

ENVIRONMENTAL ASSESSMENT

for

Meriwether Southern Oregon Land and Timber

Right-of-Way OR-048747 FD

United States

Department of the Interior

Bureau of Land Management

Medford District

Jackson County, Oregon

EA COVER SHEET**RESOURCE AREA: Butte Falls****ACTION/TITLE: R\W Request OR-048747 FD****EA NUMBER: DOI-BLM-OR-M050-2009-0034-EA****LOCATION: Township 35 South, Range 4 West, in Section 31, Willamette Meridian,
Jackson County, Oregon**

List of Preparers	Title	Responsibility
Randy Bryan	Engineer	Road Specifications
John Osmanski	Forester	Silviculture
Ken Van Etten	Soils Scientist	Soils
Marcia Wineteer	Botanist	Botany, Noxious Weeds
Linda Hale	Wildlife Biologist	T&E Animals, Wildlife
Steve Liebhardt	Fisheries Biologist	Fisheries, Riparian
Shawn Simpson	Hydrologist	Hydrology
Lisa Brennan	Archaeologist	Cultural Resources
Jean Williams	Environmental Coordinator	NEPA Compliance

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1.0 What Action is Proposed and Why?

1.1 Definitions

Interdisciplinary (ID) Team: A group of individuals with different training, representing the physical sciences, social sciences, and environmental design arts, assembled to solve a problem or perform a task.

Project Area: The area where the action is proposed.

Reciprocal Right-of-Way M-660 Agreement: An agreement that allows both BLM and private parties to use each other's roads, lands, and right-of-ways for the management and removal of timber and other forest products.

Right-of-Way (ROW): A permit or an easement that authorizes the use of public lands for specified purposes, such as pipelines, roads, telephone lines, electric lines, and reservoirs, and the lands covered by such an easement or permit.

1.2 Introduction

This Environmental Assessment (EA) will provide the decisionmaker, the Butte Falls Field Manager, with current information to aid in the decision making process. It will also determine if there are significant impacts not already analyzed in the Environmental Impact Statement for the Medford District's Resource Management Plan and whether a supplement to that Environmental Impact Statement is needed or if a Finding of No Additional Significant Impact is appropriate.

1.2.1 What Action is the BLM Proposing?

The Medford District Bureau of Land Management (BLM), Butte Falls Resource Area received a request for a right-of-way from Meriwether Southern Oregon Land and Timber, LLC (Meriwether) for construction of 1,060 feet (0.2 miles) of road across BLM-administered land.

The BLM proposes to issue the right-of-way to Meriwether and allow 1,060 feet of road construction across BLM-administered lands providing access to adjacent Meriwether lands.

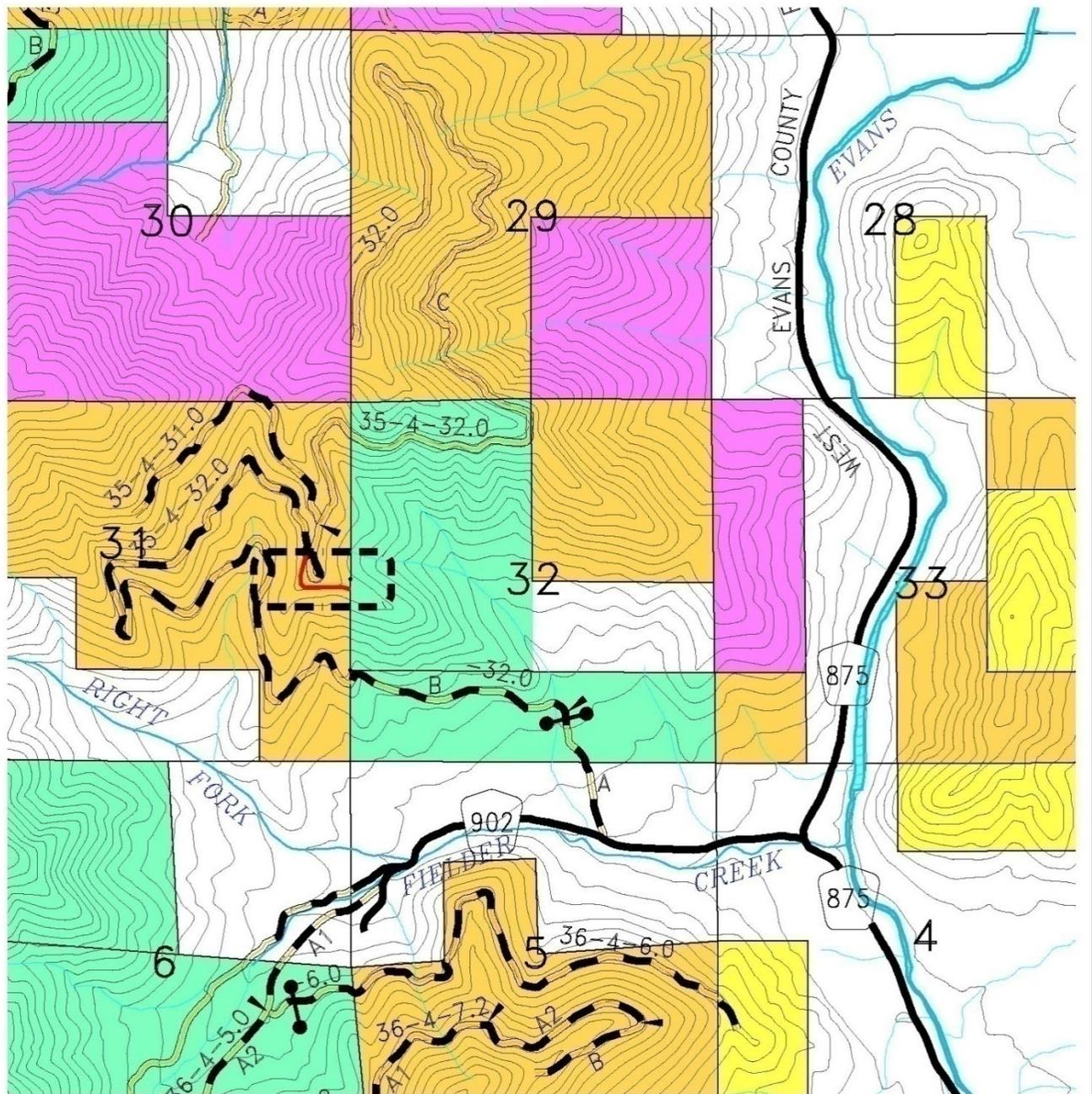
Pusuant to 43 CFR 2812 the proposed action is to amend Reciprocal Right-of-Way M-660 Agreement to authorize Meriwether to construct and use a 1,060 foot spur road located on BLM-administered lands in Township 35 South, Range 4 West, section 31 to access private property for the purpose of timber harvest.

1.2.2 Where is the Action Proposed to Occur?

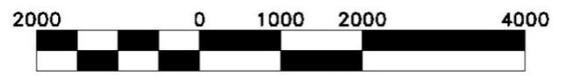
The proposed road is located on BLM-administered lands, northeast of the community of Rogue River, in the Lower Evans Creek 6th Field Watershed (See Map 1).

Map 1: Project Area

EXHIBIT A
FOREST CAPITAL R-O-W



 PROJECT LOCATION
 PROPOSED ROAD



SCALE: 1"=2000'

- “Continue to make BLM-administered lands available for needed rights-of-way where consistent with local comprehensive plans, Oregon statewide planning goals and rules, and the exclusion and avoidance areas identified in this RMP” (1995 ROD/RMP p. 82).
- “Locate, design, construct, and maintain roads to standards that meet management objectives in accordance with the district road management plan” (1995 Rod/RMP p. 88).
- “Follow best management practices for water quality and soil productivity to mitigate adverse effects on soils, water quality, fish and riparian habitat during road construction and maintenance” (1995 ROD/RMP p. 88).

1.4 What Factors will the BLM use to Make a Decision?

In choosing the alternative that best meets the purpose and need, the BLM will consider the extent to which each alternative would:

- 1. provide a road transportation system that serves resource management needs;
- 2. be consistent with Federal and State laws and management direction for BLM-administered lands (43 CFR 2804.25 (d)(1) and 43 CFR 2804.26 (1)).

1.5 Does the Proposed Project Conform with Land Use Plans and Other Documents?

The actions proposed and analyzed in this EA were developed to be consistent with the management objectives for public lands identified in the following documents. The EA analysis here tiers to that of the Northwest Forest Plan and supporting environmental impact statements in effect on the date of the EA decision.

1.5.1 Medford District Record of Decision and Resource Management Plan (ROD/RMP), June 1995

The Medford District Record of Decision and Resource Management Plan responds to the need for a healthy forest and rangeland ecosystem with habitat that will contribute toward and support populations of native species, particularly those associated with late-successional and old growth forests. The RMP responds to the need for a sustainable supply of timber and other forest products that will help maintain the stability of local and regional economies, and contribute valuable resources to the national economy on a predictable and long-term basis. The RMP contains the same land use allocations and standards and guidelines as the NWFP, but also responds to issues specific to the Medford District.

1.5.2 Northwest Forest Plan (NWFP), April 1994

The Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl (also known as the Northwest Forest Plan) provides extensive standards and guidelines, including land allocations, which comprise a comprehensive ecosystem management strategy. The Medford District ROD/RMP of June 1995 incorporated the standards and guidelines of the NWFP and superseded the NWFP. Since the NWFP is commonly referenced as a shorthand description of this coordinated set of standards and guidelines common to the various Federal

management units throughout the range of the northern spotted owl, we may make reference to the NWFP, even though it was replaced by the later adopted ROD/RMP. Wherever we refer to the “NWFP,” we are actually referring to the 1995 ROD/RMP which incorporated the conservation strategy of the 1994 decision.

1.5.3 Survey and Manage (S&M), January 2007

This project conforms with the 2007 Record of Decision To Remove the Survey and Manage Mitigation Measure Standards and Guidelines from Bureau of Land Management Resource Management Plans Within the Range of the Northern Spotted Owl (also known as Survey and Manage).

1.5.4 Medford District Integrated Weed Management Plan, June 1998

Medford District Integrated Weed Management Plan provides a proactive ecosystem-based approach to reduce populations of alien plant species to a level which will allow for the restoration of native plant species, and provide for overall ecosystem health. Control measures may include cultural or preventative (seed testing, vehicle washing), physical (handpulling, competitive planting, burning), biological (insects), and chemical (herbicide), and may be found in greater detail in the Northwest Area Noxious Weed Control Program EIS, December 1985.

