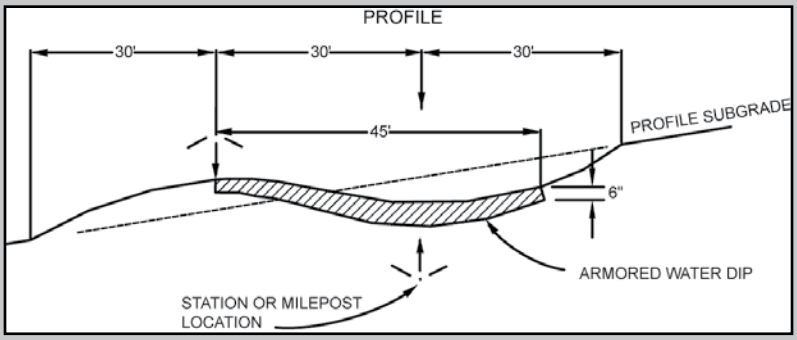
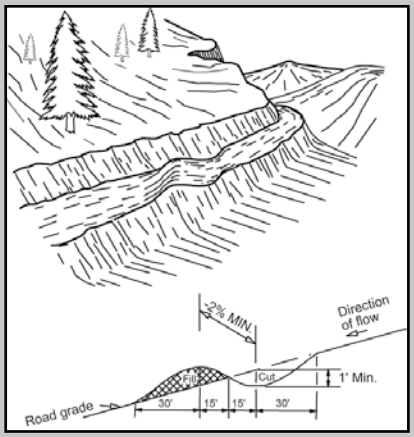
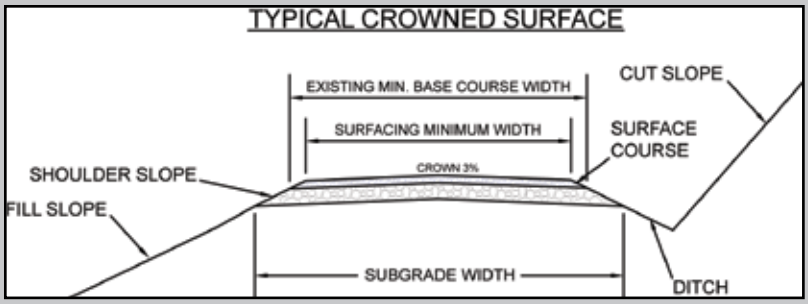
Cable Trust Right-of-Way (OR 063104 FD)

Environmental Assessment

DOI-BLM-OR-M050-2009-0025-EA







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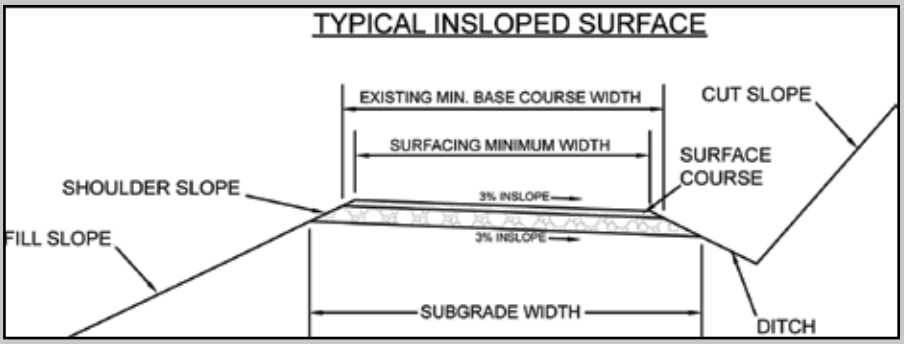

BLM

Medford District Office

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering economic use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interest of all people. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. administration.

