

Environmental Assessment and Decision Notice/FONSI

Odell Butte Communication Site AT&T Facility

October 2012

Crescent Ranger District
Deschutes National Forest
Klamath County, Oregon
Township 24S, Range 7E, Section 26 Willamette Meridian

Prepared by Adapt Engineering Inc

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Reviewed by the United States Forest Service

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**DECISION NOTICE
FINDING OF NO SIGNIFICANT IMPACT**

**ODELL BUTTE COMMUNICATION SITE
Facilities to Support AT&T Mobility Equipment**

**USDA Forest Service
Crescent Ranger District – Deschutes National Forest
Klamath County, Oregon**

Decision and Rationale

I have selected Alternative B and have decided to give approval for the issuance of a communications use lease for the construction and operation of the facilities intended to support AT&T mobility equipment.

Construction activities include construction of a self-supporting multi-user 40 foot lattice style tower, a multi-unit equipment building measuring 36 feet by 20 feet, consisting of several modular-type structures, as well as an 11' x 15' shelter for a shared backup generator on a concrete slab, a (1) 2,000 gallon propane tank, an ice bridge on concrete footings connecting the tower and equipment shelter, and approximately 35 feet of retaining wall along the north and east edges of the proposed site. Additionally, two existing Bonneville Power Administration owned propane tanks will be relocated 30 feet to the north. No changes to the road access will be needed.

I also hereby incorporate all the Project Design Features and mitigations in the EA to maintain scenic quality and an invasive plant-free site as well as protecting cultural resources, and mitigating impacts to soils and recreation (pages 18-19 EA).

Alternative B fulfills the Purpose and Need and there are several associated public benefits, which includes equal access among commercial users in the spirit of the Telecommunications Act. Its goal is to promote competition and reduce regulation in order to secure lower prices and higher quality services for American telecommunications consumers. It also encourages the rapid deployment of new telecommunications technologies. This decision is consistent with all portions of the Odell Butte Communication Site Plan, including the priority to maintain the viewscape and functionality of the fire lookout.

I believe the analysis has shown there would be no noticeable change to scenery from the existing condition as viewed from Highways 58 and 97. It is an existing electronic site where the Deschutes National Forest Plan allows facilities to be seen; as long as they are subordinate to the main scenery which is a mountaintop framed by vegetation several miles away. I have determined this project to be consistent with those values.

My decision continues the orderly development of the Odell Butte Electronic Site as prescribed in the 2011 Odell Butte Electronic Site Plan. There has been an increasing demand from the public and the telecommunication service industry on all Deschutes National Forest communication sites as a result of recent gains in technology. The Odell Butte Electronic Site is situated in a key location and is a designated electronic site by the Deschutes National Forest Plan and one of the few peaks in the central Cascades with road access and electrical power to the summit. The Cascade Mountain range in Oregon is a major obstacle to line of sight electronic communication between the heavily populated west side and

the growing communities in central Oregon. It also is situated where thousands of travelers on Highways 58 and 97 utilize the towers for communication and other network-related functions.

One of the main environmental and economic issues I considered and addressed besides orderly development and scenery is the effect to other existing users on Odell Butte. Comments were solicited during the course of this project, both during scoping and the official 30-day comment period, and are addressed in the EA. Relying on the Federal Communication Commission with their licensing procedure and good faith efforts between the users, I am convinced all the uses would be compatible. A 30-day technical review period among Odell Butte users, or holders of written instruments, was completed pursuant to Forest Service Handbook 2709, Chapter 90, 94.5. No comments were received.

Public Involvement

AT&T approached the Crescent Ranger District with a proposal for construction of facilities at an existing site at the Odell Butte Communication Site. The proposal followed Forest Service Handbook screening processes (FSH 2709.11, chapter 90, 94-1) and the proposal was accepted. The Forest Service began the National Environmental Policy Act process, and an opportunity for current Odell Butte Communication Site users to comment was offered through a scoping letter dated October 7th, 2011.

One response was received during this scoping period from an existing Odell Butte User, Angel Mountain LLC on November 6th, 2011. The comment and response is summarized below.

Commenter	Comment	Response
Angel Mt. LLC	<i>"Angel Mt, LLC was never contacted by AT&T Mobility or any other organization regarding Angel Mt, LLC's capacity to accommodate AT&T's needs"</i>	The [Angel Mountain] structure is not able to support collocation or to be upgraded without rebuilding in a new location. Additionally the facility does not meet the coverage objective in height, which again would require a rebuild of the structure.

Also, the project was published in the Deschutes National Forest Schedule of Projects winter publication (covering January 1- March 31, 2012) on January 1, 2012.

Government to Government collaboration occurred between the Forest Service and the Klamath Tribes, Burns-Paiute Tribes, and the Confederated Tribes of the Warm Springs, regarding proposed activities on Odell Butte. No concerns were expressed by the tribal governments regarding the proposed action.

The opportunity to comment on the Odell Butte Communication Site project was provided in accordance with 36 CFR 215.5. Interested citizens were provided an opportunity to comment through a letter and a legal notice published in *The Bulletin*, Bend, Oregon on February 21, 2012. It was also posted on the Deschutes National Forest website: <http://www.fs.usda.gov/goto/centraloregon/projects>. The comment period ended March 21, 2012. No comments were received during this period.

Consultation with the State Historic Preservation Office (SHPO) was conducted for this project and SHPO concurrence with a "No Effect" determination was received for archeological resources on January 13th 2012 and for above ground resources on January 10th 2012. Government to Government

collaboration occurred between the Forest Service and the Klamath Tribes, Burns-Paiute Tribes, and the Confederated Tribes of the Warm Springs, regarding proposed activities on Odell Butte. No concerns were expressed by the tribal governments regarding the proposed action.

Alternatives Considered

Only one other alternative, No Action, was considered in detail. There were no key issues that had the potential to solve the Purpose and Need (EA, page 13), although there were several analysis issues that were brought forward into the Environmental Consequences section. There were a variety of Alternatives Considered but Eliminated from Further Detailed Analysis (EA, page 20). The Forest Service considered several locations and options for the requested facilities, such as collocation with existing facilities on the electronic site (EA, starting on page 14). The lack of space in buildings and on towers plus their structural integrity eliminated them from further detailed analysis.

If I had selected No Action, Alternative A, AT&T would not be able to provide the desired coverage in and around the key location of Odell Butte. Also, there would be no opportunity for the Forest Service to better serve the public interest and accommodate future communication users on Odell Butte.

Finding of No Significant Impact and Other Laws and Regulations

After considering the environmental effects described in the EA, I have determined that these actions will not have a significant effect on the quality of the human environment considering the context and intensity of impacts (40 CFR 1508.27). Thus, an environmental impact statement will not be prepared. I base my finding on the following:

1. My finding of no significant adverse or beneficial effects that is not biased or offset by a combination of actions. I have determined the scenery will have minimal to no change from the current condition and the environmental consequences related to recreation, wildlife, fire safety, and other resources of interest is relatively benign. It is a highly developed site with buildings and towers (EA, Figure 9, page 23), it receives limited recreation use, and it provides marginal habitat for wildlife and plant species with very few species present (EA, pages 32-59). This is a designated electronic site that is occupied with many users and potential adverse effects are mainly limited to the site itself (EA, pages 21-63).
2. There will be no significant effects on public health and safety because this action is relatively neutral to the human environment and would have no measurable effect to water or air quality. Also, AT&T would be able to provide better coverage for the customers they serve (EA, pages 10-11).
3. There will be no significant effects on unique characteristics of the area, because it is a designated electronic site with no existing unique characteristics or ecologically critical areas such as park lands, prime farmlands, wetlands, or wild and scenic rivers because none are nearby (EA, page 69) or within the project area.
4. The effects on the quality of the human environment are not likely to be highly controversial because there is no known scientific controversy over the impacts of the project. The CEQ defines scientific controversy as when experts disagree with the Forest Service cited science. There has been no public comment or disagreement on how science was used for this project.
5. The effects analysis shows the effects are not uncertain, and do not involve unique or unknown risk. The Forest Service has considerable experience with the types of activities to be

implemented and has assigned routine Project Design Features that have been extensively used on other similar projects with no unexpected consequences (EA, starting on page 18).

6. The action is not likely to establish a precedent for future actions with significant effects, because the construction of the multi-unit building and towers is a site-specific activity and does not represent a decision in principle that causes future considerations.
7. Cumulative impacts are absent or are not significant. Effects are very limited in context and intensity to the electronic site itself with a duration of one season with a construction window typically June through October. Disturbance will cease once construction is completed and the facilities are on the landscape for the foreseeable future. Also, the scale of the project is relatively small. Construction and operation of the communications facility will occur on substantially less than one acre (EA starting on page 14).
8. The action will have no significant adverse effect on districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or cause loss of or destruction of significant scientific, cultural, or historical resources. There would be no effect to cultural resources with the proposed construction zone as there are no identified cultural resources within and adjacent to the project area. Consultation with the State Historic Preservation Office (SHPO) was conducted for this project and SHPO concurrence with a "No Effect" determination was received for archeological resources on January 13th 2012 and for above ground resources on January 10th 2012. Government to Government collaboration occurred between the Forest Service and the Klamath Tribes, Burns-Paiute Tribes, and the Confederated Tribes of the Warm Springs, regarding proposed activities on Odell Butte. No concerns were expressed by the tribal governments regarding the proposed action.
9. Due to their absence, the action will not adversely affect any Threatened, Endangered or Candidate species or its habitat (EA, pages 32-33 and page 50). A Biological Evaluation was prepared and is included in the EA in its entirety.
10. The action will not violate Federal, State, and local laws or requirements for the protection of the environment and is consistent with the Deschutes National Forest and Management Plan. Applicable laws and regulations were considered in the EA (starting on page 64.) Coordination with Klamath County is ongoing and all appropriate land use approvals by planners will be granted prior to construction. All frequencies will be licensed by the FCC.

Administrative Review or Appeal Opportunities

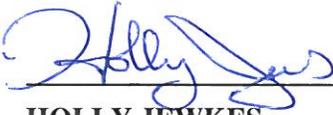
This decision is not subject to appeal pursuant to 36 CFR 215.12(e)(1). No substantive comments expressed concerns during the comment period for the proposed action analyzed and documented in this EA (36 CFR 215.6).

Implementation

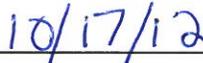
This decision gives NEPA approval for the AT&T project. Implementation is contingent upon authorization of the special use permit, per 36 CFR 251.62. The special use permit can only be signed once all the requirements of FSH 2709.11 Chapter 90, Section 94.5 have been met.

Contact Person

For additional information concerning this decision, please contact Tim Foley, Environmental Coordinator, at the Crescent Ranger District, PO Box 208, Crescent, OR 97733; or by phone at 1-541-433-3200.



HOLLY JEWKES
District Ranger
Crescent Ranger District



DATE

Environmental Assessment

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SUMMARY

Odell Butte is a designated electronic site located on the Crescent Ranger District on the Deschutes National Forest in Klamath County (Figure 1). The Deschutes National Forest proposes to issue a communication use lease for the construction and operation of co-locatable facilities to support communications equipment for AT&T. The facilities would include one communications tower and an associated multi-unit building to be sited on the Odell Butte Communication Site (Figure 2). The design is intended to facilitate future orderly development of the site. No new access roads would be needed as the construction would occur adjacent to an existing access road and parking area. The project area is located on the top of Odell Butte (6,994 feet in elevation according to USGS datum NAD 83) Section 26, T. 24 S. R. 7 E., Willamette Meridian at approximately Latitude 43° 28' 14" North, Longitude 121° 51' 49" West.



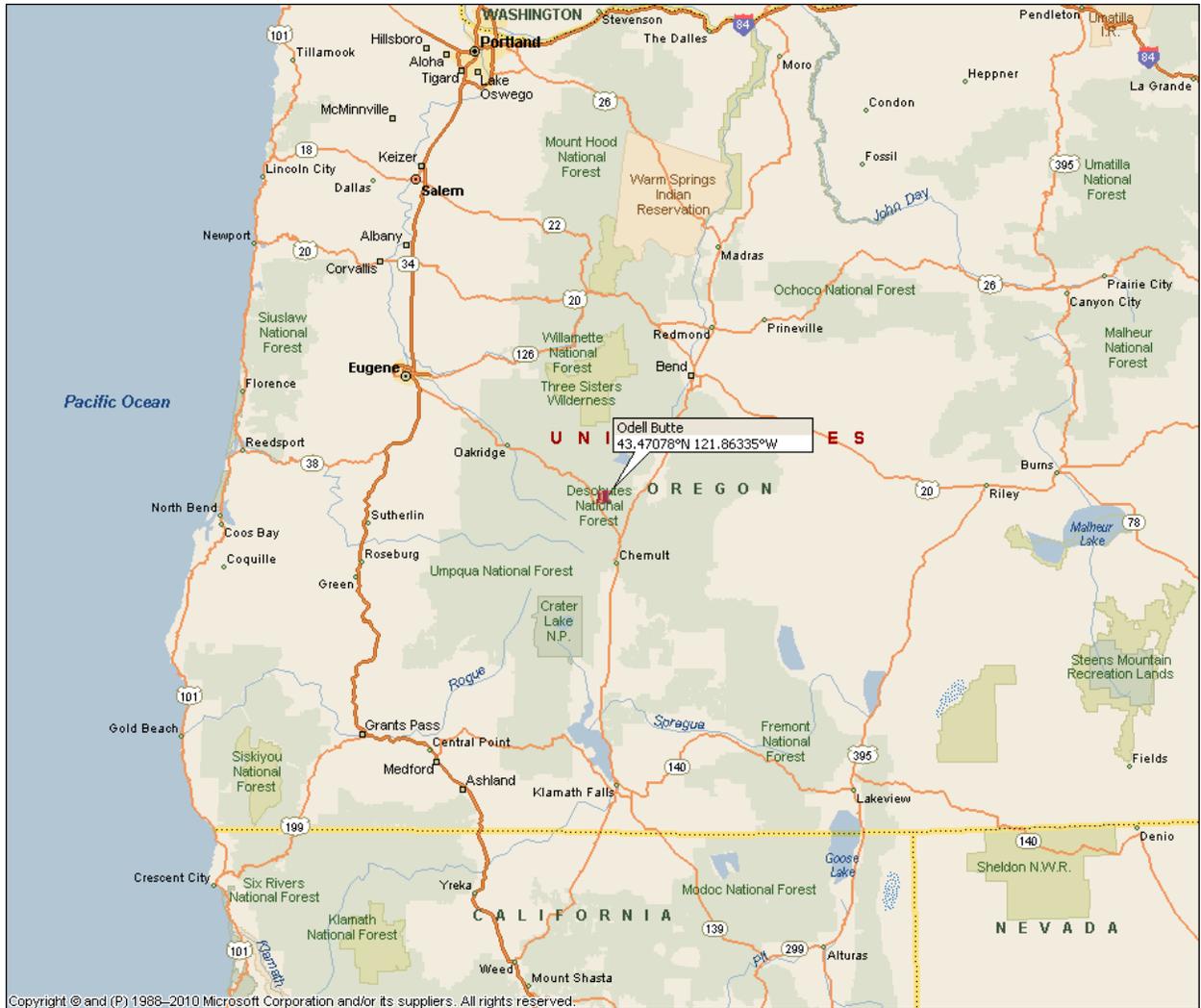


Figure 1. Odell Butte Communication Site Vicinity Map

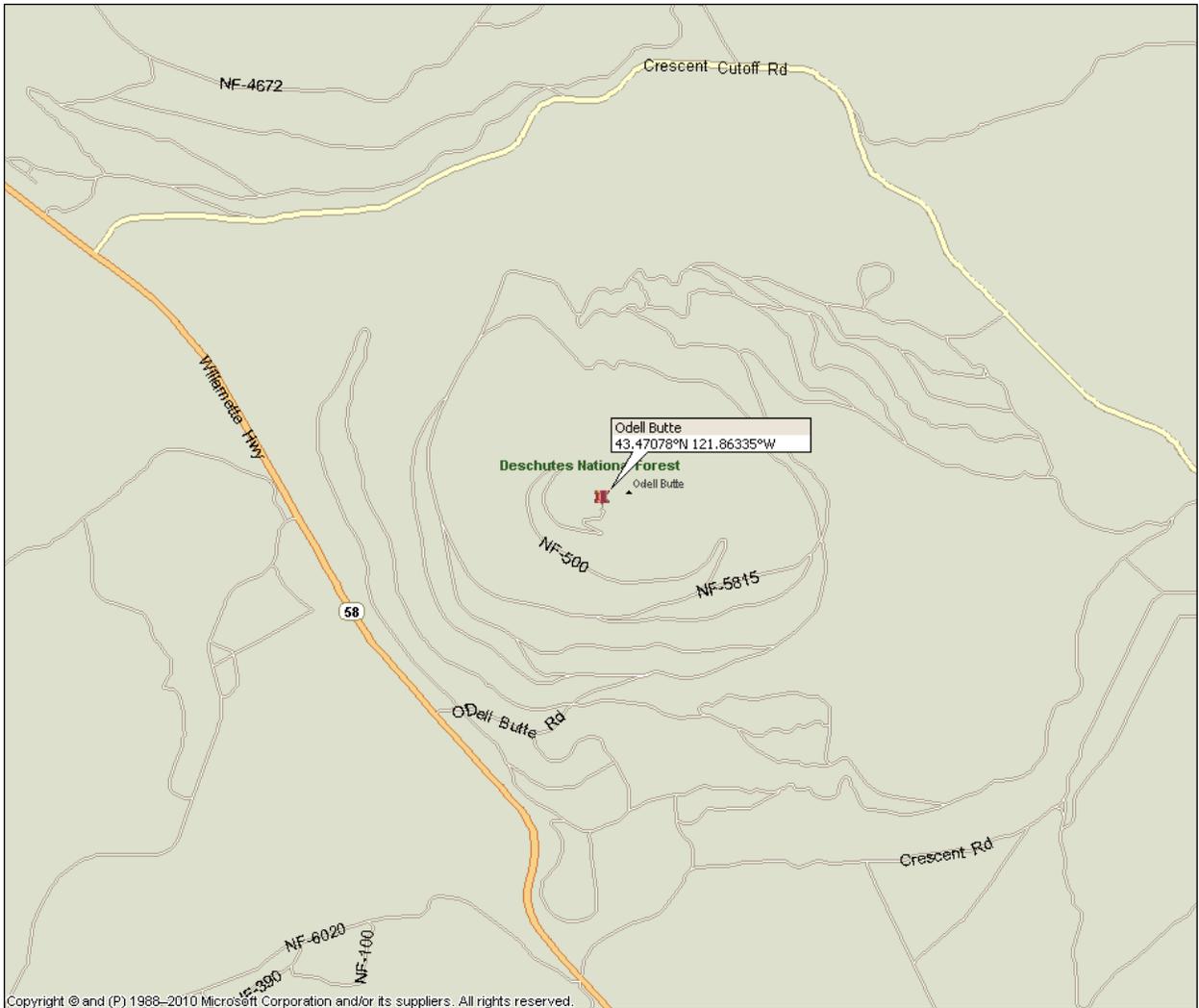


Figure 2. Odell Butte Communication Site Locator Map

INTRODUCTION

Document Structure

The Forest Service has reviewed this Environmental Assessment, prepared by Adapt Engineering, 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 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 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 and appendices to this document.