1.5.5 Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States Programmatic EIS and ROD, September 2007

The Programmatic EIS provides national guidance for using herbicides and other vegetation treatments on BLM-administered public lands in 17 western states. It guides the use of herbicides for field-level planning and on-the-ground projects designed to restore and sustain important riparian, range, and wildlife habitat on public lands under BLM management. The EIS replaces analyses contained in four existing Environmental Impact Statements completed between 1986 and 1992 for 14 Western states, and adds analysis of vegetation treatments in two other Western states and Alaska.

1.5.6 Relevant Statutes

Oregon and California Act (O&C) 1937 – Requires the BLM to manage O&C lands for permanent forest production, in accord with sustained-yield principles. Management of O&C lands must also protect watersheds, regulate streamflow, provide for recreational facilities, and contribute to the economic stability of local communities and industries.

National Environmental Policy Act (NEPA) 1969 – Requires the preparation of environmental impact statements for Federal projects which may have a significant effect on the environment.

Endangered Species Act (ESA) 1973 – Directs Federal agencies to ensure their actions do not jeopardize threatened and endangered species.

Federal Land Policy and Management Act (FLPMA) 1976 – Defines BLM’s organization and provides the basic policy guidance for BLM’s management of public lands.

Archaeological Resources Protection Act (ARPA) 1979 – Protects archaeological resources and sites on federally-administered lands. Imposes criminal and civil penalties for removing archaeological items from Federal lands without a permit.

Clean Water Act (CWA) 1987 – Establishes objectives to restore and maintain the chemical, physical, and biological integrity of the nation’s water.

Clean Air Act (CAA) 1990 – Provides the principal framework for national, state, and local efforts to protect air quality.

1.6 What are the Relevant Issues and How were the Issues Identified?

1.6.1 Relevant Issues

Based on input from the project's ID Team plus information contained in the 1995 ROD/RMP, the following issues were identified. These issues provide a basis for comparing the environmental effects of the alternatives and aid in the decision-making process. The major issues brought forward were used to formulate alternatives, identify appropriate design features, or analyze environmental effects. The following major issues were identified:

1.6.2.2 Soils

Soil erosion and slope stability are soil concerns relating to road construction. These concerns would be moderated by the road design. This includes construction requirements such as; end hauling waste material, gradient of the slope, drainage, and season of use.

1.6.2.3 Hydrology

The main water quality concern with relation to new road construction is stream sedimentation. Road construction could also affect stream temperature, as well as, water quantity. Due to the length of this proposed road, the location and project design features these concerns would be minimized or eliminated.

1.6.2.4 Fisheries

Under the Endangered Species Act (ESA), NOAA Fisheries designates SO/NC Coho Salmon Critical Habitat (CCH) and Essential Fish Habitat (EFH), which is defined as areas within the geographical area currently or historically occupied by the species that have the physical or biological features essential to the conservation of the species and requires special management and protection. The nearest populations of fish occur approximately 0.8 miles downstream from the proposed project area in Fielder Creek. Fielder Creek is known to support steelhead and cutthroat trout, and is designated as CCH and EFH. There are 1.3 miles of CCH designated streams in the Fielder Creek seventh field watershed with an additional 1.4 miles of cutthroat habitat in the Fielder Creek seventh field watershed. The entire fish-bearing areas of Fielder Creek and Right Fork Fielder Creek are privately owned.

1.6.2.5 Botany/Weeds

The proposed road construction is within the range and contains suitable habitat for one Endangered plant, *Fritillaria gentneri* (Gentner's fritillary). If present within the disturbed area, *Fritillaria gentneri* plants would likely be destroyed within the area disturbed during the proposed road construction. The programmatic consultation for activities that may affect federally listed plants (USDI FWS 2008, USDI BLM 2008) covers new road construction if Project Design Criteria (PDCs) are met. PDCs for new road construction include surveying suitable habitat along the proposed corridor and protecting occurrences using 100 foot minimum buffers, with no disturbance within the buffer. A one year survey is adequate (USDI BLM 2008, p. 28). If PDCs are not met, a separate consultation with the U.S. Fish and Wildlife Service is

required. PDCs were met, surveys were conducted and no T&E or Sensitive vascular or nonvascular plants were detected.

In the process of road construction, existing vegetation is removed and soil is disturbed, leaving the area open to noxious weed invasions. Weeds may be brought into the project area by equipment or vehicles during road construction or subsequent traffic on the new road. Weeds may also spread into the newly disturbed area through natural processes, such as wind or wildlife movement through the area. A survey of the project area discovered no existing noxious weed populations. Project design features would reduce the risk of introducing noxious weeds during road construction.

1.6.3 Issues Discussed but Considered not Relevant for Purposes of Analysis

1.6.3.1 Wildlife

There are two wildlife species on the USFWS T&E list: Northern spotted owl and vernal pool fairy shrimp. The area is outside the range of the vernal pool fairy shrimp.

The proposed ROW is within the range of the northern spotted owl. The nearest known spotted owl site is over 1.5 miles from the proposed Right-of-Way.

Northern spotted owls prefer old growth coniferous forest for nesting, roosting, and foraging habitat. They may also be found in areas with multi-layered, closed canopies with large diameter trees and abundance of dead and down woody material. The area where the Right-of-Way is proposed is classified as noncommercial woodland and is not spotted owl habitat. The area does not have the potential of developing into late-successional forest or supporting old-growth dependant species, such as spotted owl. The proposed Right-of-Way would have no effect on Northern spotted owl because it would not occur within spotted owl habitat on BLM-administered lands.

The Special Status Species Assessment determined that due to the small amount of habitat removed (approximately 1.2 acres total) along a linear path, there would be no measurable impacts to special status species that could be present in the area (see Appendix A).

1.7 Decisions to be Made

The BLM will decide whether or not to grant the Right-of-Way, and if so under what terms and conditions.

2.0 Alternatives

2.1 Introduction

Chapter 2 provides a description of the proposed project. The alternative ways for meeting the need for this project and the objectives identified in Chapter 1 are presented. Project Design Features that serve as the basis for resource protection during project implementation are included.

One action alternative was developed to respond to the issues identified in Chapter 1. A No Action Alternative is included to provide a baseline for comparison.

2.2 Description of the Alternatives

2.2.1 Alternative 1 – No Action

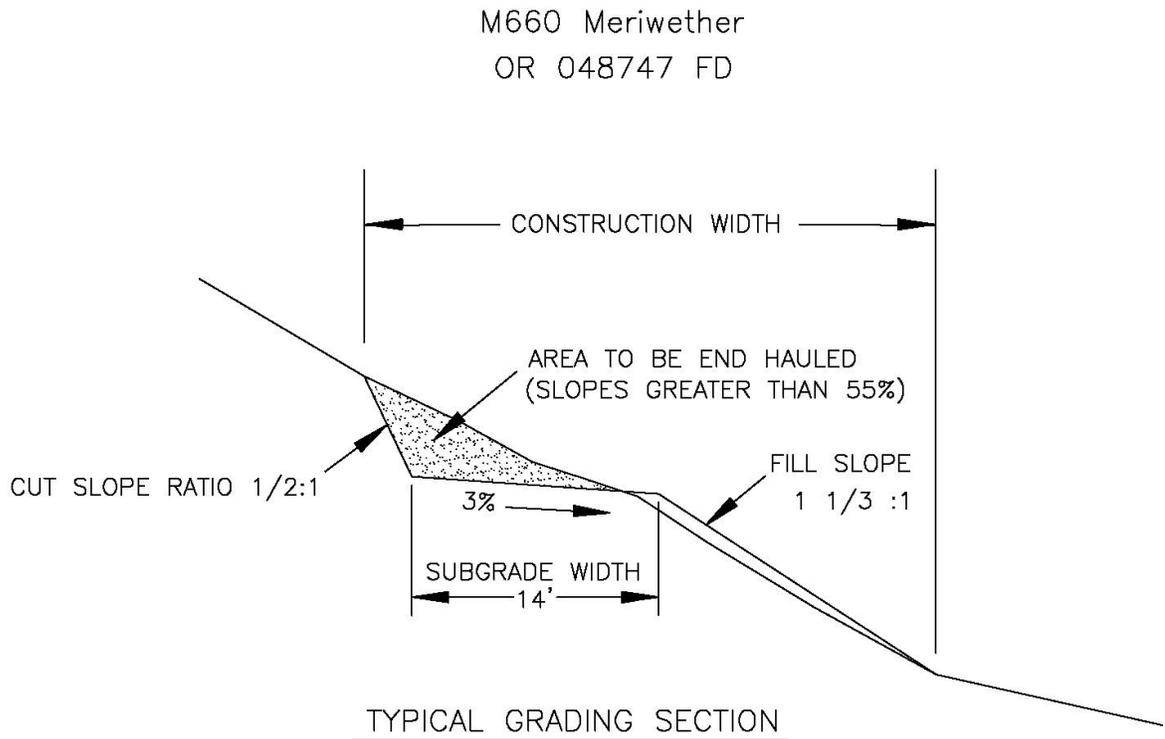
The No Action Alternative describes the baseline against which the effects of the proposed actions will be evaluated, the existing conditions in the Project Area, and the continuing trends. Under Alternative 1, the proposed road would not be approved and the applicant would not acquire legal access to their land across public land. This could result with the applicant seeking legal action to acquire access. If legal action is taken it would likely involve the route currently proposed over public land.

2.2.2 Alternative 2 – Proposed Action

Alternative 2, the Proposed Action, the BLM would authorize Meriwether to construct, use, and maintain 1,060 feet (0.2 miles) of natural surface road off of BLM road #35-4-32.0 in Township 35 South, Range 4 West, Section 31.

The new permanent road would be identified as road #35-4-31.1. The right-of-way clearing width would be 50 feet. Conifer trees in the right-a-way that are of commercial size (greater than 8 inches in diameter) are approximately 15 trees. The useable running surface of the road width would be 14 ft; however, it would be wider at turnouts, turnarounds, and for radius curves. Maximum grade would be 13 percent, cutslopes would be no greater than 1/2 to 1, and fill slopes would be 1 1/3 to 1 or less (Figure 2). Excess material would be end hauled (removed from the site) to a designated area. Road would be blocked and waterbarred prior to the rainy season and after use.

Figure 2: Proposed Road Cross-Section



2.3 Project Design Features

The following Project Design Features are included in the design of the project in Alternative 2. These Project Design Features are a compilation of Best Management Practices identified in the Medford District ROD/RMP and resource protection measures identified by the Interdisciplinary Team. The Project Design Features would serve as a basis for resource protection in the implementation of the projects. They will be considered in the analysis of the impacts of the projects in Chapter 3.