BLM/OR/WA/AE-10/010+1792

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

NOV 3 0 2009

IN REPLY REFER TO:

1792 (ORM050)

Dear Reader:

Attached for your review and comment is the recently completed *Cable Trust Right-of-Way (OR 063104) Environmental Assessment* (EA). This EA evaluates a request from Cable Trust for legal ingress and egress to their property in Township 34 South, Range 2 West, Section 5. The Bureau of Land Management (BLM) proposes to authorize a right-of-way to Cable Trust and allow construction of 1,700 feet of road across BLM-administered lands.

This document is available for public review and comment for a period of 15 days. The 15-day comment period will begin when the notice of the EA availability is published in the *Medford Mail Tribune*. At the end of the comment period, I will make my decision regarding this project, taking into consideration all pertinent site-specific issues or concerns I receive. Remember, the most useful comments are those that clearly communicate your issues or concerns. New information that would affect the analysis or show evidence of flawed or incomplete analysis would be most useful.

Your comments regarding the Cable Trust Right-of-Way project must be received by 4:30 p.m., December 16, 2009.

If you wish to withhold your name, address, or both from public review or from disclosure under the Freedom of Information Act, you must state this at the beginning of your written comment. You request will be honored to the extent allowed by law. All submissions from organizations or businesses and from individuals identifying themselves as representatives or officials of organizations or businesses will be made available for public inspection in their entirety.

If you have questions or comments concerning this project, please contact Juanita Wright at 541-618-2345 or Robyn Wicks at 541-618-2458. Comments may also be mailed or delivered "Attention: Robyn Wicks" to the Bureau of Land Management, 3040 Biddle Road, Medford, Oregon 97504. E-mail comments may be sent to Medford_Mail@blm.gov (Attention: Robyn Wicks).

I appreciate your interest in this project and look forward to your comments.

Sincerely,

Jon K. Raby
Field Manager
Butte Falls Resource Area

Acronyms

BFRA – Butte Falls Resource Area

BLM – Bureau of Land Management

CCH – Coho Critical Habitat

CFR – Code of Federal Regulations

Dbh – Diameter at breast height

EFH – Essential Fish Habitat

ESA – Endangered Species Act

ESU – Evolutionary Significant Unit

FM – Fragile due to Mineralogy

GIS – Geographic Information Systems

IM – Instruction Memorandum

NEPA – National Environmental Policy Act

LOC – Letter of Concurrence

LWD – Large Woody Debris

NOAA – National Oceanic and Atmospheric Administration

ODEQ – Oregon Department of Environmental Quality

ODFW – Oregon Department of Fish and Wildlife

OR/WA – Oregon/Washington

PDF – Project Design Feature

ROD/RMP – Record of Decision and Resource Management Plan

SO/NC – Southern Oregon/Northern California

T&E – Threatened and Endangered

USDA – United States Department of Agriculture

USDI – United States Department of the Interior

USFWS – United States Fish and Wildlife Service

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1.0 Purpose and Need

This section describes why the BLM (Bureau of Land Management) is proposing an action. It also identifies the factors that will be used for making a decision and lists the legal requirements the BLM must consider.

1.1 Introduction

The BLM's Butte Falls Resource Area is proposing to authorize a reciprocal right-of-way agreement with a private landowner (Cable Trust). Authorization would also allow construction of an access road.

This Environmental Assessment (EA) documents the environmental analysis the BLM conducted to estimate the site-specific effects on the human environment that may result from implementation of this right-of-way proposal. The analysis documented in this EA will provide the BLM authorized officer (Butte Falls Resource Area Field Manager) with current information to aid in the decision-making process.

This EA complies with the Council on Environmental Quality's Regulations for Implementing the Procedural Provisions of the NEPA (National Environmental Policy Act)(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).