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. Which alternative best serves the public interest;
2. Whether to give NEPA approval for construction and operation of the facilities proposed which allow for future collocation;
3. Which alternative best implements the site plan as amended for orderly development; and
4. Which Project Design Features or mitigation measures may apply to the project.

Background

The Odell Butte Communication Site is located on the Crescent Ranger District of the Deschutes National Forest, Klamath County, State of Oregon in Section 26, T. 24 S. R. 7 E., Willamette Meridian at approximately Latitude 43° 28' 14" North, Longitude 121° 51' 49" West. The elevation at Odell Butte Communication Site is approximately 7000 feet above mean sea level (amsl). The area available for communications-related development is approximately 0.50 acres in size. The Odell Butte Communication Site is road accessible. Odell Butte's primary purpose is to serve as an active fire lookout facility and therefore no uses may interfere with fire lookout operations.

The vegetation can be characterized as high elevation (subalpine) environment with lodgepole pine trees, mountain hemlock and with a manzanita brush component. There is no standing water, such as seeps or springs, or riparian-dependent wildlife or plant species within several miles.

The most senior use at this site is two-way radio and the site is designated as low power non-broadcast. This site designation was established in an Environmental Assessment and Decision Notice approved in 1982. The Deschutes National Forest Land and Resource Management Plan approved in August 1990 recognized the designation of the Odell Butte Communication Site. The maximum power output for the Odell Butte Communication Site is based on the maximum output allowed for two-way radio under the Federal Communications Commission's rules at Title 47, Code of Federal Regulations, Part 90.

Odell Butte was first developed as a fire lookout facility in 1916. The original lookout structure has been upgraded several times over the years and its primary purpose is to serve as an active fire lookout during the summer season.

All communication users on Odell Butte are subject to the 1996 Telecommunications Act. Its goal is to promote competition and reduce regulation in order to secure lower prices and higher quality services for American telecommunications consumers. It also encourages the rapid deployment of new telecommunications technologies. It defines collocation as the duty to provide rates, terms, and conditions that are just, reasonable, and nondiscriminatory; for physical collocation of equipment necessary for interconnection or access to unbundled network elements at the premises of the local exchange carrier.

An updated Communication Site Management Plan was completed in 2011 which supersedes the Odell Butte Electronic Site Plan approved June 2, 1982. The primary objectives of the Odell Butte Communications Site Management Plan are to:

1. Allow communication use while preserving the viewshed of Odell Butte from State Highway 97, State Highway 58, County Road 46 and Forest Service Road 62.
2. Maintain visual resource objectives by requiring design standards that are unobtrusive and by utilizing earth tone colors and non-reflective surface material consistent with the standards in the Land and Resource Management Plan.
3. Document site management policy, procedures and standards, which are not already specified in the standard communication site lease.
4. Manage for low power communications uses only. The maximum power output expressed as ERP is based on the maximum output allowed for two-way radio

under the Federal Communications Commission's rules at Title 47, Code of Federal Regulations, Part 90. As of the 2003 regulation, that is 500 watts ERP. Each use must operate at or below the power level authorized by their respective FCC license as long as it does not exceed the site limitation.

5. No continuously transmitting uses are authorized at this site, excluding microwave and controller channels used in support of mobile radio equipment.
6. All uses must be designed, operated and maintained so as not to physically or electronically interfere with the senior uses. If new uses deteriorate the receiving/transmitting operation of existing uses, the new uses may be required to institute at their expense; additional studies, equipment upgrades, frequency isolation, or physically separate themselves from the existing uses.
7. Present a program for operation within the site.
8. Help fulfill the public need for adequate communication sites.
9. Protect the interests of leaseholders, site users, and the public by preserving a safe and an electronically "clean" environment.
10. Encourage the efficient development and use of space and facilities within the designated site, subject to the USFS goal to provide the best possible public service at reasonable cost.
11. Authorize new Tenant and/or Customer uses that can physically and electronically be accommodated within existing buildings and/or towers.
12. Amend this Communications Site Plan as necessary to be consistent with future Forest Land and Resource Management Plans. The Forest Service will provide authorization holders with proposed amendments to this plan and will allow a reasonable period of time for the holders to review and comment on the proposed changes.

Purpose and Need for Action

The purpose is to evaluate Forest Service issuance of a communication use lease for construction and operation of a new communications facility to support communications equipment for AT&T. The action is needed because AT&T currently does not have the needed coverage to serve its customers in and around Odell Butte and no other facility on Odell Butte or private lands can meet the necessary requirements. AT&T is a well capitalized, publicly traded corporation specializing in communications and the required facilities needed to provide communications to its customers. The goal of special uses on the Deschutes National Forest is to “provide for use and occupancy of the National Forest system ... when such use will not detract from specific management area direction, is in the public interest, and cannot reasonably be served by development on non-National Forest System land.” Because of Odell Butte’s strategic position in the Cascade Mountains and existing infrastructure, there are no other opportunities with these unique attributes to serve the public.

Since their introduction, wireless telecommunications systems have proven to be an invaluable communications tool in the event of emergencies and natural disasters where normal land line communication are often disrupted, overlooked, or inaccessible during and after an event has occurred. This service and similar technology are utilized by numerous agencies and organizations that provide emergency services. Wireless telecommunications systems, including cellular telephones, have also proven to be invaluable tools in business and everyday personal use. In this sense, wireless telecommunications system networks have proven to be desirable in the interest of the public convenience, safety, health, and welfare. This wireless technology would enhance the communications systems of residents and businesses around the project coverage area. Odell Butte is the most desirable site to fulfill this need and better serve the public interest.

Figure 3 displays AT&T’s coverage prior to construction of the Odell Butte Communication Site facility.

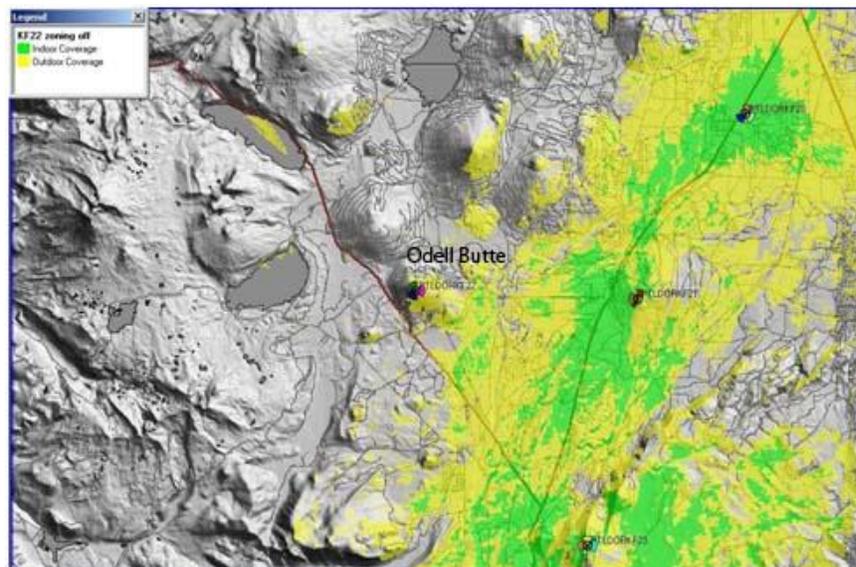


Figure 3. AT&T’s Coverage without Facilities on Odell Butte

Figure 4 displays AT&T's coverage following proposed construction of the Odell Butte Communication Site facility. In comparison to Figure 3, notice the additional coverage depicted in yellow and green to the northwest of Odell Butte.

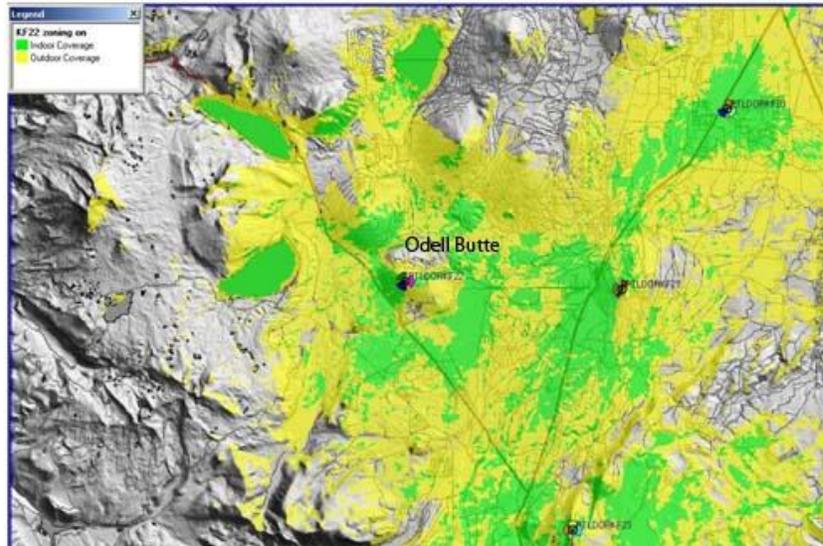


Figure 4. AT&T's Expected Coverage with Facilities on Odell Butte

Public Involvement

AT&T approached the Crescent Ranger District with a proposal for construction of facilities at an existing site at the Odell Butte Communication Site. The proposal followed Forest Service Handbook screening processes (FSH 2709.11, chapter 90, 94-1) and the proposal was accepted. The Forest Service began the National Environmental Policy Act process, and an opportunity for current Odell Butte Communication Site users to comment was offered through a scoping letter dated October 7th, 2011.

One response was received during this scoping period from an existing Odell Butte User, Angel Mountain LLC on November 6th, 2011. The comment and response is summarized below.

Table 1. Comments Received During Scoping		
Commenter	Comment	Response
Angel Mt. LLC	<i>"Angel Mt, LLC was never contacted by AT&T Mobility or any other organization regarding Angel Mt, LLC's capacity to accommodate AT&T's needs"</i>	The [Angel Mountain] structure is not able to support collocation or to be upgraded without rebuilding in a new location. Additionally the facility does not meet the coverage objective in height, which again would require a rebuild of the structure.

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Consultation with the State Historic Preservation Office (SHPO) was conducted for this project and SHPO concurrence with a "No Effect" determination was received for archeological resources on January 13th 2012 and for above ground resources on January 10th 2012.

Issues

Using the comments from the public, other agencies, and site users, the interdisciplinary team 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.

ALTERNATIVES, INCLUDING THE PROPOSED ACTION

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. No new construction of any facilities on Odell Butte would occur.

Alternative B - The Proposed Action

The proposed action is for the United States Forest Service (USFS) to issue a communication use lease for construction and operation of a new telecommunications facility on Odell Butte. The information below represents a summary of the construction plans and associated actions included in Alternative B. A complete set construction plans is available in the project file at the Crescent Ranger District. Specifically, the following is proposed:

- Construct a self-supporting multi-user 40 foot lattice style tower, with the potential for future collocation with other communication users at Latitude 43.470783, Longitude -121.863347.
- Construct a multi-unit equipment building measuring 36 feet by 20 feet, consisting of several modular-type structures. The multi-unit building may be built in phases to accommodate incremental growth as it is required at the site.
- Construct an 11' x 15' shelter for a shared backup generator on a concrete slab, (1) 2,000 gallon propane tank, an ice bridge on concrete footings connecting the tower and equipment shelter, and approximately 35 feet of retaining wall along the north and east edges of the proposed site. An approximately 45 foot trench will be dug to connect the propane tank to the backup generator, and an approximately 80 foot trench would be dug to connect the equipment shelter to the existing electrical box and to the backup power generator. Trench depth would not exceed 4'6". Some minor grading and gravel installation would be needed to facilitate building installation.
- Space for two additional equipment shelters would be reserved adjacent to the proposed shelter to accommodate future carriers, thus promoting collocation.
- Remove a small number of trees across an area of disturbance of roughly a tenth (0.10) of an acre
- Relocate two existing BPA-owned propane tanks, CMU walls, and snow guard posts 30 feet to the north. An approximately 60 foot trench will be dug to connect the relocated tanks to the existing BPA building.
- No changes to road access to the site would be needed.

- A geotechnical investigation would be conducted prior to construction to determine soil stability and foundation requirements. As part of this investigation, a test pit (roughly 3' wide, 8' long, and 5' deep) would be dug at the project site to determine the depth to bedrock using either a mini-excavator or backhoe.
- The duration of construction for the proposed facilities is expected to be 60-90 days.
- No temporary staging of materials and/or equipment would occur that would impact the primary use of the site (the fire lookout). Equipment and materials would be staged so as to minimize interference with other users of the communications site. Except for some possible delays associated with equipment such as cement trucks accessing the site, there would be minimal effect to the electronic site access for users.
- Equipment necessary for construction of the building and tower would include a backhoe, light duty trucks, cement trucks, and a crane.
- The Forest Service frequency manager has determined there would be no interference with their equipment and the AT&T facilities.

Figure 5 displays the Odell Butte Communication Site with existing facilities.

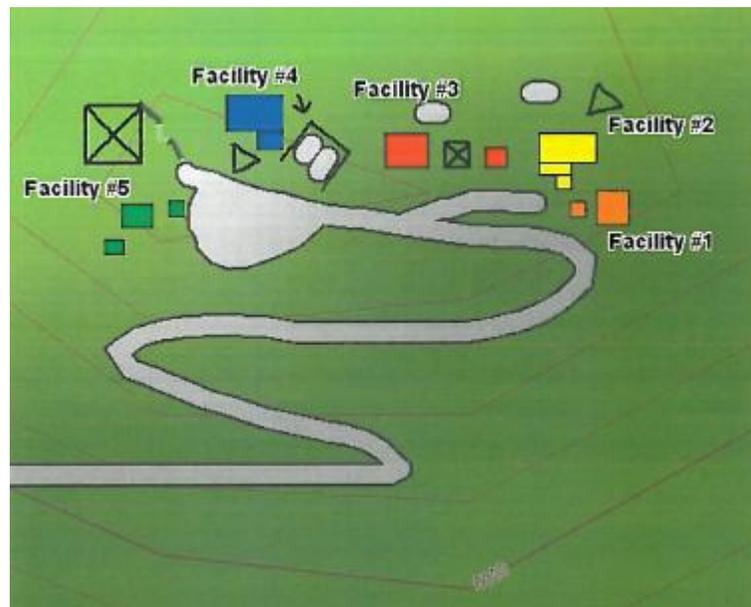


Figure 5 - Odell Butte Communication Site with Existing Facilities
(Facility #1: Verizon; Facility #2: Union Pacific RR; Facility #3: Angel Mtn. LLC;
Facility #4: Bonneville Power Administration; Facility #5: Forest Service Lookout)

Figure 6 displays a schematic of the proposed action overlaid on aerial photography from 2011.

