



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Medford District Office
3040 Biddle Road
Medford, Oregon 97504
email address: Medford_Mail@blm.gov

IN REPLY REFER TO:

1792(M060)

MAY 27 2011

Dear Interested Public:

The attached *Revised Environmental Assessment* (EA) for the Meriwether Right-of-Way Project is available for public review. The public review period ends on June 17, 2011.

The Ashland Resource Area of the Medford District Bureau of Land Management (BLM) proposes to implement an amendment to the existing M-660 Right-of-Way and Road Use Permit (OR 048747) with Meriwether Southern Oregon Land & Timber, LLC. The project area is located in T. 37 S., R. 3 W., in Section 31, and T. 38 S., R. 3 W., in Sections 5 and 6, W.M., Jackson County, OR (Map 1-1). Meriwether Southern Oregon Land & Timber, LLC requested an amendment to an existing reciprocal right-of-way and road use agreement to allow for the construction of a new road to provide long-term access to their private land adjoining BLM-administered land. The applicant holds an existing reciprocal right-of-way and road use permit with the Bureau of Land Management for land near the project area. If approved the existing road use permit would be amended to include new construction off of the 38-3-06 road to access the applicant's land. Segments of existing roads 38-3-5 and 38-3-6 would also be added to the permit, providing legal access from the end of County Road 842 to the start of the proposed new road construction.

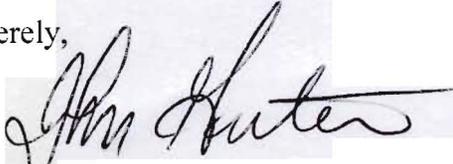
We welcome your comments on the content of the Revised EA. We are particularly interested in comments that address one or more of the following: (1) new information that would affect the analysis, (2) information or evidence of flawed or incomplete analysis; (3) BLM's determination that there are no significant impacts associated with the proposed action, and (4) alternatives to the Proposed Action that would respond to purpose and need. Specific comments are the most useful. **Comments are due by 4:30 PM, June 17, 2011.**

Before including your address, telephone number, email address, or other personal identifying information in your comment, be advised that your entire comment, including your personal identifying information, may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

All comments should be made in writing and mailed or delivered to Kristi Mastrofina, Ashland Resource Area, 3040 Biddle Road, Medford, OR 97504. Further information on this

proposed project is available at the Medford District Office, 3040 Biddle Road, Medford, Oregon 97504 or by calling Kristi Mastrofini, Ashland Resource Area Planning, at (541) 618-2384.

Sincerely,

A handwritten signature in black ink, appearing to read "John Gerritsma", is written over a light blue rectangular background.

John Gerritsma
Field Manager, Ashland Resource Area

Enclosure

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REVISED ENVIRONMENTAL ASSESSMENT

for the

MERIWETHER RIGHT-OF-WAY PROJECT: AMENDMENT TO M-660 RIGHT-OF-WAY & ROAD USE AGREEMENT (OR 048747 FD)

**United States
Department of the Interior
Bureau of Land Management
Medford District**

Jackson County, Oregon

May 2011

REVISED ENVIRONMENTAL ASSESSMENT (EA)

**MERIWETHER RIGHT-OF-WAY PROJECT:
AMENDMENT TO M-660 RIGHT-OF-WAY
& ROAD USE AGREEMENT (OR 048747 FD)**

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT
JACKSON COUNTY OREGON**

EA COVER SHEET

RESOURCE AREA: Ashland

RESPONSIBLE OFFICIAL: John Gerritsma, Ashland Field Manager
3040 Biddle Road
Medford, OR 97504

ACTION/TITLE: Meriwether Right-Of-Way Project: Amendment to M-660
Right-of-Way & Road Use Agreement (OR 048747 FD)

EA NUMBER: DOI-BLM-OR-M060-2010-0025-EA

LOCATION: Forest Creek 6th Field Watershed, tributary to the Applegate River Watershed; the Public Land Survey System (PLSS) description is T. 37 S., R. 3 W., in Section 31, and T. 38 S., R. 3 W., in Sections 5 and 6; W.M.; Jackson County, Oregon (Map 1-1).

List of Preparers	Responsibility
Carl Symons	Project Lead
John McNeel	Road Engineer
Armand Rebischke	Botany (including T&E)
Mike Derrig	Hydrology
Ted Hass	Soils
Jeff Stephens	Wildlife
Stephen Haney	Wildlife
Chris Volpe	Fisheries (including T&E) & Riparian
David Knutson	Cultural Resources
Ron Gregory	Cultural Resources
Nicholas Schade	Visual Resources
Dennis Byrd	Recreation
Kristi Mastrofini	NEPA Compliance

REVISED ENVIRONMENTAL ASSESSMENT (EA)
for the
MERIWETHER RIGHT-OF-WAY PROJECT
AMENDMENT TO M-660 RECIPROCAL AGREEMENT
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CHAPTER 1 - PURPOSE AND NEED FOR PROPOSED ACTION

A. INTRODUCTION

This Environmental Assessment (EA) documents the environmental analysis conducted to estimate the site-specific effects on the human environment that may result from the implementation of the Bureau of Land Management's proposed action. The analysis documented in this EA will provide the responsible official, the Ashland Resource Area Field Manager, with current information to aid in the decision-making process. This document complies with the Council on Environmental Quality's (CEQ) Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (NEPA; 40 CFR Parts 1500-1508) and the Department of the Interior's regulations on Implementation of the National Environmental Policy Act of 1969 (43 CFR part 46).

Meriwether Southern Oregon Land & Timber, LLC has requested an amendment to an existing reciprocal right-of-way and road use agreement for the purpose of accessing their private land, which adjoins Bureau of Land Management (BLM)-administered land located in the Forest Creek drainage. In response to public comments received, the BLM has revised the EA and is now reissuing the EA for additional public review. The Meriwether Right-of-Way Project Environmental Assessment was originally issued for public review on July 26, 2010. Two comment letters were received.

B. NEED FOR THE PROPOSED ACTION

The BLM has a legal obligation to respond to the private landowner's application to amend their existing M-660 Right-of-Way and Road Use Agreement. The need for this action is established by CFR 43 Subpart 2812 under the authority of the Federal Land and Policy Management Act and the Oregon and California (O&C) Lands Act of 1937. The purpose of this action is to provide the applicant, Meriwether Southern Oregon Land and Timber Company, with a legal right-of-way and road use agreement across BLM-administered lands, providing the applicant with long-term access to their private land located along the western edge of T. 37 S., R. 3 W., Section 32.

Reciprocal rights-of-way agreements are an important tool used by the BLM for acquiring access to BLM lands through cooperation with private forest land owners. These agreements establish cooperation among landowners for road use and land access. Reciprocal agreements and road right-of-way agreements stipulate conditions of use for both the BLM and private land owners while using or constructing roads across private or public lands under agreement.

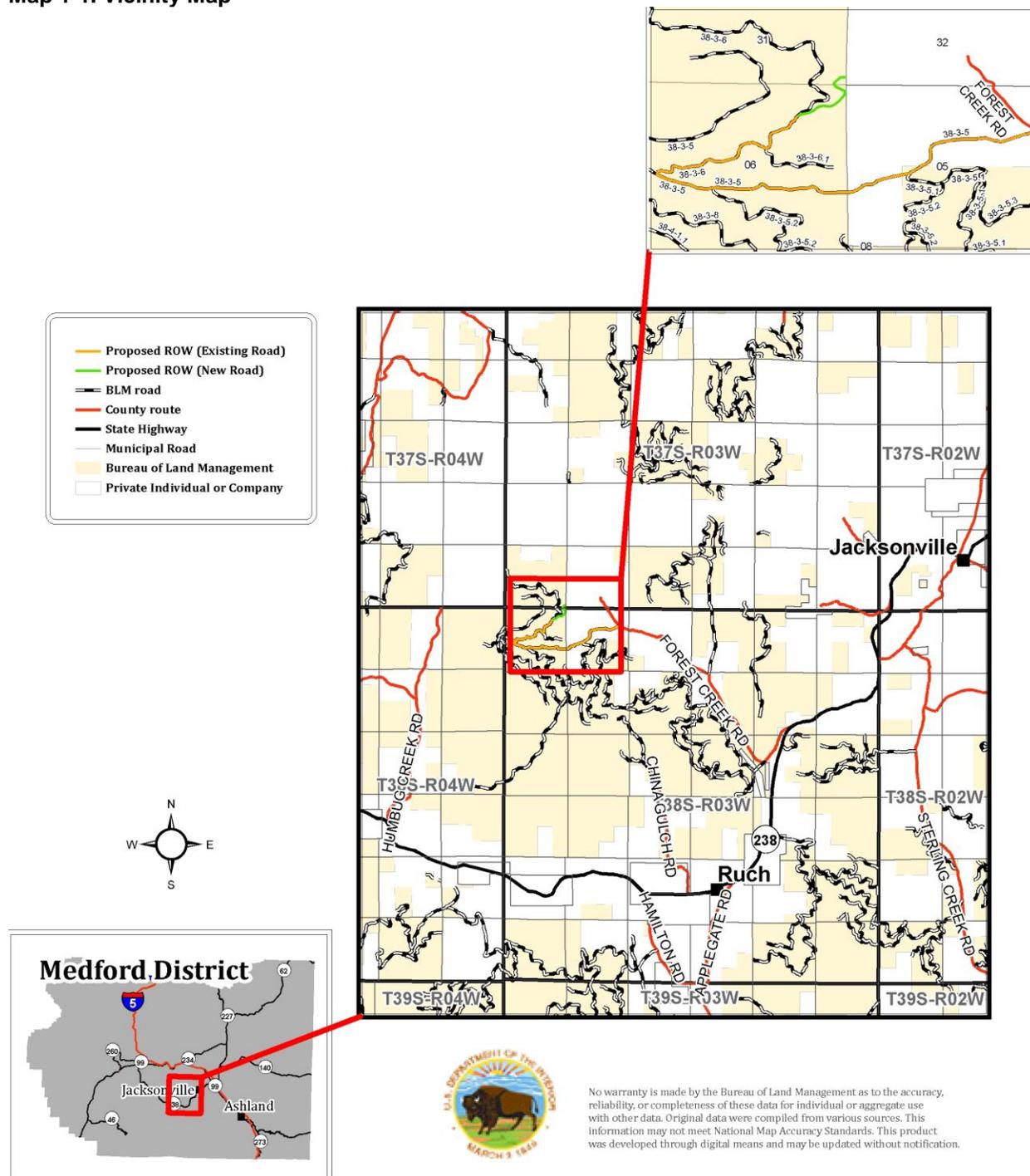
C. BLM'S PROPOSED ACTION

The Medford District Bureau of Land Management (BLM) has reviewed the private landowner's application and proposes to implement an amendment to the existing M-660 Right-of-Way and Road Use Agreement held by Meriwether Southern Oregon Land & Timber, LLC. The project area is located in T. 37 S., R. 3 W., in Section 31, and T. 38 S., R. 3 W., in Sections 5 and 6, W.M., Jackson County, OR (Map 1-1). Please refer to Chapter 2, Section C, Alternatives Considered but Eliminated from Detailed Analysis, for information concerning the applicant's original application and road proposal.

Meriwether Southern Oregon Land & Timber, LLC requested an amendment to an existing reciprocal right-of-way and road use agreement to allow for the construction of a new road to provide long-term access to their private land adjoining BLM-administered land. The applicant holds an existing reciprocal right-of-way and road use agreement with the Bureau of Land Management for land near the project area. If approved the existing right-of-way and road use agreement would be amended to include new construction off of BLM-administered 38-3-06 road to access the applicant's land. Segments of existing BLM-administered roads 38-3-5 and 38-3-6 would also be added to the agreement, providing legal access from the end of County Road 842 to the start of the proposed new road construction.

The segment of proposed new road construction is approximately 2,224 feet in length beginning in the northeast portion of Section 6 in T. 38 S., R. 3 W, where it takes off of road 38-3-6, and continues into the south eastern portion of Section 31, T. 37 S. R. 3 W (see Map 2-1).

Map 1-1. Vicinity Map



No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed through digital means and may be updated without notification.

D. DECISION FRAMEWORK

The Ashland Resource Area Field Manager must decide whether to implement the Proposed Action as designed or whether to select the No-Action Alternative. The decision will also include a determination concerning whether or not the impacts of the Proposed Action are significant to the human environment. If the impacts are determined to be within those impacts analyzed in the Resource Management Plan Environmental Impact Statement, or otherwise determined to be insignificant, a Finding of No Significant Impact (FONSI) can be issued and a decision implemented. If this EA determines that the significance of impacts are unknown or greater than those previously analyzed and disclosed, then a project specific EIS must be prepared.

E. LAND USE CONFORMANCE & LEGAL REQUIREMENTS

The BLM initiated planning and design for this project to conform and be consistent with the Medford District's 1995 Record of Decision (ROD) and Resource Management Plan (RMP), which incorporated the Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl and the Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl (Northwest Forest Plan) (USDA and USDI 1994). The 1995 Medford District Resource Management Plan was amended by 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*.

Following the March 31, 2011 decision by the United States District Court for the District of Columbia in Douglas Timber Operators et al. v. Salazar, which vacated and remanded the administrative withdrawal of the Medford District's 2008 ROD and RMP, we evaluated this project for consistency with the 2008 ROD and RMP. The proposed Meriwether Right-of-Way project is located on lands allocated by the 2008 Medford District RMP to Uneven Age Timber Management and Riparian Management Area. The 2008 Medford District ROD/RMP specifically states: "provide needed rights-of-way ... consistent with federal and state law" (p. 49). The Meriwether Right-of-Way project contains Project Design Features that apply Best Management Practices of the 1995 RMP (Appendix D); the application of Best Management Practices is consistent with Best Management Practices contained in the 2008 RMP (Appendix C). As designed, this project is complies with Management Direction, Objectives, and Best Management Practices of the 2008 ROD and RMP.

This EA contains discussions of land allocations and components of the 1995 RMP (e.g. Late-Successional Reserves, Riparian Reserves, Aquatic Conservation Objectives, etc.), which are not components of the 2008 ROD and RMP. While the 2008 RMP does not require consideration of Riparian Reserves, Late-Successional Reserves, or the Aquatic Conservation Strategy Objectives, the design of this project does meet the 2008 Medford District RMP as well as the 1995 Medford District RMP, the plan in place prior to March 31, 2011.

The proposed action is also in conformance with the direction given for the management of public lands in the Medford District by the Oregon and California Lands Act of 1937 (O&C Act), Federal Land Policy and Management Act of 1976 (FLPMA), the Endangered Species Act (ESA) of 1973, the Clean Water Act of 1987, Safe Drinking Water Act of 1974 (as amended 1986 and 1996), Clean Air Act, and the Archaeological Resources Protection Act of 1979.

This project is designed to comply with 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 (without Annual Species Reviews).

F. RELEVANT ASSESSMENTS AND PLANS

Southwest Oregon Fire Management Plan

The Southwest Oregon Fire Management Plan provides Southwest Oregon with an integrated concept in coordinated wildland fire planning and protection among Federal, State, local government entities and citizen initiatives. The FMP satisfies the requirements of the Federal Wildland Fire Policy of 1995 and its Revision of 2001 to describe fire management activities for every burnable acre of federal land, while recognizing the ecological importance of fire on these landscapes.

The Fire Management Plan introduces fire management concepts addressing fire management activities in relation to resource objectives stated in the current Land and Resource Management Plans (parent documents) of the federal agencies, the laws and statutes that guide the state agencies and private protective associations, and serve as a vehicle for local agencies and cooperators to more fully coordinate their participation in relation to those activities.

Applegate Fire Plan

The project area is covered by the Applegate Fire Plan, a plan developed through a collaborative effort between local citizens and local and federal agencies. The Applegate Fire Plan provides a strategic framework for addressing the high fire danger throughout the Applegate Valley. The main components of the plan include fire protection and suppression, fuel hazard reduction, and emergency communications. The plan is based on a foundation of neighbors cooperating with neighbors.

Middle Applegate Watershed Analysis

Watershed Analysis is a procedure used to characterize conditions, processes and functions related to human, aquatic, riparian and terrestrial features within a watershed. Watershed analysis is issue driven. Analysis teams of resource specialists identify and describe ecological processes of greatest concern in a particular “fifth field” watershed, and recommend restoration activities and conditions under which other management activities should occur. Watershed analysis is not a decision making process. Rather, watershed analysis provides information and non-binding recommendations for agencies to establish the context for subsequent planning, project development, regulatory compliance and agency decisions (See Federal Guide for Watershed Analysis 1995 p. 1).

The 1995 Middle Applegate Watershed Analysis followed the six-step process outlined in the *Draft Revised Federal Guide for Watershed Analysis, version 2.1*. The Middle Applegate Watershed Analysis Area encompasses about 83,585 acres within the Applegate River Subbasin. Five subwatersheds make up the Middle Applegate Watershed: Ferris/Slagle, Humbug/Chapman, Forest Creek and Spencer/Rock. Watershed analysis generally focused on existing information available at the time the analysis was conducted. While data gaps were identified for the watershed analysis, information determined to be necessary for completing an analysis of effects for this proposed action was obtained. Data acquired and analysis conducted in association with the development of this proposed action was considered along with information contained in Middle Applegate Watershed Analysis.

The Middle Applegate Watershed Analysis recommends reducing road densities (USDI 1995b, p. 86, 93, and 94), while at the same time, it recommends that BLM maintain and implement reciprocal road right-of-way agreements and manage a transportation system that serves the needs of users (USDI 1995b, p. 84). It is through the NEPA process that issues regarding conflicting uses of resources are resolved to the extent possible through project design, which includes the application of best management practices. The Middle Applegate Watershed Analysis also recommends the development and maintenance of a road closure management plan. The Medford District Geographic Information System maintains a ground transportation layer that tracks information on closed roads across the Medford District.