1.1.1 Proposed Action

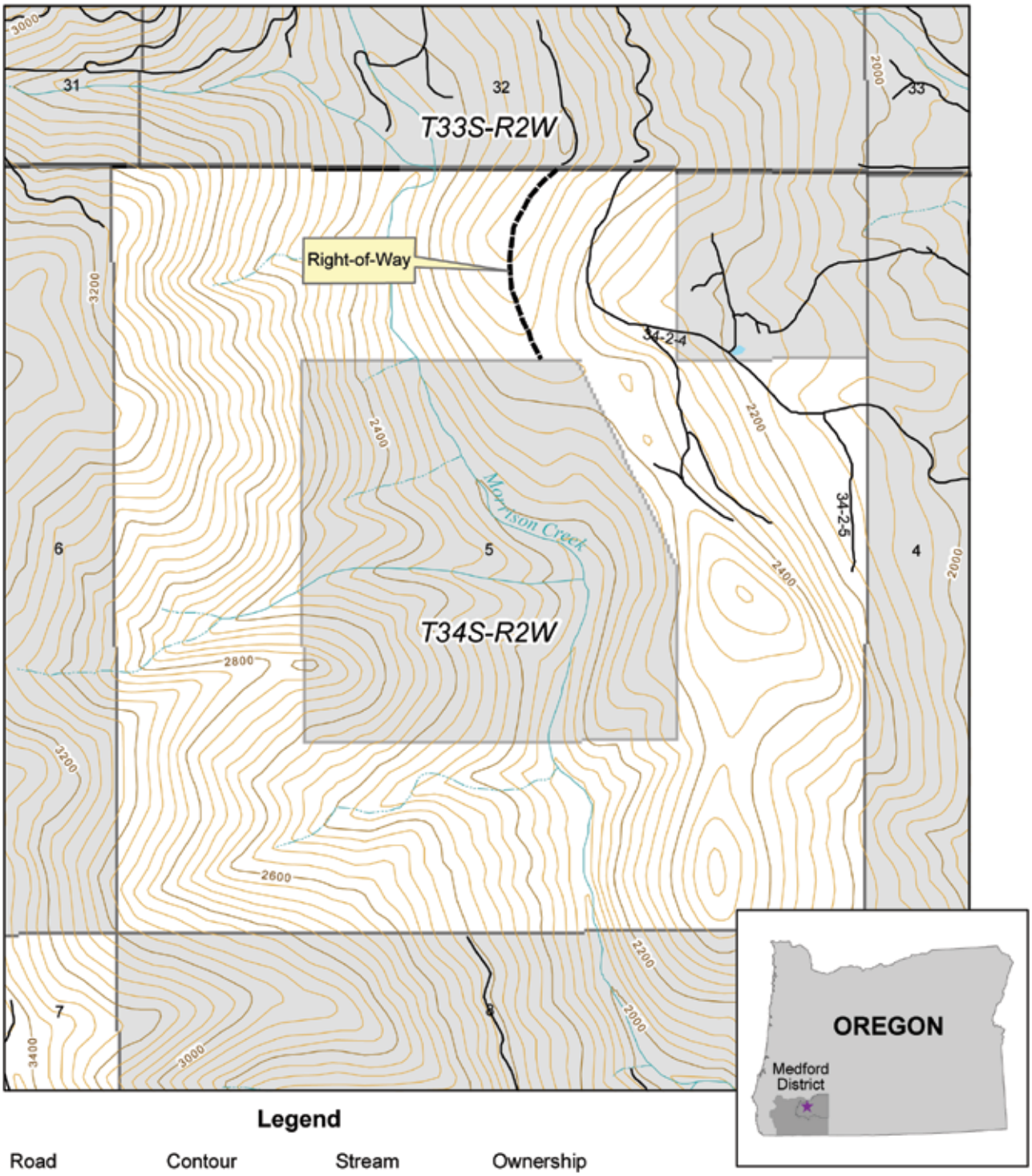
In 1997, the BLM and Mr. D.K. Cable entered into negotiations for a reciprocal right-of-way agreement for the properties included in this EA. Those negotiations were never completed. In 2007, the Cable Trust reapplied for the reciprocal right-of-way agreement.