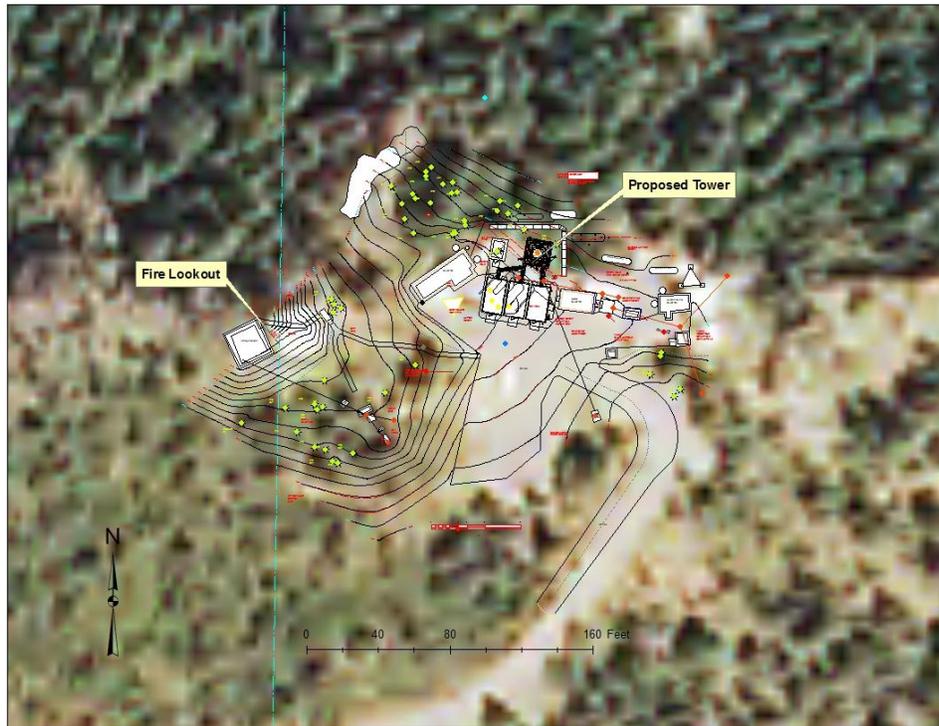


Figure 6. 2011 Aerial and proposed action schematic

Figure 7 displays a “bird’s eye view” site plan.

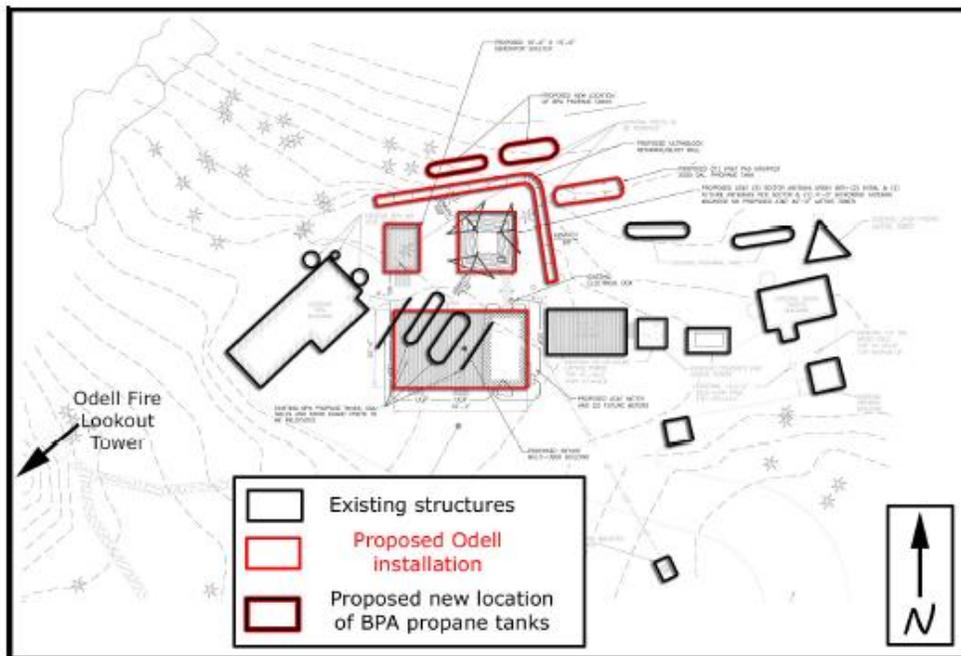


Figure 7. Proposed Construction Site Plan

Figure 8 displays an excerpt from the construction drawings which depicts a south elevation view.

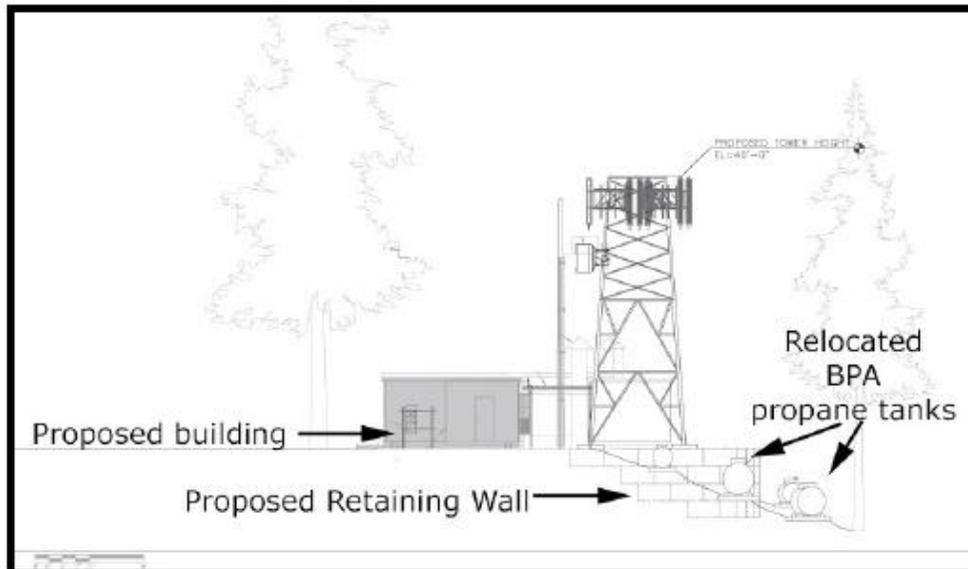


Figure 8. Proposed South Elevation Schematic

Project Design Features

The following features are incorporated into the design of all activities included in the proposal. These are features that are considered routine, have been used on similar projects, and are either incorporated into contract provisions or accomplished between appropriate resource specialists, and have proven to be effective. Project Design Features are used as a basis for determining and disclosing effects in the Environmental Consequences discussions.

Cultural Resources

If, prior to, or during construction work, items of archeological or historical value are reported or discovered, or an unknown deposit of such items is disturbed, the lease holder 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.

Scenic Quality

Construction of facilities would be designed and implemented in accordance with the Odell Butte Communication Site Management Plan. Materials used for the construction of the tower would consist of galvanized non-reflective material and would be compatible with existing improvements on the site. An assessment of the scenic quality was accomplished and is disclosed in this document in the Environmental Consequences section.

Recreation

During construction, signs alerting hikers, bikers, and other recreationists to the presence of construction activity would be posted in the immediate area of the access gate and the small pull outs at the foot of Odell Butte (Junctions of FS 61 Road and FS 5815 Road as well as State Hwy 58 and FS 5815 Road).

Soils

Where soil disturbance would occur during construction, erosion control measures would be taken in the form of silt fencing. All material brought in from outside the construction area would likely be from a private source and prior to removal, the Forest Service certifies the material as clean and weed-free.

Invasive Plants

This project would adhere to the Standards and Guidelines outlined by Forest Direction in the Region 06 Invasive Plant Record of Decision and Final Environmental Impact Statement (2005) which amended the 1990 Deschutes Land and Resource Management Plan:

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. *Requirement R6 Standard #1.*

2. Remove mud, dirt, and plant parts from all heavy equipment that will operate outside the limits of the road prism prior to entering National Forest System FS lands and before moving into a new or different analysis area. Cleaning must occur in areas where removed weed seeds will not create additional problems. *Requirement R6 Standard #2.*

3. All Forest Service employees inspect, remove, and properly dispose of weed seed and plant parts found on their clothing and personal equipment prior to leaving a project site infested with weeds. *Guideline*

4. Inspect active gravel, fill, sand stockpiles, quarry sites, and borrow material for invasive plants before use and transport. Treat or require treatment of infested sources before any use of pit material. Use only gravel, fill, sand, and rock that are judged to be weed free by District or Forest weed specialists. *Requirement R6 Standard #7*

5. Environmental analysis for all ground-disturbing projects would evaluate weed risk and consider weed prevention in the development and evaluation of alternatives and mitigating measures. Silvicultural prescriptions, logging plans, road management, and other activities would include weed prevention measures (e.g., shade retention and minimal soil disturbance). Prevention would be emphasized as the preferred strategy for invasive plant management. *Guideline*

Mitigation

No mitigation is expected to be required for this project based upon the analysis and conclusions described in this document.

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). Alternatives that were considered but dismissed from detailed consideration and the reasons for dismissal are summarized below.

Collocate on the Existing Bonneville Power Administration Facility

No building space was available for AT&T. The BPA tower does not have available space on the existing tower to facilitate all of the AT&T required antennas. AT&T could potentially locate a few antennas on this site but this “partial installation” would not eliminate the need for a new tower and required building space to facilitate the immediate site requirements by AT&T.

Collocate on the Existing Verizon Wireless/RCC/Unicel Facility

No building space was available for AT&T. The Verizon Wireless/RCC tower/wood poles do not have available space to facilitate the AT&T required antenna configuration.

Collocate on the Existing Union Pacific Facility

No building space (with minimal space and structural capacity on the tower) was available for AT&T. The tower would have to be replaced and or extended above 50 feet. Due to the concern with a height that would not be acceptable and consistent with the existing towers at the site and the allowable USFS height this proposal was abandoned. In addition due to the tower location it would be very challenging to install a building near this tower due to the topography, terrain and constrained access to this area of the site.

Collocate on the Existing Angel Mt. LLC/ U.S. Cellular Facility

The proposed project location is in close proximity to the Angel Mt. building. The existing Angel Mt. building offered several complications. The existing building did not provide enough room for AT&T and their space requirements. Additionally, the U.S. Cellular tower does not have available space on the existing tower to facilitate the AT&T required antenna configuration.

Locate Facilities on Adjacent Private Land

An alternative was considered that would locate AT&T operations to an alternate location on private land. This alternative was eliminated from detailed consideration because there is no suitable private land that can provide the coverage needed to serve the surrounding communities. Odell Butte Communication Site on the Deschutes National Forest is unique in that it is roughly 7,000 feet in elevation, has power to the top, has an access road, and is strategically located to be able to provide coverage without impediment to the desired service area.

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

A check of the National Register for listed resources in the area was performed on October 17, 2011, and no resources were found within a half-mile vicinity. The Odell Butte Fire Lookout was, however, found in the National Historic Lookout Register, an unofficial register maintained in part by the Forest Fire Lookout Association (FFLA). The Oregon SHPO requests a limited reconnaissance survey of the area to locate resources eligible for the National Register in addition to a check of the Oregon Historic Sites Database. The 1981 USGS quad map shows no buildings other than the fire lookout within the entire half-mile vicinity (although USFS records indicate that Union Pacific RR and BPA may have had buildings on Odell since the 1960s that have since been replaced). Additionally, there are no buildings other than recent equipment shelters and the lookout tower within the Area of Potential Effect (APE), a half-mile mile radius circle around the site.

In a Thematic Determination of Eligibility for lookout structures on the Deschutes National Forest, the lookout was determined ineligible for the National Register of Historic Places in 1991.

Three separate pedestrian surveys have been carried out either within or directly adjacent to the project area to evaluate the potential for archeological resources being present. All of these surveys were negative for cultural resources (Steece 1993a; Harder and DeRose 2007; Brannan and Clark Schmidt 2007). In addition, the high level of development that exists on top of the butte reduces the likelihood that the proposed project will impact previously recorded archaeological sites.

Alternative A

Under Alternative A there would be no construction or ground disturbance. Therefore there would be no impact to cultural resources of any kind under this alternative.

Alternative B

In 1991, the Forest Service determined the Odell Fire Lookout to be not eligible for the National Register due to it being less than 50 years old and there are no other potentially eligible resources within the visual APE. As such, the proposal would have no effect on any above ground historic resources. An archaeological file review for this project is on file at the Crescent Ranger District. Additionally, as there are no archeological resources within the project area, there will be no effect to these resources. These findings were submitted to the Oregon SHPO on January 5th, 2012 for review and comment. In a response dated January 10th 2012 SHPO concurred that there would be no effect to archeological resources; in a response dated January 13th 2012 SHPO concurred that there would be no effect to above ground historic resources. Both the historic property assessment and SHPO

concurrence are on file at the Crescent Ranger District. ***Therefore it is anticipated that there would be no impact to cultural resources of any kind under this alternative.***

Cumulative Effects

There are two other ongoing projects on Odell Butte. Midstate Electric has been approved to replace their wooden monopole with a metal monopole to support a communications dish for Klamath County Emergency Services. This project was found to have no direct, indirect or cumulative effects. Verizon Wireless has submitted a proposal which has been approved for upgrades to their building and tower on Odell Butte. The NEPA process has not begun for this project. No cumulative effects on heritage resources are expected from the combination of the AT&T project and these two additional projects.

Scenic Resources

The Odell Butte Communication Site is within a Scenic Views Management Area and is classified as having a Scenic Integrity Level of Medium (Scenery Management System) and a classification of Partial Retention (Visual Management System). This means any changes to the existing condition would be allowed if the landscape appears slightly altered and as long as management activities remain visually subordinate to the character of the landscape. The existing condition of Odell Butte includes thin vegetative cover that obscures all development except for the fire lookout to passing motorists on the local roadways.



Figure 9. Existing Odell Butte Electronic Facilities as Seen from the Odell Fire Lookout

Modeling Methodology

Five designated viewpoints were established surrounding the butte on major roads in locations where motorists traveling at highway speeds have the best opportunity to see the summit of Odell Butte and the electronic site facilities (see Figure 10) in the middle-ground and background. Distances ranged from ~1.5 to ~3 miles to the proposed tower. The proposed tower was photo-simulated to scale and placed into the photo at the Odell Butte Electronic Site and depicted in Figures 11-20 to simulate the proposed tower. The equipment shelter was not simulated into the photo because the electronic shelters that are there now are not discernible and the proposed equipment shelter would be hidden behind the treeline. See Figures 6-8 for diagrams of the proposed facilities.

Alternative A

Under Alternative A, no new construction or ground disturbance would occur and the scenery would remain unaltered from the conditions shown above and below.

Alternative B

The before/after photo-simulations that follow depict the potential visual impacts associated with construction of the proposed facility from five representative viewpoints. The location of the proposed tower is indicated with a blue arrow in all “after” simulations. The proposed communication structures would be located in the middleground and background distance zones to observers in the area of the Butte. The proposed tower is not clearly discernible from any of the five established viewpoints, and thus the requirements of Moderate Scenic Integrity (Partial Retention) would be met. The height and scale of the proposed structures would not be noticeable to the casual viewer driving on any of the main roads around Odell Butte (State Highway 58, County Route 61 (Crescent Cut-Off), and County Highway 46 (Cascade Lakes Highway)) because existing topography and vegetation create a visual screen throughout the year. The lookout itself (which is substantially higher than the proposed tower) is barely discernible if at all from these locations. ***The results of this analysis indicate that the proposed action will have no effect on the scenery of the area and will meet the requirements of Moderate Scenic Integrity (Partial Retention) described above.***

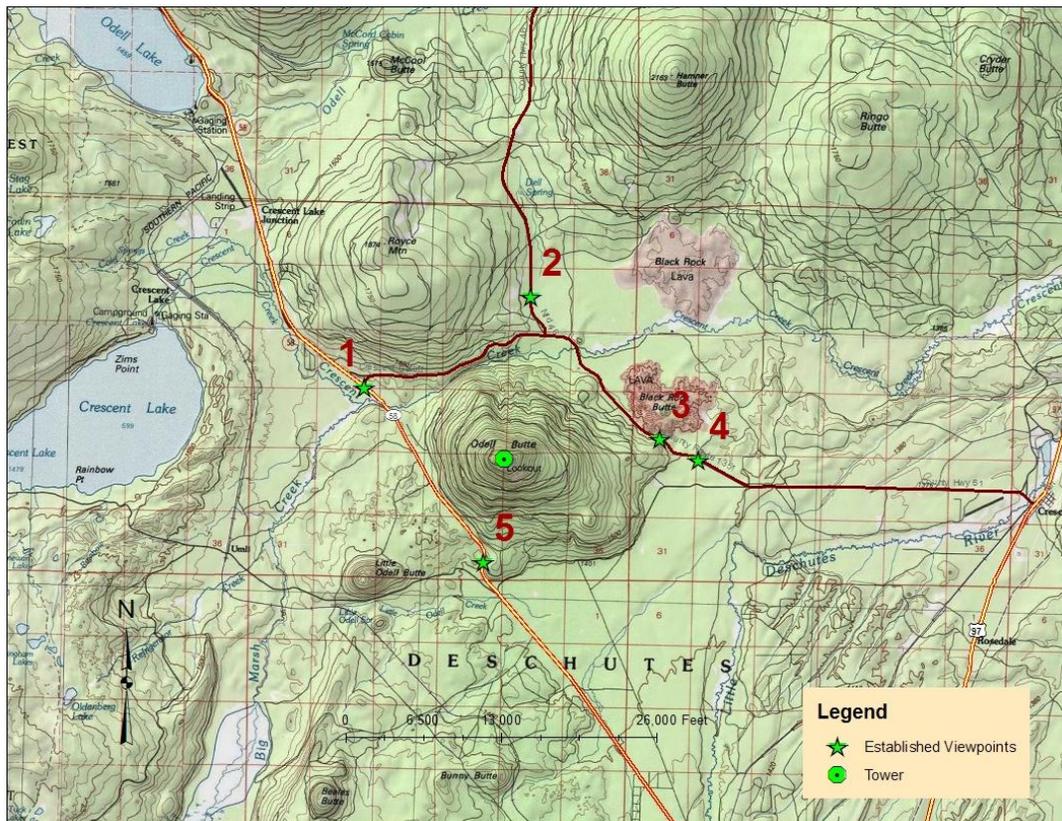


Figure 10. Odell Butte Electronic Site Established Viewpoints

Viewpoint 1: State Highway 58, approximately 2.5 miles NW of the proposed facility on Odell Butte.