- Limit construction to the dry season (generally May 15 to October 15).
- Restrict all rock hauling, log hauling, and landing operations on natural surface or inadequately rocked roads whenever soil moisture conditions or rain events could result in road damage or the transport of sediment to nearby stream channels, generally October 15 to May 15.
- Restrict all road closure work from October 15 to May 15, or when soil moisture exceeds 25 percent.
- Place waste stockpile and borrow sites resulting from road construction or reconstruction in a location where sediment-laden runoff can be confined, at least one site potential tree length from a stream.
- Apply native plant seed and weed-free straw mulch to areas disturbed by road construction to minimize erosion and the introduction of noxious weeds.
- 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.
- Stop work and notify the BLM within 12 hours if an archaeological site is discovered during the project.

Table 2-1. Effects on Critical Elements of the Human Environment	
Element	Rationale
Air Quality	The Project Area is not located within a Quality Management Area (QMA) or Smoke Sensitive Receptor Area.
Area of Critical Environmental Concern	No effect on an Area of Critical Environmental Concern (ACEC). There is no ACEC in the project area.
Cultural Resources	The BLM completed a cultural survey following Oregon BLM/State Historic Preservation Office protocol. The Medford District Archaeologist assessed the project as “No Effect Determination, no significant resources and/or resources avoided.” The following PDF was included in the EA to help avoid impacts to cultural resources: <ul style="list-style-type: none"> • Stop work and notify the BLM within 12 hours if an archaeological site is discovered during the project.
Environmental Justice	The Meriwether Right-of-Way project is not expected to have any effects on minority or low income populations.
Farm Lands (prime or unique)	No farm lands will be affected. Road would be constructed on BLM-administered forest lands.
Floodplains	Road construction would not take place in floodplains within the Project Area. The proposed action does not involve occupancy and modification of floodplains and would not increase the risk of flood loss. The proposed action is consistent with Executive Order 11988, Floodplain Management.
Invasive, Nonnative species	No noxious weed populations were discovered where the new road construction would occur. However, yellow star-thistle occurs along Road 35-4-32 in T35S-R4W-S32 on private lands, approximately ¼ mile away from the proposed road construction. Ingress and egress will occur along this road during and after construction of the new road. Scotch broom is also abundant within one mile of the project area on private lands along Fielder Creek Road which provides access to Road 35-4-32. <p>Activities proposed in this project that could contribute to the introduction or spread of noxious weeds, include road construction and movement of vehicles off system roads. To minimize the potential for introducing invasive, nonnative species into the project area, the BLM will implement PDFs and additional actions. The use of these preventative strategies will reduce the risk of introducing or spreading noxious weeds in the project area.</p>
Native American Religious Concerns	The Project Area contains no known sites that are sacred to Native Americans.

Table 2-1. Effects on Critical Elements of the Human Environment	
Element	Rationale
Threatened or Endangered Species	<p>T&E Plant Species: No T&E plants occur within the project area. Issuing the permit to authorize construction of the proposed road would be “No Affect” to T&E plant species because no T&E plants would be impacted.</p> <p>T&E Fish Species: The Project Area does not contain Southern Oregon/Northern California (SO/NC) coho salmon or coho critical habitat. The proposed road would have “No Affect” on SO/NC coho salmon or coho critical habitat because the nearest populations of fish occur approximately 0.8 miles downstream from the proposed project area in Fielder Creek. Fielder Creek is known to support steelhead and cutthroat trout, and is designated as Coho Critical Habitat (CCH) and Essential Fish Habitat (EFH). The proposed road construction is located outside of any Riparian Reserves, without any connection to streams at crossings. The road would be blocked and waterbarred during rainy months, therefore, there would be no mechanism for sediment to travel from the road to area streams. Because of these factors the road construction would not affect cutthroat trout or coho salmon populations, CCH or EFH.</p> <p>T&E Wildlife Species: Within the Butte Falls Resource Area, there are two wildlife species on the USFWS T&E list: Northern spotted owl and vernal pool fairy shrimp. The area is outside the range of the vernal pool fairy shrimp. The proposed ROW is within the range of the Northern spotted owl. The nearest known spotted owl is over 1.5 mile from the proposed ROW.</p> <p>The lands where the ROW is proposed to be built is classified as non-commercial woodland and is not spotted owl habitat. The area does not have the potential of developing into late-successional forest or supporting old-growth dependant species, such as spotted owl. The proposed ROW would have no effect on Northern spotted owl because it would not occur within spotted owl habitat on BLM lands.</p>

Table 2-1. Effects on Critical Elements of the Human Environment	
Element	Rationale
Wastes, Hazardous or Solid	<p>The Project Area contains no known historical sites with the potential to contain hazardous materials. BLM employees conducting field work in the Project Area have not encountered any illegal dumping of hazardous materials. If hazardous materials are discovered during the project implementation, applicable State and Federal laws would be followed to protect human health and the environment.</p> <p>During project implementation, applicable State of Oregon Department of Environmental quality guidelines for spill prevention and containment of petroleum products would be followed (Oregon Administrative Rules, Chapter 340, Department of Environmental Quality, Division 142, Oil and Hazardous Materials Emergency Response Requirements).</p>
Water Quality	The proposed action would not affect water quality due to locating the road away from stream channels.
Wetlands/Riparian Zones	The proposed action would not result in the destruction, loss, or degradation of any wetland. As such, the proposed action is consistent with Executive Order 11990, Protection of Wetlands.
Wild and Scenic Rivers	The Meriwether ROW project would have no effect on Wild and Scenic Rivers because the Project Area does not contain any segment of a wild and scenic river.
Wilderness	No designated wilderness areas are located in or near the Project Area.

3.0 Affected Environment/ Environmental Consequences

3.1 Introduction

The proposed right of way is in a forest stand classified as suitable woodland and withdrawn from planned timber harvest. Hot, dry environmental conditions combined with gravelly rocky soils create poor conditions for conifer establishment and growth. As a result, this stand is not biologically capable of supporting a sustained yield of forest products and has been withdrawn from lands that contribute to the planned timber harvest volume. Timber harvest on withdrawn lands are limited to activities that enhance other resource values, the salvage of tree mortality or right-of- way access construction (RMP, 1995).

The proposed road is located at about 2400 feet elevation on west and south aspects and is approximately 1,060 feet in length. Construction of the road would convert approximately 1.2 acres of suitable woodland to nonforested land. Road construction would require the removal of trees, shrubs and herbaceous vegetation. Tree species affected include Douglas-fir, sugar pine, ponderosa pine, madrone, canyon live oak, and black oak. Shrubs include poison oak and small amounts of deerbrush ceanothus, honeysuckle and white leaf manzanita. The herbaceous layer provides minimal ground cover with small amounts of plantain, iris, fescue and shootingstar. The majority of the trees that would be removed during road construction are less than 8 inches in diameter. Conifer trees in the right-a-way that are of commercial size (greater than 8 inches in diameter) are limited to approximately 15 trees.

Chapter 3 describes the current condition of the environment within the Meriwether ROW project. Past activities have contributed to the conditions currently existing in the Project Area and are reflected in the description of the current conditions. The information in this chapter forms the baseline for determining the effects of the proposed action. This chapter is organized by the resources most relevant to the issues identified in Chapter 1. For each resource, the environments are described. After each resource's affected environment description, the impact of each alternative is analyzed under the same resource heading.

3.1.1 Land Use Allocations and Restrictions

3.1.1.1 Administratively Withdrawn

Administratively Withdrawn areas (areas withdrawn from scheduled timber harvest) include such areas as timber production capability classification withdrawals, recreation sites, and right-of-way corridors. The proposed right-of-way is in a forest stand classified as suitable woodland (withdrawn for timber production capability) and withdrawn from planned timber harvest.

3.2 Soils

3.2.1 Definitions

Headwalls or oversteepened slopes: Positions on the landscape inherently prone to slumping or earthflows, due to slopes that are at or near the underlying regolith's (soil covering bedrock) natural angle of repose. Although each soil type and underlying parent material have different angles of repose, typically

steep concave slopes greater than 65 percent are considered to be headwalls with the greatest potential for landslides or mass wasting in the Southern Oregon geologic region.

Dry Ravel: Surface gravel or cobble sized rock fragments that are loosely held together by organic material and/or small amounts of soil fines. Dry ravel is prone to movement downslope upon disturbance and depending on depth of the ravel and on the steepness of slope it can cover or destroy downhill vegetation and/or scour the soil surface layer of organic matter.

3.2.2 Methodology

In June of 2009 the resource area soil scientist and hydrologist conducted a field reconnaissance of the proposed 1060 feet of right of way across BLM administered lands to identify possible field issues related to the road construction. Existing roads near the proposed right-of-way were checked for evidence of active or past erosion or slumping.

Field verifications for the soil types were made for consistency with the Jackson County Soil Survey (NRCS 1993).

3.2.3 Assumptions

All proposed project design features would be implemented to meet resource objectives.

3.2.4 Affected Environment

The proposed right-of-way traverses across convex slopes ranging from 50 to 70 percent. The proposed road grade line ranges from 4 to 14 percent.

The dominant soil type along the proposed right of way is the Offenbacher soil with inclusions of the McMullin soil and rock outcrop. The Offenbacher soil is moderately deep (20-40 inches) to metamorphic bedrock and is skeletal (contains greater than 35 percent rock fragments in the subsoil). The surface layer is typically a gravelly loam with high runoff and erosion potential due to steepness of slopes.

The McMullin soil is similar to the Offenbacher soil, except it is shallow to bedrock (less than 20 inches).

Typically, the soils in this area have formed in relatively stable competent metamorphic parent materials.

There are no obvious headwalls (oversteepened concave slope positions) along the proposed road grade. There is no visual evidence (e.g., pistol butted or jack strawed trees, hummocky ground, past soil movement) of slope instability. There is, however, surface gravels several inches deep that may be prone to dry raveling especially on the steeper slopes (greater than 60 percent). The first 300-400 feet of this right of way has surface gravels with side slope greater than 60 percent.

3.2.5 Environmental Consequences

3.2.5.1 Effects of Alternative 1 (No Action) on

Direct and Indirect Effects

There would be no direct or indirect effects to the soil resource from this alternative. No soil disturbance would occur, therefore, no increase in potential for erosion, raveling or landslides would occur.

Cumulative Effects

This alternative would not result in additional cumulative effects because there would be no ground disturbance.