***Department of Interior, Bureau of Land Management, Western Oregon Districts,
Transportation Management Plan (1996, updated 2002).***

The Western Oregon Districts, Transportation Management Plan, is not a decision document; rather it provides guidance for implementing applicable decisions of the Medford District Resource Management Plan (which incorporated the Northwest Forest Plan). This road management project is consistent with guidance in the Western Oregon Districts Transportation Management Plan.

Applegate River Water Quality Restoration Plan

The Oregon Environmental Quality Commission has adopted numeric and narrative water quality standards to protect designated beneficial uses. In practice, water quality standards have been set at a level to protect the most sensitive uses. Cold-water aquatic life such as salmon and trout are the most sensitive beneficial uses in the Rogue River and its tributaries (ODEQ 2004:5). The Oregon Department of Environmental Quality (DEQ) is required by the federal Clean Water Act (CWA) to maintain a list of stream segments that do not meet water quality standards for one or more beneficial uses. This list is called the 303(d) list because of the section of the CWA that makes the requirement. DEQ's 2004/2006 303(d) list is the most recent listing of these streams (ODEQ 2006a).

The BLM is recognized by Oregon DEQ as a Designated Management Agency for implementing the Clean Water Act on BLM-administered lands in Oregon. The BLM and DEQ have a Memorandum of Agreement (MOA) that defines the process by which the BLM will cooperatively meet State and Federal water quality rules and regulations. In accordance with the MOA, the BLM in cooperation with the Forest Service, DEQ, and the Environmental Protection Agency is implementing the Forest Service and Bureau of Land Management Protocol for Addressing Clean Water Act Section 303(d) Listed Waters (USDA and USDI 1999). Under the Protocol, the BLM will protect and maintain water quality where standards are met or surpassed, and restore water quality limited waterbodies within their jurisdiction to conditions that meet or surpass standards for designated beneficial uses. The BLM would also adhere to the State Antidegradation Policy (OAR 2005; 340-041-0004) under any proposed actions.

The EPA approved the Total Maximum Daily Load (TMDL) and Water Quality Management Plan (WQMP) for the Applegate Subbasin (2004). The Rogue Basin TMDL was issued by Oregon DEQ on December 22, 2008. A Water quality restoration plan (WQRP) for BLM-administered lands in the Applegate Subbasin (2005) was prepared by the BLM and approved by the DEQ. Recovery goals focus on protecting areas where water quality meets standards and avoiding future impairments of these areas, and restoring areas that do not currently meet water quality standards.

G. SCOPING & ISSUES

Scoping is the process the BLM uses to identify issues related to the proposal (40 CFR 1501.7) and determine the extent of environmental analysis necessary for an informed decision. It is used in the NEPA process to identify (1) the issues to be addressed, (2) the depth of the analysis, and (3) potential environmental impacts of the Proposed Action.

Scoping began for the Meriwether Right-of-Way project when notice of the proposed action appeared in the Ashland Resource Area's Schedule of Proposed Actions published in Medford's Messenger (BLM's quarterly newsletter) beginning with the Spring 2010 edition. The Environmental Assessment (EA) was completed on July 26, 2010 and mailed to adjacent landowners and individuals and groups who are maintained on a general mailing list used for notification of projects occurring on the Ashland Resource Area. The comment period closed on August 16th, 2010; one comment letter was received. Additional issues identified from the EA comment period were identified and are incorporated into a list of relevant issues below.

Relevant Issues

An interdisciplinary (ID) team of resource specialists reviewed the proposal and all pertinent information, including public comments received during the EA comment period, and identified the relevant issues listed below. Some issues identified as relevant to this project proposal were analyzed in association with broader level environmental analyses. Where appropriate, this EA will incorporate by reference the analysis from broader level NEPA documents (40 CFR § 1508.28), to be considered along with project specific analysis. The interdisciplinary team identified the following issues (formatted into questions) related to the proposed action:

1. What are the effects of road construction on soil compaction and site productivity?
2. What are the effects of road construction (including full bench construction) on hydrologic flow, including peak flow and low flow?
3. How does new road construction affect road densities already identified as high for the Forest Creek Watershed. The Middle Applegate Watershed Analysis identifies reducing road densities as a high priority.
4. What are the effects of road construction on water quality? There is a potential for increased sediment to be produced as a result of disturbance associated with road construction and log hauling activities.
5. What is the potential for new road construction to increase access for off-highway vehicles (OHVs) potentially increasing impacts to soils, water quality, and aquatic and terrestrial habitat.
6. What is the potential for the effects associated with road construction to contribute to significant cumulative impacts?
7. What are the effects of road construction on aquatic habitat and fish, including threatened and sensitive fish species?
8. What are the effects of road construction on northern spotted owl nesting, roosting, foraging, and dispersal habitat?
9. What are the effects of road construction on terrestrial wildlife species including Bureau Special Status Species and Survey and Manage species?
10. What are the effects of road construction activities on Bureau Special Status and Survey and Manage vascular plants, bryophytes, lichens, and fungi?
11. What is the risk for road construction to introduce and increase the spread of noxious weeds?
12. What are the effects of road construction on forest values? Commenters submitted the article by Trombulack and Frissell (2000) to support their concern for adverse impacts on forest values. Specifically, Trombulack and Frissell (2000) outline seven general effects: mortality from road construction; mortality from collision with vehicles; modification of animal behavior; alteration of the physical environment; alteration of the chemical environment; spread of exotics; and increased use of an area by humans.
13. What is the potential for new road construction to increase fire risk and fire hazard?
14. How does the Meriwether Right-of-Way Project comply with the Aquatic Conservation Strategy Objectives?

CHAPTER 2. THE PROPOSED ACTION AND ALTERNATIVES

A. INTRODUCTION

This chapter describes the Proposed Action Alternative developed by the ID Team to respond to the Purpose and Need statement in Chapter 1. In addition, a “No Action” Alternative is presented to form a base line for analysis. Project design features (PDFs), which apply the Best Management Practices as described in Appendix D of the RMP, are an essential part of the Proposed Action. The PDFs are included as features of the action alternative in the analysis of anticipated environmental impacts.

B. ALTERNATIVES ANALYZED IN DETAIL

Alternative 1 - No Action Alternative

The No-Action Alternative describes a baseline against which the effects of the action alternatives can be compared. This alternative describes the existing conditions and the continuing trends, given the effects of other present actions and reasonably foreseeable actions identified, for the time periods relevant to the resource issues of concern. Under Alternative 1, the No-Action Alternative, the M-660 Road Use Agreement would not be amended and the proposed new road would not be constructed on BLM administered land. This alternative would not respond to the purpose and need identified in Chapter 1 of this EA and established by 43 CFR Subpart 2812. Selection of the No-Action Alternative would cause Meriwether Southern Oregon Land & Timber, LCC to pursue alternate access across adjacent private lands in order to access their land. Decisions concerning access across private land are not within BLMs jurisdiction or decision authority; therefore, exact routes or project design are only estimated and discussed qualitatively.

Alternative 2 – Proposed Action

Under Alternative 2, the Proposed Action, the BLM would authorize the amendment of the M-660 right-of-way and road use agreement held by Meriwether Southern Oregon Land & Timber, LLC. The agreement would allow the applicant to construct a new road off of the 38-3-06 road to access their land located in T. 37 S., R. 3 W., in section 32. The new road would be about 2,225 feet (0.42 mile) in length (Map 2-1). The clearing limits would range from 35 to 50 feet, with about 85 percent of the route at 35 to 40 feet clearing width, and 15 percent at about 50 feet wide. Existing BLM-administered roads 38-3-5 and 38-3-6 would also be added to the agreement, providing legal access from the end of County Road 842 to the start of the proposed new road construction.

Project Design Features are an integral part of the Proposed Action developed to avoid or reduce the potential for adverse impacts to resources. The following project design features would be required as a condition of using the BLM administered road segment and for the new road construction.

Project Design Features

The Project Design Features (PDFs) apply BLM Best Management Practices (BMPs) related to roads (1995 Medford District RMP/ROD, Appendix D, pages 155-164). BMPs are considered the primary mechanisms to achieve Oregon Water Quality standards and are required by the Federal Clean Water Act (as amended by the Water Quality Act of 1987) to reduce nonpoint source pollution to the maximum extent practicable (1995 RMP/ROD, p.151).

The following project design features would be required as a condition of constructing and using the new road as well as existing roads 38-3-5 and 38-3-6 (to the intersection of the new road) on BLM administered land:

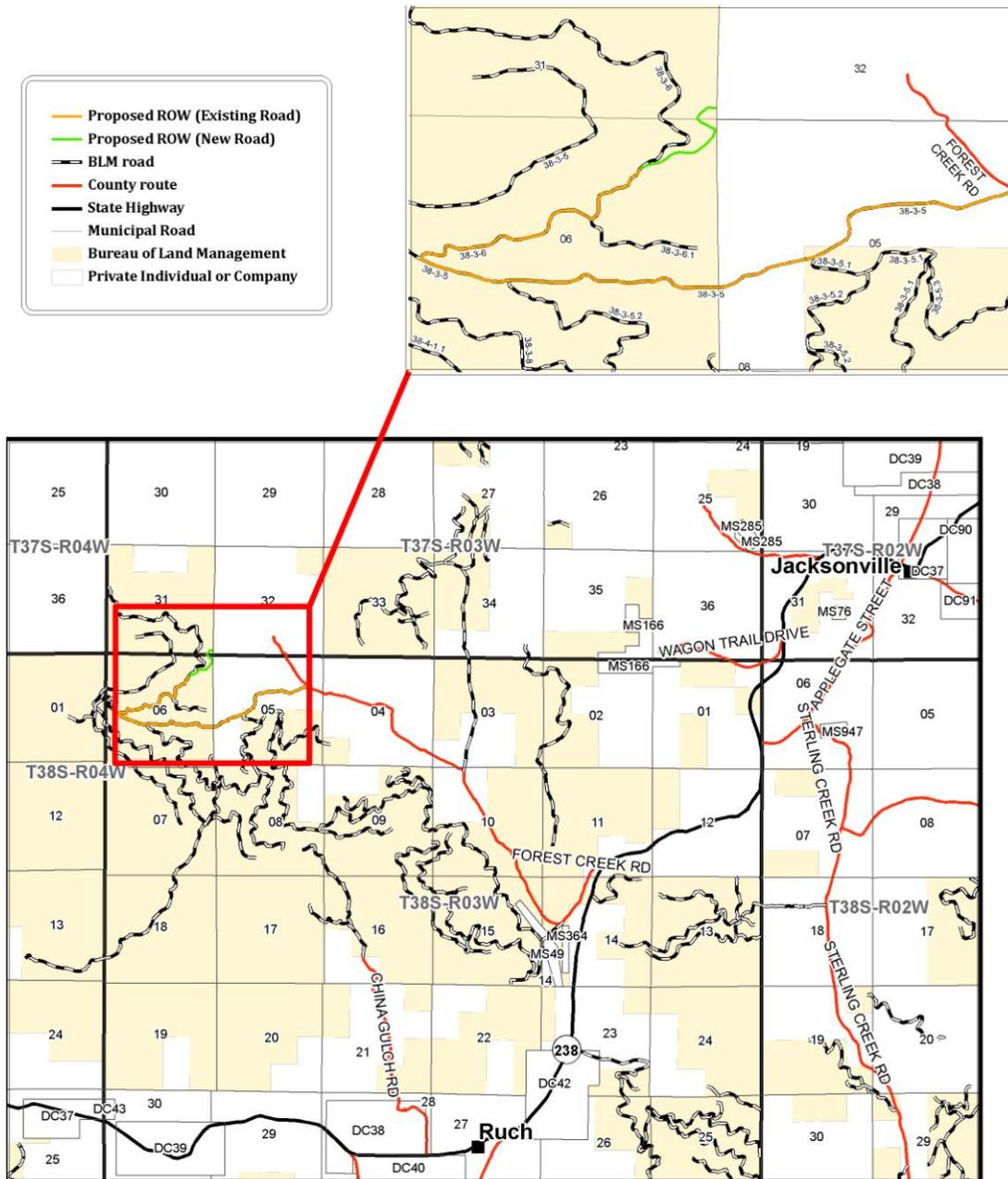
1. Limit road construction and other ground disturbing activities to the dry season, generally from June 1 to October 15. A waiver may be considered for work to begin earlier than June 1 if dry, low flow conditions exist, and with approval from the authorized officer and concurrence from a watershed specialist (hydrologist, soil scientist, or fisheries biologist).
2. All construction activities would be stopped during a rain event of 0.2 inches or more within a 24-hour period or if determined by the administrative officer that resource damage would occur if construction is not halted. If on-site information is inadequate, measurements from the nearest Remote Automated Weather Station would be used. Construction activities would not occur for at least 48 hours after rainfall has stopped and on approval by the BLM.
3. Install at grade a minimum 24 inch cmp with metal end section (MES) at the intermittent channel crossing; design approaches to minimize fill in the channel.
4. Minimize excavation where the proposed road crosses swales.
5. The applicant would be required to use filtering materials such as weed free straw bales, coconut fiber logs/bales, or other erosion control measures, as approved by the BLM, to minimize the movement of sediment downstream from the worksite.
6. Road design and resulting travelway should be out-sloped at 2-4 percent with rolling dips as necessary.
7. Where full bench construction is proposed, excavated material shall be end-hauled and placed in an approved stable location.
8. All fill slopes and other areas of loose fill shall be seeded with an approved seed mix and mulched with weed free material prior to fall rains.
9. For dry weather haul (generally June 1 through October 15), place 6 inches aggregate base or pit run rock for a minimum of 50 feet each side of the intermittent channel crossing; place 6 inches of pit run or fractured rock on the fillslope and travelway where the proposed road crosses swales.
10. For wet weather haul, all roads used for haul will be rocked to a depth specified by BLM road engineers to prevent road damage, road erosion, and off-site movement of sediment.
11. Roads would be maintained as necessary to maintain effective drainage and adequate rock depths for resource protection.
12. Construction of the proposed road right-of-way would not occur between March 1 and June 30 in order to minimize disturbance effects to nesting northern spotted owls. This seasonal restriction may be waived if protocol surveys have determined the activity center is not occupied, owls are non-nesting, or owls failed in their nesting attempt.
13. Snags and downed coarse woody debris will be left undisturbed unless they present a safety hazard. Snags that need to be felled for safety or downed coarse woody material within the road prism will be windrowed along the lower side of road fill slopes to help stabilize freshly disturbed soils and to filter run-off to prevent soil from moving off-site. This woody material would also continue to serve as habitat and refugia for terrestrial mollusks and northern spotted owl prey species.
14. Slash would be windrowed at the base of newly-constructed fill slopes to catch sediment.
15. Dust abatement would be required to stabilize the road surface. All dust abatement application activities would comply with State and Federal laws.
16. Ensure that after use the road is adequately blocked to preclude vehicle traffic (including OHVs). This would include blocking the entrance with a gate, any large boulders (36 inches+) encountered during excavation, or another suitable method such as an earthen berm with logs. Also, consider placing cull or unmerchantable logs along the road length as equipment exits following use. The closure must be effective and maintained over time.
17. To minimize the spread of noxious weeds:
 - Vehicle and equipment use off existing roads in the project area would be limited to the dry season;
 - Wash logging and construction equipment, including undercarriages, before initial move-in and prior to all subsequent move-ins into the Project Area to remove soil and plant parts and prevent the spread of invasive and noxious weeds. Washing equipment prior to entry onto BLM lands may be accomplished by use of a pressure hose. Washing shall be

defined as removal of dirt, grease, plant parts, and material that may carry noxious weed seeds and parts onto BLM lands.

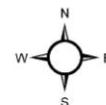
- Seeding of native grasses and/or an approved seed mix on highly disturbed soil (e.g., cut and fill slopes, etc.) would occur;
- The BLM would treat any noxious weed populations found in the project area prior to ground disturbing activity with subsequent treatments occurring as necessary and as funding is available.

18. Implementation monitoring would occur to determine if the proposed action was implemented as planned.

Map 2-1. Proposed Action



No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed through digital means and may be updated without notification.



C. ALTERNATIVES AND ACTIONS CONSIDERED BUT NOT ANALYZED IN DETAIL

Original route proposed across BLM-administered land: Initially, the applicant proposed to construct a road off of road 36-3-6, approximately 913 feet in length, across BLM-administered land in T. 37 S., R. 3 W., in the southeastern portion of Section 31 (Fig. 2-1).

Rationale for eliminating from detailed analysis: While this was a shorter and more direct route, it was eliminated from detailed study as it was overly steep and passed through the middle of a 100-acre northern spotted owl core (100-acre Late-successional Reserve under the 1995 RMP). Therefore, an alternate route was proposed (and analyzed under the proposed action) that would reduce the percent road grade (road steepness) and would substantially reduce the amount of area affected in the 100-acre owl core/Late-successional Reserve (LSR).