Latitude: 43.48672

Longitude: -121.90794



Figure 11. Odell Butte Communication Site Existing Condition from Viewpoint #1



Figure 12. Odell Butte Communication Site Proposed Condition from Viewpoint #1

Viewpoint 2: County Highway 46, approximately 2.5 miles N of the proposed facility on Odell Butte.

Latitude: 43.50825

Longitude: -121.85603



Figure 13. Odell Butte Communication Site Existing Condition from Viewpoint #2

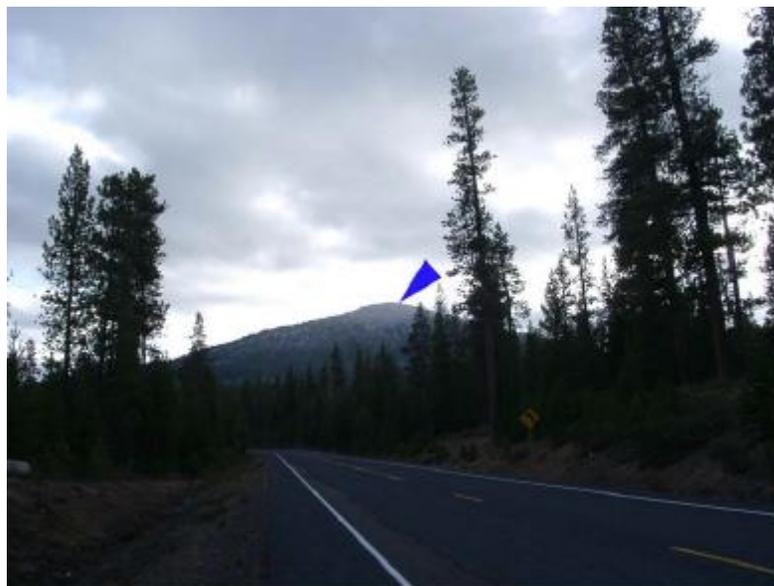


Figure 14. Odell Butte Communication Site Proposed Condition from Viewpoint #2

Viewpoint 3: County Route 61, approximately 2.5 miles E of the proposed facility on Odell Butte.

Latitude: 43.47617

Longitude: -121.81442



Figure 15. Odell Butte Communication Site Existing Condition from Viewpoint #3



Figure 16. Odell Butte Communication Site Proposed Condition from Viewpoint #3

Viewpoint 4: County Route 61, approximately 3 miles E of the proposed facility on Odell Butte.

Latitude: 43.47139

Longitude: -121.8022



Figure 17. Odell Butte Communication Site Existing Condition from Viewpoint #4



Figure 18. Odell Butte Communication Site Proposed Condition from Viewpoint #4

Viewpoint 5: Highway 58, approximately 1.75 miles SW of the proposed facility on Odell Butte.

Latitude: 43.44722

Longitude: -121.86944



Figure 19. Odell Butte Communication Site Existing Condition from Viewpoint #5

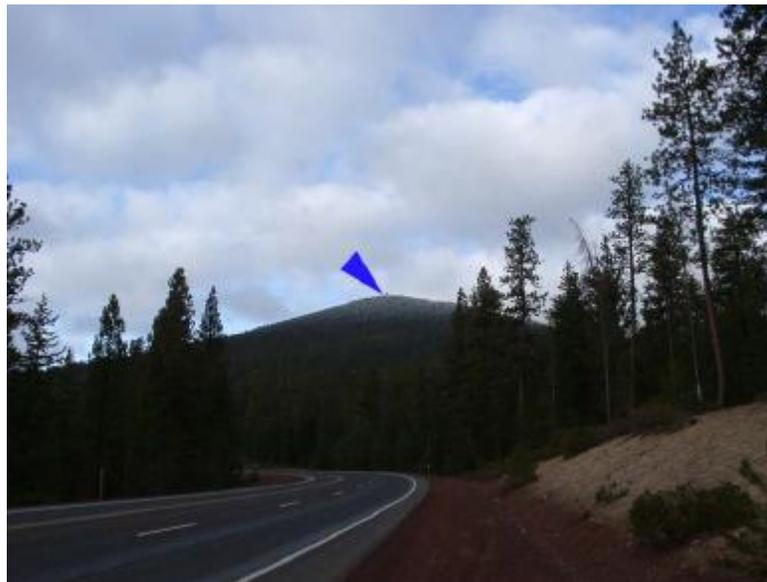


Figure 20. Odell Butte Communication Site Proposed Condition from Viewpoint #5

Cumulative Effects

There are two other ongoing projects on Odell Butte. Midstate Electric has been approved to replace their wooden monopole with a metal monopole to support a communications dish for Klamath County Emergency Services. This project was found to have no direct, indirect or cumulative effects. Verizon Wireless has submitted a proposal which has been approved for upgrades to their building and tower on Odell Butte. The NEPA process has not begun for this project. No cumulative effects on scenic resources are expected from the combination of the AT&T project and these two additional projects.

Recreation

The Recreation Opportunity Spectrum (ROS) is a system used to identify broad categories of recreation opportunities and settings on Forest lands. The Odell Butte ROS is classified as Roded Natural. Areas classified as Roded Natural are characterized by a landscape partially modified by man-made improvements, which do not overpower natural features. Access to Odell Butte is provided by secondary access roads (FS 5815). The Odell Butte fire lookout is not open to the public and is generally only accessible by vehicle via a gated access road. Recreational use of other areas of Odell Butte summit does occur in the summer months, ranging between 25 and 50 visitors per week. These users generally hike/bike up from the gate that is approximately ½ mile from the top of Odell Butte. Some do hike/bike from the base of Odell Butte from either the junction of County Route 61 and FS 5815 Road or from State Hwy 58 and FS 5815 Road.

Alternative A

Under Alternative A there would be no new construction or ground disturbance, and thus no impacts to recreation.

Alternative B

While Odell Butte is not easily accessed by the public for recreational use, ***there is expected to be a short duration impact to recreation during construction of the facility.*** Mitigation for this impact can be implemented with informational postings in the immediate area of the access gate and the small pull outs at the foot of Odell Butte (Junctions of County Route 61 and FS 5815 Road as well as State Hwy 58 and FS 5815 Road). ***Post construction there is no foreseeable long-term impacts to recreation users.***

Cumulative Effects

There are two other ongoing projects on Odell Butte. Midstate Electric has been approved to replace their wooden monopole with a metal monopole to support a communications dish for Klamath County Emergency Services. This project was found to have no direct, indirect or cumulative effects. Verizon Wireless has submitted a proposal which has been approved for upgrades to their building and tower on Odell Butte. The NEPA process has not begun for this project. No cumulative effects on recreation resources are expected from the combination of the AT&T project and these two additional projects.

Wildlife

The following evaluates potential impacts to Threatened, Endangered and Sensitive Species (TES), Management Indicator Species (MIS), Birds of Conservation Concern (BCC), Landbird Strategic Plan Focal Species (Landbird Focal Species) and Survey and Manage Species (S&M). The primary zone of influence for discussion of effects is bounded by the project area because that is the area of disturbance and most logical biological unit for effects to the species that may use the Odell Butte area.

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 is presented below.

Direct, Indirect, and Cumulative Effects

Alternative A

As there would be no construction or change in use under this alternative, there would be no new impacts to any TES, MIS, BCC, Landbird Focal or S&M species.

Alternative B

Threatened, Endangered, and Sensitive Species

Pre-field Review

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 determinations in the programmatic document. Every project that meets the project design criteria (PDCs) applicable to each affected species is covered by this document. If every PDC is not followed, then additional consultation may be needed and an effects determination made to determine the need for further consultation with the USFWS. The BE covers the northern spotted owl (*Strix occidentalis*) and the 2008 designation of Critical Habitat and the Oregon spotted frog (*Rana pretiosa*), Pacific fisher (*Martes pennanti*), and North American wolverine (*Gulo gulo luscus*) that are currently federal candidates for listing.

The Regional Forester's Sensitive Species list was revised in January 2008. This list was reviewed for species that may be present on the Deschutes National Forest and the proposed project area. After a review of existing records, habitat requirements and existing habitat components it was determined that ***there would be no impacts (or effect) to any endangered, threatened, or sensitive species as a result of the proposed action (Table 2).***

Table 2. Threatened, Endangered, and Sensitive Wildlife Species		
Species	Status	ESA Category of Effect
Northern spotted owl (<i>Strix occidentalis</i>)	Threatened	NE
Northern spotted owl Critical Habitat	Designated	NE
Oregon spotted frog (<i>Rana pretiosa</i>)	Federal Candidate	NE
Pacific fisher (<i>Martes pennanti</i>)	Federal Candidate	NE
North American wolverine (<i>Gulo gulo luscus</i>)	Federal Candidate	NE
Northern bald eagle (<i>Haliaeetus leucocephalus</i>)	R6 Sensitive	NI
Horned grebe (<i>Podiceps auritus</i>)	R6 Sensitive	NI
Rednecked grebe (<i>Podiceps grisegena</i>)	R6 Sensitive	NI
Bufflehead duck (<i>Bucephala albeola</i>)	R6 Sensitive	NI
Harlequin duck (<i>Histrionicus histrionicus</i>)	R6 Sensitive	NI
American peregrine falcon (<i>Falco peregrinus anatum</i>)	R6 Sensitive	NI
Yellow rail (<i>Coturnicops noveboracensis</i>)	R6 Sensitive	NI
Tricolor blackbird (<i>Agelaius tricolor</i>)	R6 Sensitive	NI
Lewis' woodpecker (<i>Melanerpes lewis</i>)	R6 Sensitive	NI
White-headed woodpecker (<i>Picoides albolarvatus</i>)	R6 Sensitive	NI
Northern waterthrush (<i>Seiurus aurocapillus</i>)	R6 Sensitive	NI
Greater sage grouse (<i>Centrocercus urophasianus phaios</i>)	R6 Sensitive	NI
Pygmy rabbit (<i>Brachylagus idahoensis</i>)	R6 Sensitive	NI
Townsend's big-eared bat (<i>Plecotus townsendii</i>)	R6 Sensitive	NI
Crater Lake Tightcoil snail (<i>Pristiloma articum crateris</i>)	R6 Sensitive	NI
Silver-bordered fritillary (<i>Boloria selene</i>)	R6 Sensitive	NI
Johnson's hairstreak (<i>Callophrys johnsoni</i>)	R6 Sensitive	NI

NE = No Effect
NI = No Impact

Survey History and Field Reconnaissance for Sensitive Species

No surveys were conducted specifically for this project. The site has been surveyed numerous times and the district biologist is familiar with the habitat types and conditions. The area is already heavily disturbed with little to no habitat for any Proposed, Endangered, Threatened, or Sensitive species directly at or in the area of influence of the electronic tower or buildings. The site is a mixture of openings, shrubs, and patches of lodgepole pine and

mountain hemlock. The shrub component is primarily composed of manzanita. It is a developed designated electronic site, currently occupied by multiple towers and buildings including the fire lookout. The project area is 5 miles west of the nearest northern bald eagle nest. The project is within the range of the northern spotted owl, although it is above 6,000 feet amsl which is the standard cutoff for suitable habitat. The closest nesting spotted owl pair is over 3 miles to the north.

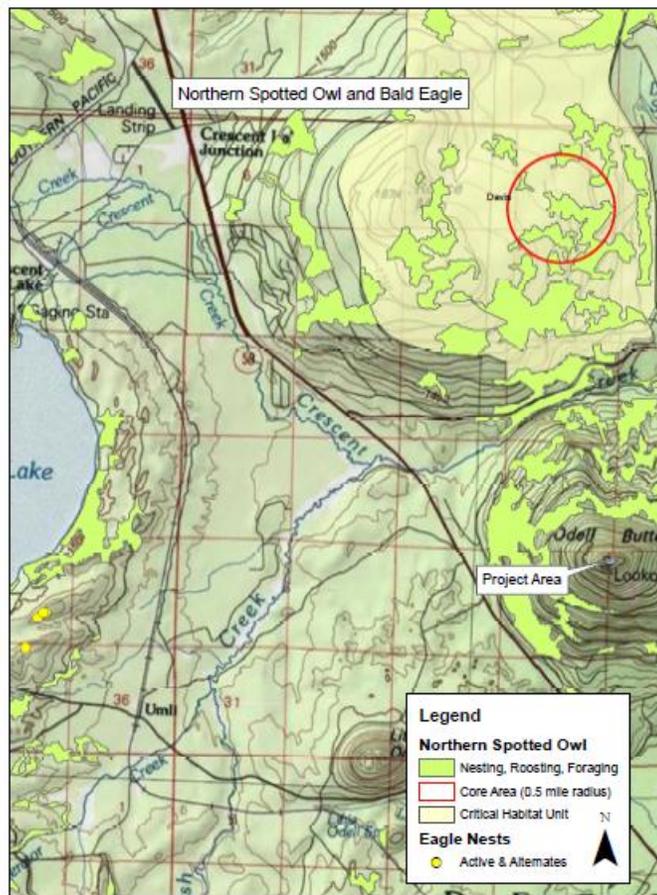


Figure 21. Northern Spotted Owl Habitat, Core and Critical Habitat and Bald Eagle Nests

Potential Effects on Listed Species and Critical Habitat

Northern spotted owl (*Strix occidentalis caurina*) and 2008 Critical Habitat Designation

In June 1990 the U.S. Fish and Wildlife Service 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. The project area is not within the designated critical habitat boundary for this species; the nearest area of critical habitat is roughly 2.5 miles to the

north. As it is beyond 0.25 miles from this boundary, there are no noise related restrictions. 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. This type of habitat is not present at the site. The nearest NRF is located 0.4 miles from the site so there would be no disturbance of spotted owls from the Odell Butte Communications site. Additionally the project area is located at roughly 7,000 feet amsl; suitable habitat for this species does not generally extend above 6,000 feet amsl. Nest sites are generally in cavities in the boles of dead or live trees however, abandoned raptor nests, broken treetops, mistletoe brooms can be used as nest structures but generally less frequently. There are no known nesting sites in the project area; the nearest nesting site is over 3 miles to the north. 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. This type of habitat is not present in the project area. Additionally, the project is not designated as Late-successional reserve (areas managed to provide complex forest habitat characterized by old growth and complex canopy structure). ***In summary there is no suitable habitat within the project area.***

Oregon spotted frog

The Oregon spotted frog (*Rana pretiosa*) is currently listed as a 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, loss through intensified agriculture, grazing, and urbanization (USGS 2003). Pearl (per. comm. 2008) remarked that central Oregon, including Big Marsh on the Crescent Ranger District and Sunriver 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" 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 and an unnamed tributary of Odell Creek, Ranger Creek, and along portions of the Little Deschutes River. 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 personal communication,

2008). *There are no wetlands in or near the project area and therefore no suitable habitat.*

Pacific fisher

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 that 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 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) with a coniferous component, large snags or decaying 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 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 Odell Butte. Carnivore surveys were conducted on the Crescent District in 1993-1996 and 1998 using bait with camera sets, snow tracking and track plates. There were no detections of fishers or wolverines from these surveys.

The project area is at roughly 7,000 feet elevation and snowpack is generally deep in the winter. Additionally the project area does not have very large trees or complex structure needed to support the fisher. ***Therefore there is no habitat for the Pacific fisher in the project area.***

North American wolverine

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). Wolverines in the contiguous United States are 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 will 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 were 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 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 averaged 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, personal communication 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).

While the project area is at a high elevation, it would not be considered alpine and it does not provide denning habitat. There is potential for the wolverine to travel through the area, but it is highly unlikely due to the amount of human use and the availability of more remote habitat along the Cascade crest.