The BLM proposes to issue a perpetual right-of-way grant to Cable Trust and allow 1,700 feet of road construction across BLM-administered land. Pursuant to 43 CFR Part 2800, the proposed action would authorize Cable Trust to construct and use 1,700 feet of road in order to access private property.

1.1.2 Project Area

The Project Area is the corridor of BLM land proposed for road construction. The proposed project is located about 24 miles northeast of the city of Rogue River and 18 miles northeast of the city of Gold Hill in the southwest ¼ of the northeast ¼ of section 5 in Township 34 South, Range 2 West, Willamette Meridian, Jackson County, Oregon (Map 1). The Project Area is within the Evans Creek fifth field, Upper Evans Creek sixth field, and Morrison Creek seventh field watersheds.

Map 1. Cable Trust Right-of-Way Location Map



Legend

Road	Contour	Stream	Ownership
Proposed	40-foot	Perennial	BLM
Existing	200-foot	Intermittent	Non BLM

U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management
Medford District
Butte Falls Resource Area
November 2009

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Miles

NOTE: 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 was 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.

1.2 Purpose

In order to be considered a reasonable alternative, any action alternative must meet the objectives provided in the 1995 Medford District ROD/RMP (Record of Decision and Resource Management Plan) for projects to be implemented in the Project Area. The ROD/RMP objectives are:

- to continue to make BLM-administered lands available for needed rights-of-way where consistent with local comprehensive plans, Oregon statewide planning foals and ruled, and the exclusion and avoidance areas identified in the ROD/RMP by considering new locations for rights-of way on a case-by-case basis (ROD/RMP, p. 82);
- to acquire access to public lands to assist various programs to meet management objectives (ROD/RMP, p. 84);
- to develop and maintain a transportation system that serves the needs of users in an environmentally sound manner (ROD/RMP, p. 84).

1.3 Need

The checkerboard land ownership pattern of intermingled BLM and private lands makes it necessary to cross public lands in order to access private lands and vice versa. Cable Trust owns about 150 acres of land that is completely surrounded by BLM-administered land. The BLM needs to issue a perpetual right-of-way grant to provide Cable Trust with legal and continuous access across public land to their property. In addition, the BLM needs to acquire a perpetual easement across Cable Trust lands in order to obtain legal and continuous access to public lands for long-term management needs. A new private access road would provide Cable Trust with a route into their lands.

1.4 Issues

Based on input from the project's interdisciplinary team (ID Team) of resource specialists, plus information contained in the ROD/RMP, the following issues were identified. These issues were considered relevant, were used to disclose consequences, may affect the design of the project actions, or helped prescribe mitigation measures for the project. The issues identified were resolved with project design features or through the design of the project.

1.4.1 Invasive Plants

Will road construction lead to an increase in noxious weeds and nonnative plants in the Project Area?
Vegetation removal and soil disturbance during the road construction process may temporarily leave the area open to the introduction and spread of invasive weeds.

See PDFs 2 and 5 (section 2.4, Project Design Features) and section 3.5.4.2, Effects of Alternative 2 (Proposed Action) on Botanical Resources.

1.4.2 Water Quality

Will road construction increase sediment in streams?
Soil surface erosion from road construction can increase sediment in streams. Mass wasting (landslides) from road construction can introduce large amounts of sediment into streams.

See section 3.2.4.2, Effects of Alternative 2 (Proposed Action) on Soil and section 3.3.4.2, Effects of Alternative 2 (Proposed Action) on Water Resources.

1.4.3 Soil

Will road construction affect soil erosion and slope stability (mass wasting)?
Soil surface erosion can reduce soil productivity. Road construction can decrease slope stability and damage downhill vegetation and road structures.

See section 3.2.4.2, Effects of Alternative 2 (Proposed Action) on Soil.

1.5 Decision Factors

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

- provide the private landowner with access to their property;
- provide the BLM with access for long-term management;
- meet Federal and state laws and management direction for BLM lands.

