candidate, or sensitive species within the New Office planning area. There are no perennial or fish bearing water bodies within the planning area. Project activities are consistent with the Clean Water Act (CWA 1977), and Inland Native Fish (INFISH) objectives.

1. The project would have **"No Effect"** on the Columbia River Bull Trout.

2. The project would have "**No Impact**" on the Interior Redband trout.

Table 15. Summary of Conclusion of Effects for Threatened, Endangered, and Federal Candidate Aquatic Species, for the Crescent Ranger District Administrative Site Project Area

Species	Scientific Name	Status	Occurrence	Effects Determination
Aquatic Species				
Columbia River Bull Trout	*Salvelinus confluentus*	T	HN	**NE**
Interior Redband Trout	*Oncorhynchus mykiss* ssp.	S	HN	**NI**

T – Federally Threatened
S – Sensitive Species from Regional Forester's List
HN – **Habitat Not** within the project area or affected by its activities
NE – No Effect
NI- No Impact

Existing Condition

The existing administrative site is approximately six acres in size. There are no fish bearing water features within the planning area. The nearest water body is the Little Deschutes River, which is over 600 feet away from the administrative site and on the opposite side of Highway 97. The Little Deschutes River through this reach is occupied by non-native species such as brook trout and brown trout. Native and Region 6 sensitive species redband trout may inhabit this area, but has not been confirmed in several years. Native bull trout once occupied this reach of the Little Deschutes River, but have been extirpated for several decades.

Alternative A: There would be no direct or indirect effects to fisheries since there would be no change in the influence on aquatic resources from the existing buildings footprint and/or parking lots on the Administrative Site.

Alternative B: The majority of acres proposed for new buildings or parking lots are already cleared of vegetation and compacted as an irretrievable commitment to support existing buildings and parking infrastructure. Construction of a new office building and multi-bay engine structure would result in the continuation of this condition on the existing footprint of the six acre administrative site, thus proposed project activities would have no effect on fish or their habitat.

Cumulative Effects

The zone of influence is defined as the six-acre Administrative site. There are no projects that are foreseeable actions that have the potential to overlap in time and space with those of the Crescent Ranger District Administrative Site Project therefore there would be no cumulative effects.

Transportation

This project has no road construction proposed, or any change to the current access to the administrative site. No roads analysis is required to inform the Responsible Official.

Currently the public access to the Crescent Forest Service office is off of Highway 97, with access rights established with Oregon Department of Transportation (ODOT). The employee access on the east side of the Crescent Forest Service property is from the following roads; Ward Street, Main Street, and Bonner Lane. The three street easements for employee access to the Crescent Forest Service property can be found at the county surveyor's office in Klamath County, Oregon.

Currently the Forest Service Office in Crescent, Oregon has adequate access for the existing building. The road access needed for the new office to be built in Crescent remains the same as the current existing access. If, during construction, a need to change access off of Highway 97 is discovered, it would be coordinated through ODOT with an application for access. Any changes discovered during construction to the access off of the three Klamath County roads would be coordinated with Klamath County.

Alternatives A and B: There would be no direct or indirect effects to transportation since there would be no change in the access from Highway 97 or to the three Klamath County roads surrounding the administrative site.

Cumulative Effects

The zone of influence is defined as the six-acre Administrative site. There are no projects that are foreseeable actions that have the potential to overlap in time and space with those of the Crescent Ranger District Administrative Site Project therefore there would be no cumulative effects.

CONSISTENCIES

Deschutes National Forest Land and Resource Management Plan

The Deschutes National Forest Land and Resource Management Plan of 1990 (LRMP) as amended, provides guidance for management activities. The LRMP establishes goals, objectives, standards, and guidelines for each specific management area of the Forest, as well as Forest-wide standard and guidelines.

The LRMP identifies one management allocation within the project area - Administrative Buildings and Sites. The entire approximately six acres of the project area are designated as Administrative Building and Sites. The goal of this allocation is "To provide cost-effective, safe, functionally efficient buildings and related improvement needed for conducting the work of the Forest (LRMP page 4-86)."

The new office building for the Crescent Ranger District is consistent with the Deschutes Land and Resource Management Plan as it is within the existing footprint of the current administrative site. It would be designed as an energy efficient building under the LEED system.

Northwest Forest Plan

This project is outside the boundaries of the Northwest Forest Plan, therefore no direction in the Northwest Forest Plan (NWFP) applies to this project.

National Environmental Policy Act (NEPA) of 1969

This project follows the format and content requirements of environmental analysis and documentation. The entire process of preparing this environmental analysis was undertaken to comply with NEPA.