Potential Effects on Sensitive Species

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 Crescent Lake about 5 miles to the west. ***Additionally the project area does not provide the complex forest habitat utilized by this species.***

Horned and Red-necked grebes

Both species nest in lakes and ponds with tall vegetation or marshy habitats. ***The project area does not contain any lakes or ponds that could potentially provide nesting habitat for either species.***

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 will use tree cavities or artificial nest boxes in trees close to water. ***Lakes and ponds are not present at or near the project area.***

Harlequin

This duck species 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 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 streams in or near the project area.***

Peregrine falcon

This species occurs as resident and migratory populations. They nest on cliffs greater than 75 feet in height and within 1 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 per. comm. 2005). The Deschutes National Forest confirmed their first nesting eyrie on the Deschutes National Forest (Sisters Ranger District) in 2008. ***There is no suitable cliff habitat present within or near the proposed project area.***

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. (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). ***Within the project area there is no suitable habitat.***

Tricolored blackbird

This species 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 no suitable habitat present in the project area.***

Lewis' woodpecker

This species 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 the Cascade forests. Wisdom (2000) reported that burned ponderosa pine forest created by stand-replacing fires provide highly productive habitats 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' woodpeckers will 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 of nest trees was

26 inches and mean nest tree height was 41 feet (Marshall et al. 2003). ***There is no suitable nesting habitat in the project area.***

White-headed woodpecker

This species is a medium sized bird and unique because of striking plumage with 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-growth 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 that nest trees ranged from 23.6 to 118.1 cm (9-46 inches) with an average diameter of 27 inches and 89 percent of the nest trees were in ponderosa pine. ***There is no ponderosa pine habitat at this site.***

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 2008 and 2009 (K. Boucher, pers. comm.) have confirmed northern waterthrushes at several sites on these stream systems. ***There is no suitable habitat within or adjacent to the project area.***

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, this habitat type does not occur on the Crescent Ranger District.***

Pygmy rabbit

This species typically occurs in dense stands of big sagebrush growing in deep loose soils (NatureServe 2008). ***This habitat type does not occur within the project area.***

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, buildings, bridges and mines) and caves (Christy and West 1993). The species range extends from southwestern British Columbia, western Washington, western and central Oregon, and northwestern and west-central California. Like other species of bats, Townsend's big-eared bat likely forages heavily in riparian areas, wetlands, and lakes, and along forest edges or ridges, particularly forest ecotones, where insects concentrate. Approximately 400 caves exist on the Deschutes National Forest and adjoining private and Bureau of Land Management Land (BLM). The majority of Townsend's on the Deschutes inhabit caves in the eastern semi-arid desert areas of the Bend-Ft. Rock Ranger District. There are no known caves or mines on the Crescent Ranger District (Walker Mountain EA, 2011) while there are reports of myotis species in lava rock outcrops, there are no documented reports of Townsend's big-eared bats utilizing those features on the District. ***There is no suitable habitat in the project area.***

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 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 no perennially wet habitat in the project area.***

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 susans (Opler et al. 2006). ***Because open marshes or open shrubby wetlands are not present in or adjacent to the project area, there is no habitat within the project area.***

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 plant 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). ***Dwarf mistletoe is not present on Odell Butte and therefore there is no habitat present.***

Management Indicator Species

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 species listed in Table 3 were selected for the Deschutes National Forest.

Table 3 displays species by presence and/or habitat within the project area for Management Indicator Species that may be present or have habitat on the Deschutes National Forest.

Table 3. Wildlife Species Potential within the Project Area Species			
Species	Status	Habitat/Present within the Project Area?	Species Presence Within The Analysis Area?
Three-Toed Woodpecker	Management Indicator Species	Lodgepole pine, No	No
American Marten	Management Indicator Species	Large down wood, No	No
Northern Goshawk	Management Indicator Species	Ponderosa pine; No	No
Osprey	Management Indicator Species	Large snags; No	No

Species	Status	Habitat/Present within the Project Area?	Species Presence Within The Analysis Area?
Northern Bald Eagle	Management Indicator Species	Lakes, reservoirs, large trees for nesting; No	No
	Regional Forester Sensitive		
Northern Spotted Owl	Management Indicator Species	Late and old-structured mixed conifer forest; No	No
	Federally Listed		
Mule Deer	Management Indicator Species	Yes	Yes
Elk	Management Indicator Species	Yes	Yes
Woodpecker Guild	Management Indicator Species	Snags and down wood; No	No
Great Blue Heron	Management Indicator Species	No	No
Great Gray Owl	Management Indicator Species	Large trees adjacent to open meadows; No	No
Peregrine Falcon	Management Indicator Species	Cliff habitats; No	No
	Regional Forester Sensitive		
Wolverine	Management Indicator Species	High elevation basins; No	No
	Regional Forester Sensitive		
Townsend's Big-eared Bat	Management Indicator Species	Caves; No	No
Waterfowl	Management Indicator Species	Lakes and streams; No	No
Golden Eagle	Management Indicator Species	Open shrublands; No	No
Red-tail Hawk	Management Indicator Species	Large trees; No	No
Cooper's Hawk	Management Indicator Species	Dense Ponderosa pine; No	No
Sharp-shin Hawk	Management Indicator Species	Dense second growth ponderosa pine; No	No

Potential Effects on MIS Species

The only Management Indicator Species with *potential* for an effect is big game (mule deer and elk). Odell Butte is currently a developed communications site and fire lookout

occupying approximately one acre. The site has been actively used for many years. It is anticipated that the proposed tower and building would not appreciably change how big game uses the area. The change would be immeasurable because the relative size of the footprint compared to the existing facilities. Because of the small scale of the project at the electronic site, the lack of quality habitat, and likely very little use by big game ***no direct or indirect effects to big game are anticipated.***

There is no habitat in the project area for the remaining MIS species. The MIS that are Federally listed or Regionally Sensitive are discussed in the previous section. There are documented occurrences of several MIS on Odell Butte, but all are outside the analysis area and would not be affected by implementation of the project.

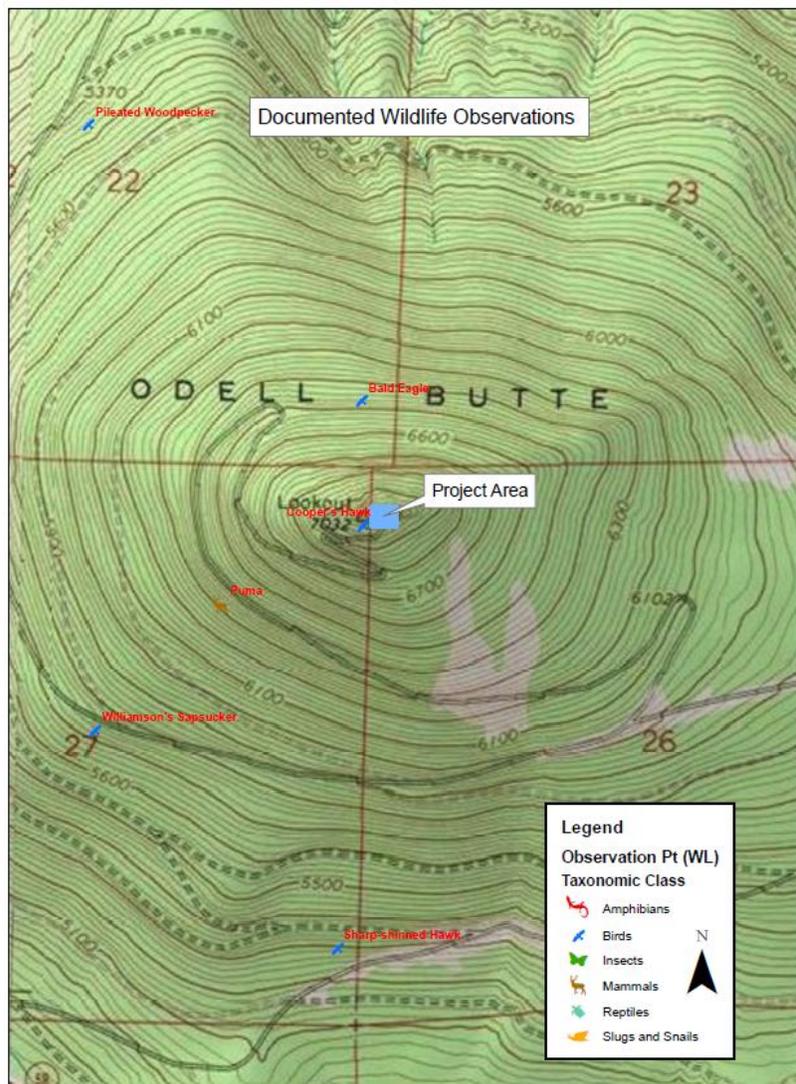


Figure 22. Documented Wildlife Sightings in and adjacent to the Analysis Area

Birds of Conservation Concern

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. Within two years, federal agencies were required to develop a Memorandum of Understanding (MOU) with the U.S. Fish and Wildlife Service to conserve migratory birds including taking steps to restore and enhance habitat, prevent or abate pollution affecting birds, and incorporating migratory bird conservation into agency planning processes whenever possible. Toward meeting this end the U.S. Fish and Wildlife Service developed the Birds of Conservation Concern in 2002 and released the U.S. Shorebird Conservation Plan (2004).

The “Birds of Conservation Concern 2002” (BCC) 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.

Bird Conservation Regions (BCRs) were developed based on similar geographic parameters. One BCR encompasses the analysis area – BCR 9, Great Basin. Table 4 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.

Potential Effects on BCC Species

There is no habitat for any of the BCC species. ***There would be no effects to these species by implementation of the project.***

Table 4. Birds of Conservation Concern		
Bird Species	Preferred Habitat	Habitat in Project Area
Swainson's Hawk	Open lands with scattered trees	No
Ferruginous Hawk	Sagebrush-shrub steppe	No
Golden Eagle	Elevated nest sites in open country	No
Peregrine Falcon	Cliffs	No
Prairie Falcon	Cliffs in open country	No
Greater Sage Grouse	Sagebrush dominated rangelands	No
Yellow Rail	Dense sedge marshes	No
American Golden-Plover	Burned meadows/mudflats	No
Snowy Plover	Dry sandy beaches	No
American Avocet	Wet meadows	No
Black-necked Stilt	Edges of Ponds and Lakes	No
Solitary Sandpiper	Meadow/Marsh/Bogs	No
Whimbrel	Marsh/Mudflats	No
Long-billed Curlew	Grasslands	No
Marbled Godwit	Marsh/Wet Meadows	No
Sanderling	Sandbars and beaches	No
Long-billed Dowitcher	Shallow Ponds and Lakes	No
Wilson's Phalarope	Marsh/Meadows	No
Yellow-billed Cuckoo	Dense riparian/cottonwoods	No
Flammulated Owl	Ponderosa pine forests	No
Burrowing Owl	Non-forested grasslands	No
Black Swift	Cliffs associated with waterfalls	No
Lewis's Woodpecker	Ponderosa pine forests	No
Williamson's Sapsucker	Ponderosa pine forests	No
White-headed Woodpecker	Ponderosa pine forests	No
Loggerhead Shrike	Open country with scattered trees/shrubs	No
Gray Vireo	Pine/juniper woodland/sagebrush scrubland	No
Virginia's Warbler	Mountain Mahogany groves	No
Brewer's Sparrow	Sagebrush clearings in coniferous forests/bitterbrush	No
Sage Sparrow	Sagebrush	No
Tricolored Blackbird	Cattails or tules	No

Landbird Conservation Strategy

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 project analysis. Odell Butte falls within the Central Oregon sub-province. The species selected in the conservation strategy represent focal species for habitats types or features considered at risk. Table 5 shows the focal species for Central Oregon.

Potential Effects on Landbird Focal Species

There is no habitat for any of the Landbird Focal species. ***There would be no effects to these species by implementation of the project.***

Habitat	Habitat Feature	Focal Species for Central Oregon	Present In the Analysis Area
Ponderosa Pine	Large patches of old forest with large trees	White-headed woodpecker	No
	Large trees	Pygmy nuthatch	No
	Open understory with regenerating pines	Chipping sparrow	No
	Patches of burned old forest	Lewis' woodpecker	No
Mixed Conifer Late-Successional	Large trees	Brown creeper	No
	Large snags	Williamson sapsucker	No
	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	No
Meadows	Wet/dry	Sandhill crane	No
Aspen	Large trees with regeneration	Red-naped sapsucker	No
Subalpine fir	Patchy presence	Blue grouse	No
Whitebark pine	Old growth	Clark's nutcracker	No

Survey and Manage Species

In 1994 the Northwest Forest Plan developed a system of reserves, Aquatic Conservation Strategy, and various standards and guidelines for the protection of old growth associated species. Mitigation measures were also included for species that were rare, or thought to be rare due to a lack of information about them. It was unknown whether the major elements of the NWFP would protect these species. These species (collectively known as Survey and Manage species) were included in standards and guidelines under “Survey and Manage”, “Protection Buffers”, and “Protect Sites from Grazing”.

In January 2001, a Record of Decision for Amendments to the Survey and Manage, Protection Buffer and other Mitigation Measures Standards and Guidelines (2001 amendment) was signed. This decision amended the NWFP Survey and Manage and related standards and guidelines to add clarity, remove duplication, increase or decrease levels of management for specific species based on new information, and established a process for making changes to management for individual species in the future (USDA 2001 pgs ROD-1-3).

The 2001 amendment put into place a review process that would allow for the adding or dropping of species, based on new information as well as. A complete description of the categories can be found in the 2001 amendment Standards and Guidelines (S&G) pages 6 through 14.

Several attempts to remove Survey and Manage Species from management were made with an EIS in 2004 and again in 2007. Court cases were overturned and/or entered into settlement negotiations. The Instruction Memorandum dated July 21, 2011 regarding the 2011 Settlement Agreement in Litigation over the Survey and Manage Mitigation Measure stated Projects within the range of the northern spotted owl were subject to the 2001 ROD as modified by the 2011 Settlement Agreement. Survey and manage animal species for the Deschutes National Forest includes the great gray owl and the Crater Lake Tightcoil snail.

Great Gray Owl

The great gray owl habitat includes large trees and adjacent meadows for foraging. While the analysis area is open, it is fully developed with roads and buildings and not considered foraging habitat. ***There is no habitat within the analysis area for the great gray owl.***

Crater Lake Tightcoil Snail

The Crater Lake Tightcoil snail, a survey and manage species, is now on the Regional Forester’s R6 Sensitive species list. It is documented to occur on the Deschutes National Forest. A discussion of potential impacts to this species are discussed in the Threatened, Endangered, and Sensitive Species section of this document. ***The discussion establishes that there is no habitat for this species in the analysis area.***

Additional Protection Species (White-headed woodpecker, Black-backed woodpecker, Pygmy nuthatch, Flammulated owl)

While this group of species was not identified as survey and manage, the NWFP recognized this group of cavity nesters would not be sufficiently aided by applying mitigation measures for riparian protection or other elements of the plan. Additional direction was given that would require snags and green tree levels be left in sufficient numbers to meet 100 percent of the potential population level of each species. In addition, snags over 20 inches dbh may be marked for cutting only after retaining the best available snags considering size and longevity (2001 amendment page S&G-34, 35). **All four species are covered in previous sections, stating there is no habitat for these species within the analysis area.**

Protection Buffer Species (Fringed myotis, Silver-haired bat, Long-eared myotis, Long-legged myotis, Pallid bat, and Townsend's big-eared bat)

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. There are no caves or snags within the project area. All buildings associated with the site were built for electronics equipment and well sealed. **There is no habitat for bats within the analysis area.**

Potential Effects on S&M Species

There is no habitat for any of the S&M species. **There would be no effects to these species by implementation of the project.**

Cumulative Effects

There are two other ongoing projects on Odell Butte. Midstate Electric has been approved to replace their wooden monopole with a metal monopole to support a communications dish for Klamath County Emergency Services. This project was found to have no direct, indirect or cumulative effects. Verizon Wireless has submitted a proposal which has been approved for upgrades to their building and tower on Odell Butte. The NEPA process has not begun for this project. No cumulative effects on wildlife resources are expected from the combination of the AT&T project and these two additional projects.

Botany and Invasive Plants

Threatened, Endangered and Sensitive Plants

Introduction

Sensitive plants are those species identified by a U.S. Forest Service Regional Forester for which population viability is a concern, as evidenced by either a significant current or predicted downward trend in population numbers or density, or in a habitat capability that would reduce a species' existing distribution (Forest Manual 2670.5). The sensitive species list for Region 6, Pacific Northwest, was last updated on January 31, 2008. This list includes vascular plants and non-vascular species such as bryophytes (mosses and liverworts), fungi (e.g. mushrooms), and lichens.

Threatened and endangered plants are those species whose viability is of concern and have been identified as such by either state and/or federal agencies. Within Oregon, the state and federal designations for rare plants are listed by the following agencies: Oregon Department of Fish and Wildlife, Oregon Department of Agriculture, and U.S. Fish and Wildlife Service.