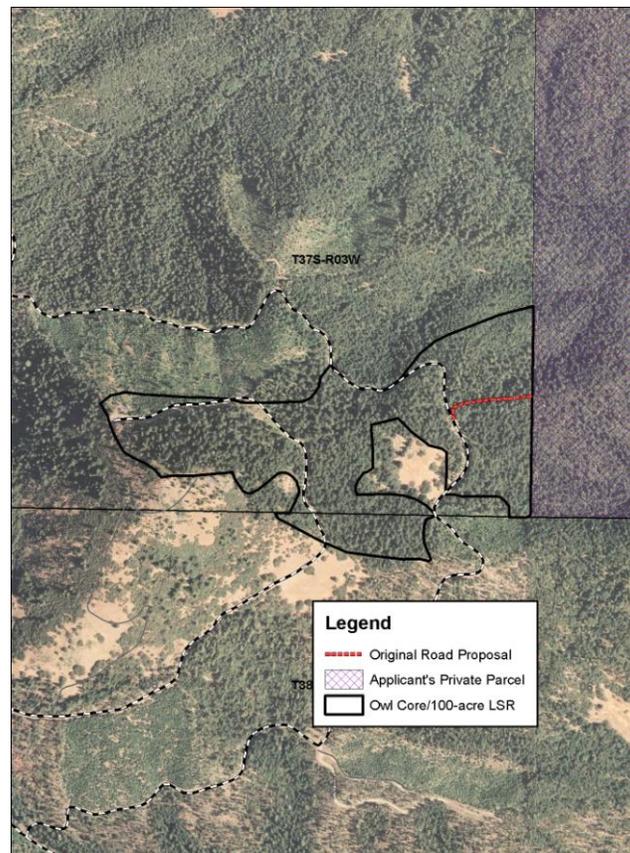


Figure 2-1. Proposed Road Location No 1- Eliminated from Detailed Study.

Alternate route across BLM-administered land: In response to public comment, the BLM requested the project proponent to explore a route that would avoid entering the 100-acre owl core/Late-Successional Reserve altogether. Meriwether Southern Oregon Land & Timber, LLC submitted a third route that would be constructed off of the 38-3-06 road, and contour along the slope on BLM-administered land for about 3,496 feet, and would then drop down slope crossing adjoining private land in T. 38 S, R. 3 W., Section 5 before entering the Meriwether property in the southwest corner of section 32 (T. 37 S., R. 3 W.). This route would require an additional 1,271 feet of road construction and two additional riparian crossings and culvert installations. Dropping down to avoid the 100-acre owl core/LSR would also involve steeper road grades and the approval from a second private land owner to cross their privately-owned land.

Rationale for eliminating from detailed analysis: The BLM chose not to analyze this alternative in detail as it would increase road density over the current proposal (an issue also voiced by commenters) and

would involve increased environmental effects in the way of an increased risk of sedimentation associated with two additional riparian crossings and culvert installations. Agencies are not required to analyze alternatives in detail that would involve greater environmental effects. This alternative would not have responded to public comments requesting that BLM reduce road densities in accord with recommendations of the Middle Applegate Watershed Analysis.

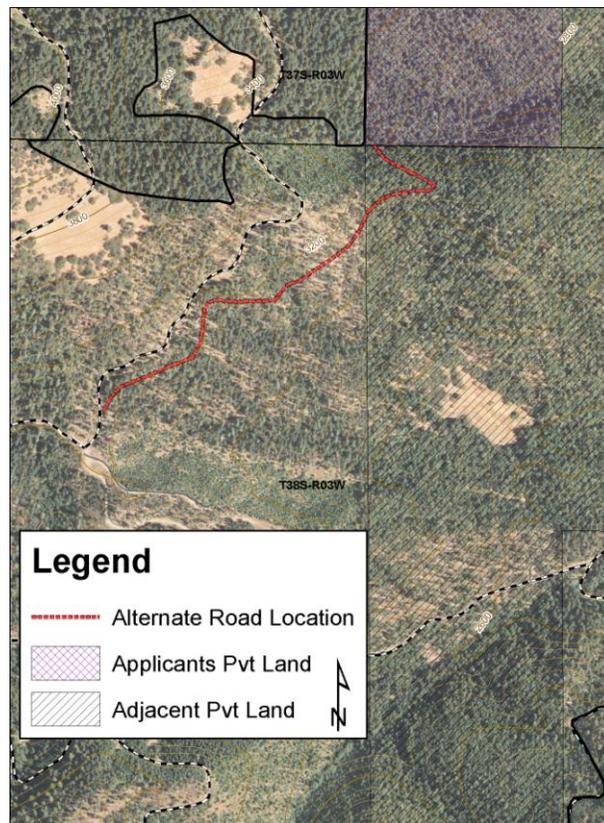


Figure 2-1. Proposed Road Location No 3- Eliminated from Detailed Study

Helicopter yarding: This alternative would analyze an option using helicopter yarding to move the logs to a landing location and would not have required the construction and use of the proposed new road.

Rationale for eliminating from detailed analysis: This option would not have responded to the purpose and need, which is to respond to the applicant's request to amend the M-660 road right-of-way and road use agreement to provide for road access to their private land, therefore, this option was not analyzed in detail.

Alternate route across private land: There is limited road access to the private land parcel via an existing road that enters the lower elevations of the property from private land to the north and east of the Meriwether Southern Oregon Land & Timber parcel.

Rationale for eliminating from detailed analysis: Alternate road access across private land would not involve BLM-administered lands, and is therefore outside of BLMs jurisdiction and decision authority.

Temporary Road Construction: This alternative would involve the construction of a temporary road to access the applicant's private land. The road would then be obliterated following completion of harvest activities.

Rationale for eliminating from detailed analysis: temporary road construction would not lessen or eliminate the potential resource impacts that would result from road construction and temporary access would not meet the applicant's need for permanent access to provide for the long-term management of their private land parcel. The construction of temporary road access at this time would mean that future access needs would require periodic construction of about 2,224 feet of road. Periodic road construction would result in more impacts to the environment than would the original proposal for permanent road construction with limited access (i.e., the proposed road would be closed by barricading or gating when not in use).

Narrower Road Clearing Widths: This alternative involves constructing a road with a narrower road clearing width to reduce habitat fragmentation impacts.

Rationale for eliminating from detailed analysis: Reducing the road clearing width does not offer an alternative that is significantly different than the Proposed Action. However, the road would be designed to minimize the clearing width (estimated to be 35 to 50 feet) while taking into consideration site-specific location conditions and Occupational Safety and Health Administration (OSHA) requirements.

A. INTRODUCTION

This chapter forms the scientific and analytical comparison of alternatives. The Affected Environment describes the existing conditions of the project area and associated analysis areas, and sets the environmental baseline for comparing the effects of the alternatives, including the No-Action Alternative. The affected environment is described to the level of detail needed to determine the significance of impacts to the environment of implementing the Proposed Action.

The Environmental Consequences portion of this chapter provides the analytical basis for the comparisons of the alternatives (40 CFR § 1502.16) and the reasonably foreseeable environmental consequences to the human environment that each alternative would have on the relevant resources. Impacts can be beneficial, neutral or detrimental. This analysis considers the direct impacts (effects caused by the action and occurring at the same place and time), indirect impacts (effects caused by the action but occurring later in time and farther removed in distance but are reasonably foreseeable) and cumulative impacts (effects caused by the action when added to other past, present and reasonably foreseeable future actions). The temporal and spatial scales used in this analysis vary depending on the resource addressed.

As the Council on Environmental Quality (CEQ), in guidance issued on June 24, 2005, points out, the “environmental analysis required under NEPA is forward-looking,” and review of past actions is required only “to the extent that this review informs agency decision-making regarding the proposed action.” Use of information on the effects on past action may be useful in two ways according to the CEQ guidance. One is for consideration of the proposed action’s cumulative effects, and secondly as a basis for identifying the proposed action’s direct and indirect effects.

The CEQ stated in this guidance that “[g]enerally, agencies can conduct an adequate cumulative effects analysis by focusing on the current aggregate effects of past actions without delving into the historical details of individual past actions.” This is because a description of the current state of the environment inherently includes the effects of past actions. The CEQ guidance specifies that the “CEQ regulations do not require the consideration of the individual effects of all past actions to determine the present effects of past actions.” The importance of “past actions” is to set the context for understanding the incremental effects of the proposed action. This context is determined by combining the current conditions with available information on the expected effects of other present and reasonably foreseeable future actions.

B. WATER RESOURCES

Affected Environment

The proposed road is located within the Forest Creek Subwatershed, which is considered a 6th field hydrologic unit code (HUC). Forest Creek is a tributary of the Applegate River. Both watercourses are listed (303d) as impaired for dissolved oxygen and a TMDL has been developed for the Applegate River for summer temperatures. The analysis area for this proposal is Forest Creek above Forest Creek Right Fork. It is a 7th field HUC and referred to as drainage. The analysis area is approximately 4,924 acres, of which 53 percent, or 2,634 acres is managed by the BLM. The remainder is in private ownership. The runoff pattern is rain dominated and produces peak flows that generally occur during high rainfall after soils are saturated. There are approximately 74 miles of all stream types within the analysis area, with 36.7 miles located on BLM managed land.

Forest Creek is located within the Timber Mountain Off-highway-Vehicle (OHV) Recreation Management Area. Off-highway-vehicle use is the dominant form of recreation and there is a network of roads and trails, some of which are user created, and many are not maintained. This has likely contributed to observed elevated levels of sediment and degraded aquatic conditions along many stream

reaches. Road and trail density is used for this analysis as an indicator of watershed disturbance. Unsurfaced roads are frequently the largest source of sediment in forested, mountainous terrain. This is likely the case within the analysis area. It is important to note that not all roads affect the landscape in a similar manner. For example, flat ridgetop roads are much less likely to contribute sediment and increased runoff than roads within the riparian reserve. Road density in miles per square mile within the analysis area is 5.2, with an additional OHV trail density of 1.2. The total road and trail density is 6.4, which is considered high and confirms that the analysis area may be at a greater risk for increases in sediment and peakflows.

The topography along the proposed road alignment is generally steep, ranging between 40-70 percent, and can be characterized as midslope between Forest Creek and the ridgetop. Because of the steep sideslopes, delivery potential of disturbed soil to high gradient stream courses below the road, and eventually Forest Creek, is considered high. The proposed road crosses one long duration intermittent stream and several swales. There is little evidence of annual scour on the stream; however, stream surveys indicate that perennial water exists both above and below the crossing. At a minimum this could indicate a high groundwater table in the vicinity of the crossing. However, there was no riparian vegetation noted along the proposed alignment that would indicate high groundwater and the potential of altering that flow during road construction.

Environmental Consequences

Alternative 1 - No Action

Because no new road construction is proposed under this alternative, the effects described reflect current conditions and trends that are shaped by ongoing management and events unrelated to the proposed action. All current conditions and trends would continue as specified in affected environment. Namely, high road densities and continued OHV use would continue to deliver water and sediment to streams. Likewise, in certain stream reaches channel processes would maintain poor aquatic habitat conditions due to increases in fine sediment. If the no-action alternative were to be selected, Meriwether Southern Oregon Land & Timber, LLC would likely pursue road access across adjacent private lands. However, the exact route location and road design is not known. It is reasonable to assume alternate routes would increase road densities in the analysis area similar to road densities estimated under the proposed action. The most likely route would be from the east, northeast, which would involve crossing Forest Creek and would have a greater risk of sedimentation to Forest Creek.

Alternative 2 - Proposed Action

The primary water quality concerns associated with this proposal are delivery of sediment to watercourses during and shortly after road construction activities and more long term impacts resulting from wet season use and potential future road failures. Wet season road use can cause road damage and generate turbid runoff and increase stream sedimentation. These effects are particularly acute when the road is unsurfaced. Road failures can occur as a result from slope instability caused by excavation, groundwater interception, saturated fill-slopes, or culvert failure. In addition, excavation through swales can result in shallow groundwater flow being altered

The secondary effects are primarily related to the potential for increased off-highway vehicle use (OHV). The proposed road is located within the Timber Mountain Off-highway Vehicle (OHV) EIS planning area. OHV use in the area is resulting in instances of resource damage, and this use is likely to continue and possibly increase over time. Adding to the existing road network will elevate the potential for use of the newly constructed road and the likelihood of establishment of unauthorized connector routes. If this occurs, the result is the potential for long-term increases in sediment delivered to streams.

Although the proposed action has the potential to adversely affect water resources, the required project design features (see Chapter 2, Alternative 2, Project Design Features) would be effective in minimizing

the potential for fill slope failures and delivery of sediment to stream networks. Specifically, the road would be designed to be out-sloped at 2-4% with rolling dips; excavation would be minimized where the proposed road crosses swales; channel approaches would be designed to minimize fill in the intermittent channel; approaches to the intermittent channel would be rocked for a distance of 50 feet either side of the channel (the entire road would be rocked if wet weather use is planned); where full bench construction is proposed, excavated material would be end-hauled and placed in an approved stable location; slash would be windrowed at the base of newly-constructed fill slopes to catch sediment; all fill-slopes and other areas of loose fill shall be seeded with an approved seed mix and mulched with weed free material prior to fall rains; road construction would only occur during the dry months; road maintenance should occur as necessary to maintain effective drainage. Correct implementation of these measures would, under most circumstances, minimize additional adverse effects, thus avoiding significant impacts, and would ensure compliance with all applicable statutes and management direction, including recommendations contained within the Water Quality Restoration Plan for the Applegate Sub-basin (2005, pp. 46-49).

As previously discussed, the effects related to the proposed action involve those associated with new road construction and wet season use. Within the Forest Creek subwatershed, there are numerous factors influencing water quality and aquatic habitat including: residential development, timber harvest, high road and trail densities, OHV use, and agriculture. Poor aquatic conditions, including elevated stream temperatures are partially the result of these and are likely synergistic, particularly within lower Forest Creek. The unit of measure used to assess potential cumulative effects for this analysis is road density and openings within the transient snow zone. The proposed action would increase road density within the analysis area from 6.4 to 6.5 miles per square mile. This small increase (0.10 percent) is not expected to adversely affect concentration or timing of peak flows. Consequently, the small reduction in canopy cover (2.0 acres or 0.04 percent) occurring outside the transient snow zone would also not increase potential for altering peak flows. The project is located entirely within the rain-dominated zone. Watersheds located in the rain-dominated zone are less sensitive to peak flow changes than those in the transient snow zone (Grant, et al., 2008). Stream temperatures will remain unaffected since no perennial or long-duration intermittent streams will be affected. Consequently, other related parameters such as dissolved oxygen will remain unaffected. Other actions, such as increased harvest on private lands may affect canopy cover over time, but the extent and timing is uncertain. In summary, this project does not appreciably alter the indicators for assessing cumulative watershed effects contained within the RMP of road density and increasing openings in the transient snow zone. Therefore, no additional cumulative watershed effects are anticipated as a result of project implementation.

C. SOIL RESOURCES

The dominant soils series identified in the proposed road alignment are Offenbacher and Vannoy. The Offenbacher soil is moderately deep and well drained. It formed in colluvium derived dominantly from metamorphic rock. Typically, the surface is covered with a layer of needles, leaves, and twigs about one inch thick. The surface layer is dark grayish brown and dark brown gravelly loam about nine inches thick. The subsoil is reddish brown and yellowish red loam about 25 inches thick. Bedrock is at a depth of about 34 inches. The depth to bedrock ranges from 20 to 40 inches. Permeability of this soil is moderate. Runoff is rapid, and the water erosion potential is high particularly on slopes over 60 percent. In some areas the surface layer is very gravelly loam or is stony.

The Vannoy soil is moderately deep, well drained on hillslopes. It formed in colluvium derived dominantly from metamorphic rock. Typically, the surface is covered with a layer of needles, leaves, and twigs about $\frac{3}{4}$ inch thick. The surface layer is dark brown silt loam about 4 inches thick. The next layer is reddish brown silt loam about 7 inches thick. The subsoil is yellowish red clay loam about 27 inches thick. Weathered bedrock is at a depth of about 38 inches. Permeability of the Vannoy soil is moderately slow. The depth to bedrock ranges from 20 to 40 inches. In some areas the surface layer is gravelly or very gravelly loam. Runoff is medium and the potential for water erosion is moderate on slopes less than 35 percent. On slopes over 35 percent, runoff is rapid and the water erosion potential is high.

It is estimated that the natural erosion rates for soils in the Applegate geomorphological erosion response unit (GERU) is approximately 0.7 yd³/ac/yr. (Amaranthus, 1985. p. 230). The existing conditions of the 38-3-5 and 38-3-06 roads in the area of proposed construction are stable and well drained. The road from which the new construction will originate is surfaced and behind a seasonally locked gate. There is no off-road OHV traffic in the immediate area of the proposed construction, but there is OHV use associated with Timber Mountain OHV riding area on existing roads and trails nearby. OHV traffic may be of concern in the future.

Alternative 1 – No Action

There would be no direct or indirect effects to the soil resource as a result of BLM's Proposed Meriwether Right-of-Way Project.

However, if the no-action alternative were to be selected, Meriwether Southern Oregon Land & Timber, LLC would likely pursue road access across adjacent private lands. The exact road location and design is not known. Although, the most likely route would be from the east, northeast, which would involve the use of existing roads and some new road construction (estimated to be less than 0.5 mile) to reach Meriwether property. This route would likely involve constructing a road across Forest Creek. The BLM assumes alternate routes would increase road densities similar to what is estimated under the proposed action, although no new roads would be constructed on BLM-administered land. Approximately four (4) acres of land is disturbed and taken out of vegetation production for every one mile of road proposed.

Alternative 2 - Proposed Action

The effects to soils as a result of the proposed action are associated with proposed new road construction. Road construction affects soils by disturbing the soil surface, increasing surface erosion, and concentrating runoff. Road building would result in moderately high erosion rates locally as approximately 2.0 acres of land would be disturbed from the proposed new road construction. In this geomorphological erosion response unit, areas where roads and landings were constructed on steep unstable slopes, it was estimated that erosion rates were about 7.28 yd³/ac/yr. (Amaranthus, 1985. p.232). The increase in erosion would be most noticeable the first few substantial rainfall events after construction and would return to near pre-construction levels within the next three to five years as the cut and fill slopes stabilize and ground cover is re-established on the disturbed area. Required erosion control measures such as out-sloping roads to disperse water, seeding and mulching fill slopes, and windrowing slash and large woody debris along the foot of fill slopes would help to reduce soil erosion.