3.2.5.2 Effects of Alternative 2 on Soils

Direct and Indirect Effects

The direct effects of this proposed road construction would excavate and expose bare soil and rock material subject to erosion, raveling or slumping downslope. The extent of the indirect effects of damage to downslope vegetation and to the soil surface depends on the amount of material moving down slope and the velocity of the moving material. It is expected that project design features such as end hauling of waste material to stable locations, reduced road width from a typical 16 feet to 14 feet (which means less excavation and less exposed material), restriction to dry soil periods for construction and use, and seeding and mulching of fillslope material would reduce the amount of material that could move downslope and cause damage. Although some small amounts of dry ravel from the gravelly surface layer may occur during construction, downslope damage is expected to be minimal or negligible. The potential for soil and rock material moving off site is low because, there are no major headwalls and the shape of the sideslopes are convex or linear.

Implementation of PDFs is expected to reduce the effects of erosion of the running surface and possible sedimentation in local stream channels. There is no site specific data to quantify these effects, however with the proper implementation of the PDFs, little or no increases in erosion, raveling, or landsliding is expected.

Cumulative Effects

The construction of 1,060 feet of new road would add to the existing road density of this road system. Field reconnaissance of other roads in similar soil types and land forms in this area do not exhibit signs of instability from slumping or excessive erosion. Therefore, with the implementation of the project design features, it is expected that constructing this road would not increase erosion or landslide potential in the Right Fork of Fielder Creek watershed. Any potential dry ravel is expected to be minimal and contained within the immediate slope below and would not be measureable at the 7th field scale.

3.3 Hydrology

3.3.1 Definitions

Transient Snow Zone: A winter precipitation band from about 3,500 feet to 5,000 feet in elevation where a mixture of snow and rain occurs. The snow level in this zone fluctuates throughout the winter in response to alternating warm and cold fronts. Snow packs in this elevation range area often shallow and are quickly melted by rain and warm winds.

3.3.2 Methodology

The project hydrologist used the following sources for analysis:

- Field reconnaissance in June 2009 to identify potential issues and to determine stability of area based on existing conditions.

- The Lower Evans Creek watershed analyses (USDI 1995) provided general water resources background information for the Project Area.
- Geographic Information System and BLM Field Visits were used to analyze the existing condition of the Project Area.
- Stream types on BLM-administered lands were identified through site visits; non-Federal land stream types were estimated using aerial photo interpretation and information on adjacent BLM-administered lands.
- The scale for analysis is the Lower Evans Creek 6th field subwatershed.

3.3.3 Assumptions

- All proposed project design features would be implemented to meet resource objectives.

3.3.4 Affected Environment

The Lower Evans 6th field subwatershed is located northwest of Medford and covers approximately 21,766 acres (34 square miles). The climate is considered a Mediterranean type which consists of cool, wet winters and hot, dry summers. Summer temperatures range from the 80's to the high 90's occasionally reaching summer daytime high temperatures of 100+ degrees Fahrenheit (F). Winter lows drop regularly to 10 to 20 degrees F. Annual precipitation ranges from 35-45 inches. The elevation ranges from 1,000 to 3,960 feet. Typically, most precipitation occurs in the late fall, winter, and early spring as rainfall with the exception of the upper ridges where snow may accumulate. Less than 1 percent of the project area is in the transient snow zone (TSZ) within this rain dominated watershed.

The existing road density in the Lower Evans 6th field subwatershed is 5.5 miles per square mile. There are approximately 187 miles of existing road in the watershed.

The Oregon Environmental Quality Commission has adopted water quality standards to protect designated beneficial uses. 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 Department of Environmental Quality (DEQ) is required by the Federal Clean Water Act 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 Clean Water Act that makes the requirement. DEQ's 2004/2006 303(d) list is the most recent listing of these streams (ODEQ 2006a).

Within the Lower Evans 6th field subwatershed, Evans Creek is on the list for Fecal Coliform. This project would have no affect on Fecal Coliform, therefore, no affect on 303(d) listed streams.

3.3.5 Environmental Consequences

3.3.5.1 Effects of Alternative 1 (No Action) on Water Resources

Direct and Indirect Effects

Alternative 1 would not build the proposed 1,060 foot road for Meriwether to access private land. There would be no ground disturbance, therefore, there would be no chance of sediment reaching stream channels.

Cumulative Effects

This alternative would not result in additional cumulative effects because there would be no ground disturbance.

3.3.5.2 Effects of Alternative 2 on Water Resources

Direct and Indirect Effects

The road would be located on relatively stable side slopes of 55-70 percent. To minimize erosion due to the construction all excess material would be end hauled (removed) to a stable location. In addition, the road would be waterbarred and blocked after use prior to the rainy season.

The proposed road would be built outside of riparian reserves away from stream channels. There are no draws or swales to cross with the road construction, therefore, no culverts would be needed. The road would remain natural surface, so it would be subject to surface erosion during rain events. However, the road would be blocked during the wet season to limit use and help minimize surface erosion. The disturbed areas outside the road prism would be seeded and mulched to further minimize erosion. Although erosion would be minimized, it is possible it could occur, especially after the first few years following construction. The proposed location of the road away from stream channels would minimize the likelihood of sedimentation to streams and maintain water quality if erosion were to occur from construction or long term maintenance of the road.

While this proposed road is on steep sideslopes, the slopes are relatively stable based on the convex topography with no apparent slumps or hummocky terrain, which are indicators of unstable topography. Existing roads on similar locations and slopes in the area do not exhibit signs of active or excessive erosion. Because of these factors, the location of the road, and the PDF's, this project is not expected to affect stream sedimentation, stream temperatures, or cause any measurable changes to water quantity.

Cumulative Effects

The cumulative effects related to road building in the Lower Evans Creek 6th field watershed include stream sedimentation and increased stream temperatures. This project is not expected to affect either of these water quality issues and therefore would not contribute to the cumulative effects related to road building and water quality impacts.

The construction of approximately 1,060 feet (0.20 miles) of road would not substantially affect the road density of the watershed at this scale.

3.4 Fisheries

3.4.1 Definitions

Evolutionary Significant Unit (ESU) - A population or group of populations of salmon that 1) is substantially reproductively isolated from other populations and 2) contributes substantially to the evolutionary legacy of the biological species.

Smolt - a young salmon at the stage when it migrates from fresh water to the sea.

Turbidity – a unit of measurement quantifying the degree to which light traveling through a water column is scattered by the suspended matter. Turbidity is measured in Nephelometric Turbidity Units (NTU).

3.4.2 Methodology

- Lower Evans Creek Watershed Analysis was used for background information.
- Geographic Information System (GIS) was used for analysis and calculations.
- Literature related to fisheries, hydrology, streams and road activities were used for analysis.

3.4.3 Assumptions

Riparian Reserves are successful in protecting aquatic ecosystems from high risk of sediment traveling to area streams by providing buffers of undisturbed land between roads and streams (Meehan 1991).

Fish are dynamic, adaptive, and move throughout the stream systems (Bramblett et al. 2002, Kahler et al. 2001, Hilderbrand and Kershner 2000) to avoid short-term increases in sediment levels (Kahler et al. 2001).

3.4.4 Affected Environment

The proposed project is located in the Lower Evans Creek sixth field watershed, specifically in the Fielder Creek seventh field watershed.

3.4.4.1 Fish Populations

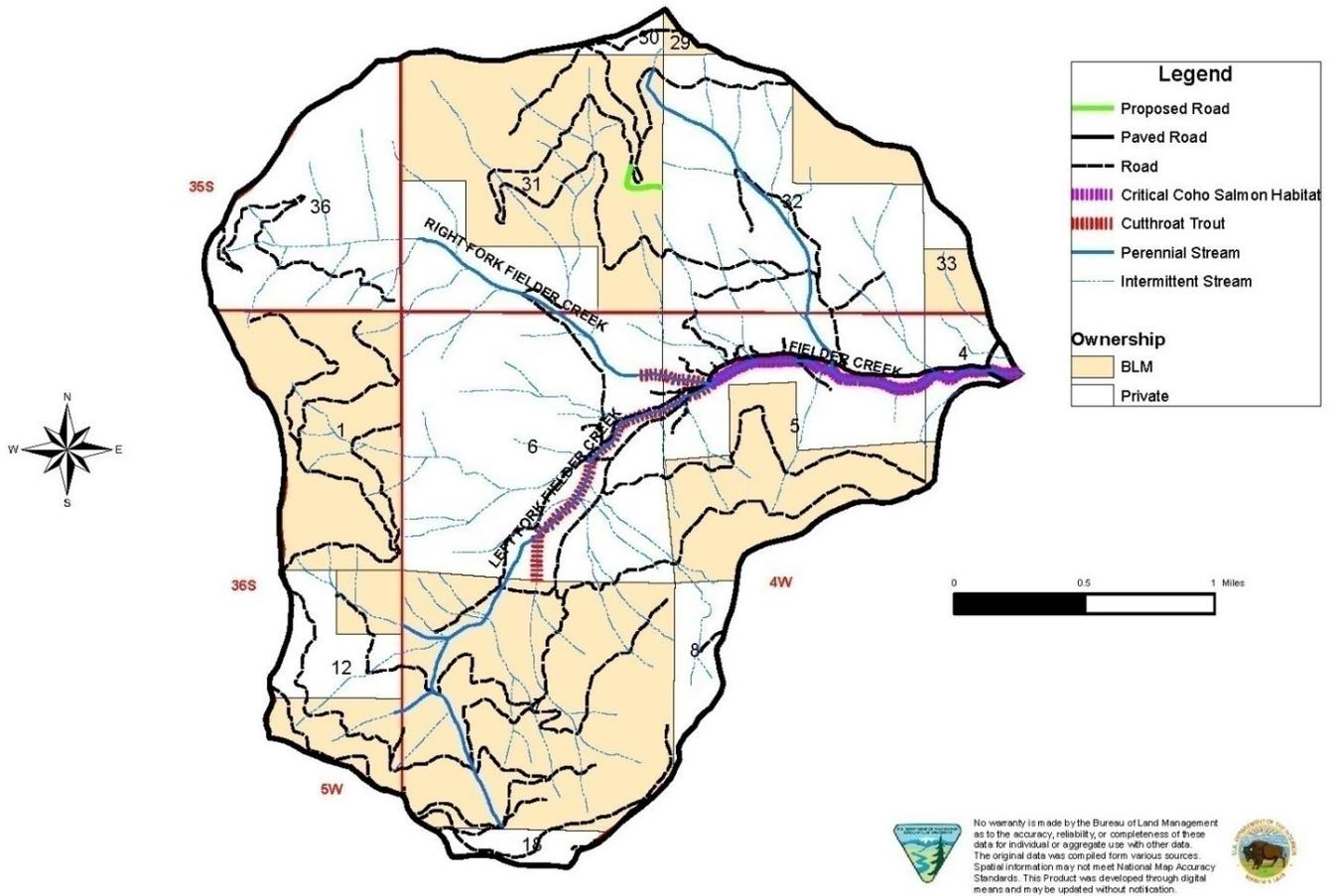
Major fish species found in the Fielder Creek seventh field watershed include coho salmon (*Oncorhynchus kisutch*), steelhead trout (*O. mykiss*) and cutthroat trout (*O. clarki*). Cutthroat trout have the widest distribution, followed by steelhead, and subsequently coho salmon.