Management Direction

The purpose of the biological evaluation is to comply with requirements of the Forest Service Manual (USFS 1995b), the Land and Resource Management Plan for the Deschutes National Forest (LRMP) (USFS 1990), and the Endangered Species Act of 1973, as amended. These documents state 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 also 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 (USFS 1995a).

The following incorporates the pre-field the botanical field survey conducted September 7th, 2011 by USFS botany staff. ***The results of this field survey indicate that no TES plant species are present at or near the project area.***

Table 6 contains the Threatened, Endangered, and Sensitive plant list for the Deschutes National Forest (Revised December 2011):

Table 6. R6 Sensitive Plant Species Documented or Suspected on the Deschutes National Forest			
Species	Range	Habitat	Occurrence within Project Area? Within the District?
<i>Agoseris elata</i> (vascular plant)	Washington and Oregon Cascades	Forest openings and forest edges adjacent to wet/moist meadows, lakes, rivers, and streams	No/No
<i>Alpova alexsmithii</i> (fungus)	Cascades, Central OR to WA	Associated with various Pinaceae sp., incl. Pacific silver fir, lodgepole, Engelmann spruce, and mountain hemlock	No/Yes
<i>Arabis suffrutescens</i> var. <i>horizontalis</i> (vascular plant)	South-Central Oregon	Meadows, woods, summits, ridges, and exposed rock outcrops	No/No
<i>Arnica viscosa</i> (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/No
<i>Astragalus peckii</i> (vascular plant)	South-Central Oregon	Basins, benches, gentle slopes, and meadows.	No/Yes
<i>Barbilophozia lycopodioides</i> (liverwort)	Circumboreal, south to Oregon and Idaho	High elevation peaks, peaty soil	No/No
<i>Botrychium pumicola</i> (vascular plant)	Central Oregon	Alpine-subalpine ridges, slopes, and meadows. Lodgepole forests in basins with frost pockets, pumice flats	No/Yes
<i>Brachydontium olympicum</i> (moss)	Alaska through Oregon, Cascade Mountains	Subalpine to alpine boulder fields, moraines and cliff faces	No/No
<i>Calamagrostis breweri</i> (vascular plant)	Oregon North Cascades and California	Non-forest moist-to-dry subalpine and alpine meadows, open slopes, streambanks, lake margins	No/No
<i>Carex abrupta</i> (vascular plant)	Oregon, California, Nevada	Montane, forests, meadows and open slopes. Usually dry soils	No/No
<i>Carex capitata</i> (vascular plant)	Circumboreal	Wet meadows, fens and bogs	No/Yes
<i>Carex diandra</i> (vascular plant)	Circumboreal, south to California	Swamps, sphagnum bogs, lake margins	No/No

Species	Range	Habitat	Occurrence within Project Area? Within the District?
<i>Carex lasiocarpa</i> var. <i>Americana</i> (vascular plant)	S Cascades of Washington, Idaho, Montana, Utah, irregularly to Oregon	Mid elevation swamps and wet meadows	No/Yes
<i>Carex livida</i> (vascular plant)	Oregon Washington, California, Idaho	In peatlands, including fens and bogs; wet meadows with still or channeled water	No/No
<i>Carex retrorsa</i> (vascular plant)	Nevada, Oregon, Washington, Idaho, to the north and east	Bogs, swamps, wet meadows, stream margins	No/No
<i>Carex vernacula</i> (vascular plant)	Washington, Oregon, California, Idaho	Alpine, moist meadows, open slopes	No/No
<i>Castilleja chlorotica</i> (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/No
<i>Cheilanthes feei</i> (vascular plant)	Widespread western states, barely in Oregon	Limestone rocky areas	No/No
<i>Chyloscyphus gimmiparis</i> (liverwort)	Oregon, Alaska, Utah	High elevation montane streams, aquatic	No/No
<i>Collomia mazama</i> (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
<i>Conostomum tetragonum</i> (moss)	Circumboreal; from BC through California	Subalpine to alpine boulder fields, moraines, and cliff ledges	No/No
<i>Cyperus acuminatus</i> (vascular plant)	Western states, west cascades Oregon	Margins wet areas, lake edges	No/Yes
<i>Cyperus lupulinus</i> ssp. <i>lupulinus</i> (vascular plant)	Idaho, Eastern Washington, Oregon	Rocky slopes adjacent to streams, low elevation	No/No
<i>Dermatocarpon luridum</i> (lichen)	Oregon, Washington	On rocks or bedrock in streams or seeps, usually submerged or inundated for most of the year	No/No
<i>Elatine brachysperma</i> (vascular plant)	Washington, Oregon, California, Nevada	Wet to drying muds	No/No
<i>Eucephalus gormanii</i> (vascular plant)	Northern West Cascades	Rocky ridges, outcrops, or rocky slopes	No/No
<i>Gastroboletus vividus</i> (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

Species	Range	Habitat	Occurrence within Project Area? Within the District?
<i>Gentiana newberryi</i> var. <i>newberryi</i> (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/No
<i>Helodium blandowii</i> (moss)	Circumboreal, south through Cascades to Sierra Nevada, and through Rockies to Arizona	Montane fens with calcareous groundwater.	No/Yes
<i>Heliotropium curassavicum</i> (vascular plant)	Western United States	Alkaline, saline playas, receding ponds and clay soils	No/No
<i>Helvella crassitunicata</i> (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
<i>Hygrophorus caeruleus</i> (fungus)	Cascades, central Oregon (Jefferson Co.) to central WA	On soil in association with roots of Pinaceae sp. near melting snowbanks	No/Yes
<i>Leptogium cyanescens</i> (lichen)	Oregon, Washington	Generally riparian but recently documented in upland settings on vine maple, big leaf maple and Oregon white oak	No/No
<i>Lipocarpha aristulata</i> (vascular plant)	Washington, Oregon, California, Idaho	Low elevation streamsides, gravel bars	No/No
<i>Lobelia dortmanna</i> (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/No
<i>Lycopodiella inundata</i> (vascular plant)	Oregon, Idaho, California, Montana – Circumboreal	Deflation areas in coastal backdunes; montane bogs, including sphagnum bogs; less often wet meadows	No/Yes
<i>Lycopodium complanatum</i> (vascular plant)	Oregon, Idaho, Washington	Edges of wet meadows; dry forested midslope with >25% canopy cover	No/No
<i>Muhlenbergia minutissima</i> (vascular plant)	Western United States	Thin lava soils, associated with Typha, sedges	No/No
<i>Ophioglossum pusillum</i> (vascular plant)	Oregon, Washington, California, Idaho	Dune deflation plains; marsh edges; vernal ponds and stream terraces in moist meadows	No/No

Species	Range	Habitat	Occurrence within Project Area? Within the District?
<i>Penstemon peckii</i> (vascular plant)	Central Oregon east Cascades	PP openings, open PP forests; mixed conifer openings; recovering fluvial surfaces	No/Yes
<i>Pilularia americana</i> (vascular plant)	Oregon, California	Alkali and other shallow vernal pools, not recently used stock ponds, reservoir shores	No/No
<i>Polytrichum sphaerothecium</i> (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
<i>Potamogeton diversifolius</i> (vascular plant)	Oregon, Idaho, Nevada, California	Aquatic, Pond edges,	No/No
<i>Pseudocalliergon trifarium</i> (moss)	Circumboreal; British Columbia, Alberta, Montana, Oregon	Montane fens, submerged to emergent or on saturated ground, usually in full sunlight	No/No
<i>Ramaria amyloidea</i> (fungus) S&M	Central OR Cascades (Willamette and DES NF); WA Cascades, NW CA	Mycorrhizal with true firs, Douglas fir, and western hemlock in humus or soil.	No/Yes
<i>Rhizomnium nudum</i> (bryophyte) S&M	Oregon, Washington	Moss found in moist coniferous forests. On DNF associates include lodgepole pine, Engelmann spruce, mountain hemlock, and western white pine	No/Yes
<i>Rorippa columbiae</i> (vascular plant)	Oregon, California, Washington	Wet to vernal moist sites in meadows, fields, playas, lakeshores, intermittent stream beds, banks of perennial streams, along irrigation ditches, river bars and deltas, roadsides.	No/Yes
<i>Rotala ramosior</i> (vascular plant)	Washington, Oregon, California, Idaho	Low elevation low gradient shores, pond edges, river bars	No/No
<i>Scheuchzeria palustris</i> <i>var. americana</i> (vascular plant)	Oregon, Washington, California, Idaho	Open to canopied bogs, fens, and other wetlands where often in shallow water	No/No
<i>Schistostega pennata</i> (bryophyte) S&M	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	No/Yes

Species	Range	Habitat	Occurrence within Project Area? Within the District?
<i>Schoenoplectus subterminalis</i> (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
<i>Scouleria marginata</i> (bryophyte) S&M	Pacific Northwest endemic; Oregon, Washington, Idaho, northern California, southwestern British Columbia	Exposed or shaded rocks in streams; seasonally submerged or emergent	No/No
<i>Splachnum ampullaceum</i> (moss)	Circumboreal; from Alaska through Oregon, and Alberta	Peatlands, wetlands, on old ungulate dung	No/No
<i>Texosporium sancti-jacobi</i> (lichen)	Western North America	In Oregon, late seral dry shrub/grassland	No/No
<i>Tomentypnum nitens</i> (moss)	Circumboreal, Alaska through Oregon	Montane fens at slightly elevated (stumps, logs, hummocks)	No/Yes
<i>Trematodon boasii</i> (moss)	British Columbia through California, Japan, Newfoundland	Subalpine stream, trail and pond edges.	No/No
<i>Tritomaria exsectiformis</i> (liverwort)	Alaska through Oregon, to Montana, Wyoming and Colorado	Open to shaded coniferous forest along perennial flowing water from springs and seeps	No/Yes
<i>Utricularia minor</i> (vascular plant)	Western United states north through Canada	Aquatic plant of pools, ponds, bogs, marshes, wet meadows	No/Yes

Alternative A

As there would be no new construction or ground disturbance under this alternative, there would be no impacts to sensitive species.

Alternative B

As there are no sensitive species present within the project area, no impacts to these species will occur under this alternative.

Northwest Forest Plan Survey and Manage Plant Species

Considered in this section are those species from the bryophyte, lichen, fungi, and vascular plant groups identified in the Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines (January 2001), as updated by the 2011 Settlement Agreement, that are known to occur or were found to occur during surveys in or near proposed the Odell Butte project site.

Introduction

On December 17, 2009, the U.S. District Court for the Western District of Washington issued an order in *Conservation Northwest, et al. v. Sherman, et al.*, No. 08-1067-JCC (W.D. Wash.), granting Plaintiffs' motion for partial summary judgment and finding NEPA violations in the Final Supplemental to the 2004 Supplemental Environmental Impact Statement to Remove or Modify the Survey and Manage Mitigation Measure Standards and Guidelines (USDA and USDI, June 2007). In response, parties entered into settlement negotiations in April 2010, and the Court filed approval of the resulting Settlement Agreement on July 6, 2011. Projects that are within the range of the northern spotted owl are subject to the survey and management standards and guidelines in the 2001 ROD, as modified by the 2011 Settlement Agreement.

Species included in the Survey and Manage Standards and Guidelines are placed in categories as follow:

- Category A (Rare, Pre-Disturbance Surveys Practical) Manage All Known Sites, Pre-Disturbance Surveys.
- Category B (Rare, Pre-Disturbance Surveys NOT Practical) Manage All Known Sites.
- Category C (Uncommon, Pre-Disturbance Surveys Practical) Manage High-Priority Sites, Pre-Disturbance Surveys.
- Category D (Uncommon, Pre-Disturbance Surveys NOT Practical or NOT Necessary) Manage High-Priority Sites.
- Category E (Rare, Status Undetermined) Manage All Known Sites.
- Category F (Uncommon or Concern for Persistence Unknown, Status Undetermined) Manage known sites is NOT a requirement for this category.
 - Strategic Surveys are required for all of the above categories.

Survey protocols were reviewed and a pre-field review was prepared to determine if there were any known sites of Survey and Manage species in or near the Odell Butte project site. Results from this review indicated ***there are no documented Survey and Manage plant occurrences in or near the project area.***

While all categories of Survey and Manage species require management of known sites, only Category A and C species require pre-disturbance surveys. These surveys are required only for those activities where soil-disturbance is large enough to trigger the need for a survey. In such cases, the Standard and Guidelines indicate that line officers should seek specialists' recommendations to help determine the need for a survey.

The proposed AT&T project at Odell Butte is an activity with minimal ground disturbance (less than 0.1 acres, or 4,356 sq. ft.) that would be limited to a specific location. With the limited scope of this project, there is a very low probability that the project would cause a significant negative effect on any Survey and Manage species. Because of this low probability of impact to Survey and Manage, pre-disturbance surveys were not considered necessary for this project. However, the botanical survey conducted on September 7, 2011 also targeted Survey and Manage plant species, in addition to TES plants and invasive weeds. ***No Survey and Manage species were found during this survey.***

Project Consistency

The Odell AT&T Project applies the Deschutes Forest Survey and Manage species list in the 2011 Settlement Agreement (found in Appendix A of this EA) and thus meets the provisions of the 2001 *Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines*, as modified by the 2011 Settlement Agreement.

Indirect and Direct Effects

Alternative A

As there would be no new construction or ground disturbance under this alternative, there would be no impacts to Survey and Manage plant species

Alternative B

As there are no Survey and Manage plant species within the project area, no impacts to these species will occur under this alternative.

Invasive Plant Species

Field surveys for invasive plants were conducted along with TES plant surveys on September 7th, 2011. **Results of this field assessment indicated there are no known occurrences of invasive plants within or near the Odell Butte Electronic site.** The following factors were used to determine the level of noxious weed risk (low, moderate, or high) associated with the Odell Butte Electronic site Facilities:

- *Presence of known weed populations*
- *Level of disturbance*
- *Resource value*
- *Introduction vectors*

Alternative A

As there would be no new construction or ground disturbance under this alternative, there would be no new increase in risk of introduction of invasive species.

Alternative B

The following describes potential impacts related to invasive weeds for Alternative B.

Presence of known weed populations (LOW) – The project site does not contain invasive plants, nor are there any documented invasive infestations near the site.

Level of disturbance (HIGH) – The proposed project will have a high degree of disturbance as there will be tree removal, grading, tower construction, and gravel placement.

Resource value (HIGH) - The Odell Butte site has commercial value from its use as a communications site. Additionally, Odell Butte is currently used as an active fire lookout for the region, thereby serving a unique and critical role in maintaining public safety and managing fire occurrence and forest health.

Introduction vectors (MODERATE) - The proposed construction activities for the project will require the use of heavy machinery (bull dozer, gravel truck, etc.). Such equipment has the potential to carry invasive plant material (plant parts, seeds, contaminated soil) within the tire tread or undercarriage of the equipment.

Based upon the compilation of the risk factors above, the overall risk of the introduction of invasive plants from the construction and maintenance of the facilities on Odell Butte is rated as MODERATE. Because of this rating, Project Design Features have been incorporated such as clean equipment and weed-free material sources to emphasize prevention strategies. These prevention strategies have proven successful on numerous projects on the Deschutes National Forest.

This project would adhere to the Standards and Guidelines outlined by Forest Direction in the Region 06 Invasive Plant Record of Decision and Final Environmental Impact Statement (2005) which amended the 1990 Deschutes Land and Resource Management Plan:

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. *Requirement R6 Standard #1.*
2. Remove mud, dirt, and plant parts from all heavy equipment that will operate outside the limits of the road prism prior to entering National Forest System FS lands and before moving into a new or different analysis area. Cleaning must occur in areas where removed weed seeds will not create additional problems. *Requirement R6 Standard #2.*
3. All Forest Service employees inspect, remove, and properly dispose of weed seed and plant parts found on their clothing and personal equipment prior to leaving a project site infested with weeds. *Guideline*
4. Inspect active gravel, fill, sand stockpiles, quarry sites, and borrow material for invasive plants before use and transport. Treat or require treatment of infested sources before any use of pit material. Use only gravel, fill, sand, and rock that are judged to be weed free by District or Forest weed specialists. *Requirement R6 Standard #7*
5. Environmental analysis for all ground-disturbing projects would evaluate weed risk and consider weed prevention in the development and evaluation of alternatives and mitigating measures. Silvicultural prescriptions, logging plans, road management, and other activities would include weed prevention measures (e.g., shade retention and minimal soil disturbance). Prevention would be emphasized as the preferred strategy for invasive plant management. *Guideline*

Cumulative Effects

There are two other ongoing projects on Odell Butte. Midstate Electric has been approved to replace their wooden monopole with a metal monopole to support a communications dish for Klamath County Emergency Services. This project was found to have no direct, indirect or cumulative effects. Verizon Wireless has submitted a proposal which has been approved for upgrades to their building and tower on Odell Butte. The NEPA process has not begun for this project. No cumulative effects related to botanical resources or invasive plants are expected from the combination of the AT&T project and these two additional projects.