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."

There is a risk for spreading or introducing noxious weeds for the action alternative in this project. The risk is proportional to the area of ground disturbance used in the action alternative. The Region 6 Invasive Plant Final Environmental Impact Statement (FEIS) Record of Decision (USDA Forest Service, 2005) adopted Standards and Guidelines that would be followed to address this risk. Prevention is the overall objective, as described in the Project Design Features, Chapter 2.

Clean Water Act

The State of Oregon, as directed by the Clean Water Act (CWA) and the Environmental Protection Agency, is responsible for the protection of rivers and other bodies of water in the public interest. To show that water quality is being protected, states are required by the CWA to adopt water quality standards which must be approved by the Environmental Protection Agency. Best Management

Practices (BMP) and state-wide management plans are a requirement of the CWA and are used to meet water quality standards. There are no waterbodies in the analysis area. The closest surface water in the vicinity is over 600 feet away (Little Deschutes River) and proposed activities would not affect aquatic resources as there would be no change in the influence on hydrologic process or water quality because the proposed action maintains the same footprint as the current condition.

Clean Air Act

The proposed action is consistent with the Clean Air Act. There is the potential to dispose of cleared vegetation as a result of construction activities by hauling off-site and burning. This would be a very small quantity of vegetative material as the area of disturbance overlaps an existing administrative site and no ground outside the administrative site would be disturbed. The Forest Service, in cooperation with the DEQ, the Oregon Department of Forestry, and the Bureau of Land Management, has a Memorandum of Understanding (MOU) to establish a framework for implementing an air quality program in northeast Oregon. Any burning would be conducted in compliance with the State of Oregon Smoke Management System and would meet smoke management objectives for total emissions.

Executive Order 13514, and Guidance for Federal Agencies on Sustainable Practices for Designed Landscapes

Signed in 2009, Executive Order 13514 calls for agencies to implement sustainable practices when constructing and operating high performance Federal buildings, including increasing energy efficiency; conserving and protecting water resources through efficiency, reuse, and stormwater management; and strengthening the vitality and livability of the communities in which Federal facilities are located. On October 21, 2011, the Council on Environmental Quality (CEQ) released Guidance for Federal Agencies on Sustainable Practices for Designed Landscapes, to assist agencies with recommendations to consider when constructing a new facility. The guidance provides recommendations in the following categories: site selection and planning, soils, water, vegetation, materials selection, human health and well-being, existing/historic facilities and cultural landscapes, construction, and operations and maintenance.

The new facilities at the Crescent Administrative Site would adhere to E.O. 13514 and use the recommendations in the CEQ guidelines in planning, development, and construction process. Some of the reasons for construction of a new Forest Service facility on the present Crescent Administrative Site, including increasing energy efficiency and supporting the local community, demonstrate that the ideals of the E.O. and the CEQ guidance are important drivers of this project.

Executive Order 12898 of February 11, 1994, Environmental Justice in Minority Populations and Low-income Populations

Executive Order 12898 directs the agency to identify and address, "...as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations...." The intent of the order is to assure the fair treatment and meaningful involvement and consideration of all people. Fair treatment means that no group of people, including racial, ethnic, or socioeconomic group should bear a disproportionate share of the negative environmental consequences resulting from the execution of a federal actions. Outreach and public involvement for this project has been extensive and at various scales within various communities of interest.

In order to identify and address environmental justice concerns, the EO states that each agency shall analyze the environmental effects, including human health, economic, and social effects of Federal actions, including effects on minority populations, low-income populations, and native Americans as part of the NEPA process.

As a result of outreach and scoping (public involvement) processes, there were no potentially disproportionately high and adverse human-health, environmental, or social effects to minority or low-income populations identified.

USDA Civil Rights Policy

The Civil Rights Policy for the USDA, Departmental Regulation 4300-4 dated May 30, 2003, states that the following are among the civil rights strategic goals; (1) managers, supervisors, and other employees are held accountable for ensuring that USDA customers are treated fairly and equitably, with dignity and respect; and (2) equal access is assured and equal treatment is provided in the delivery of USDA programs and services for all customers. This is the standard for service to all customers regardless of race, sex, national origin, age, or disabilities.

Disparate impact, a theory of discrimination, has been applied to the Crescent Ranger District Administrative Site planning process in order to reveal any such negative effects that may unfairly and inequitably impact beneficiaries regarding program development, administration, and delivery. The objectives of this review and analysis are to prevent disparate treatment and minimize discrimination against minorities, women and persons with disabilities and to ensure compliance with all civil rights statutes, Federal regulations, and USDA policies and procedures.