The National Oceanographic and Atmospheric Administration (NOAA) Fisheries division listed the Southern Oregon Northern California (SO/NC) Coho Salmon Evolutionarily Significant Unit (ESU) as “threatened” under the Endangered Species Act (ESA) in May 1997. As directed under Endangered Species Act (ESA), NOAA Fisheries designates SO/NC Coho Salmon Critical Habitat (CCH) and Essential Fish Habitat (EFH), which is defined as areas within the geographical area currently or historically occupied by the species having the physical or biological features essential to the conservation of the species and requires special management and protection.

The nearest populations of fish occur approximately 0.8 miles downstream from the proposed project area in Fielder Creek. Fielder Creek is known to support steelhead and cutthroat trout, and is designated as CCH and EFH.

There are 1.3 miles of CCH designated streams in the Fielder Creek seventh field watershed with an additional 1.4 miles of cutthroat habitat in the Fielder Creek seventh field watershed. The entire fish bearing areas of Fielder Creek and the Right Fork of Fielder Creek are privately owned. See Map 2 for representation of fish distribution in relation to project area.

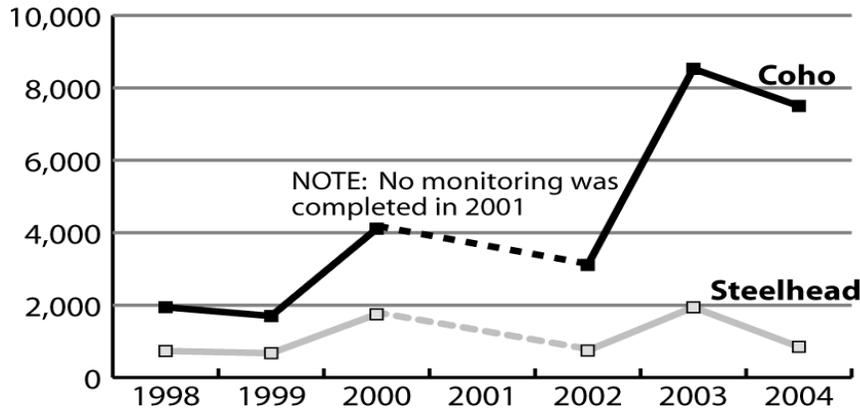
Map 2: Proposed Road in Fielder Creek 7th Field Watershed



3.4.4.2 Population Trends

Limited information is available on Evans Creek 5th Field Watershed relating to current and historic populations. Population data available for the project area is from the joint BLM and Oregon Department of Fish and Wildlife (ODFW) smolt trap program in the West Fork Evans Creek. The smolt trap project estimated steelhead population numbers as being between 600 and 2,000 and coho salmon numbers increasing from about 2,000 to nearly 8,000 from 1998 to 2004 (Figure 3).

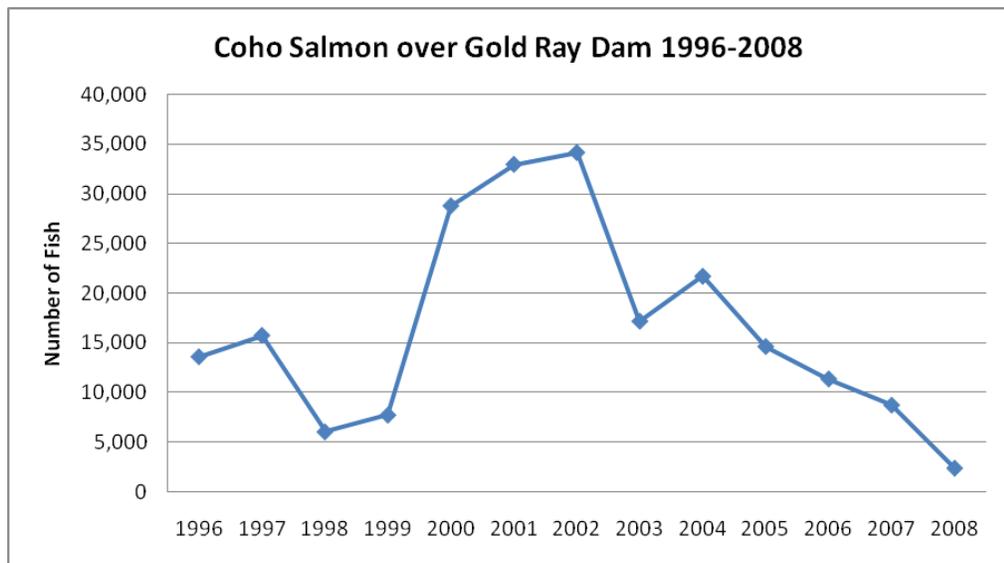
Figure 3: Coho Salmon and Steelhead Trout Smolt Populations in West Fork Evans Creek



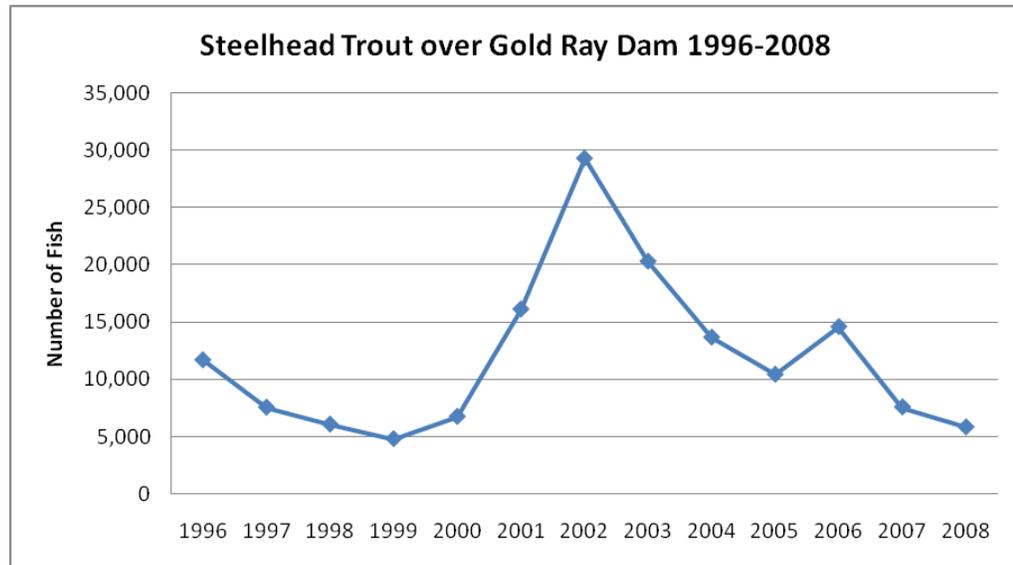
In 2001, ODFW studied the population health of steelhead within the Rogue Basin, which includes the Lower Evans Creek fifth field watershed. The population goal for subyearling (less than 1 year old) steelhead trout was not met. However, the goal for post yearling (older than 1 year) steelhead trout was met in both pools and riffles in the Rogue Basin.

Coho salmon and steelhead trout populations for the Upper Rogue Basin have been monitored at Gold Ray Dam since 1942. The wild adult coho salmon population had recently been on an upward trend since the extremely low years of 1964 – 1979, where numbers were as low as 12 returning adults (Satterthwaite 2004). However, since 2002, the wild adult population has been on a downward trend and the 2008 returns are the lowest of the last 10 years (ODFW Gold Ray Counts 1996-2008) (Figure 4).

Figure 4: Coho Counts at Gold Ray Dam since 1996



The steelhead trout population has been monitored at Gold Ray Dam since 1942. Steelhead trout were in an upward trend through 2002 and have been on a downward trend and the 2008 returns are among the lowest in the last 10 years (ODFW Gold Ray Counts 1996-2008) (Figure 5).

Figure 5: Steelhead Counts at Gold Ray Dam since 1996

The Evans Creek mouth is downriver from Gold Ray Dam on the Rogue River; however, the coho salmon and steelhead trout numbers over the dam reflect the overall population trends for the entire Rogue River and ESU. Figures 3 and 4 depict the trend of coho salmon and steelhead trout within the Rogue basin.

3.4.4.3 Fish Barriers

Within the Lower Evans Creek fifth field watershed there are nine partial fish barriers. Fielder Dam is a 25 foot concrete dam located at river mile 3.0 on Evans Creek, and is a partial barrier to coho salmon as well as steelhead and cutthroat trout. All other barriers are partial barriers to steelhead and cutthroat only (USDI 1995a). Ditch Creek has an 18 to 20 foot high rock/concrete dam that is a full barrier to steelhead and cutthroat trout.

3.4.4.4 Habitat

Salmon and trout species need cool water temperatures, hiding cover, clean spawning gravels, rearing pools and an adequate food supply for good fish production. Fish production is largely determined by habitat quantity and quality (Meehan 1991). Optimum temperatures for coho salmon, steelhead, and cutthroat trout are 55 to 60 degrees Fahrenheit (°F) and temperatures over 84°F are considered lethal (Meehan 1991).

Spawning gravel for salmon and trout ranges in size from 0.5 to 4 inches (Meehan 1991). When high, fine sediment levels occur in spawning gravels, less spawning occurs, eggs tend to suffocate and emerging fry become trapped resulting in mortality and reduced production (Philips et al. 1975, Tappel and Bjornn 1983, Chapman 1988, Meehan 1991). Hausle and Coble (1976) reviewed studies on coho salmon and steelhead fry emergence in gravels with concentrations of sand exceeding 20 percent. When concentrations of sand exceed 20 percent in spawning beds, emergence success declined.