Soils

The zone of influence to assess effects is the construction site itself and any overlapping activities. The Deschutes National Forest Soil Resource data indicates that there is one soil type (mapping unit 84) on Odell Butte surrounding the project area. It occurs on steeply sloping hillsides and has well to excessively drained soils formed from a thin to thick layer of volcanic ash and pumice over stratified volcanic materials. The taxonomic class is Entic Cryorthods. It is classified as stable, productivity is classified as low, and erosion potential is classified as moderate to high.

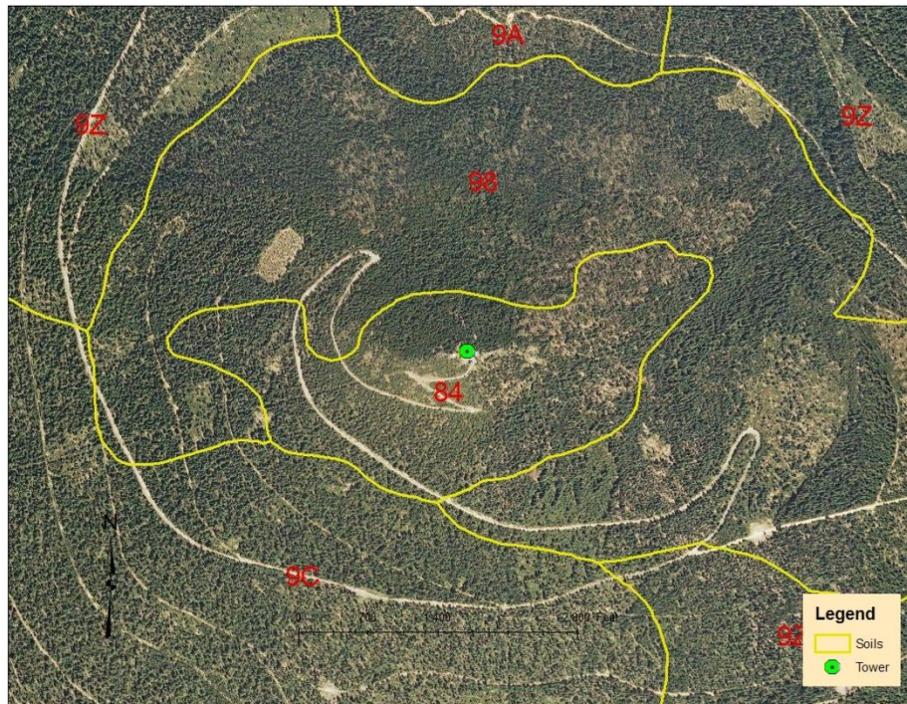


Figure 23. Soils at and adjacent to the project site

Alternative A

As there would be no new construction or ground disturbance under this alternative, there would be no impacts to soils.

Alternative B

It is estimated that the actual increase in detrimental soil conditions would be less than one hundredth of an acre, due to the overlap with an existing site cleared of vegetation. The total area of disturbance is less than a tenth of an acre (see Figures 6 and 7). Therefore, construction activities would increase the area of irretrievable effects by less than 0.10 acres because vegetation would be removed with no re-growth potential while the area is functioning as a communication site. ***The extent of soil disturbance is so small that the effects would be negligible.***

Cumulative Effects

There are two other ongoing projects on Odell Butte. Midstate Electric has been approved to replace their wooden monopole with a metal monopole to support a communications dish for Klamath County Emergency Services. This project was found to have no direct, indirect or cumulative effects. Verizon Wireless has submitted a proposal which has been approved for upgrades to their building and tower on Odell Butte. The NEPA process has not begun for this project. No cumulative effects on soil resources are expected from the combination of the AT&T project and these two additional projects.

Public Safety

Odell Butte was first developed as a fire lookout facility in 1916. The original lookout structure has been upgraded several times over the years and its primary purpose is to serve as an active fire lookout during the summer season. The fire lookout plays a unique and critical role in early detection of and response to wildfires which have the potential to damage infrastructure, natural resources, and endanger public safety. Any structures which impede the view of the surrounding area from the tower have the potential to negatively impact fire suppression efforts and public safety.

Additionally, telecommunication coverage in the area is currently limited for AT&T customers. Figures 3 and 4 show coverage before and after implementation of the proposed action.

Alternative A

As there would be no new construction or ground disturbance under this alternative, there would be no impacts to public safety related to fire suppression or detection as the view from the lookout would remain unchanged. Additionally, as telecommunications coverage would not improve, there would be no beneficial impact to public safety due to increased access to emergency services.

Alternative B

A “balloon test” was performed to evaluate potential impacts to the view from the fire lookout related to the construction of this facility. A tethered helium balloon was raised from the center-point of the proposed tower to the proposed height (see Figure 24 below). The results of this test show that the proposed tower will not obscure the view from the fire lookout. Therefore there would be no negative impacts to public safety related to fire suppression or detection.



Figure 24. “Balloon test” as viewed from the fire lookout. Note that the balloon is at the elevation and approximate location of the proposed tower

Following completion of the proposed project, telecommunications service around the project area is expected to improve for AT&T customers. Since their introduction, wireless telecommunications systems have proven to be an invaluable communications tool in the event of emergencies and natural disasters where normal land line communication are often disrupted, overlooked, or inaccessible during and after an event has occurred. This service and similar technology are utilized by numerous agencies and organizations that provide emergency services. As a result, access to emergency services is expected to improve resulting in a positive impact to Public Safety under this alternative.

Cumulative Effects

There are two other ongoing projects on Odell Butte. Midstate Electric has been approved to replace their wooden monopole with a metal monopole to support a communications dish for Klamath County Emergency Services. This project was found to have no direct, indirect or cumulative effects. Verizon Wireless has submitted a proposal which has been approved for upgrades to their building and tower on Odell Butte. The NEPA process has not begun for this project. No cumulative effects on public safety are expected from the combination of the AT&T project and these two additional projects.

CONSISTENCIES

Telecommunications Act of 1996

Section 704(c) of this act (sec 97, ex. 13) requires Federal agencies to facilitate the development and placement of telecommunications equipment on buildings and land they manage when placement does not conflict with the agency's mission or current or planned use of the property. The proposed activities are consistent with the intent of the telecommunications act as specified in the Purpose and Need and in this section; also, proposed activities do not conflict with the Forest Service mission or current or planned use of the property. The most senior use at this site is two-way radio and the site is designated as low power non-broadcast. This site designation was established in an Environmental Assessment and Decision Notice in 1982. The Deschutes National Forest Land and Resource Management Plan approved in August 1990 recognized the designation of the Odell Butte Communication Site. Additionally, the proposed project is consistent with the 2011 Communication Site Management Plan which allows for orderly development.

Title V, Federal Land Policy and Management Act (FLPMA) of October 21, 1976

This act authorizes the use of National Forest System lands for telecommunications uses.

National Historic Preservation Act of 1966, as amended

This Act requires Federal agencies to consult with American Indian Tribes, State, and local groups before nonrenewable cultural resources, such as archaeological and historic structures, are damaged or destroyed. Section 106 of this Act requires Federal agencies to review the effects proposed projects may have on the cultural resources of the analysis area. An analysis of potential impacts to cultural resources is on file at the Crescent Ranger District. No impacts are expected based on the results of this analysis. No concerns were expressed by the relevant tribal governments contacted as described in the Public Notice and Scoping section of this document.

National Environmental Policy Act (NEPA)

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

Forest Service Handbook 2709, Chapter 90 Communications Site Management

Consistency is demonstrated by the following:

94.5 – Requirements before Issuance of Authorization states, "Issue an authorization only after all of the following requirements have been satisfied:"

1. National Environmental Policy Act (NEPA) requirements have been met (FSH 1909.15).

Environmental information was made available to public officials and citizens before actions were taken. Prior to issuance of a decision, scoping for concerns was accomplished through AT&T and Forest Service endeavors. Comments on the EA are being solicited through a 30-day comment period.

Information provided was of high quality, accurate with expert agency comments augmented by science, and public scrutiny was solicited. A team of specialists in their field were part of the Interdisciplinary Team, including Biological Evaluations for plants and animals. There is no water or aquatic species near the project area. A response to public comment would be a part of this document, when the final decision has been reached.

Public officials make decisions that are based on understanding of environmental consequence and take actions that protect, restore, and enhance the environment. The body of this document contains disclosure of the effects of this action versus none. The 1990 Deschutes National Forest Plan establishes management direction, prescriptions, and standards and guidelines specific for each area; describing the availability and suitability of each land for resource management, levels of protection, and monitoring and evaluation requirements. Odell Butte is a designated electronic site, and follows each and every management Standard and Guideline for electronic sites as detailed in this section.

2. Coordination with other agencies has been completed, including appropriate coordination with the FAA concerning tower height, placement, and lighting and with the DOD when site activity could affect local military operations.

All required county permits will be obtained prior to project initiation. A FCC license for any frequencies to be used will also be obtained prior to project initiation. Coordination with FAA and DOD does not apply because tower heights are below required thresholds.

3. Coordination with facility owners and facility managers at the site has been completed, including a 30-day comment period concerning the application.

The 30-day comment period for other users on Odell Butte was initiated by representatives of AT&T on February 24, 2012 and concluded on March 26, 2012. No responses were received.

4. Acceptable design measures or other satisfactory resolution of potential incompatibility has been agreed to by the applicant and the existing users at the site, including the Forest Service if applicable.

The Forest Service has determined the facilities to be compatible with their uses on the electronic site. Coordination among Odell Butte users is ongoing.

5. The applicant has received the appropriate authorization from the FCC and the licenses have been reviewed by a Forest Service telecommunications specialist.

Licenses are currently being reviewed by the Forest Service. This review would be completed when and if authorization takes place.

6. *The building design has been reviewed by the appropriate Forest Service personnel and the application has been accepted by the Responsible Official.*

The building design has been reviewed by the Forest Service and the application was accepted prior to scoping for this project.

1990 Deschutes National Forest Land and Resource Management Plan (LRMP)

This Environmental Assessment tiers to the Final Environmental Impact Statement (FEIS) for the 1990 Deschutes National Forest Land and Resource Management Plan (LRMP), and incorporates by reference its analysis and findings. The LRMP establishes the land management allocation upon which management of Odell Butte is based, as well as Standards and Guidelines for management of electronic sites. The following demonstrates consistency with the Standards and Guidelines in the LRMP that apply to electronic sites found on page 4-75:

1. *SU-10: Developed, planned and denied electronic sites are listed and shown on the Electronic Sites and Major Utilities Corridor Map.*

Odell Butte Communication Site is shown on the Electronic Sites and Major Utilities Corridor Map.

2. *SU-12: Site plans for planned sites must be completed prior to installation of facilities. Plans must be compatible with the Recreation Opportunity Spectrum (ROS) and visual classification of the area.*

The Odell Butte Communication Site was first established in an Environmental Assessment and Decision Notice approved in 1982. The Deschutes National Forest Land and Resource Management Plan approved in August 1990 recognized the designation of the Odell Butte Communication Site. The Odell Butte Communication Site Plan completed in 2011 requires that all facilities maintain visual resource objectives by requiring design standards that are unobtrusive and by utilizing earth tone colors and non-reflective surface material consistent with the standards in the Land and Resource Management Plan. The current Visual Quality Objective for Odell Butte is Partial Retention (SMS Moderate Scenic Integrity Level). This objective means human activities may be evident from designated viewing points but must remain subordinate to the characteristic landscape. An analysis for the proposed facilities was performed to determine the visual quality. They were found to be subordinate and would not dominate the landscape.

Further, the Recreation Opportunity Spectrum (ROS) is classified as Roaded Natural which is given to settings lightly modified by human activity where access is generally available for highway vehicles. The ROS does not change with the implementation of this project.

3. *SU-13: Applicants for electronic facilities will be directed toward use of the developed sites before use of planned sites is considered.*

The proposed facility would occur within an existing developed site on Odell Butte.

Roads Analysis

According to the Forest Service Road Management Policy, after January 12, 2001, all NEPA decisions need to be informed by a road analysis where relevant. This project has no road construction proposed, or change to the current access to the site. Therefore no roads analysis is required to inform the Responsible Official.

Odell Butte Communication Site Plan

- ***Collocation, when practical, shall be required.***
Site applicants shall take the lead in this area and shall design their proposals to accommodate multiple uses of facilities and improvements. This includes the multiple-use of buildings, towers, solar generating systems, back-up generators, grounding systems, fuel containers, access ways, and parking areas. An additional objective is to encourage the efficient development and use of space and facilities within the designated site, subject to the USFS goal to provide the best possible public service at reasonable cost.

An analysis of possible collocation opportunities conducted by AT&T indicated that co-location would not be possible due physical and technical limitations. The proposed action has been reviewed by USFS staff and found to be consistent with the procedures laid out in the 2011 Communication Site Plan.

- ***Visual quality analysis will be required prior to increasing the height or changing locations of existing towers.***
A Visual Quality Analysis was performed for this project and the results are displayed in the Environmental Consequences/Scenery section of this document. No substantial impacts were found during this analysis.

Forest Service Handbook 2709.11 – Special Uses 93.2 – Interference

Although there have been no known instances of interference among users (documented or otherwise) on the Odell Butte Site, the following remedies are available if interference becomes an issue.

1. Avoid interference problems through proper communications site designation, appropriate site planning, strict adherence to the terms and conditions of the communications site authorization, timely site inspections, and cooperation among communications site users. The compatibility of communications uses is a function of frequency relationships, geographic separation, the amount and period of power emission, and equipment design characteristics. Problems may be mitigated by judicious use of frequency assignments by the responsible agency, by location of incompatible uses on different sites, or by utilization of special equipment, such as filters. The site designation and the site plan shall identify the intended use of the site. Do not authorize uses that are incompatible, unless they are successfully subjected to the process described in section 97, exhibit 06, which concludes with installation, operation, and maintenance of the equipment for the proposed use without measurable interference.

2. *Grant senior users at a site priority with respect to resolution of interference complaints, except for non-broadcast uses at a site designated for radio and television broadcasting.*
3. *Require all users to maintain their equipment to industry standards; to operate their systems in accordance with the terms of their FCC license or National Telecommunications and Information Administration (NTIA) frequency assignment; and to comply with the applicable Forest Service communications site authorization.*
4. *Require new users at a communications site to correct, at their expense, interference problems that they create and to cease operation of the suspect equipment until the problem is corrected. Require the suspect equipment to be removed from the communications site if interference problems cannot be resolved or corrected within a reasonable time.*
5. *Resolve interference problems first by verifying adherence to the requirements in the Forest Service communications site authorization. It may not always be clear which agency (Forest Service, FCC, or NTIA) is responsible when interference or frequency issues arise. For example, the operation of otherwise approved communications equipment when pulled out of its housing may be a violation of a Forest Service authorization, rather than a violation of FCC or NTIA rules. The use of unapproved frequencies or power levels may be an authorization violation, as well as a license infraction.*
6. *Where a violation creates an irreconcilable problem (for example, the problem remains after the Forest Service gives the holder an opportunity to comply), suspend or revoke the authorization in accordance with its terms, agency policy (FSM 2700) and applicable regulations (36 CFR 251.60). Interference problems should be coordinated with the FCC or NTIA, as appropriate (sec. 96.1).*

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 and miles of roads 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.

State and Local Laws

There are no identified inconsistencies with State and local laws, land use, and environmental policies. AT&T will acquire all necessary local permits required prior to project initiation.

Clean Water Act

There is no surface water at or near the project area and proposed activities would not affect ground water resources.

Clean Air Act

The proposed action is consistent with the Clean Air Act. Disposal of vegetation as a result of construction activities using prescribed burning may occur. This would be a very small quantity of vegetative material as the area of disturbance overlaps an existing site and construction of the building and towers is estimated to be less than 0.10 acres. 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 Oregon. All prescribed burning is coordinated with the DEQ through the State of Oregon smoke management program. Any pile burning would be conducted in compliance with the State of Oregon Smoke Management System and would meet smoke management objectives for total emissions. Additionally, emissions resulting from construction equipment would be limited in duration and would be substantially less than those related to the nearby state highways.

Other Disclosures

1. 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 would be affected by the proposed action. Odell Butte is not located in a floodplain.

2. Civil Rights and Environmental Justice

Civil Rights legislation and Executive Order 12898 (Environmental Justice) direct an analysis of the proposed alternatives as they relate to specific subsets of the American population. The subsets of the general population include ethnic minorities, people with disabilities, and low-income groups. The proposed action would not pose any adverse effect to those populations.

3. Prime Lands (Farm, Range, and Forest)

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. National Forest Land is generally not considered "prime" forestland. This project, therefore, would not affect prime lands.