New road construction would also have an impact on the soil productivity. Approximately four (4) acres of land is disturbed and taken out of vegetation production for every one mile of road proposed. The 0.4 mile of total new construction would take approximately 2.0 acres of land out of production. There would be a very slight increase in percent (<1%) of the watershed affected by roads and trails. The effect of new road construction on site productivity at the watershed scale would be minor and insignificant.

Proposed new road construction increases the potential for off-highway vehicle use (OHV) in an area previously undisturbed by OHV use. This could also increase the potential for the establishment of additional unauthorized OHV routes. The two main effects of OHV use on the soil resource are increased erosion and compaction. The effect from increased soil erosion and compaction is a loss in soil productivity and increased sedimentation to local waterways. A Project Design Feature would require the applicant to close the road when not in use. The closure design (gate, barricade, etc) is required to be adequate for preventing OHV use on the newly constructed road.

D. FISH

Affected Environment

The project area is located in the Middle Applegate River fifth-field watershed, specifically near a short duration intermittent tributary to the Forest Creek subwatershed. The nearest fish populations from the project area occur over one mile downstream, in the Left Fork of Forest Creek, where resident cutthroat trout have been documented. Anadromous fish species, such as steelhead trout and listed “threatened” Southern Oregon Northern California Coasts coho salmon currently are present much further downstream (4 miles from the project area) due to non-natural physical obstructions, which have precluded these species from utilizing upstream habitats. Historical distribution of these species is not known, but given habitat characteristics common to both the Left and Right Forks (e.g. low gradient, lack of natural barriers, stream size), it is likely that both steelhead and coho could and would have historically utilized lower portions of both of the forks of Forest Creek. For the purpose of this analysis, Coho Critical Habitat (CCH) will be assumed to include the known fish bearing reaches in the subwatershed, including the Left Fork of Forest Creek downstream of the proposed new road. This is likely an overestimation of the historical range of coho, as cutthroat trout typically occur farther upstream than anadromous fish.

Aquatic habitat, particularly in the lower elevation fish bearing stream reaches, has been impacted by a suit of past and ongoing activities, most notably among them mining, extensive road and OHV trail construction, timber harvest, and streamside lands converted to agricultural and residential use. The effects of these activities to aquatic habitat include: straightened and incised stream channels, and formation of non-natural migration barriers, which has resulted in loss of suitable spawning and rearing habitat; loss of stream side shade in some areas, which results in higher stream water temperatures; and accelerated erosion both in channels and across the landscape, which has led to increased inputs of fine sediment and turbidity.

Environmental Consequences

Alternative 1 – No Action

Under the No-Action Alternative, the proposed road would not be constructed on BLM-administered lands; therefore, there would be no-effect to fish and aquatic habitat as a result of this federal action. Aquatic habitat would continue to be impacted both by the legacy of past actions (for example, loss of habitat resulting from anthropogenic barriers and channel modifications) and continuing chronic inputs of sediment and turbidity, resulting primarily from an extensive road and OHV trail network.

If the no-action alternative were to be selected, Meriwether Southern Oregon Land & Timber, LLC would likely pursue road access across adjacent private lands. The exact road location and design is not known. Although, the most likely route would be from the east, northeast, which would involve the use of existing roads and some new road construction (estimated to be less than 0.5 mile) to reach Meriwether property. This route would likely involve road improvement in close proximity to Forest Creek and constructing a road across Forest Creek. The BLM assumes alternate routes would increase road densities similar to what is estimated under the proposed action, although no new roads would be constructed on BLM-administered land. As described above, BLMs Fish Biologist determined Forest Creek to be coho critical habitat; this route would have an increased risk of sedimentation to Forest Creek due to the close proximity of ground disturbing activities.

Alternative 2 – Proposed Action

The proposed action could potentially impact aquatic habitats as a result of new road construction and wet weather hauling. The proposed new road construction would cross one midslope intermittent stream channel and would be hydrologically connected to the stream continuum. Roads with hydrologic

connectivity have the ability to directly input sediment into aquatic habitats. The proposed new road construction would also require the removal of existing vegetation where the proposed road intersects the Riparian Reserve on BLM lands. However, stream temperatures would not be adversely affected, as the stream in the project area is intermittent and dry during the summer months. Because this road would be hydrologically connected to the stream continuum, it would have a high potential to contribute sediment to aquatic habitats in the Forest Creek subwatershed.

The primary mechanisms by which the new road construction may impact water quality and aquatic habitat is the potential for it to disrupt natural flow paths by intercepting, concentrating, and routing flow down the road prism. Intercepted water could be transported down the road causing erosion and rutting. Eroded particulates (sediment) from the road could potentially be transported to aquatic habitat in the intermittent channel. During high flow events, this sediment could be mobilized, potentially affecting aquatic habitats in the Forest Creek subwatershed.

The road would be constructed during the dry season, when the intermittent stream would be dry. This would ensure that construction of the road would not directly contribute sediment to aquatic habitats. Indirectly, intercepted water could be transported down the road causing erosion and rutting. However, the potential for rutting would be limited, as the road would be out-sloped with rolling water dips to disperse water, and the surface is proposed to be rocked. Maintenance of the rock surface would protect the subgrade of the road from erosion via routed flow. Erosion of the road surface resulting from use of the road (log haul), could result in eroded particulates (sediment) from the road being transported to aquatic habitat in the intermittent channel. Use of the road during the wet season would increase the potential for erosion and transport of sediment, though as the surface would be rocked, it would be much more resistant to erosion than a native surfaced road.

Project Design Features, including those outlined in the soil and water resources section of this document, would serve to greatly reduce the erosive and transport potential resulting from the proposed road construction and haul. Disturbed soils, both on the fill slopes and in the vicinity of the channel crossing itself, would be mulched and seeded and have a period to stabilize before the onset of wet weather (usually mid to late fall), increasing their resistance to erosion. Outslope construction of the road prism, coupled with installation of rolling water dips, would allow the road along the majority of its length to shed the majority of intercepted water and eroded and mobilized fine sediment to downslope vegetated areas, where it would be filtered and trapped long before reaching aquatic habitats. Any water/sediment not diverted off the road prior to the crossing would encounter the armored approaches to the channel crossing. These armored approaches increase the road's resistance to rutting, but would not necessarily preclude the transport of small quantities of sediment from being input into the channel. If the road is to be used during wet weather, the entire length of the road would rocked to BLM specifications. The rock surfacing would enable the road to be much more resistant to erosion, and when combined with the out-sloped design of the road, would greatly limit the potential for road rutting and sediment transport to channels that would result from haul.

In the event that sediment mobilized from the new road were to be transported to the intermittent stream, it would be unlikely to measurably affect fish habitat located downslope/downstream from the project area. The intermittent channel below the proposed road crossing has a large amount of vegetative debris present within the channel. As such, mobilized sediment released to this channel during typical flow events would have a high probability of being stored by this debris, and then subsequently slowly released downstream over time in the intermittent channel. In such a scenario, inputs to fish habitat would be so small as to be immeasurable. In the event of a large flood event, displaced sediment could become entrained as a brief pulse of elevated turbidity, which would not be detectable or meaningful to fish habitat beyond background turbidity levels anticipated to occur during such an event from other sources.

Use of other project area roads for hauling, especially during the wet season, increases the likelihood that the surface will be broken down to fine sediment, and subsequently routed down the roads/ditches. Adequate rock surfacing would be maintained appropriate to the season of use for all roads used for

hauling. BLM road 38-3-5 parallels Oregon Belle Creek from county road 842 to the intersection of BLM road 38-3-6. The 38-3-5 road is chip sealed and use of this road would not increase the potential for sediment delivery to aquatic habitat. BLM road 38-3-6 is rocked. This particular road is located near the top of the ridge, has limited hydrological connectivity (only 2 intermittent channel crossings), and a gentle grade. The road bed is in good condition, and does not exhibit signs of excessive erosion (i.e. no ruts or other signs of water being routed down the road). As such, use of these two road segments for haul would have minimal potential to contribute sediment to aquatic habitats.

In sum, though this new road construction and haul would yield a slight increase in road density and an additional disturbance in an already disturbed watershed, this perturbation would be relatively small and inconsequential to aquatic habitat in the intermittent stream and would not add a measurable or meaningful effect to fish or fish habitat in the Forest Creek subwatershed. As such, authorizing construction of this road and associated hauling activities would have no effect to coho salmon located four miles downstream from the project location, or designated CCH in lower stream reaches.

E. CONSISTENCY WITH THE AQUATIC CONSERVATION STRATEGY

The Northwest Forest Plan's (NWFP) Aquatic Conservation Strategy (ACS) has four components: Riparian Reserves, Key Watersheds, Watershed Analysis, and Watershed Restoration. It is guided by nine objectives which are used to assess agency actions and their effects to ecological processes at the 5th-field hydrologic scale, or watershed, at the 6th and or 7th fields (subwatershed and or drainage), and at the site level. In this case, the intermittent stream is tributary to a small 7th field drainage in the Forest Creek 6th field (subwatershed) within the larger Middle Applegate River 5th field Watershed. How the four components of ACS relate to the road construction is explained below:

1. Riparian Reserves: Riparian Reserve widths for streams, springs, wetlands, and unstable soils have been determined according to the protocol outlined in the NWFPs ACS. As an intermittent stream, the Riparian Reserve involved in this project is one site potential tree, or 160 feet slope distance as measured from either side of the channel edge.
2. Key Watersheds: Tier 1 Key Watersheds contribute directly to conservation of at-risk anadromous salmonids, bull trout, and resident fish species. They also have a high potential of being restored as part of a watershed restoration program. The Middle Applegate River Watershed is not a designated Key Watershed.
3. Watershed Analysis: BLM completed the Middle Applegate River Watershed Analysis in 1995. The analysis covers the planning area.
4. Watershed Restoration: Most of the restoration activities in the watershed have focused on restoring and facilitating fish passage to provide better access to habitat on private and federal lands. Projects by the local watershed council, ODFW and/or BLM include culvert removal and replacement, road and OHV trail decommissioning, and irrigation ditch fish screens and siphoning.

Evaluation of This Action's Consistency with Northwest Forest Plan Aquatic Conservation Strategy Objectives:

1. **Maintain and restore the distribution, diversity, and complexity of watershed and landscape-scale features to ensure protection of the aquatic systems to which species, populations and communities are uniquely adapted.**

Though a disturbance at the site scale, the new road construction would be too minor to appreciably affect landscape-scale features, and would not impact the distribution, diversity, or complexity of these features.

2. Maintain and restore spatial and temporal connectivity within and between watersheds. Lateral, longitudinal, and drainage network connections include floodplains, wetlands, upslope areas, headwater tributaries, and intact refugia. These network connections must provide chemically and physically unobstructed routes to areas critical for fulfilling life history requirements of aquatic and riparian-dependent species.

Because spatial connectivity at the site-level would be maintained by installing a properly sized culvert at the one channel crossing, placing the culvert at grade, and minimizing the fill in the channel, connectivity would not be affected at the drainage or watershed scale.

3. Maintain and restore the physical integrity of the aquatic system, including shorelines, banks, and bottom configurations.

The physical integrity of the intermittent channel would be disturbed at the site-level, as the shorelines, banks, and stream bottom of about 15 feet of the channel would be converted from a natural state to a culvert to allow for passage of water downstream of the road crossing. The potential for effects to the physical integrity of the aquatic system beyond the site scale would be from decreasing channel stability or increasing sedimentation to the channel. Project design features are included to minimize the potential for these effects to occur due to construction of the channel crossing, they include: installing a properly sized culvert at the one channel crossing; placing the culvert at grade; minimizing the fill in the channel; rocking the approaches to the channel to minimize the potential for erosion of the road surface and sedimentation to the stream; construction would only occur during the dry period (June-October 15); approved erosion control measures would be required to filter sediment below the worksite; and fill slopes would be seeded and mulched to stabilize soils prior to fall rains. The project is designed to ensure that the physical integrity of aquatic systems is maintained at the drainage and watershed scale. Also refer to ACS Objective 4, below.

4. Maintain and restore water quality necessary to support healthy riparian, aquatic and wetland ecosystems. Water quality must remain within the range that maintains the biological, physical, and chemical integrity of the system and benefits survival, growth, reproduction, and migration of individuals composing aquatic and riparian communities.

There is potential for this project to input fine sediment to aquatic habitat in the intermittent channel downstream of the proposed road crossing. Sediment inputs would typically occur as small pulses that would slowly migrate downstream and be assimilated into background conditions, or in the event of a large flood, a brief flush could entrain sediment in the nature of elevated turbidity. In any case, inputs would not exceed the range necessary to maintain biological, physical, or chemical integrity of the aquatic system. Any additional inputs of sediment resulting from this road would only be measurable at the site level, and would not meaningfully impact this objective at the larger spatial scales.

5. Maintain and restore the sediment regime under which aquatic ecosystems evolved. Elements of the sediment regime include the timing, volume, rate, and character of sediment input, storage, and transport.

See objective #4. Minute site level sediment inputs would not compromise further the sediment regime of the aquatic ecosystems within the Forest Creek subwatershed or larger 5th field Middle Applegate Watershed.

6. Maintain and restore instream flows sufficient to create and sustain riparian, aquatic, and wetland habitats and to retain patterns of sediment, nutrient, and wood routing. The timing, magnitude, duration, and spatial distribution of peak, high, and low flows must be protected.

The small increase (0.10 percent) in road density is not expected to adversely affect concentration or timing of peak flows. The small reduction in canopy cover (2.0 acres or 0.04 percent) occurring outside the transient snow zone would also not increase potential for altering peak flows. Instream flows would not be measurably affected at any spatial scale by this project (see Water Resources above).

7. Maintain and restore the timing, variability, and duration of floodplain inundation and water table elevation in meadows and wetlands.

No meadows or wetlands exist in the vicinity of the proposed road. No causal mechanism exists between any element of the proposed road construction and this objective. It would not be affected at any spatial scale. See objective 6 also.

8. Maintain and restore the species composition and structural diversity of plant communities in riparian areas and wetlands to provide adequate summer and winter thermal regulation, nutrient filtering, appropriate rates of surface erosion, bank erosion, and channel migration and to supply amounts and distributions of coarse woody debris sufficient to sustain physical complexity and stability.

No wetlands exist in the project area. Though some vegetation would be removed from the riparian area of an intermittent stream channel to accommodate the construction of the road, the species composition and structural diversity of the plant community beyond the road-stream crossing would not be compromised due to the small area disturbed (<0.1 acre) within a riparian area. Surveys for special status and 2001 Survey and Manage vascular and non-vascular plants were conducted and none were found. Project design feature would be required to minimize erosion potential, they include: minimizing the fill in the channel; rocking the approaches to the channel to minimize the potential for erosion of the road surface and sedimentation to the stream; construction would only occur during the dry period (June-October 15); approved erosion control measures would be required to filter sediment below the worksite; and fill slopes would be seeded and mulched.

9. Maintain and restore habitat to support well-distributed populations of native plant, invertebrate, and vertebrate riparian-dependent species.

See objectives # 4, 5, and 8. Site level inputs of sediment would be of too small a magnitude to measurably degrade aquatic habitat. Small site scale disturbance of riparian vegetation would not affect plant communities beyond the site scale.

E. TERRESTRIAL WILDLIFE

Affected Environment

The potential for effects to wildlife is primarily associated with the proposed new road construction. Plant associations along the proposed road alignment are diverse and include a mosaic of white oak woodland, hardwood stands dominated by madrone and oak, shrubland and early, mid, and mature conifer stands. The primary tree species in the project area are Douglas-fir, ponderosa pine, madrone and white oak. Shrub species include manzanita, deerbrush ceanothus, wedgeleaf ceanothus. Hardwood tree species in riparian areas include willow, ash and maple. This assortment of vegetations types provides for a wide array of wildlife species habitats and needs.

The following Bureau Special Status species, Survey and Manage species, and Game Birds Below Desired Condition and Birds of Conservation Concern species are known or suspected to occur in the proposed project area (see Table 3-1). Species determined to have a very low likelihood of occurring in the project area or whose presence would be considered accidental, were not included in this analysis.