Large woody debris (LWD) is important for providing cover for fish, forming pools, stabilizing channels, and trapping and sorting fine sediment (Meehan 1991). LWD also provides channel roughness to dissipate stream energy which causes bank erosion and increases channel width (Montgomery and Buffington 1997). Oregon Department of Fish and Wildlife (ODFW) conducted fish habitat surveys and found that the Lower Evans Creek sixth field watershed had an average of 10 pieces of LWD per mile of stream, 25 pools per mile and dominant substrate of 28 percent cobble and 27 percent bedrock. Properly functioning streams

were determined to have more than 25 pieces of LWD per mile, greater than 30 pools per mile and less than 20 percent fine sediments and sands.

3.4.4.5 Aquatic and Riparian Habitat Trend

Aquatic habitat is improving in the analysis area because road decommissioning, improvement, and renovation continue to reduce the amount of chronic erosion and improve hydrologic function. Culverts have been upgraded to accommodate 100-year flood events resulting in less risk of major washouts and fill failure. LWD levels have increased habitat complexity and cover for fish. As a result, fine sediment levels have decreased and LWD levels are higher than observed in previous ODFW surveys; however, the upward trend for the entire analysis area is at a slow rate of recovery.

Riparian areas are improving throughout the analysis area because they are no longer managed for timber production on BLM-administered lands. As a result, younger stands are recovering and will eventually provide a supply of LWD and increased shade levels. Thinning of overstocked riparian areas can help recover riparian health and function by accelerating tree growth for future LWD recruitment and increased canopy structure. Private lands are managed for timber production and limited riparian areas remain after harvest, which keep riparian areas in a fractured state.

3.4.5 Environmental Consequences

3.4.5.1 Effects of Alternative 1 (No Action)

Direct and Indirect Effects

Under the no action alternative current conditions would continue and there would be no direct or indirect effects on fish populations or fish habitat on public lands.

Cumulative Effects

This alternative would not result in additional cumulative effects because there would be no ground disturbance.

3.4.5.2 Effects of Alternative 2

Direct and Indirect Effects

The proposed road construction is on a ridge top located outside of any Riparian Reserves, without any connection to streams at crossings. Although, sediment from road construction and road use has the potential to affect fish and Essential Fish Habitat, the road would be blocked and waterbarred during rainy months. Therefore, there would be no mechanism for sediment to travel from the road to area streams. Because of the location and PDFs the road construction would not affect cutthroat trout, steelhead or coho salmon populations, EFH or CCH.

Endangered Species Act Determination

The proposed road construction would have a No Effect determination on coho salmon populations and CCH, because the road is located outside and away from Riparian Reserves and there is no mechanism for sediment to travel from the road to area streams.

3.5 Botany and Noxious Weeds

3.5.1 Methodology

Surveys for T&E and Sensitive vascular and nonvascular plants and noxious weeds were conducted by qualified botanists along the proposed road route on April 24 and June 24, 2009. Surveys on these dates would detect rare plants and noxious weeds that potentially occur in the project area. The BLM does not require pre-disturbance surveys for Special Status fungi (USDI 2004, Attachment 5, 1-2).

3.5.2 Assumptions

There are no legal directives for protecting T&E or Special Status plants on private lands. Therefore, the BLM assumes that even though suitable habitat may exist and rare plants may occur there, private lands do not contribute toward their protection.

3.5.3 Affected Environment

The route of the proposed road traverses a slope at around 2300 feet elevation, following a contour beginning at a southwest aspect and ending at a southeast aspect. The route crosses through several plant communities, including mid- to late seral dry mixed hardwood-conifer stands in the ponderosa pine/Douglas-fir series; Oregon white oak woodland; and small openings with shallow soils, sparse vegetation, chaparral shrubs and rock outcrops. Dominant trees include Douglas fir, sugar pine, ponderosa pine, incense cedar, black oak, white oak, and madrone. Dominant shrub species include manzanita, deerbrush, and poison oak. The ground layer vegetation throughout the area is sparse.

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. The likelihood of a population occurring in the project area is very small. Because the habitat is a dry, mostly south-facing slope, it is not suitable habitat for most of the fungi species, which grow in moister conifer forests with high canopy cover.

3.5.4 Environmental Consequences

3.5.4.1 Effects of Alternative 1 (No Action) on Special Status Plants and Fungi and Noxious Weeds

Direct and Indirect Effects

Under Alternative 1, no road would be constructed. There would be no effects to T&E or Sensitive plants because no populations occur there and no disturbance would occur. There would be no effects to Sensitive fungi, if present, because no disturbance would occur. Therefore, implementation of Alternative 1 would be “no affect” to T&E plants and would not trend Sensitive plant species toward listing.

Although not constructing the road would reduce the risk of introducing noxious weeds into the project area as a result of that action, the risk remains that weeds may be introduced and spread during on-going activities, such as traffic, recreation, and natural processes. 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.

Cumulative Effects

This alternative would not result in additional cumulative effects because there would be no ground disturbance.

3.5.4.2 Effects of Alternative 2 on Special Status Plants and Fungi and Noxious Weeds

Direct and Indirect Effects

Constructing the proposed road would be “no affect” to T&E plants and would not trend Sensitive plant species toward listing because surveys have been completed and no populations were detected.

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 area impacted on BLM-managed lands is very small (1.2 acres) and the 20 Sensitive fungi suspected or documented in the Medford District are very rare, the risk of impacting them is 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).

Constructing the road would create a moderate risk of introducing and spreading noxious weeds into the project area. When vegetation is removed and soil disturbed, conditions are optimal for noxious weeds to establish. The areas that naturally have an open canopy are especially at risk of weed invasion by yellow star-thistle or Scotch broom because both species grow in open canopy conditions. Populations of both species are known within one 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.

The use of Project Design Features (PDFs) and the BLM’s on-going noxious weed program would reduce these risks. These PDFs were developed by the western states BLM weed coordinators, with review and input by 30 individuals from agricultural research services, state agencies, universities, weed societies, and weed advisory councils with backgrounds in weed prevention and control (USDI 1996, 35-40). Washing equipment prior to entering the project area would remove noxious weed seeds and parts that could fall off and establish in the newly disturbed areas. Seeding and mulching bare soil after road construction is complete would speed up establishment of native vegetation that can compete with non-native invasive plants.

Although the immediate potential for weed spread under Alternative 2 would be greater than the No Action Alternative, the BLM considers the potential for introducing noxious weeds into the project area under Alternative 2 similar to the No Action Alternative because of the use of these preventative and monitoring strategies.

Cumulative Effects

Past and present activities on both private and public lands in the Fielder Creek area may have negatively affected rare plants or fungi and contributed to the introduction and spread of noxious weeds; such as, residential and commercial development, road building, on and off road vehicular traffic, timber harvest, forest management, agriculture, mining, recreation, wildfire, fire suppression, wildlife activities, and natural processes. It is reasonable to expect these activities will continue in the future.

Construction of the proposed road would not add cumulative effects to T&E or Sensitive vascular or nonvascular plants because the BLM surveyed for these species and no sites were found. Because the area impacted on BLM-managed lands is very small (1.2 acres) and the 20 Sensitive fungi suspected or documented in the Medford District are very rare, the risk of impacting them is very small. Habitat removed during the road construction would not be suitable habitat for most of the Sensitive fungi. Therefore, construction of the proposed road would not add cumulative effects to Sensitive fungi for these reasons and because the BLM and Forest Service protect known sites (current and future found), conduct large-scale inventories throughout the Pacific Northwest, and provide suitable habitat in reserves.

Constructing the proposed road could potentially introduce noxious weeds into the project area, although it is not possible to quantify with any degree of confidence that amount or to distinguish it from the background risk of introduction from on-going activities. 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.

4.0 List of Preparers

List of Preparers	
Name	Position/Responsibility
Interdisciplinary Team	
Jean Williams	Environmental Coordinator/NEPA Compliance
John Osmanski	Forester/Forest Conditions
Shawn Simpson	Hydrologist/Water Resources
Ken Van Etten	Soil Scientist/Soil
Marcia Wineteer	Botanist/Botany; Noxious Weeds
Linda Hale	Wildlife Biologist/Wildlife
Randy Bryan	Engineering/Transportation
Steve Liebhardt	Fishery Biologist/Fisheries
Lisa Brennan	Cultural Resources

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APPENDIX A

Wildlife

Federally Listed Species

Federally listed species are those species listed under the Endangered Species Act (1973 et seq.). Listings of threatened and endangered species carry federal mandates for consultation with the US Fish and Wildlife Service prior to any action that may affect a species or its habitat. Within the Butte Falls Resource Area, there are two wildlife species on the USFWS T&E list: Northern spotted owl and vernal pool fairy shrimp.

The proposed ROW is within the range of the Northern spotted owl. The nearest known spotted owl is over 1.5 mile from the proposed ROW. The area is outside the range of the vernal pool fairy shrimp.

Northern Spotted Owl

Northern spotted owls prefer old growth coniferous forest for nesting, roosting, and foraging habitat. They may also be found in areas with multi-layered, closed canopies with large diameter trees and abundance of dead and down woody material.

The area where the ROW is proposed to be built across BLM is classified as non-commercial woodland and is not spotted owl habitat. The area does not have the potential of developing into late-successional forest or supporting old-growth dependant species, such as spotted owl. The proposed ROW would have no effect on Northern spotted owl because it would not occur within spotted owl habitat on BLM lands.

Special Status Species

The following table shows the Butte Falls Resource Area special status species assessment. The list is compiled from the Bureau of Land Management OR/WA Special Status Species List, updated in January 2008, based on information from the Oregon Natural Heritage Program and BLM site-specific information. The table contains only the Bureau Sensitive Species known or suspected to be present in the Butte Falls Resource Area boundaries. The method(s) used to assess and review the potential effects to these species followed the techniques described in the OR/WA Special Status Species Policy (IM OR-2003-054). The list includes USFWS Neotropical Migratory Birds of Concern which have been identified as possibly being present in the Butte Falls Resource Area. The species considered are taken from a list of Western BLM Bird Species of Conservation Concern, (source USFWS Migratory Bird Program Strategic Plan 2004-2014; list updated in 2008) and includes birds listed by USFWS as Game Birds below Desired Condition.

The following table shows the basic conclusions of this assessment by species.