The project alternatives are not likely to result in civil rights impacts to Forest Service employees or customers of its program.

Civil Rights Impact Analysis

Civil Rights Impact Analysis (CRIA) identifies the potential social impacts of a decision on employees and customers, so these impacts would be considered and appropriately mitigated as part of the decision-making process. CRIA is required for any major decision which has a significant social or civil rights impact (FSM 1730.3). Decisions include natural resource management decisions that potentially impact Forest Service employees or customers. A decision with a significant civil rights impact is one that abolishes positions or reduces services or programs offered to the public.

After reviewing the Proposed Action and completing a discussion with Crescent Ranger District personnel, it was determined that there would not be a need for a complete Civil Rights Impact Analysis (CRIA). Follow-up with the Regional Office Civil Rights Staff responsible for CRIA oversight included sharing the proposed action, some explanation and clarifications of the proposed actions associated with the “new building” (new Ranger Station), and possible impacts to employees. Following are some key points discussed.

1) Employee Displacement: Explained that employees would need to move, entirely out of the existing old ranger station (administrative building) in order for complete construction and replacement to occur on the very same site for the new building (ranger station). Employees would continue in nearby facilities such as the old and new conference rooms, other existing buildings, and some modular offices brought in to accommodate for work space. These would be within the existing administrative site. There may be some “telework” assignments that would also accommodate these work needs and employee needs. Technical support would be in place to provide for these various needs (i.e. computer, phones, plotters within reason of funds and need for equipment).

2) Displacement time is estimated to be between; May 2013 to June 2014.

3) Customer service to the public served should only be altered slightly. All services would be in the same location, provided from an established work building (modular or otherwise). Directional signing would be provided to guide customers to this temporary reception and service area. These temporary sites would be ADA accessible.

4) Parking for employees and customers would be sufficiently designated and provide for ADA needs. A traffic flow plan would be in place for health & safety purposes.

5) Cultural heritage concerns regarding the permitting and administration of the matsutake mushroom program activity between September & November, 2013, would not be impacted. This activity involves a high level of permitting to Asian and Hispanic collectors and a various other groups. Refer to previous point #3.

There would be minimal impact to employees, either positively or negatively, as the new building would provide a more open concept thereby allowing more interaction between disciplines. The construction of a new administration facility would not result in any permanent employee displacement, nor would the civil rights of any employee or member of the public be impacted. No Civil Rights monitoring is necessary from this proposed action.

Other Disclosures

Wetlands and Floodplains

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. No wetlands or floodplains would be affected by the proposed action. The Crescent Ranger District New Office Building would not be located in a wetland or floodplain.

Civil Rights and Environmental Justice

Civil Rights legislation and Executive Order 12898 (Environmental Justice) direct an analysis of the proposed alternative as it relates to specific subsets of the American population. The subsets of the general population include ethnic minorities, people with disabilities, and low-income groups. The proposed action would not pose any adverse effect to those populations as there would be no change in location or services offered to all subsets of the public. ADA requirements would be incorporated into the new design improving access into and inside the new facility.

Prime Lands (Farm, Range, and Forest)

The Secretary of Agriculture issued memorandum 1827 which is intended to protect prime farmlands and rangelands. There are no lands within the boundaries of the Deschutes National Forest that meet the definition of prime farmland, or are considered prime farmland as discussed in the Deschutes LMRP. The Crescent Administrative Site is not considered “prime” forestland; therefore this project would not affect any prime lands.

Congressionally Designated Areas Such as Wilderness, Wild and Scenic Rivers, and National Recreation Areas

There are no Wilderness, Wild and Scenic Rivers, or National Recreation Areas within or adjacent to the project. The nearest Wilderness is Mount Thielsen Wilderness located approximately eleven and a half miles to the southwest of the project area. The nearest Wild and Scenic River is Crescent Creek approximately seven and one-half mile to the west of the project area.

Inventoried Roadless Areas or Potential Wilderness Areas

There are no inventoried roadless areas in or near the project area. The nearest inventoried roadless area is Maiden Peak, located approximately ten miles to the northwest of the project area.

There are no Potential Wilderness Areas that meet the criteria of Forest Service Handbook 1909.12 Chapter 70 (71.1) within the project area. All six acres has been impacted with development including; buildings, roads, parking areas, tree removal, and other evidence of human activities precluding the area from being included in a potential wilderness inventory.

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