Table 3-1. Bureau Species of Concern Known or Suspected to Occur

Species	Bureau Status	Occurrence
northern spotted owl (<i>Strix occidentalis caurina</i>)	FT	Known
great gray owl (<i>strix nebulosa</i>)	SM	Suspected
flamulated owl (<i>Otus flammeolus</i>)	BCC	Suspected
olive-sided flycatcher (<i>Contopus cooperi</i>)	BCC	Known
rufus hummingbird (<i>Selasphorus rufus</i>)	BCC	Known
band-tailed pigeon (<i>Patagioenas fasciata</i>)	GBBDC	Known
mourning dove (<i>Zenaida macroura</i>)	GBBDC	Known
purple finch (<i>Carpodacus purpureus</i>)	BCC	Suspected
red tree vole (<i>Arborimus longicaudus</i>)	SM	Suspected
fringed myotis (<i>Myotis thysanodes</i>)	SEN	Suspected
Townsend's big-eared bat (<i>Corynorhinus townsendi</i>)	SEN	Suspected
pallid bat (<i>Antrozous palidus</i>)	SEN	Suspected
chase sideband (<i>Monadenia chaceana</i>)	SEN/SM	Suspected
traveling sideband (<i>Monadenia fidelis celeuthia</i>)	SEN	Suspected
FT= Federally threatened under the Endangered Species Act SM= Survey and Manage species BCC=USFWS Birds of Conservation Concern GBBDC=USFWS Game Birds Below Desired Condition SEN= Bureau sensitive species		

The BLM completed an evaluation of the 1995 Medford District RMP based on reports published from 2004 to 2005 about northern spotted owl population trends since the Northwest Forest Plan was published in 1994. Specifically, the 2005 RMP evaluation summarized the findings of four northern spotted owl reports that were the subject of a coordinated review by the Bureau of Land Management (BLM), Forest Service (FS), and US Fish and Wildlife Service (USFWS). Based on the evaluation of pertinent elements of the 1995 RMP and findings contained in the Report, BLM's Medford District Manager determined that effects on NSO populations identified in the four reports were within those anticipated in the 1995 RMP EIS, and that the RMP goals and objectives were still achievable in light of information from the reports (USDI 2005, p. 6). The reviewed reports include the following:

The reviewed reports include the following:

- *Scientific Evaluation of the Status of the Northern Spotted Owl* (Sustainable Ecosystems Institute, Courtney et al. 2004);
- *Status and Trends in Demography of Northern Spotted Owls, 1985-2003* (Anthony et al. 2004);
- *Northern Spotted Owl Five Year Review: Summary and Evaluation* (USFWS 2004); and
- *Northwest Forest Plan – The First Ten Years (1994-2003): Status and trend of northern spotted owl populations and habitat, PNW Station Edit Draft* (Lint 2005).

Anthony et al. (2004, 2006) is the last published meta-analysis of owl demographic data collected in 14 demographic study areas across the range of the northern spotted owl. Four of the study areas are in western Washington, six are in western Oregon, and four are in northwestern California. Although the agencies anticipated a decline of NSO populations under land and resource management plans during the past decade, the reports identified greater than expected NSO population declines in Washington and northern portions of Oregon, and more stationary populations in southern Oregon and northern California (USDI, 2005).

Summarizing Anthony et. al., between 1985-2003:

- The northern spotted owl population declined over its entire range, and varied from the most pronounced in Washington (7.3% year per) to the least pronounced in California (2.2%).

- Within Oregon, the northern demographic study areas averaged 4.9% population decline, and the southern study areas decline averaged less than 1% per year and were statistically stable, with a western Oregon average of 2.8% decline per year.
- Range-wide, adult survival rates declined in 5 of 14 study areas (western Washington and northwestern California) and western Oregon was stable in all six study areas. (USDI, 2005; USDI 2008, p. 2-284).

The reports did not find a direct correlation between habitat conditions and changes in NSO populations, and they were inconclusive as to the cause of the declines. Even though some risk factors had declined (such as habitat loss due to harvesting) other factors had continued such as habitat loss due to wildfire, potential competition with the barred owl, West Nile virus, and sudden oak death (USFWS 2004, Lint 2005). The barred owl is present throughout the range of the spotted owl, so the likelihood of competitive interactions between the species raises concerns as to the future of the spotted owl (Lint 2005). Lint (2005) also found that between 1994-2003, federal lands in the Klamath Province lost 6.6% of spotted owl nesting habitat to stand-replacement fire, mainly to the Biscuit Fire (almost 500,000 acres) (USDI, 2005).

An updated draft meta-analysis (<<http://www.reo.gov/monitoring/reports/northern-spotted-owl-reports-publications.shtml>> POPULATION DEMOGRAPHY OF NORTHERN SPOTTED OWLS, Forsman, et al) is projected to be published in July 2011. The conclusions reached in this draft are similar to those found in Anthony et al. NSO populations in southern Oregon remain statistically stable.

There is one **northern spotted owl activity center** in the vicinity of the project area. The area was last surveyed by BLM biologists in 2003 and 2004 with vocal responses but breeding status could not be determined. The Medford District Resource Management Plan designated about 100 acres of northern spotted owl habitat in the closest proximity to this activity center (known to exist as of January 1, 1994), as a 100-acre Late-Successional Reserve (see Section below titled Late-Succession Reserve). These 100-acre areas are also termed *Known Spotted Owl Activity Centers*.

Northern Spotted Owl Critical Habitat: The proposed project is not located in any designated critical habitat for the northern spotted owl.

The **great gray owl**, a Survey and Manage species, nests in late-successional habitat near forest edges where decadent features provides suitable nesting platforms and prefers open areas to forage. Although surveys are not required for suitable nesting habitat adjacent to natural openings smaller than 10 acres, this area was surveyed by BLM biologists in 2003 and 2004 with no birds being detected.

BLM has interim guidance for meeting BLM's responsibilities under the Migratory Bird Treaty Act and Executive Order (EO) 13186. Both the Act and the EO promote the conservation of migratory bird populations. The interim guidance was transmitted through Instruction Memorandum (IM) No. 2008-050. The IM relies on two lists prepared by the U.S. Fish and Wildlife Service to determine which species are to receive special attention in land management activities; the lists are *Bird Species of Conservation Concern* (BCC) found in various Bird Conservation Regions (BCR) and *Game Birds Below Desired Condition* (GBBDC). The following species are known or suspected to be present in the vicinity of the proposed action, which is located in BCR 5, **flamulated owl, olive-sided flycatcher, rufus hummingbird, band-tailed pigeon, mourning dove, and the purple finch.**

Red tree voles are the most arboreal mammal species in the Pacific Northwest and are predominantly found in Douglas-fir forests. Aubry et al. (1991) found that red tree voles occur in old-growth forests significantly more than in younger forests. The only potential habitat for tree voles is located along the 260 foot section inside the spotted owl core. Red tree vole surveys were conducted along the proposed right-of-way and no presence was detected.

The **fringed myotis**, **pallid bat** and **Townsend's big-eared bats** prefer caves or adits to roost but will also utilize snags at times. These species forage in open areas and around water sources where insects are more abundant. There are no adits proximate to the proposed right-of-way and all snags will be retained unless they present a safety hazard. Therefore, this proposed action will not adversely affect any of these bureau sensitive bat species.

The **chase sideband** and the **traveling sideband** are Survey and Manage terrestrial mollusks. Both species are found in downed woody debris, talus areas adjacent to forest, and are also associated with riparian areas. Large scale surveys were conducted previously in association with timber sales in the Forest Creek watershed and recently along this proposed right-of-way; neither species was detected.

No **deer** or **elk** big game management areas or critical wintering habitat areas designated in the Medford District RMP (USDI 1995a) are found within the proposed action area.

Environmental Consequences

Alternative 1 – No Action

Under the **No-Action Alternative**, the proposed road would not be constructed; therefore, there would be no-effect to any wildlife species of concern as a result of this federal action. All current conditions and trends in the project area would continue. The project area is located within the Timber Mountain OHV Recreation Management Area. Under Alternative 1, OHV use would continue along existing roads in the vicinity of the project area with potential for noise disturbance to wildlife species, including northern spotted owls. Although, the nearest route used by OHVs, BLM Road 38-3-6, is greater than 195 feet from the last recorded northern spotted owl nest tree, and beyond the distance used for seasonal operating restrictions employed for reducing noise disturbance to northern spotted owls during breeding season.

Other wildlife in proximity to OHV use may be impacted by ongoing OHV noise disturbance, which has occurred in the area for the last 40 years. Implementation of any action alternatives of the Timber Mountain OHV Recreation Management Plan would result in reducing OHV trail density in the Forest Creek Watershed.

If the no-action alternative were to be selected, Meriwether Southern Oregon Land & Timber, LLC would likely pursue road access across adjacent private lands. The exact road location and design is not known. Although, the most likely route would be from the east, northeast, which would involve the use of existing roads and some new road construction (estimated to be less than 0.5 mile) to reach Meriwether property. This route would likely involve road improvement in close proximity to Forest Creek and constructing a road across Forest Creek. The BLM assumes alternate routes would increase road densities similar to what is estimated under the proposed action, although no new roads would be constructed on BLM-administered land. Although not located on federally managed land, the general effects to wildlife from new road construction would be similar to those described under the Proposed Action (Alternative 2) below.

Alternative 2 – Proposed Action

Roads are an increasingly present feature on our landscape. Roads can have a wide array of effects to wildlife ranging from: effects resulting from human-caused mortality, effects resulting from changes in behavior, and effects resulting from habitat modification (Trombulak and Frissell, 2000).

Human-caused mortality can be the result of road construction, vehicle collisions, increased access for hunting and poaching, or increased predation of “flushed” animals. Death or injury from vehicle collisions is well documented and affects the majority of terrestrial wildlife species to varying degrees (Trombulak and Frissell, 2000). Generally speaking, human influences on forest wildlife are greatest near roads and decrease steadily with distance from roads.

Changes in animal behavior may include displacement or passive avoidance, altering breeding behavior, and reduced fitness due to disturbance related stress. Gaines et al. (2003) reviewed literature on road- and trail-associated effects upon wildlife and found that alteration of use of habitats in response to roads or road networks was the most common change reported.

Habitat modification includes habitat loss, increased edge effects, reduction of snags, routes for competitors, and dispersal barriers (Trombulak and Frissell, 2000). Road construction modifies habitat but it also has a broader effect than just the conversion of a small area of habitat to road surface and edge. Edge effects are characterized by changes in biotic (community and habitat structure) and abiotic (microclimate) elements (Marsh and Beckman 2004). If exposure to the edge modifies the features of the forest beyond their range of natural intrinsic variation, then the edge area will be effectively reduced for conservation purposes (Murcia 1995).

Ultimately, these effects are species specific but generally affect species abundance and hence, persistence. While roads are generally not considered good for wildlife, some species take advantage of the edge created by roads. These are the opportunistic habitat generalists that thrive on human disturbance of natural landscapes. Generally, these species persistence is not threatened and may not require additional habitat. Farhig and Rytwinski (2009) reviewed 79 studies and state that the negative response effects (60%) of roads on animal abundance outnumbered the positive effects (10%), while one-third of responses were neutral or showed no effect.

The proposed new construction (approximately 2,224 feet) on BLM-administered land would modify approximately 3 acres of existing habitat. The change of this small amount of habitat would have a negligible impact to the terrestrial wildlife species in the project area. However, other pervasive effects of roads to wildlife, as described above, would impact wildlife. Impacts associated with motorized disturbance would be reduced by gating or barricading the new road when not in use by the applicant.

The proposed action would enter a **northern spotted owl** core. *Application of the Endangered Species Act to proposals for access to non-federal lands across lands administered by the Bureau of Land Management and the Forest Service*, an Interagency Agreement reached among the Bureau of Land Management (BLM), U.S. Forest Service (FS), U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS), establishes policy for evaluating access proposals with regard to Endangered Species Act compliance. The following evaluation of the proposed action employs the policy and procedures described in the Interagency Agreement (IA).

The portion of the proposed right-of-way in the core is approximately 260 feet long and would modify less than 1 acre of suitable habitat. The right-of-way would be within 770 feet from the nearest known nest tree. This section of the proposed right-of-way is located on a 10 degree slope, dual canopy stand and would minimally reduce the average canopy coverage. The rest of the right-of-way is located in an area that was previously harvested or treated for fuels reduction by the BLM, and no longer provides suitable spotted owl habitat. Although this action would affect a negligible amount of the total owl habitat in the area (see Section F, Terrestrial Wildlife Habitat, Late-successional Habitat & Late Successional Associated Species) and seasonal restrictions would be required, it was included in the 2009 formal consultation with the US Fish and Wildlife Service (USFWS). The USFWS Biological Opinion (13420-2009-F-0147) concluded that implementation of the proposed action will not jeopardize the continued existence of the northern spotted owl. This proposed right-of-way is not located in and would have no effect on designated critical habitat.

This proposed action would potentially remove some nesting platforms for **great gray owls**. However, the area of affected nesting habitat is very small and snags not determined to be safety hazards would be retained. The removal of this small amount of potential nesting habitat would have a negligible effect on great gray owls. Seasonal restrictions required for spotted owls would also provide protection for great gray owls. Additionally, previous surveys did not detect great gray owls in the project area.

Red tree vole surveys were conducted along the proposed right-of-way and no presence was detected. This section of the right-of-way is somewhat flat and road construction would not greatly reduce the average canopy closure in the stand. The proposed action would not adversely affect red tree voles.

There are no adits proximate to the proposed right-of-way and all snags will be retained unless they present a safety hazard. Therefore, this proposed action would have a negligible effects to the bureau sensitive bat species **fringed myotis, pallid bat** and **Townsend's big-eared bats**.

Surveys for Survey and Manage mollusk species did not detect either the **chase sideband** or the **traveling sideband** mollusk species. The potential effects to mollusk habitat would be minimal because the proposed action impacts only a negligible amount of suitable habitat (<1 acre) and downed woody debris would be maintained onsite. Therefore, the proposed right-of-way would not adversely affect Survey and Manage terrestrial mollusk species.

Flammulated owl, olive-sided flycatcher, rufus hummingbird, band-tailed pigeon, mourning dove, and the **purple finch** all utilize open areas and edge habitat to nest or forage (Marshall et al., 2006). Therefore, the proposed action would not negatively affect these bird species and may provide some positive effects.

Some migratory bird individuals other than USFWS species of concern may be lost or displaced during project activities, but there would be no perceptible shift in species composition because of the small scale habitat modifications. Adequate untreated areas in and adjacent to the project area would maintain habitat for displaced individuals. Overall, populations in the region would be unaffected due to this small amount of loss that would not be measurable at the regional scale.

As with Alternative 1, OHV use would continue along existing BLM Road 38-3-6 in the vicinity of the project area with potential for noise disturbance to wildlife species, including northern spotted owls. The construction of additional 2,224 feet of road, off of road 38-3-6, has the potential to slightly increase the miles of OHV routes in Forest Creek Watershed and in the vicinity of the project area. Although, both BLM Road 38-3-6 and the proposed new route is greater than 195 feet from the last recorded northern spotted owl nest tree and beyond the distance used for seasonal operating restrictions employed for reducing noise disturbance to northern spotted owls during breeding season. Additionally, the road would be barricaded and camouflaged with rocks, downed wood, or other vegetative material to close the road following operations to all vehicle use. The steep side slopes along the road prism would help to effectively close the road following its intended use.

F. TERRESTRIAL WILDLIFE HABITAT, LATE-SUCCESSIONAL HABITAT & LATE-SUCCESSIONAL ASSOCIATED SPECIES

Affected Environment

The project area is located in the Forest Creek sixth-field watershed. The 22,500-acre Forest Creek Watershed drains into the Middle Fork Applegate River. The Middle Fork fifth-field watershed encompasses about 83,054 acres and is tributary to the Applegate River. The Forest Creek watershed is comprised of federal administered lands and privately owned lands; approximately 11,000 acres (49 percent) are managed by Bureau of Land Management and 11,500 acres (51 percent) are privately owned.

General Vegetation & Conditions

Vegetation of the Forest Creek sub-watershed is located within the Siskiyou Mountains of the Klamath Mountains Geologic Province. The Siskiyou Mountains serve as a link between the Cascade Mountains and the Oregon and California Coast ranges. Vegetation has migrated into Siskiyou Mountains over the last 60 million years from the Oregon and California Coast ranges, Sierras, Cascades, the Klamath River corridor, and the lowland chaparral areas. From about the 14th through the mid 19th century, the landscape pattern had a high degree of variation in the vegetation patterns including condition class (grass/forb,

shrubland, hardwood/woodland, young forest, mid-sized forest, late-successional/old-growth forest), arrangement, and composition of plant species. Forest stands had fewer trees per acre of larger diameter, and forests had more ponderosa pine, incense cedar, and native grasses due to frequent fire from natural lightning ignitions and Native American and Euro-American use of fire for various purposes. Forests probably never reached climax vegetation stage due to frequent fire disturbances (USDI 1995b). For more detailed description of pre-settlement conditions in the Forest Creek area, refer to the Middle Applegate Watershed Analysis (USDI 1995b).

The present day composition and distribution of vegetation in the Forest Creek sub-watershed is influenced by site characteristics (soil types, aspect, and topography), natural disturbance (wildfires, insects, disease, etc.) historic mining, rural residential development, agricultural activities, timber harvest, fuels reduction projects, fire suppression, and road building. Common forest types in the Forest Creek Watershed include Douglas-fir, ponderosa pine, and white oak forest series (USDI 1995b). In most of the watershed, south to westerly facing slopes are dominated by shrub, early and mid-successional vegetation, with north to easterly slopes are dominated by mixed conifer mid to late-successional vegetation. Although the Inland Siskiyou have always been fragmented by meadows and shrubland, the current habitat conditions have changed from that which existed in the pre-settlement environment. One element in particular, hiding cover used for protection from predators is inadequate or lacking in some areas. Wildlife species now face greater risks from predation as they move across the landscape. Information on the current distribution of successional stages (Table 3-2) was derived from a combination of vegetation data stored in the Medford District's Geographic Information System (GIS), aerial photography, and the District's completed management activities layer.