Butte Falls Resource Area BLM Special Status Species Assessment Meriwether ROW OR 048747 FD				
Species	OR Status	Range	Presence in Project Area	Conclusions
Amphibians				
Foothill yellow-legged frog	BS	Yes	Absent	<p>Yellow-legged frogs are generally found in permanent slow-flowing streams from sea level to about 1800 ft. (Corkran and Thoms 1996). These frogs are closely associated with permanent streams and are most common in and near streams with rocky, gravelly, or sandy bottoms (Leonard et al 1993).</p> <p>The proposed ROW does not cross any perennial streams. Natural water flows and streamside vegetation would not be impacted.</p> <p>No impacts from proposed ROW.</p>
Reptiles				
Northwestern pond turtle	BS	Yes	Absent	<p>Northwestern pond turtles live in freshwater environments with abundant aquatic vegetation, basking spots, and terrestrial surroundings for nesting and over-wintering (Brown et al 2000). The closest known population is in Evans Creek, approximately 6 miles south of the ROW area.</p> <p>No pond habitat occurs in, or adjacent to the proposed ROW. The proposed ROW does not cross any perennial streams.</p> <p>No impacts from proposed ROW.</p>
Birds				
Bald eagle	BS	Yes	Absent	<p>Bald eagles forage in fields and grasslands near Evans Creek and the Rogue River in the winter. Within Jackson County, bald eagles nest near the Rogue River, lakes, and larger streams.</p> <p>The nearest known nest is in Savage Creek drainage south of I-5, approximately 7 miles from the proposed ROW. No suitable nest trees are present in the proposed ROW.</p> <p>No impacts from proposed ROW.</p>

Butte Falls Resource Area BLM Special Status Species Assessment Meriwether ROW OR 048747 FD				
Species	OR Status	Range	Presence in Project Area	Conclusions
Band-tailed pigeon	GBBDC	Yes	Suspected; transient	<p>Band-tailed pigeons inhabit coniferous forests (Marshall et al 2003). They typically nest in closed-canopy conifer or mixed hardwood and conifer forests. Their nests are primarily in Douglas-fir, but they also will nest in hardwoods and shrubs, within closed-canopy conifer or mixed hardwood and conifer stands. Band-tailed pigeons are often found near mineral springs and mineral sites.</p> <p>The proposed ROW does not impact any mineral springs or seeps. The ROW would not remove closed-canopy conifer forest structure. Conifer forest landscape with a variety of forest stand age and structure would be available adjacent to the ROW and within the 6th field watershed.</p> <p>Impacts from proposed ROW would be inconsequential to the persistence of the species in the 6th field watershed.</p>
Lewis' Woodpecker	BS	Yes	Absent	<p>Lewis' woodpeckers are present in lower elevation lands in Sam's valley. They are not present in the project area.</p> <p>No impacts from proposed ROW.</p>
Mourning dove	GBBDC	Yes	Present	<p>Mourning doves are adapted to a wide range of habitats from open forests and clearcuts to urban and agricultural areas (Marshall et al 2003). They avoid dense forests. They can produce young in up to 4 nesting attempts per year. They are common in BFRA.</p> <p>The proposed ROW would occur in open woodlands and could remove some nesting habitat along the ROW. Habitat would remain outside the ROW within the section and throughout the 6th field watershed.</p> <p>Impacts from ROW activities would be inconsequential to the persistence of the species in the 6th field watershed.</p>

Butte Falls Resource Area BLM Special Status Species Assessment Meriwether ROW OR 048747 FD				
Species	OR Status	Range	Presence in Project Area	Conclusions
Streaked horned lark	BS	No	Absent	<p>Horned lark mainly occur in open fields with short herb-dominated ground cover, including fallow fields. Streaked horned larks are considered extirpated in the Rogue Valley, but may migrate through BFRA in the spring and fall (Marshall et al 2003).</p> <p>Proposed ROW would not occur in habitat.</p> <p>No impacts from proposed ROW.</p>
Tri-colored blackbird	BS	No	Absent	<p>Project area is outside the range of the species. Nearest population is at Denman Wildlife Refuge.</p> <p>No impacts from proposed ROW.</p>
White-headed woodpecker	BS	No	Absent	<p>White headed woodpeckers occur in open ponderosa pine and mixed conifer forests dominated by ponderosa pine. They have been reported in the Mt. Ashland area and the Dead Indian Plateau. There are no confirmed sightings in the Evans Creek watershed.</p> <p>The area is not open ponderosa pine and does not have suitable habitat for white-headed woodpeckers. Proposed ROW is outside the known range of the species.</p> <p>No impacts from proposed ROW.</p>
Wood duck	GBBDC	Yes	Absent	<p>Wood ducks nest in cavities in trees in riparian zones. They are present near slow reaches and backwaters of the Rogue River, larger creeks and ponds.</p> <p>There is no wood duck habitat within the proposed ROW.</p> <p>No impacts from proposed ROW.</p>
White-tailed kite	BS	No	Absent	<p>White-tailed kites are present in the Rogue Valley agriculture lands near Medford and Ashland. The project area is outside the known range and does not provide open grassland habitat.</p> <p>No impacts from proposed ROW.</p>

Butte Falls Resource Area BLM Special Status Species Assessment Meriwether ROW OR 048747 FD				
Species	OR Status	Range	Presence in Project Area	Conclusions
Mammals				
Fisher	FC	Yes	Suspected	<p>Fishers use a variety of forested habitats. They use late-successional forests for denning and rearing young (Raley and Aubry 2002). No documented occurrence in the 6th field watershed.</p> <p>The proposed ROW is would not remove denning or rearing habitat for fisher as it is open forest with canyon live oak and scattered Douglas fir trees. Foraging habitat is present throughout the 6th field watershed outside the ROW.</p> <p>No known impacts from the proposed ROW.</p>
Fringed myotis (bat)	BS	Yes	Suspected	<p>Fringed myotis appear adapted to live in areas with diverse vegetative substrates. They appear to primarily roost in caves, mines and crevices in buildings (Verts and Carraway 1998).</p> <p>There are no documented occurrences in 6th field watershed. There are no caves, mines, cliffs with small holes, or buildings within the proposed ROW. The proposed ROW would not remove large trees with holes.</p> <p>Proposed ROW would not affect persistence of the species in the watershed.</p>
Pallid Bat	BS	Yes	Suspected	<p>Pallid bats are generally associated with drier areas and the range west of the Cascade Mt. is restricted to the drier interior valleys of the southern portion of the state (Verts and Carraway 1998).</p> <p>There are no documented occurrences in 6th field watershed. Proposed ROW does not remove large trees with holes. Snags and coarse woody debris would be retained outside the ROW.</p> <p>Proposed ROW would not affect persistence of the species in the watershed.</p>

Butte Falls Resource Area BLM Special Status Species Assessment Meriwether ROW OR 048747 FD				
Species	OR Status	Range	Presence in Project Area	Conclusions
Townsend's big-eared bat	BS	Yes	Suspected	<p>Townsend's big-eared bats roost in mines, caves, cavities in trees, and buildings.</p> <p>No documented occurrence in the section. There are no mines, caves, or cliffs in the area. They are unlikely to be present in the ROW. The proposed ROW does not remove large trees with holes. Snags and coarse woody debris would be retained outside the ROW.</p> <p>Proposed ROW would not affect persistence of the species in the watershed.</p>
Mollusks				
Chace sideband (snail) (<i>Monadenia</i>)	BS	Yes	Absent	<p>No detections during protocol surveys in the 6th field watershed for projects near the proposed ROW. <i>Monadenia chaceana</i> may be found within 30 m. of rocky areas, talus deposits and associated riparian areas in the Klamath physiographic province (Duncan et al 2003).</p> <p>Areas that contain moist, shaded rock surfaces are preferred for daily refuges. Forest habitats without either rock features or large woody debris are not currently considered to be suitable habitat for the species.</p> <p>ROW would not impact habitat.</p>
Crater Lake tightcoil (snail) (<i>Pristiloma</i>)	BS	No	Absent	<p>Surveys have never detected Crater Lake tightcoil in BFRA. The closest location to BFRA is at a high elevation spring in Crater Lake National Park. They are generally found within 10 meters of open water in springs, seeps, and riparian areas. These features are not present in ROW.</p> <p>No impacts from proposed ROW.</p>

Butte Falls Resource Area BLM Special Status Species Assessment Meriwether ROW OR 048747 FD				
Species	OR Status	Range	Presence in Project Area	Conclusions
Oregon shoulderband (snail) (Helminthoglypta)	BS	Yes	Absent	No detections with protocol surveys in the 6 th field watershed for projects near the proposed ROW. This species is known from rocky areas including talus deposits, but not necessarily restricted to these areas. They are suspected to be found within its range wherever permanent ground cover and/or moisture are available. This may include rock fissures or large woody debris sites (Duncan et al 2003). These features are not present in ROW. No identified impacts from proposed ROW.
Insects				
Johnson's hairstreak butterfly	BS	Unknown	Unknown	No records of presence on BFRA. The nearest location is in the Klamath River drainage (Hoffman and Logan 2005). Identified habitat is mostly older forests with red fir, western hemlock, or gray pine on which a parasitic mistletoe, <i>Arceuthobium camplopodum</i> is found. They appear to be an old-growth obligate (Pyle 2002). Proposed ROW does not have old-growth habitat. No identified impacts.
Siskiyou short-horned grasshopper	BS	Unknown	Absent	Surveys indicate habitat is clearcuts and natural grassy meadows. They may be associated with grasses, forbs and elderberry and grasslands (Fouts et al 2008). Nearest known locations are Mt. Ashland and Woodruff Meadows (USFS). They have not been documented on BFRA. Proposed ROW has no elderberry and is not native grassland. No known effects identified from project.
Crustaceans				
Vernal pool fairy shrimp	FT	No	Absent	Project is outside the range of the species.

Butte Falls Resource Area BLM Special Status Species Assessment Meriwether ROW OR 048747 FD				
Species	OR Status	Range	Presence in Project Area	Conclusions
<p>STATUS: FT (USFWS Threatened) - likely to become endangered species within the foreseeable future. FC (USFWS Candidate) - proposed and being reviewed for listing as threatened or endangered BS [Bureau (BLM) Sensitive] - eligible for addition to Federal Notice of Review, and known in advance of official publication. Generally these species are restricted in range and have natural or human-caused threats to their survival. MBC (Neotropical Migratory Birds of Concern) - on USFWS Birds of Conservation Concern published in 2008 to identify species and populations of migratory and non-migratory birds which may need consideration in management actions. GBBDC (Game Birds Below Desired Conditions) – US FWS Migratory Bird Program Strategic Plan 2004-2014 list of species whose populations are below long-term averages or management goals (from draft list).</p>				

APPENDIX B

Aquatic Conservation Strategy (ACS)

B.1 Components of the Aquatic Conservation Strategy

The following are four main components to the ACS: Riparian Reserves, Key Watersheds, Watershed Analysis (WA), and Watershed Restoration.