Consultation and Coordination

Preparers:

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- Dave Pinyerd, Architectural Historian, Historic Preservation Northwest
- Dana Shuford, Archeologist, Archeological Services of Clark County
- Ben White, Environmental Scientist, Adapt Engineering
- Brandon Olsen, Senior Vice President, AT&T

Reviewers – (Crescent Ranger District, USFS):

- Tim Foley, Environmental Coordinator
- Joan Kittrell, Wildlife Biologist
- Leslie Hickerson, Cultural Resources Specialist
- Christina Veverka, Botanist
- Robert Gentry, Recreation Specialist
- Jeff Bishop, Fire and Fuels Specialist
- Robin Gyorgyfalvy, Landscape Architect
- Meria Page, Realty Specialist

Federal, State and Local Agencies:

Oregon State Historic Preservation Office (SHPO)

Tribes

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

Appendix A

**2011 Settlement Agreement Survey
and Manage Plant Species
Documented or Suspected to Occur
on the Deschutes National Forest**

2011 Settlement Agreement

Survey and Manage Plant Species documented (D) or suspected (S) to occur on the Deschutes National Forest

Category	Survey Direction	Group	Species	D or S	Habitat
A	Manage All Known Sites. Conduct Pre-Disturbance Surveys. Conduct Strategic Surveys.	Bryophyte	Schistostega pennata	D	Usually on mineral soil in crevices on lower and more sheltered parts of root wads of fallen trees. Often near steams or other wet areas. Most commonly found within silver fir plant series but also found in western hemlock, mountain hemlock, and lodgepole pine stands near water. Stands are typically late seral or old growth.
B	Manage All Known Sites. Conduct Strategic Surveys. If Strategic Surveys not completed by FY 2006 for bryophytes and lichens and FY 2011 for fungi, then conduct Equivalent Effort Surveys in old growth habitat that would be disturbed.	Bryophyte	Rhizomnium nudum (*Strategic Surveys completed)	D	Coniferous forests on moist soil in seepages, vernal wet depressions or intermittently wet, low gradient channels.
		Bryophyte	Tritomaria exsectiformis	D	Riparian zones; typically open to shaded coniferous forest in association with low volume, perennial water flow at or near springs and seeps, along very gentle topographic gradients. Lodgepole pine (<i>Pinus contorta</i>) is present at nearly all sites of <i>T. exsectiformis</i> within the Oregon and Washington Cascades. Other tree species occurring at these sites include white fir, ponderosa pine, Engelmann spruce, Douglas fir, western hemlock and mountain hemlock, and subalpine fir.
		Fungus	Albatrellus caeruleoporus	D	Associated with hemlock (<i>Tsuga</i>).
		Fungus	Albatrellus ellisii	S	Associated with species of <i>Abies</i> , <i>Picea</i> , <i>Pinus</i> , <i>Pseudotsuga</i> , <i>Tsuga</i> or <i>Castanopsis</i> . On mineral soil, litter and humus.

Category	Survey Direction	Group	Species	D or S	Habitat
		Fungus	<i>Alpova alexsmithii</i>	D	Associated with various Pinaceae spp., particularly <i>Abies magnifica</i> and <i>Pinus ponderosa</i> .
		Fungus	<i>Arcangeliella crassa</i>	D	Beneath the soil surface and associated with various Pinaceae spp., particularly <i>Abies concolor</i> , <i>A. magnifica</i> , <i>Pinus contorta</i> , or <i>P. ponderosa</i> .
		Fungus	<i>Arcangeliella lactarioides</i>	D	Associated with various Pinaceae spp., particularly <i>Abies magnifica</i> and <i>Pinus ponderosa</i> .
		Fungus	<i>Boletus pulcherrimus</i>	S	In humus, associated with roots of mixed conifers (e.g., <i>Abies grandis</i> , <i>Pseudotsuga menziesii</i>).
		Fungus	<i>Choiromyces alveolatus</i>	D	Associated with various Pinaceae spp., particularly <i>Abies procera</i> , <i>Abies</i> spp., <i>Pinus contorta</i> , <i>P. ponderosa</i> , <i>Pseudotsuga menziesii</i> , <i>Tsuga heterophylla</i> and <i>T. mertensiana</i> above 4200 ft. elevation.
		Fungus	<i>Chroogomphus loculatus</i>	D	Assoc. w/ various Pinaceae spp., especially <i>Tsuga mertensiana</i> at 4600 ft.
		Fungus	<i>Clavariadelphus ligula</i>	D	Under coniferous or mixed coniferous forests associated with <i>Abies</i> , <i>Calocedrus</i> , <i>Pinus</i> , <i>Pseudotsuga</i> , <i>Thuja</i> , <i>Tsuga</i> , <i>Umbellularia</i> , and <i>Castanopsis</i> .
		Fungus	<i>Clavariadelphus occidentalis</i>	D	Associated species include Pacific silver fir, white fir, grand fir, incense cedar, sugar pine, western white pine, ponderosa pine, Douglas fir.
		Fungus	<i>Clavariadelphus sachalinensis</i>	S	Associated species include white fir, subalpine fir, incense cedar, Engelmann spruce, sugar pine, ponderosa pine, Douglas fir.
		Fungus	<i>Clavariadelphus truncatus</i>	D	Mixed deciduous-coniferous forests or deciduous forests with <i>Abies</i> , <i>Calocedrus</i> , <i>Picea</i> , <i>Pinus</i> , <i>Pseudotsuga</i> , <i>Thuja</i> , <i>Tsuga</i> .
		Fungus	<i>Cortinarius magnivelatus</i>	S	Associated with roots of <i>Abies concolor</i> , <i>A. magnifica</i> , <i>Picea engelmannii</i> , <i>Pinus lambertiana</i> , <i>P. ponderosa</i> .
		Fungus	<i>Cortinarius olympianus</i>	S	Associated with roots of Pinaceae spp

Category	Survey Direction	Group	Species	D or S	Habitat
		Fungus	Cortinarius verrucisporus	S	Associated with roots of <i>Abies</i> spp.
		Fungus	Cortinarius wiebeae	D	Associated with roots of <i>Pseudotsuga menziesii</i> and <i>Pinus ponderosa</i> .
		Fungus	Cudonia monticola	D	On litter and rotten wood. Associated species include Pacific silver fir, white fir, grand fir, subalpine fir, red fir, noble fir, Engelmann spruce, Douglas fir, mountain hemlock.
		Fungus	Elaphomyces anthracinus	D	Associated with roots of ponderosa pine in Oregon.
		Fungus	Elaphomyces subviscidus	D	Associated with roots of <i>Pinus contorta</i> and <i>Tsuga mertensiana</i> at high elevation (7,150 ft.).
		Fungus	Fayodia bishpaerigera	S	In litter debris under hardwoods and conifer.
		Fungus	Fevansia aurantiaca (= <i>Alpova aurantiaca</i>)	D	Associated with various Pinaceae species, particularly <i>Abies lasiocarpa</i> and <i>Pseudotsuga menziesii</i> .
		Fungus	Gastroboletus ruber	D	Associated with roots of assorted Pinaceae above 4,350 ft. elevation, particularly <i>Abies amabilis</i> , <i>A. procera</i> , <i>A. magnifica</i> var. <i>shastensis</i> , <i>Pinus monticola</i> or <i>Tsuga mertensiana</i> .
		Fungus	Gastroboletus subalpinus	D	Associated with roots of various Pinaceae above 5,000 ft. elevation, particularly <i>Abies magnifica</i> , <i>Pinus albicaulis</i> , <i>P. contorta</i> and <i>Tsuga mertensiana</i> .
		Fungus	Gastroboletus turbinatus	D	Lowland forests of <i>Picea sitchensis</i> - <i>Tsuga heterophylla</i> to montane/subalpine <i>Abies</i> , <i>Picea</i> and <i>Pinus</i> spp.
		Fungus	Gastroboletus vividus	S	With roots of various Pinaceae, particularly <i>Abies lasiocarpa</i> , <i>A. x shastensis</i> and <i>Tsuga mertensiana</i> .
		Fungus	Gautieria magnicellaris	D	Associated with roots of <i>Abies concolor</i> in western United States above 5300 ft. elevation.
		Fungus	Gymnomyces abietis	D	Associated with roots of <i>Abies</i> spp. and possibly other Pinaceae above 3200 ft. elevation.

Category	Survey Direction	Group	Species	D or S	Habitat
		Fungus	Gymnomyces nondistincta	S	Associated with roots of Pacific silver fir and mountain hemlock.
		Fungus	Gyromitra californica	D	On or adjacent to well-rotted stumps or logs of coniferous trees, on litter or soil rich in brown rotted wood. Primarily in <i>Abies amabilis</i> , <i>A. conolor</i> , <i>A. magnifica</i> , <i>Pinus contorta</i> , <i>P. lambertiana</i> , <i>P. ponderosa</i> , <i>Pseudotsuga menziesii</i> , <i>Picea engelmannii</i> , <i>Tsuga mertensiana</i> and <i>Populus tremuloides</i> .
		Fungus	Helvella crassitunicata	D	On soil, especially along trails, in montane regions with <i>Abies</i> spp.
		Fungus	Hydnotrya inordinata	D	Associated with roots of <i>Abies amabilis</i> , <i>Pinus contorta</i> , <i>Pseudotsuga menziesii</i> , and <i>Tsuga heterophylla</i> from 3500-6500 ft. elevation.
		Fungus	Hygrophorus caeruleus	D	Associated with roots of Pinaceae spp., near melting snowbanks.
		Fungus	Leucogaster citrinus	D	Associated with roots of <i>Abies concolor</i> , <i>A. lasiocarpa</i> , <i>Pinus contorta</i> , <i>P. monticola</i> , <i>Pseudotsuga menziesii</i> and <i>Tsuga heterophylla</i> from 900-6500 ft. elevation.
		Fungus	Polyozellus multiplex	D	Clustered on ground under conifers (usually spruce and fir) or aspen in late summer and fall.
		Fungus	Ramaria amyloidea	D	On humus or soil in association with <i>Abies amabilis</i> , <i>A. concolor</i> , <i>A. magnifica</i> , <i>A. x shastensis</i> , <i>A. procera</i> , <i>Pinus contorta</i> , <i>P. monticola</i> , <i>Pseudotsuga menziesii</i> , <i>Thuja plicata</i> and <i>Tsuga mertensiana</i> .
		Fungus	Ramaria aurantiisiccescens	S	Occurs in humus, litter and soil associated with <i>Abies concolor</i> , <i>A. lasiocarpa</i> , <i>A. procera</i> , <i>Chamaecyparis lawsoniana</i> , <i>Pinus contorta</i> , <i>P. ponderosa</i> , <i>Picea engelmannii</i> , <i>Thuja plicata</i> , <i>Tsuga mertensiana</i> and <i>Acer macrophyllum</i> .
		Fungus	Ramaria botrytis var. aurantiiramosa	S	On humus or soil associated with <i>Pseudotsuga menziesii</i> and <i>Tsuga heterophylla</i> .
		Fungus	Ramaria coulterae	D	On coniferous debris.

Category	Survey Direction	Group	Species	D or S	Habitat
		Fungus	Ramaria largentii	S	Occurs on soil, litter and humus in association with Pinaceae. Associated species include <i>Pseudotsuga menziesii</i> , <i>Abies amabilis</i> , <i>A. concolor</i> , <i>A. grandis</i> , <i>Pinus lambertiana</i> , <i>P. monticola</i> , <i>Calocedrus decurrens</i> , <i>Taxus brevifolia</i> , <i>Thuja plicata</i> .
		Fungus	Ramaria maculatipes	D	On humus or soil in association with <i>Abies</i> spp., <i>Pseudotsuga menziesii</i> and <i>Tsuga heterophylla</i> .
		Fungus	Ramaria rubrievanescens	D	On humus or soil with Pinaceae spp. Associated species include <i>Abies amabilis</i> , <i>A. concolor</i> , <i>A. grandis</i> , <i>A. lasiocarpa</i> , <i>A. magnifica</i> , <i>A. x shastensis</i> , <i>A. procera</i> , <i>Calocedrus decurrens</i> , <i>Pinus contorta</i> , <i>P. lambertiana</i> , <i>P. monticola</i> , <i>P. ponderosa</i> , <i>Picea engelmannii</i> , <i>Pseudotsuga menziesii</i> , <i>Tsuga mertensiana</i> .
		Fungus	Ramaria thiersii	S	On humus or soil in association with Pinaceae spp.
		Fungus	Rhizopogon abietis	S	Associated with <i>Abies</i> , <i>Tsuga</i> , <i>Picea</i> and <i>Pinus</i> spp.
		Fungus	Rhizopogon atroviolaceus	D	Hypogeous to emergent, scattered to grouped, associated with <i>Abies</i> , <i>Picea</i> , <i>Pinus</i> , <i>Pseudotsuga</i> and <i>Tsuga</i> spp.
		Fungus	Rhizopogon evadens var. subalpinus	D	Usually associated with roots of <i>Tsuga mertensiana</i> or <i>Abies</i> spp. from 4000-7600 ft. elevation.
		Fungus	Rhizopogon exiguus	S	Associated with roots of <i>Pseudotsuga menziesii</i> and <i>Tsuga heterophylla</i> .
		Fungus	Rhizopogon flavofibrillosus	D	Associated with roots of various Pinaceae spp., including <i>Abies concolor</i> , <i>A. lasiocarpa</i> , <i>Picea engelmannii</i> , <i>Pinus contorta</i> , <i>P. lambertiana</i> , <i>Pseudotsuga menziesii</i> .
		Fungus	Sarcodon fuscoindicus	S	Occurs on soil, litter and humus. Associated species include <i>Abies amabilis</i> , <i>Pinus lambertiana</i> , <i>Pseudotsuga menziesii</i> , <i>Tsuga heterophylla</i> , <i>Thuja plicata</i> .

Category	Survey Direction	Group	Species	D or S	Habitat
		Fungus	<i>Spathularia flavida</i>	S	On litter, woody debris and soil in conifer and hardwood forests. Associated species include <i>Abies concolor</i> , <i>A. grandis</i> , <i>Pinus contorta</i> , <i>P. monticola</i> , <i>P. ponderosa</i> , <i>Pseudotsuga menziesii</i> , <i>Thuja plicata</i> and <i>Tsuga heterophylla</i> .
C	Manage High-Priority Sites. Conduct Pre-Disturbance Surveys. Conduct Strategic Surveys.	Vascular	<i>Cypripedium montanum</i>	D	In ponderosa pine, lodgepole pine, and Douglas-fir forests but also with incense cedar, grand fir, sugar pine. Also known from along roadsides, on top of road bank, on Sisters District
		Lichen	<i>Cladonia norvegica</i>	D	On rotten wood, tree bases and tree trunks in mature to old conifer forests at low to middle elevations.
D	Manage High Priority Sites. Conduct Strategic Surveys.	Fungus	<i>Chalciporus piperatus</i>	D	Mixed woods.
		Fungus	<i>Mycena overholtsii</i>	D	Conifer forests (particularly those with <i>Abies</i> spp.) above 3200 ft. elevation in decayed wood near snow banks or just after snow melt.
		Fungus	<i>Phaeocollybia attenuata</i>	D	In litter, humus or soil under mixed coniferous forests. Associated species include <i>Pseudotsuga menziesii</i> , <i>Tsuga heterophylla</i> , <i>Picea sitchensis</i> , <i>Abies amabilis</i> and <i>Pinus</i> spp.
		Fungus	<i>Ramaria rubripermanens</i>	D	Occurs on soil, litter, humus and charred wood in association with Pinaceae spp. Associated species include <i>Abies grandis</i> , <i>A. lasiocarpa</i> , <i>A. magnifica</i> , <i>A. procera</i> , <i>Calocedrus decurrens</i> , <i>Pinus contorta</i> , <i>P. lambertiana</i> , <i>P. monticola</i> , <i>P. ponderosa</i> , <i>Picea engelmannii</i> , <i>Tsuga mertensiana</i> .
		Fungus	<i>Rhizopogon truncatus</i>	D	Associated with roots of various Pinaceae spp., including <i>Abies concolor</i> , <i>A. lasiocarpa</i> , <i>Picea engelmannii</i> , <i>Pinus contorta</i> , <i>P. lambertiana</i> , <i>Pseudotsuga menziesii</i> .
		Fungus	<i>Sparassis crispa</i>	D	Usually solitary at the base of a living coniferous tree (<i>Pseudotsuga</i> , <i>Pinus</i>).

Category	Survey Direction	Group	Species	D or S	Habitat
		Fungus	Tremiscus helvelloides	S	In duff, soil and rotten wood under conifers.
E	Manage All Known Sites. Conduct Strategic Surveys.	Lichen	Chaenotheca subroscida	D	Restricted to the bark (occasionally on bare wood) of old-growth trees of <i>Picea</i> and <i>Thuja</i> , less commonly on species of <i>Abies</i> and <i>Pinus</i> .
		Lichen	Dermatocarpon luridum	D	Rocks or bedrock in streams or seeps, usually submerged or inundated for most of the year.
		Lichen	Leptogium teretiusculum	D	Shaded and humid bark of hardwood trees in riparian areas.
F	Conduct Strategic Surveys.	Lichen	Chaenotheca furfuracea	D	On soil or roots protected from precipitation, such as in shaded humid crevices, on sheltered soil banks, or on upturned bases of large old coniferous trees in moist forests. Also on decorticated (e.g. lacking bark) stumps, and mosses and rocks.
		Fungus	Collybia bakerensis	S	On downed conifer logs (firs, hemlocks) soon after melting snow ~ 8,200 ft. elevation.
		Fungus	Gomphus clavatus	S	In deep humus in coniferous forests.