Table 3-2. Vegetation Distribution (acres) by Successional Stages

Successional or Seral Stages	Forest Creek Watershed BLM Land (acres)
Late-Successional/Old-Growth Forest	1,297
Mid-Successional	3,836
Early Successional (seedlings/saplings)	2,630
Hardwood/Woodland	2,150
Grass/Shrubland	1,093
Totals	11,006

Habitat Conditions in 100-acre Northern Spotted Owl Cores/Late Successional Reserves

About 260 feet of the proposed new road would enter a northern spotted owl core, which was also designated as a 100-acre Late Successional Reserve (LSR) under the Northwest Forest Plan. Unmapped 100-acre LSRs were established by Standards and Guidelines of the Northwest Forest Plan to protect the best 100 acres of northern spotted owl habitat in the closest proximity of all northern spotted owl nest sites or activity centers, known to exist as of January 1, 1994, on Federal lands within matrix or Adaptive Management Area (AMA) land allocations. These 100-acre areas are termed *Known Spotted Owl Activity Centers* (KOAC) or 100-acre LSRs. The intent was to preserve the intensely used portion of the breeding season home range. These areas were also identified as important refugia habitat and centers for dispersal for species other than the northern spotted owl, such as plants, fungi, lichens, small vertebrates, and arthropods, and are to be maintained even if they become unoccupied by northern spotted owls (USDA/USDI 1994b p. C-10 and C-44).

These 100-acre Late-Successional Reserves combined with Riparian Reserves, other green tree retention areas, and retention of coarse woody material, were designated to provide for dispersal of organisms across the landscape between mapped Late-Successional Reserves as well as source areas for maintenance and recovery of some late-successional organisms in the matrix and AMA.

Six 100-acre unmapped Late-Successional Reserves (LSRs), or Known Spotted Owl Activity Centers (KOACs), are located BLM-administered land within Forest Creek Watershed. Although these reserves are described as 100-acre LSRs, as shown in Map 3-1, the size is variable (Table 3-3). Table 3-4 displays the vegetation conditions for each 100-acre Late-successional Reserve. Desired late-successional and old growth forest characteristics to be maintained in the these Late-successional Reserves include: multi-species and multi-layered forest stands, moderate to high accumulations of large downed wood and standing snags, moderate to high canopy closure, moderate to high numbers of trees with physical imperfections (broken tops, large deformed limbs, cavities, etc.), and moderate to high accumulations of fungi, lichens, and bryophytes (USDA/USDI 1994b p. B-5).

Map 3-1. Known Spotted Owl Activity Centers (100-acre LSRs)

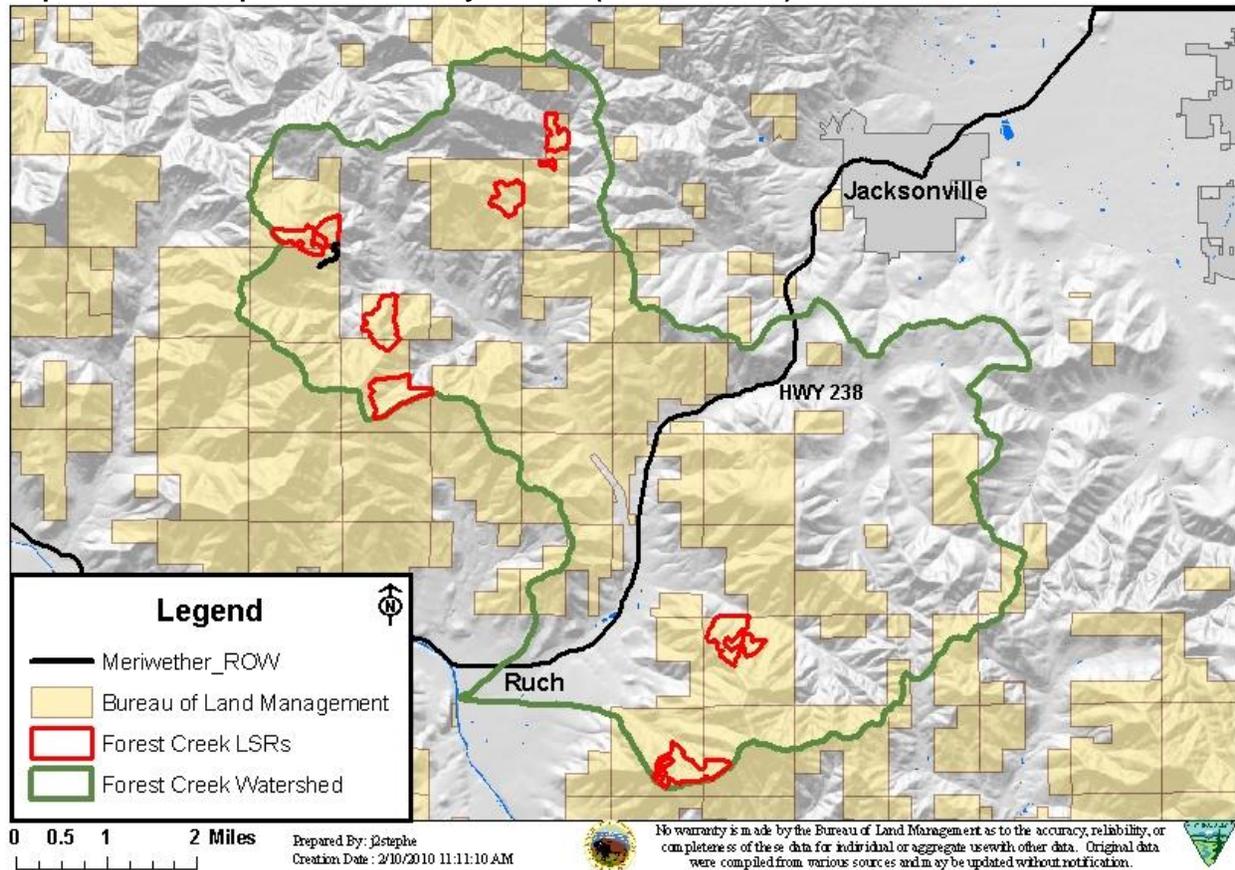


Table 3-3. Acres Late-Successional Habitat in the 100-Acre LSRs Pre and Post Proposed Action

LSR/KOAC Name	LSR Acres	Late-Successional Acres	Post Action Late-Successional Acres	Percent Change in Acres
Isabella South	95	65	64	1.5
East Fork Forest Creek	109	10	10	0
Oregon Belle	98	26	26	0
Bunny Meadows	110	25	25	0
Bishop Creek	108	60	60	0
Squires Rock	119	49	49	0
TOTAL	639	235	234	0.4

Table 3-4. Distribution (acres) of Successional Stages in Forest Creek Watershed LSRs

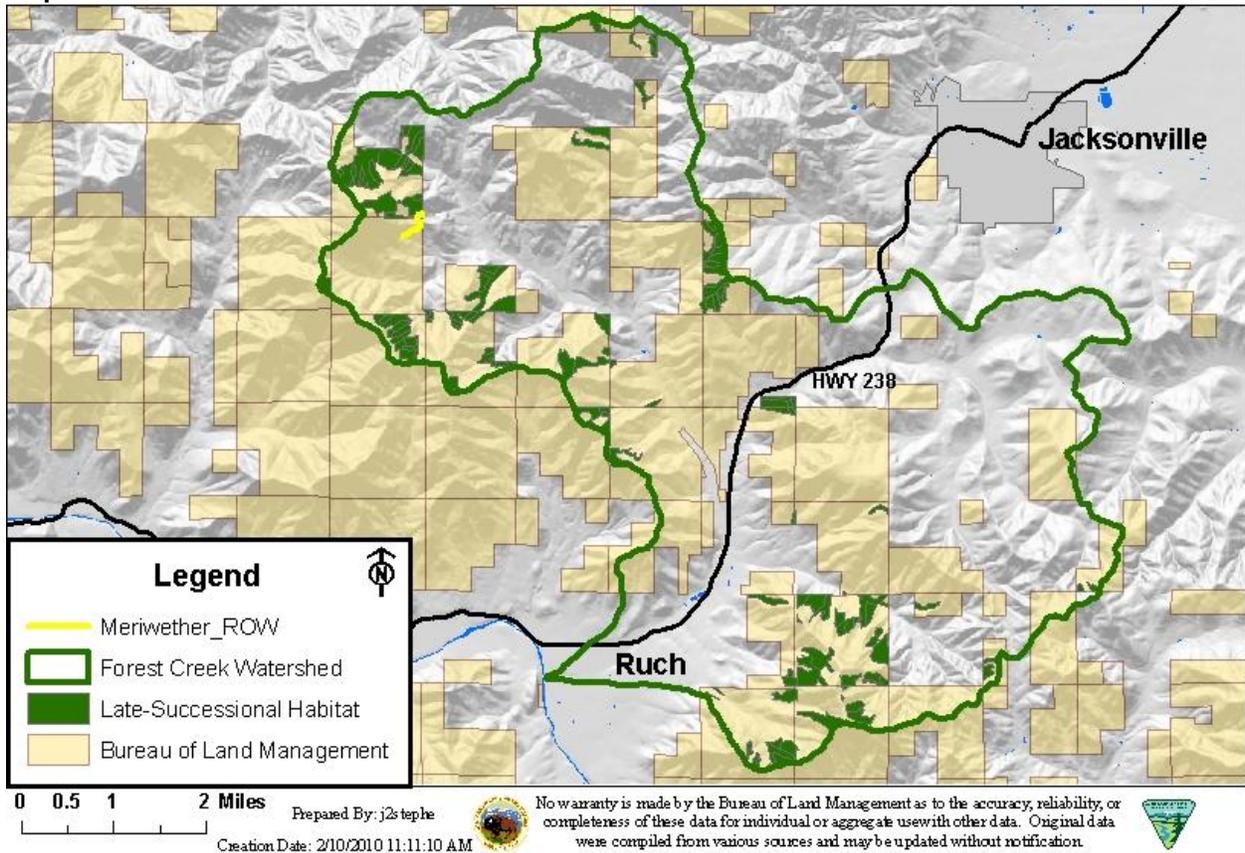
Vegetation Successional Stages	Forest Creek Watershed LSRs Total Acres
Late-Successional/Old Growth	235
Mid-Successional	268
Early Successional	134
Woodland	1
Grass/Shrubland	1
TOTAL	639

Late-Successional Habitat – Watershed Scale

Late-successional habitat within the Forest Creek Watershed has been fragmented by a combination of land management practices (timber harvest, road development, and rural development) and naturally occurring vegetation patterns influenced by climate, topography, soils. Privately owned lands intermingled among federally a managed land creates a checkerboard pattern in portions of the watershed (see Map 3-2). Private lands in the Forest Creek Watershed currently contain late-successional habitat and provide connectivity. However, it is assumed that these private lands will not provide substantial amounts of late-successional habitat connectivity over time. It is expected that rotational harvest (60-year average) on commercial timberlands would maintain forest conditions in an early to mid seral condition (USDI 1995a) and habitat disturbance attributed to development of private lands will continue. Current and past management practices employed on private lands in the area support this assumption.

The main land use associated with the 100-acre LSRs within the Forest Creek Watershed is the transportation system. There are about 205 miles of roads in the Forest Creek Watershed and 6.5 miles are within the 100-acre LSRs (Known Owl Activity Centers). These roads decrease connectivity and increase human access into habitat used by various species throughout the analysis area. Many species need security from disturbance during movements and roads open passages into habitat that would otherwise provide security and reduce chance of predation. Roads fragment habitat and often create barriers not passable by some smaller species. As the number of miles of roads increase throughout a watershed, negative impacts to wildlife tend to increase.

Map 3-2. Late Successional Habitat Within Forest Creek Watershed



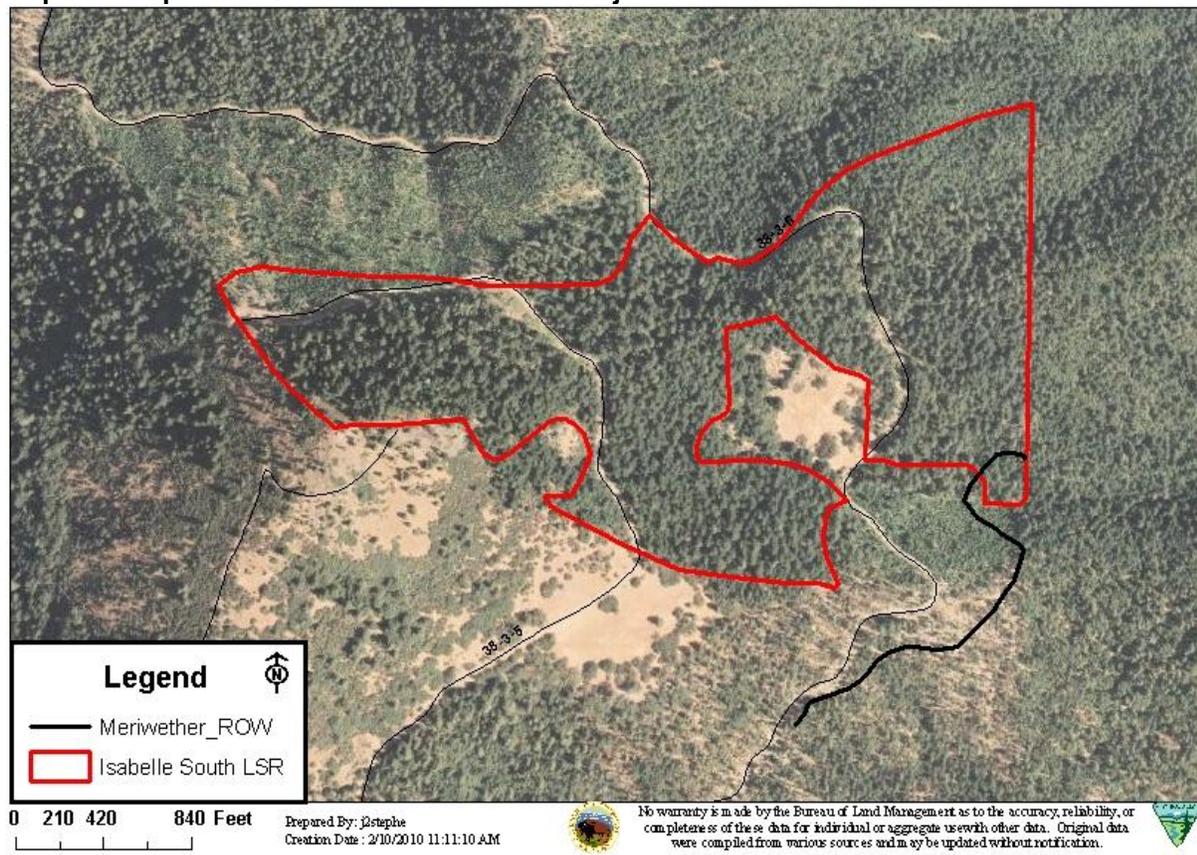
Late-Successional Species Known or Suspected To Occur

The following list (see Table 3-3) is not all-inclusive, but highlights representative groups, which utilize late successional habitat. These species are known or suspected to be in the analysis area, although they may or may not specifically need late successional habitat to meet various life needs, many of them are opportunistic and utilize habitat as it occurs. This list duplicates some species included in Table 3-1, which enumerates only Bureau Special Status species of concern.

Table 3-3. Late-Successional Habitat Associate Species

Species	Bureau Status	Occurrence
deer mouse (<i>Peromyscus maniculatus</i>)	NSS	Known
dusky-footed woodrat (<i>Neotoma fuscipes</i>)	NSS	Known
Douglas' squirrel (<i>Tamiasciurus douglasii</i>)	NSS	Known
Roosevelt elk (<i>Cervis canadensis roosevelti</i>)	Habitat only	Suspected
black-tailed deer (<i>Odocoileus hemionus</i>)	Habitat only	Known
gray fox (<i>Urocyon cinereoargenteus</i>)	NSS	Known
red tree vole (<i>Arborimus longicaudus</i>)	SM	Suspected
northern flying squirrel (<i>Glaucomys sabrinus</i>)	NSS	Suspected
Townsend's chipmunk (<i>Tamias townsendii</i>)	NSS	Known
pallid bat (<i>Antrozous palidus</i>)	SEN	Suspected
fringed myotis (<i>Myotis thysanodes</i>)	SEN	Suspected
Townsend's big-eared bat (<i>Corynorhinus townsendi</i>)	SEN	Known
northern goshawk (<i>Accipiter gentalis</i>)	NSS	Known
northern spotted owl (<i>Strix occidentalis caurina</i>)	FT	Known
great gray owl (<i>Strix nebulosa</i>)	SM	Known
flamulated owl (<i>Otus flammeolus</i>)	BCC	Known
olive-sided flycatcher (<i>Contopus cooperi</i>)	BCC	Known
pileated woodpecker (<i>Dryocopus pileatus</i>)	NSS	Known
golden-crowned kinglet (<i>Rigulus satrapa</i>)	NSS	Known
Siskiyou mountain salamander (<i>Plethodon stormi</i>)	SEN/SM	Suspected
Pacific giant salamander (<i>Dicamptodon tenebrosus</i>)	NSS	Suspected
common kingsnake (<i>Lampropeltis getula</i>)	NSS	Known
chace sideband (<i>Monadenia chaceana</i>)	SEN/SM	Suspected
traveling sideband (<i>Monadenia fidelis celeuthia</i>)	SEN	Suspected
Johnson's hairstreak (<i>Callophrys johnsoni</i>)	SEN	Suspected
FT= Federally threatened under the Endangered Species Act SM= Survey and Manage species BCC= USFWS Birds of Conservation Concern GBBDC= USFWS Game Birds Below Desired Condition SEN= Bureau sensitive species NSS= No special status		

Map 3-3. Proposed ROW Location within and Adjacent to Isabelle South LSR.



Environmental Consequences

Alternative 1- No-Action

Under the **No-Action Alternative**, the proposed road would not be constructed; therefore, there would be no-effect to the Isabelle South Late-Successional Reserve as a result of this federal action. All current conditions and trends in the project area would continue. The project area is located within the Timber Mountain OHV Recreation Management Area. Under Alternative 1, OHV use would continue along existing roads in the vicinity of the project area with potential for noise disturbance to wildlife species utilizing the 100-acre Late-Successional Reserve. OHV use has occurred in the area for about 40 years. Implementation of any action alternatives of the Timber Mountain OHV Recreation Management Plan would result in reducing OHV trail density in the Forest Creek Watershed.