B.1.1 Riparian Reserves:

The 1995 RMP/ROD (p. 27) states, “As a general rule, management actions/direction for Riparian Reserves prohibits or regulates activities that retard or prevent attainment of Aquatic Conservation Strategy and riparian reserve objectives.”

Riparian Reserves are equal to the distance of one site-potential tree on non-fish-bearing streams and two site-potential trees on fish-bearing streams. All streams would maintain at least one site-potential tree as a buffer. The riparian reserve width for the Meriwether Project is 175 feet for non fish bearing streams within the Evans Creek Watershed. There would be no road construction in any Riparian Reserves for this project.

B.1.2 Key Watersheds:

Key watersheds are “crucial for maintaining and recovering habitat for at-risk stocks of anadromous salmonids and resident fish species” (1995 ROD/RMP, 22). These watersheds have a high potential for being restored as part of a watershed restoration program. The Meriwether project is located in the Lower Evans Creek (HUC # 171003080306) sixth field watershed within the larger Evans Creek fifth field watershed. The Meriwether project is located outside of any key watershed.

B.1.3 Watershed Analysis:

Watershed Analysis is intended to enable the planning of landscape scale projects which can achieve Aquatic Conservation Strategy objectives. Watershed Analysis will serve as the basis for BMP design during project specific planning (1995 ROD/RMP, 152).

The relevant watershed analysis for this project is the Lower Evans Creek WA (1995).

B.1.4 Watershed Restoration:

Watershed Restoration is “an integral part of a program to aid recovery of fish habitat, riparian habitat, and water quality. The most important components of a watershed restoration program are control and prevention of road-related runoff and sediment production, restoration of the condition of riparian vegetation, and restoration of in-stream habitat complexity” (1995 ROD/RMP, p. 23).

B.2 Project Summary

The Medford District Bureau of Land Management (BLM), Butte Falls Resource Area received a request for a right-of-way from Meriwether Southern Oregon Land and Timber, LLC (Meriwether) for construction of 1,060 feet (0.2 miles) of road across BLM-administered land.

The BLM proposes to issue the right-of-way to Meriwether and allow 1,060 feet of road construction across BLM-administered lands providing access to adjacent Meriwether lands.

Pursuant to 43 CFR 2812 the proposed action is to amend Reciprocal Right-of-Way M-660 Agreement to authorize Meriwether to construct and use a 1,060 foot spur road located on BLM-administered lands in Township 35 South, Range 4 West, section 31 to access private property for the purpose of timber harvest.

B.2.1 Project Design Features that would maintain or restore Aquatic Conservation Strategy Objectives

- Limit construction to the dry season (generally May 15 to October 15).
- Restrict all rock hauling, log hauling, and landing operations on natural surface or inadequately rocked roads whenever soil moisture conditions or rain events could result in road damage or the transport of sediment to nearby stream channels, generally October 15 to May 15.
- Restrict all road renovation and closure work from October 15 to May 15, or when soil moisture exceeds 25 percent.
- Place waste stockpile and borrow sites resulting from road construction or reconstruction in a location where sediment-laden runoff can be confined, at least one site potential tree length from a stream.
- Apply native plant seed and weed-free straw mulch to areas disturbed by road construction to minimize erosion and the introduction of noxious weeds.

B.3 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.

Site or Project Scale

Short-Term: The Meriwether project would maintain the distribution, diversity, and complexity of the watershed and landscape-scale features for all essential habitat elements (off channel habitat and refugia, channel conditions/dynamics/floodplain connectivity). No Riparian Reserves would be entered and therefore, retain all essential habitat elements listed above. In addition, PDFs would limit any affects to the aquatic environment. By staying outside riparian reserves, and implementing PDFs listed above, riparian areas would continue to function while maintaining the distribution, diversity, and complexity of watershed and landscape-scale features.

Long-Term: No long-term impacts from road construction are expected. No road construction or related activities would occur inside Riparian Reserves. Riparian Reserves would continue to function and maintain the distribution, diversity, and complexity of watershed and landscape-scale features. No project activities would have long-term negative impacts to aquatic ecosystems.

Watershed Scale

Short-Term: Riparian Reserves are expected to maintain the distribution, diversity, and complexity of watershed and landscape-scale features primarily because activities would not occur within the Riparian

Reserves. Thus, at the watershed scale, this project would maintain the distribution, diversity, and complexity of the fifth field watershed.

Long-Term: There will be no long-term impacts from road construction because no road construction would be conducted within the riparian reserves. At the watershed scale, keeping activities out of Riparian Reserves will retain watershed features that protect the aquatic systems to which species, populations, and communities are uniquely adapted.

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-dependant species.

Site or Project Scale

Short-Term: Riparian Reserves throughout the entire Project Area would continue to function. Spatial and temporal connectivity would be maintained because no construction would occur within Riparian Reserves. Staying outside the Riparian Reserves would maintain spatial and temporal connectivity within and between watersheds.

Long-Term: Riparian Reserves throughout the entire Project Area would continue to function and would maintain and restore spatial and temporal connectivity within and between watersheds.

Watershed Scale

Short-Term/Long-Term: Riparian Reserves throughout the entire Project Area would not be entered and would continue to function and would maintain spatial and temporal connectivity.

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

Site or Project Scale

Short-Term: Riparian Reserves throughout the entire Project Area would continue to function and would protect the aquatic ecosystem including shorelines, banks, and bottom configurations. All banks and stream configurations would remain unchanged and would not affect the physical integrity of the aquatic system within the Project Area.

Long-Term: Riparian Reserves throughout the entire Project Area would continue to function and would improve to protect the aquatic system. No long-term impacts are expected in regard to the physical integrity of the aquatic system.

Watershed Scale

Short-Term/Long-Term: Riparian Reserves throughout the Project Area would continue to function and would protect the aquatic system in the short-term and the long-term. At the watershed scale, all banks and stream bottoms would continue to be protected by Riparian Reserves.

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.

Site or Project Scale

Short-Term/Long-Term: Riparian Reserves throughout the Project Area would continue to maintain water quality. Stream temperatures would not be affected by the proposed project because construction would not occur within the riparian reserve.

Watershed Scale

Short-Term/Long-Term: Riparian Reserves throughout the Project Area would continue to maintain water quality necessary to support healthy riparian, aquatic, and wetland ecosystems.

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

Site or Project Scale

Short-Term: Riparian Reserves would continue to maintain the sediment regime.

Long-Term: No ground disturbance would occur within the riparian reserves. Sediment could only move to a stream via overland flows; however, overland flow is rare throughout the Pacific Northwest due to low precipitation intensities and high infiltration rates (Salo and Cundy 1987). If overland flow and erosion did occur, the likelihood of sediment reaching stream channels is low because the proposed road would be located away from stream channels.

Watershed Scale

Short-Term/ Long-Term: At the Watershed scale this project would not affect the sediment regime due to full Riparian Reserve buffers and the length of road construction that would occur away from stream channels.

6. Maintain and restore in-stream flows sufficient to create and sustain riparian, aquatic, and wetlands habitats 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.

Site or Project Scale

Short-Term/ Long-Term: Riparian Reserves throughout the Project Area would continue to function. Patterns of sediment, nutrient, and wood routing would be retained. The project would not diminish large wood recruitment, alter the flow regime, reduce flood-prone areas, or impinge on its function. Vegetation canopy removal, soil compaction, roads, and stream crossings (four risk assessment factors) would not approach risk thresholds of peak or base flows. Therefore, this project would have no causal mechanism to alter flows.

Long-Term: Riparian Reserves would continue to function and would protect the aquatic system.

Watershed Scale

Short-Term/Long-Term:

Riparian Reserves throughout the Project Area would recover to maintain patterns of sediment, nutrient, and wood routing and the distribution of peak, high, and low flows. At the watershed scale, any affect would be negligible because, Riparian Reserves would be maintained.

7. Maintain and restore the timing, variability, and duration of floodplain inundation and water table elevation in meadows and wetlands.**Site or Project Scale**

Short-Term: The Meriwether project would maintain the timing, variability, and duration of floodplain inundation and water table elevation in meadows and wetlands because vegetation canopy removal, soil compaction, roads, and stream crossings (four risk assessment factors) would not exceed risk thresholds for altering hydrology. Therefore, the timing, variability, and duration of floodplain inundation and water table elevation would be maintained at the site scale.

Long-Term: The Meriwether project would maintain the timing, variability, and duration of floodplain inundation and the water table elevation in meadows and wetlands because Riparian Reserves would continue to function and would protect the aquatic system.

Watershed Scale

Short-Term: The Meriwether project would maintain the timing, variability, and duration of floodplain inundation and the water table elevation in meadows and wetlands because none of the project activities would increase the risk of peak flows or water accumulations. Furthermore, project activities would not occur within riparian reserves. Therefore, the timing, variability, and duration of floodplain inundation and water table elevation in meadows and wetlands would be maintained at the watershed scale.

Long-Term: The Meriwether project would maintain the timing, variability, and duration of floodplain inundation and water table elevation in meadows and wetlands because Riparian Reserves would be maintained and would continue to function to protect the aquatic system.

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.**Site or Project Scale**

Short-Term/ Long-Term: The Meriwether project would maintain species composition and structural diversity of plant communities in riparian areas and wetlands because Riparian Reserves would ensure nutrient filtering, appropriate rates of surface erosion, bank erosion, and channel migration and supply amounts and distributions of coarse woody debris sufficient to sustain physical complexity and stability.

Watershed Scale

Short-Term / Long-Term: The Meriwether project would maintain species composition and structural diversity of plant communities in riparian areas and wetlands because there will be no disturbance within these areas. Therefore, species composition and structural diversity of plant communities in riparian areas and wetlands across watersheds would be maintained.

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

Site or Project Scale

Short-Term/ Long-Term: The Meriwether project would maintain populations of native plant, invertebrate and vertebrate riparian-dependent species because no Riparian Reserves would be entered. All riparian areas would be free of any ground disturbing activities.

Watershed Scale

Short-Term/ Long-Term: The Meriwether project would maintain populations of native plant, invertebrate, and vertebrate riparian-dependent species throughout the watershed. All riparian areas would be free of any ground disturbing activity. PDFs such as seasonal restrictions to minimize disturbance would keep construction from causing large disturbances at the project site and watershed scale.

B.4 Conclusion

The Meriwether project would maintain all Aquatic Conservation Strategy objectives in the short- and long-term at both the site and watershed scales because there would be no road construction within Riparian Reserves, the road length is only 0.2 miles, and PDFs would be implemented. This project would have very limited affects on the aquatic environment and would allow Riparian Reserves to continue to function, and protect Project Area streams.