If the no-action alternative were to be selected, Meriwether Southern Oregon Land & Timber, LLC would likely pursue road access across adjacent private lands. The exact road location and design is not known. Although, the most likely route would be from the east, northeast, which would involve the use of existing roads and some new road construction (estimated to be less than 0.5 mile) to reach Meriwether property. This route would likely involve road improvement in close proximity to Forest Creek and constructing a road across Forest Creek. The BLM assumes alternate routes would increase road densities similar to what is estimated under the proposed action, although no new roads would be constructed on BLM-administered land.

Alternative 2 - Proposed Action

The proposed new road construction is located partially (260 feet) within a 100-acre LSR. While road construction to access non federal land is a valid land-use consideration in Late-successional Reserves, roads must be designed to minimize impacts on late-successional habitat. “For all new rights-of-way

proposals, design mitigation measures to reduce adverse effects on late-successional reserves. Consider alternate routes that avoid late-successional reserves. If rights-of-way must be routed through a reserve, design and locate them to have the least impact on late-successional habitat.” (USDI 1995a, p. 35).

The original road proposal was eliminated from detailed analysis as it would have had greater impacts on late-successional habitat within the 100-acre LSR (see Chapter 2, Section C, Alternatives and Actions Considered but not Analyzed in Detail). BLM specialists worked with the proponent to relocate the road so as to avoid to the extent possible impacts to late-successional habitat. However, there is still a need to cross approximately 260 feet of late-successional habitat in the southwest corner of the reserve.

Construction of the proposed road would remove less than 0.5 acre from a total of 65 acres of late successional habitat in the Isabella South LSR unit, and would reduce the total late-successional habitat in the Forest Creek Watershed from 235 to 234 acres. As with Alternative 1, OHV use would continue along existing BLM Road 38-3-6 in the vicinity of the project area with potential for noise disturbance to wildlife utilizing the Isabella South 100-acre Late-Successional Reserve. The construction of additional 2,225 feet of road off of road 38-3-6 has the potential to slightly increase the miles of OHV routes in Forest Creek Watershed (see Chapter 3, Section B, Water Resources) and in fragmentation of the Isabella South LSR. The various effects from roads on wildlife are documented above under Subsection E., Terrestrial Wildlife above. However, the effects of the new road construction on late-successional habitat have been substantially reduced by adjusting the road location from the original proposal, which cut through the middle of the 100-acre owl core/Late-Successional Reserve (Fig. 2-1). Whereas, the current proposed action would affect only an outer corner of the 100-acre LSR (Map 3-3). The proposed road right-of-way would be barricaded and camouflaged with rocks, downed wood, or other vegetative material to close the road following operations to all vehicle use. The steep side slopes along the road prism will help to effectively close the road following use. Therefore, the implementation of the proposed action would have negligible short-term effects on late-successional habitat connectivity and functionality at the site-scale. Because the reduction of late-successional habitat is so minor (0.4 percent) at the 6th-field watershed scale, the proposed action is not anticipated to adversely affect the long-term function of unmapped 100-acre LSRs in the Forest Creek Watershed, which is to provide refugia habitat and centers for dispersal for late-successional associated species including the northern spotted owl, plants, fungi, lichens, small vertebrates, and arthropods. Nor would the proposed action have any significant affects to any late-successional associated species or trend those species towards listing under the provisions of the Endangered Species Act.

G. BOTANY

Affected Environment

For the purpose of this analysis, special status plants include vascular plants, bryophytes, lichens, and fungi that are either listed as threatened or endangered under the Endangered Species Act (ESA), proposed or candidates for listing under ESA, State-listed, or Bureau designated sensitive species. For these species, the BLM implements recovery plans, conservation strategies, management recommendations, and approved project design criteria of biological opinions, and ensures that actions authorized, funded, or carried out by the BLM do not contribute to the need for species to be listed.

The proposed road passes through three plant series: Doug-fir, Ponderosa Pine and White Oak. In addition, the proposed road passes through riparian vegetation towards the north end of the proposed action near the boundary of early-seral Doug-fir and late seral Doug-fir stands. Oregon Ash, Big-leaf Maple and assorted riparian shrubs occur here. In the forest Creek watershed, these plant series provide habitat for a variety of special status plants (Table 3-6). The elevation at its intersection with 38-3-6 is approximately 3,300 feet and enters Meriwether property at approximately 3,100 feet.

Surveys for special status plants, 2001 Survey and Manage species, and noxious weeds were conducted by a qualified Botanist during spring and summer of 2008 and 2009. The proposed road is within the range of *Fritillaria gentneri*, a rare lily listed under the Endangered Species Act. No special status plants or 2001 Survey and Manage Species were detected during surveys.

Of the 20 species of fungi that are on the Medford District Sensitive Species list, 18 are Survey and Manage category B species whose status determines that pre-disturbance surveys are impractical and not required (USDI 2001, Standards and Guidelines p. 64). It is unknown if Sensitive fungi occur in the project area because surveys have not been conducted. However, the 20 Sensitive species that have been documented or are suspected of occurring in the Medford District are very rare. Approximately 260 feet of the road will be located in late-successional forest – less than one acre. The likelihood of a population occurring in the project area is very small due to the scale of disturbance that would occur.

Table 3-4. Special Status Plants Occurring in the Forest Creek Watershed

Species	Bureau Status
<i>Buxbaumia viridis</i>	Survey and Manage category D
<i>Camissonia graciliflora</i>	Bureau Sensitive
<i>Carex serratodens</i>	Bureau Sensitive
<i>Cypripedium fasciculatum</i>	Bureau Sensitive, Survey and Manage category C
<i>Cypripedium montanum</i>	Survey and Manage category C
<i>Dendriscoaulon intricatum</i>	Survey and Manage category B
<i>Eucephalus vialis</i>	Bureau Sensitive, Survey and Manage A
<i>Fritillaria gentneri</i>	Bureau Sensitive, Federally Endangered
<i>Mimulus bolanderi</i>	Bureau Sensitive
<i>Mimulus congdonii</i>	Bureau Sensitive
<i>Rafinesquia californica</i>	Bureau Sensitive
<i>Solanum parishii</i>	Bureau Sensitive

Bureau Sensitive: actions shall not trend species towards listing under ESA (BLM Policy Manual 6840)

Federally Endangered: implement Project Design Features per 2009-2013 BLM Biological Assessment (August 2008)/ USFWS Letter of Concurrence (September, 2008).

Survey and Manage categories: A: rare, pre-disturbance surveys practical, manage known sites; B: rare, pre-disturbance surveys not practical, manage known sites; C: uncommon, predisturbance surveys practical, manage known sites; D: uncommon, pre-disturbance surveys not practical or necessary, manage known sites.

Environmental Consequences

Alternative 1 – No Action

Under the No-Action Alternative, the proposed road would not be constructed; therefore, there would be no-effect to Special Status botanical resources as a result of this federal action. Road construction would likely occur on the private land parcel to access the upper elevations of the private parcel. Presence or absence of Special Status plants on private lands are unknown.

Alternative 2 – Proposed Action

Construction of the road would have no effect on special status plants, including *Fritillaria gentneri*, and would not trend any of these species towards listing under the ESA because surveys were completed and no populations were detected. Additionally, the scale at which habitat for special status plant species will be impacted is very small relative to available habitat nearby for these species.

Regarding Bureau Sensitive fungi, specific information on connectivity and habitat requirements, range (including occurrences within the analysis area), and disturbance effects is incomplete. It is unknown if Sensitive fungi populations occur in the project area, but if present, they would be impacted by construction of the proposed road. However, the probability that any of the 20 Sensitive fungi species

occur there is very low because they are rare across their known ranges and the disturbed area will be very small. The BLM assumes that protecting known sites (current and future found), conducting large-scale inventories throughout the Pacific Northwest, and providing suitable habitat in reserves will ensure this project and future projects would not contribute to the need to list Sensitive fungi (USDI 2004, 5-2).

H. NOXIOUS WEEDS & NON-NATIVE SPECIES

Affected Environment

Noxious weeds are Oregon Department of Agriculture (ODA) designated nonnative plants that cause or are likely to cause economic or environmental harm or harm to human health. Non-native plant species are species that have been introduced by humans into ecosystems in which they did not evolve. Non-native plants may adversely affect the proper functioning condition of ecosystems by competing with native vegetation for light, water and nutrients.

There are two known infestations of ODA “B” designated noxious weeds near the project area – *Rubus armeniacus* (Armenian, or Himalayan Blackberry), and *Cirsium vulgare* (Bull Thistle). Class B weeds are those of economic importance which are regionally abundant, but which may have limited distribution in some counties. Both of these weeds are common in Jackson County. Other non-native species present: *Cynosurus echinatus* (Hedgehog Dogtail), *Dactylus glomerata* (Orchard grass), and *Dipsacus fullonum* (Common Teasel) occur along BLM road 38-03-6.0.

Alternative 1 – No Action

Not constructing the road would reduce the risk of introducing noxious weeds into the project area; however, the risk remains that weeds may be introduced and spread during on-going activities, such as vehicular traffic on existing roads, recreation use (including off-highway vehicles), and natural processes (e.g., wind, carried by wildlife). However, a forest with substantial canopy cover is a strong deterrent against the invasion of weeds. The BLM’s noxious weed program of detection and treatment is aimed at combating the spread of non-native invasive plants as a result of on-going and planned activities throughout the Medford District, although these efforts are dependent upon funding.

Alternative 2 – Proposed Action

Constructing the road creates a risk of introducing and spreading noxious weeds and other non-natives into the project area. When vegetation is removed and soil disturbed, conditions are optimal for noxious weeds to establish. Populations of all species are known within 0.25 mile of the proposed road route. Weed parts or seeds could be brought into the disturbed areas by equipment during construction or by vehicles driving across the new natural surface road. Weeds may also be transported by other activities in the area, including normal vehicular traffic and natural processes.

Weed Risk Assessment

BLMs botanist conducted a weed risk assessment according to directions contained in BLM Manual 9015, Integrated Weed Management. Surveys for all species on the Medford Weed list were conducted in 2007 and 2008. Noxious weed and non-native plant populations in the project area and on BLM are small and only found on the existing connector road 38-3-6.

Class A Weeds. Those noxious weeds that are exotic (not native) to the State or area, and are of limited distribution or are unrecorded in the State or area and pose a serious threat to agricultural crops and rangelands in the State. Class A weeds receive highest priority. Management emphasis is complete control. These weeds approximate the Oregon Department of Agriculture List A weeds. A records check and surveys of areas that may be affected by the proposed project resulted in zero sites.

Class B Weeds. Those noxious weeds that are non-native (exotic) plant species that are of limited distribution or unrecorded in a region of the State but are common in other regions of the State and have been identified by the BLM or State as potentially harmful. Class B-Weeds receive second highest priority. Management emphasis is to control the spread, decrease population size, and eventually eliminate the weed population when cost-effective technology is available. These weeds approximate the Oregon Department of Agriculture List B weeds.

Table 3-5. Class B weeds located within or adjacent to the project area.

Species	Count
Armenian Blackberry	1
Bull Thistle	1

Class C Weeds. Consists of any other noxious weeds (exotic or native) or undesirable plants. This classification receives the lowest priority. Management emphasis is to contain spread to present population size or decrease population to a manageable size. The following species are exotic, have a high frequency from recent survey lists in nearby stands, and have the potential to cause ecological damage.

Table 3-6. Class C weeds located within or adjacent to project area.

Species	Count
Hedgehog Dogtail grass	1
Orchard grass	1
Common Teasel	1

Table 3-7. Factor 1: Likelihood of Noxious Weed Species Spreading to Analysis Area

Level	Value	Description
None	0	Noxious weed species not located within or adjacent to the analysis area. Project activity is not likely to result in the establishment of noxious weed species in the analysis area.
Low	1	Noxious weed species present in areas adjacent to but not within the analysis area. Project activities can be implemented and prevent the spread of noxious weeds into the analysis area.
Moderate	5	Noxious weed species located immediately adjacent to or within the analysis area. Project activities are likely to result in some areas becoming infested with noxious weed species even when preventative management actions are followed. Control measures are essential to prevent the spread of Noxious weeds within the analysis area.
High	10	Heavy infestations of Noxious weeds are located within or immediately adjacent to the analysis area. Project activities, even with preventative management actions are likely to results in the establishment and spread of noxious weeds on disturbed sites throughout much of the analysis area.

The likelihood of class B and C weed species spreading into the project area is moderate. There are small Class B and C weed populations immediately adjacent to and within project. Construction of the road will create localized, but intensive ground disturbance. Some weed seeds and plant material will be moved along the road prism from the intersection. Project Design Features (PDF) are included that will prevent the extensive spread of noxious weeds due to direct effects of the proposed project. Weed populations within the affected area would be reduced, perhaps eradicated for five years after road construction, per PDF's, treatment, and BLM Manual 9015. Weed spread and new establishments after five years are expected from unrelated seed transport mechanisms and relict populations. The budget to treat and monitor noxious weeds is not fixed for this project. There is no budget to treat Class C weeds; also, it is not permitted to use herbicides on Class C weeds at this time. It is expected that the BLM will

be able to treat class C weeds with new, more effective herbicides by 2013. If the weeds are not treated due to insufficient budget or workforce, the likelihood of noxious weed and non-native species spreading into and within the project area would be moderate. If the weeds are treated for 1-3 years post-implementation of road construction, the likelihood of noxious weed and non-native species spreading into the project area remains moderate. However, one to three years of weed treatments post-implementation would prevent additional spread of weeds and non-native species within the project area. Based on post-implementation weed treatments, it is likely that the infestations would be controlled to pre-road construction levels of infestation.

Table 3-8. Factor 2: Consequence of Noxious Weed Establishment in Analysis Area

Level of Consequence	Value	Description of Possible Effects
Low to Nonexistent	1	None. No cumulative effects expected.
Moderate	5	Possible adverse effects on site and possible expansion of infestation within analysis area. Cumulative effects on native plant community are likely but limited.
High	10	Obvious adverse effects within the analysis area and probable expansion of noxious weed infestations to areas outside the analysis area. Adverse cumulative effects on native plant community are probable.

The consequence of noxious weed establishment in the project area is moderate. The noxious weed and non-native populations in the affected areas are small and only associated with the intersection at BLM road 38-3-6.0. The species present at the intersection are primarily competitive with open canopy, i.e., roadside, (not competitive under forest canopy) and likely only for a short distance <100 feet. With additional ground disturbing activities (road construction/re-construction, road renovation) and operations that transport weed seed (log hauling, other road use), there is the potential to spread weeds along the road and into the project area. Unrelated activities could transport weed seed (e.g. wind, water, wildlife, wildfire, hiking, OHV, etc.) into any newly disturbed areas. No projects are currently planned for the BLM land the proposed road passes through.

Risk Rating

Step 1 - Identify level of likelihood and consequence of adverse effects and assign values according to the following:

- None = 0
- Low = 1
- Moderate = 5
- High = 10

Step 2 - Multiply the level of Likelihood value (Table 3-xx) by the Consequence value (Table 3-xx) to determine Value.

Step 3 - Use the value resulting from Step 2 to determine Risk Rating and Action in Table 3-xxx below.

Table 3-9. Risk Rating and Action

Value	Risk Rating	Action
0	None	Proceed as planned.
1-10	Low	Proceed as planned. Initiate control treatment on noxious weed populations that get established in the area.
25	Moderate	Develop preventative management measures for the proposed project to reduce the risk of introduction or spread of noxious weeds into the area. Preventative management measures should include modifying the project to include seeding the area to occupy disturbed sites with desirable species. Monitor area for at least 3 consecutive years and provide for control of newly established populations of noxious weeds and follow-up treatment for previously treated infestations.
50-100	High	Project must be modified to reduce risk level through preventative management measures including seeding with desirable species to occupy disturbed sites and controlling existing infestations of noxious Weeds prior to project activity. Projects must also provide for control of newly established populations of Noxious weeds and follow-up treatment for previously treated infestations.

5x5=25. Moderate risk. Monitoring and control shall occur.

The Medford District BLM Resource Management Plan directs the use of integrated pest management actions to contain and reduce noxious weed infestations. Therefore, the BLM designed the Meriwether Right-of-Way project incorporates project design features (PDFs) as part of the proposed action to control noxious weeds and avoid new infestations. The PDFs include both preventive features and active control. The PDFs represent the most current and widely employed methodology for weed control and prevention. The EA analyzes effects to resources in the context of a project design that includes PDFs prescribed for the Meriwether Right-of-Way project; thus, the effects of project design features have been generally incorporated into the analysis of the proposed action. While ground disturbance associated with this project would create site conditions initially more favorable for noxious weeds and introduced plants, with the implementation of project design features, weed spread would be minimized and roadside weed populations would be controlled.

PDFs included in the Meriwether Right-of-Way project to control noxious weeds are consistent with:

- Medford District BLM Resource Management Plan (USDI BLM, 1995, p. 92);
- Medford District BLM Integrated Weed Management Plan and Environmental Assessment (USDI BLM, 1998); and the
- Bureau’s 2007 Final Programmatic Environmental Impact Statement, *Vegetation Treatments Using Herbicides*, Prevention of Weeds and Early Detection and Rapid Response strategy (USDI BLM, 2007, p. 2-23 to 2-25).

Since there are no special status or survey and manage plants in the project area, this project would not contribute incrementally to adverse cumulative impacts on special status or survey and manage plants.

Constructing the proposed road could potentially introduce noxious weeds into the project area, although it is not possible to quantify the amount of spread with any degree of confidence. Some risk remains that weeds may be introduced and spread during on-going activities, such as vehicular traffic on existing roads, recreation use (including off-highway vehicles), and natural processes (e.g., wind, carried by wildlife). However, a forest with substantial canopy cover is a strong deterrent against the invasion of weeds. Because the BLM treats noxious weed populations on BLM-managed lands as detected and would implement PDFs during construction of the road, this action would not add cumulative effects to noxious weeds in the project area beyond existing conditions.

J. VISUAL RESOURCE MANAGEMENT

Affected Environment

Medford District BLM-administered lands have been classified under a Visual Resource Management (VRM) Inventory Class system established by the BLM. “Visual Resources are the land, water, vegetation, structures, and cultural modifications that make up the scenery of BLM-administered land” (1995 RMP/EIS p. 3-70). The criteria used to determine VRM classes were scenery quality ratings, public sensitivity ratings and distance zone-seen area mapping criteria.

The proposed action would amend the existing right-of-way and road use agreement to include new construction off of BLM-administered 38-3-06 Road to access the applicant’s land. Segments of existing BLM-administered Roads 38-3-5 and 38-3-6 would also be added to the agreement, providing legal access from the end of County Road 842 to the start of the proposed new road construction. The segment of proposed new road construction is approximately 2,224 feet in length beginning in the northeast portion of Section 6 in T. 38 S., R. 3 W, where it takes off of Road 38-3-6, and continues into the south eastern portion of Section 31, T. 37 S. R. 3 W (see Map 2-1). The proposed action is located on lands classified as VRM Class III under the 1995 RMP (Map 10) and Class IV under the 2008 Medford District RMP (Map 3B). BLM projects are analyzed using a visual contrast rating system process to determine whether the potential visual impacts from a proposed project will meet the VRM objectives established for the area, or whether design adjustments will be required. This process is described in [BLM Handbook H-8431-1, Visual Resource Contrast Rating](#).

Class III Objective. The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

Class IV Objective. Manage lands for high levels of change to the characteristic landscape. Management activities may dominate the view and will be the major focus of viewer attention.

Environmental Consequences

Alternative 1 – No Action

Visually, the area associated with proposed new road construction on BLM-managed land would remain the same. There would be no changes to the existing landscape associated with this federally proposed action.

Alternative 2 – Proposed Action

Resource development patterns that disrupt the land surface (road construction) and vegetative patterns (removal of vegetation associated with road building) can have adverse effects on visual resources (RMP/EIS p. 4-86). The proposed action is located on lands classified as VRM Class III under the 1995 RMP (Map 10). The management objective of this class is to partially retain the existing character of the landscape.

In accordance with the RMP, a visual resource contrast rating system analysis was completed for the Meriwether Right-of-Way Project: Amendment to M-660 Right-Of-Way & Road Use Agreement (OR 048747 FD). A Known Observation Point (KOP) near the proposed road construction was used to complete the visual resource contrast rating system analysis. The Known Observation Point is located at the intersection of Forest Creek Road and Belle Mine Road (38-3-5) looking northwest in the direction of the proposed new road construction. The KOP was chosen as it is the most commonly traveled route in the immediate area of the proposed new road construction, potentially having the greatest visual impact from this location. The proposed new road construction would be more visible to those traveling on Forest Creek Road north of the Roads intersection with Belle Mine Road as compared to the location

chosen as the KOP however; Forest Creek Road dead ends in approximately one-third mile past the Belle Mine Road (38-3-5) intersection and Forest Creek Road receives significantly less travel north of the intersection.

KOP 1

From KOP 1 (visual contrast rating worksheet – Appendix A) looking northwest at the area of the proposed new road construction, visually the landscape is typical of a highly managed forest scene. Past activities such as extensive road building and timber harvest are evident on the landscape. Meadows are scattered throughout the panoramic forested landscape. The proposed Road construction (2,224 feet) would cause a weak degree of change to the visual land features when considering the elements of form, line, and color on the landscape. No change to the texture of the land features would result from the construction of the proposed road. The proposed road construction would cause a moderate degree of contrast, compared to the current landscape, when comparing the element of line on the landscapes feature of vegetation. This is due to an increase in linear contrast and an increase in edges due to new road construction. Further; when looking at vegetation features in the landscape, a weak degree of contrast would result from the project to the element of form and no degree of contrast would happen to the elements of color and texture. From this KOP the level of visual change to the landscape would be low and the existing character of the landscape would remain the same as a result of completing the proposed project.

It is determined that the Meriwether Right-Of-Way-Project: Amendment to M-660 Right-Of-Way & Road Use Agreement (OR 048747 FD) proposed action would meet Class III VRM objectives. Adding segments of existing BLM-administered Roads 38-3-5 and 38-3-6 to the agreement, which provides legal access from the end of County Road 842 to the start of the proposed new road construction, would have no visual effect to the landscape. The proposed new road construction (2,224 feet) would have a low level of change on the landscape and the existing character of the landscape would remain the same. The project would not dominate the view of the casual observer. The proposed road construction would also meet Class IV VRM objectives of the 2008 Medford District RMP.

K. OTHER EFFECTS

Recreation

The proposed road construction project is located in the Timber Mountain OHV Management Area along a road which receives low to moderate use in fall and spring months by OHV enthusiasts, as well as upland game bird and big game hunters. The road is closed to full size vehicular traffic year round. Impacts to recreation would be low and in the form of temporary road closures and encounters with haul truck and construction traffic during the time of road construction and logging operations on the ROW applicants lands. To improve safety during hauling operations the road would be signed by the land owner to alert recreationists of the potential for encounters with haul trucks. Once the logging activities have closed, the constructed road will be closed to reduce potential OHVs access. The road may be accessible to foot and equestrian traffic. Overall the impacts to recreation will be minimal and may go unnoticed by the casual observer.

Cultural Resources

The proposed project area has been surveyed for cultural resources and none were found. Based on survey findings and the nature and scale of the undertaking, it is unlikely that the project would encounter or have an effect on historic properties. No subsurface sampling has been conducted so if cultural resources are discovered during excavation, the work must stop and the District Archaeologist consulted before work can resume.

This project would not result in restricting access to, and ceremonial use of, Indian sacred sites by Indian religious practitioners or adversely affect the physical integrity of such sacred sites. No sites have been identified in the project area. Executive Order 13007 (Indian Sacred Sites). This project would have no effect on Indian Trust Resources as none exist in the project area.

Potential Effects to Public Health and Safety.

No aspects of the project have been identified as having the potential to significantly and adversely impact public health or safety. All operations on BLM-administered lands are required to meet Occupational Safety and Health Association regulations for worker and public safety.

Environmental Justice

This project was reviewed for the potential for disproportionately high or adverse effects on minority or low income populations; no adverse impacts to minority or low income populations would occur. *Executive Order 12898 (Environmental Justice).*

CHAPTER 4. PUBLIC PARTICIPATION

Public notice of this proposed action was published in BLMs Medford Messenger, Medford BLM's quarterly newsletter. The July 26, 2010 EA was mailed to adjacent landowners, interested individuals and the following agencies, organizations, and tribes; the EA was also posted on BLM's Medford District Website. This revised EA was mailed to those who submitted comments on the July 2010 EA and will also be posted on BLM's Medford District Website.

Organizations and Agencies

Association of O&C Counties
Audubon Society
Forest Capital Partners, LLC
Meriwether Southern Oregon Land & Timber
Indian Hill, LLC
Jackson County Stockmen's Association
Jackson County Commissioners
Jackson Co. Soil and Water Conservation District
Klamath Siskiyou Wildlands Center
Northwest Environmental Defense Center
Oregon Department of Forestry
Oregon Wild
Oregon Department of Fish and Wildlife
Oregon Department of Environmental Quality
The National Center for Conservation Science and Policy
Siskiyou Project
Rogue River National Forest (RRNF)
Southern Oregon University Library
Southern Oregon Timber Industries
Pacific Legal Foundation
Applegate River Watershed Council

Federally Recognized Tribes

Cow Creek Band of Umpqua Indians
Confederated Tribes of Grand Ronde
Confederated Tribes of Siletz
Klamath Tribe
Quartz Valley Indian Reservation (Shasta Tribe)

Other Tribes

Shasta Indian Nation
Latgawa Native American Indian Tribe

REFERENCES

- Atzet, T., D.E. White, L.A. McCrimmon, P.A. Martinez, P.R. Fong and V.D. Randall. 1996. A Field Guide to the Forested Plant Associations of Southwestern Oregon. USDA Forest Service Technical Paper R6-NR-ECOL-TP-17-96. Grants Pass, OR.
- Amaranthus, M.P., R.M. Rice, N.R. Barr, and R.R. Ziemer. 1985. Logging and forest roads related to increased debris slides in southwest Oregon. *Journal of Forestry*, Vol. 83, No. 4, pp. 229-233.
- Anthony R.G., E.D. Forsman, A.B. Franklin, D.R. Anderson, K.P. Burnham, G.C. White, C.J. Schwarz, J.D. Nichols, J.E. Hines, G.S. Olson, S.H. Ackers, S. Andrews, B.L. Biswell, P.C. Carlson, L.V. Diller, K.M. Dugger, K.E. Fehring, T.L. Fleming, R.P. Gerhardt, S.A. Gremel, R.J. Gutiérrez, P.J. Happe, D.R. Herter, J.M. Higley, R.B. Horn, L.L. Irwin, P.J. Loschl, J.A. Reid, S.S. Sovern. 2004. Status and Trends in Demography of Northern Spotted Owls, 1985–2003. Final Report to Interagency Regional Monitoring Program, Portland, Oregon. Oregon Cooperative Fish and Wildlife Research Unit, Corvallis, USA.
- Aubry, K.B., M.J. Crites, and S.D. West. 1991. Regional patterns of small mammal abundance and community composition of Oregon and Washington, Pages 285-94 In L.F. Ruggiero, K.B. Aubry, A.B. Carey, and M.H. Huff, tech. coords. *Wildlife and vegetation of unmanaged Douglas-fir forests*. USDA For. Serv. Gen. Tech. Rep. PNW-285. Portland, OR.
- Courtney, S. P., J. A. Blakesley, R. E. Bigley, M. L. Cody, J. P. Dumbacher, R. C. Fleischer, A.B. Franklin, J. F. Franklin, R. J. Gutiérrez, J. M. Marzluff, L. Sztukowski. 2004. Scientific evaluation of the status of the Northern Spotted Owl. Sustainable Ecosystems Institute. Portland, OR.
- Fahrig, Lenore. 2003. Effects of Habitat Fragmentation on Biodiversity. *Annual Review of Ecology, Evolution and Systematics* 34, 487-515.
- Farhig, Lenore and Trina Rytwinski. 2009. Effects of Roads on Animal Abundance: an Empirical Review and Synthesis. *Ecology and Society*. 14(1). 21.
- Forman, R.T., and A.M. Hersperger. 1996. Road ecology and road density in different landscapes, with international planning and mitigation solutions. Pages 1-23 in G. Evink, D. Ziegler, and J. Berry, editors. *Highways and movement of wildlife: improving habitat connections and wildlife passageways across highway corridors*. Proceedings of the Florida Department of Transportation/Federal Highway Administration Transportation-Related Wildlife Mortality Seminar. Orlando, Florida, April 30-May 2, 1996.
- Gaines, W.L., P.H. Singleton, and R.C. Ross. 2003. Assessing the Cumulative Effects of Linear Recreation Routes on Wildlife Habitats on the Okanogan and Wenatchee National Forests. USDA Forest Service, Pacific Northwest Research Station, General Technical Report PNW GTR-586.
- Grant, G.E., Lewis, S.L., Swanson, F.J., Cissel, J.H., and McDonnell, J.J. 2008. Effects of Forest Practices on Peak Flows and Consequent Channel Response: A State-of-Science Report for Western Oregon and Washington. USDA For. Serv., Pac. Northwest Forest and Range Exp. Station, Portland, OR. General Technical Report PNW-GTR-760
- Lint, J. 2005. Northwest Forest Plan—the first 10 years (1994–2003): status and trends of Northern Spotted Owl populations and habitat. General technical report PNW-GTR-648. U.S. Department of Agriculture Forest Service, Pacific Northwest Research Station, Portland, Oregon.

- Marsh, D.M., Beckman, N.G. 2004. Effects of forested Roads on the Abundance and Activity of Terrestrial Salamanders. *Ecological Applications*, 14(6), pp.1882-1891.
- Marsh, D.M., Beckman, N.G. 2007. Edge Effects of gated and Ungated Roads on Terrestrial Salamanders. *The Journal of Wildlife Management*. Vol. 71, No. 2, pp. 389-394.
- Marshall, D.B., M.G. Hunter, and A.L. Contreras, Eds. 2003, 2006. Birds of Oregon: A General Reference. Oregon State University Press, Corvallis, OR 768 Pp.
- Meehan, W. R., Editor. 1991. Influences of Forest and Rangeland Management on Salmonid Fishes and their Habitats. American Fisheries Society Special Publication 19.
- Murcia, C. 1995. Edge effects in fragmented forests: implications for conservation. *Trends in Ecology and Evolution* 10:58-62.
- Oregon Administrative Rules (OAR) 340-341. May 13, 2005. Oregon Department of Environmental Quality, water pollution, division 41, water quality standards: beneficial uses, policies, and criteria for Oregon. http://arcweb.sos.state.or.us/rules/OARs_300/OAR_340/340_041.html.
- Oregon Department of Environmental Quality (ODEQ). 2004. Draft Rogue basin riparian condition assessment report: DEQ, Medford, Oregon.
- Oregon Department of Environmental Quality (ODEQ). 2006a. Oregon's 2004/2006 integrated Report: DEQ, Portland, Oregon. <http://www.deq.state.or.us/wq/303dlist/wq2004intgrrpt.htm>.
- Thorson, T.D., Bryce, S.A., Lammers, D.A., Woods, A.J., Omernik, J.M., Kagan, J., Pater, D.E., and Comstock, J.A. 2003. Ecoregions of Oregon (color poster with map, descriptive text, summary tables, and photographs): Reston, Virginia, U.S. Geological Survey (map scale 1:1,500,000).
- Trombulak, S.C., Frissell, C.A. 2000. Review of Ecological Effects of Roads on Terrestrial and Aquatic Communities. *Conservation Biology*. Vol. 14, No. 1, pp. 18-30.
- USDA, Forest Service and USDI, Bureau of Land Management. 1994a. Final SEIS On Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl (Northwest Forest Plan). Regional Ecosystem Office, Portland, OR.
- USDA, Forest Service and USDI, Bureau of Land Management. 1994b. Record of Decision (ROD) for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl and the Standards and Guidelines for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl. Portland, OR.
- USDI, Bureau of Land Management. October 1994. Medford District Proposed Resource Management Plan/ Environmental Impact Statement.
- USDI, Bureau of Land Management. 1995a. Medford District Record of Decision and Resource Management Plan.
- USDI, Bureau of Land Management. 1995b. Middle Applegate Watershed Analysis. On file at the Medford District BLM.

- USDI, Fish and Wildlife Service. 2004. Northern Spotted Owl, Five-year review: summary and evaluation. Portland, OR.
- USDI Bureau of Land Management. July 16, 2004. Project Evaluations for Former S&M Species in Which Surveys are Not Feasible, Attachment 5. In Information Bulletin OR-2004-145. Implementation of Special Status Species Policies for the Former Survey and Manage Species. On file at Oregon State Office-Bureau of Land Management, Portland, Oregon.
- USDI, U.S. Fish and Wildlife Service and U.S Dept. of Commerce, National Oceanic and Atmospheric Administration. 2004. Analytical Process for Developing Biological Assessments for Federal Actions Affecting Fish Within the Northwest Forest Plan Area. PP 19-25.
- USDI, Bureau of Land Management. August 24, 2005. Evaluation of the Medford Resource Management Plan Relative to Four Northern Spotted Owl Reports. Medford, OR.
- USDI, Bureau of Land Management and USDA, Forest Service. 2005. Water Quality Restoration Plan, Applegate Subbasin, Medford, OR.
- USDI Bureau of Land Management. June 29, 2007. Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Impact Statement, Vol. 1, 2-23 – 2-25 pp.
- USDI Bureau of Land Management. 2008. Biological Assessment FY 2009-2013 Programmatic Assessment for activities that May Affect the listed endangered plant species Gentner's fritillary, Cook's lomatium, McDonald's rockcress, and large-flowered wooly meadowfoam. 59 pp.
- USDI Bureau of Land Management. 2008. Final Environmental Impact Statement for the Revision of the Resource Management Plans of the Western Oregon Bureau of Land Management.
- USDI Bureau of Land Management. 2008. Medford District Record of Decision and Resource Management Plan.

REVISED ENVIRONMENTAL ASSESSMENT

for the

**MERIWETHER RIGHT-OF-WAY PROJECT:
AMENDMENT TO M-660 RIGHT-OF-WAY
& ROAD USE AGREEMENT (OR 048747 FD)**

APPENDIX A

Contrast Rating Sheet

Comments from item 2.

The line created by the clearing of vegetation for the road may attract minor attention in the short term. Due to the presence of existing roads in the landscape and the softening of the edge over time

Additional Mitigating Measures (See item 3)

None recommended however;

PDF's in ch. 2 of the Revised Environmental Assessment for the Meriwether Right-of-Way and Road Use Agreement (OR 048747 FD) will help decrease the slight visual contrast created by road construction (Ch. 2, see PDF's- 8, 13, and 14).