1.6 Legal Requirements

This right-of-way proposal is in conformance with the objectives, land use allocations, and management direction of the 1995 ROD/RMP and any plan amendments in effect at the time this document is published. The project also conforms with the *Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl* (Northwest Forest Plan).

The project was designed to be consistent with the direction given for the management of public lands in the Medford District by the Oregon and California Railroad and Coos Bay Wagon Road Grant Lands Act (O&C Act), Federal Land Policy and Management Act, Endangered Species Act (ESA), Clean Water Act, Clean Air Act, and Archaeological Resources Protection Act.

1.7 Decisions to be Made

This EA will provide the information needed for the Butte Falls Resource Area Field Manager to select a course of action that will best meet the purpose and need for the Cable Trust Right-of-Way project. The Field Manager must decide whether to authorize right-of-way number OR 063104 FD with terms and conditions or select no action.

2.0 Alternatives

This section provides a description of the proposed project, the alternative ways for meeting the Purpose and Need for the project, and the project design features that serve as the basis for resource protection during project implementation.

2.1 Introduction

One action alternative was developed to respond to the purpose and need in sections 1.2 and 1.3 and the issues presented in section 1.4. The No Action Alternative is included to provide a baseline for comparison.

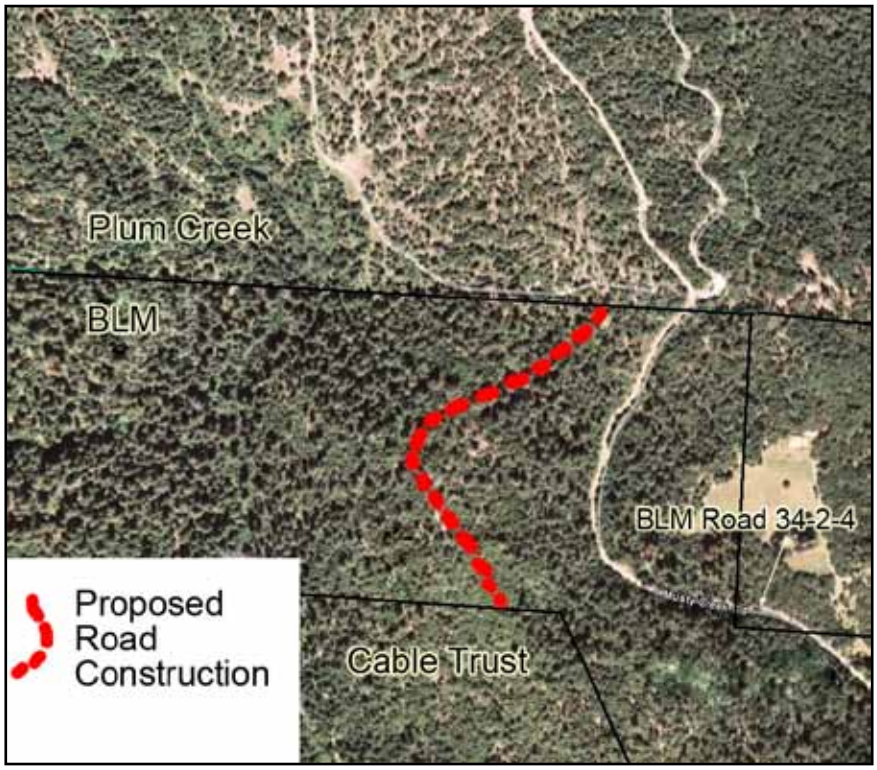
2.2 Alternative 1 (No Action)

In Alternative 1 (No Action), the BLM would not approve the right-of-way for Cable Trust and the proposed road would not be constructed. The BLM would not obtain access across Cable Trust lands for long-term management.

2.3 Alternative 2 (Proposed Action)

In Alternative 2, the BLM would enter into a reciprocal right-of-way agreement with Cable Trust. A permanent road would be constructed across BLM lands in order to provide Cable Trust with vehicular access to their lands (Figure 1).

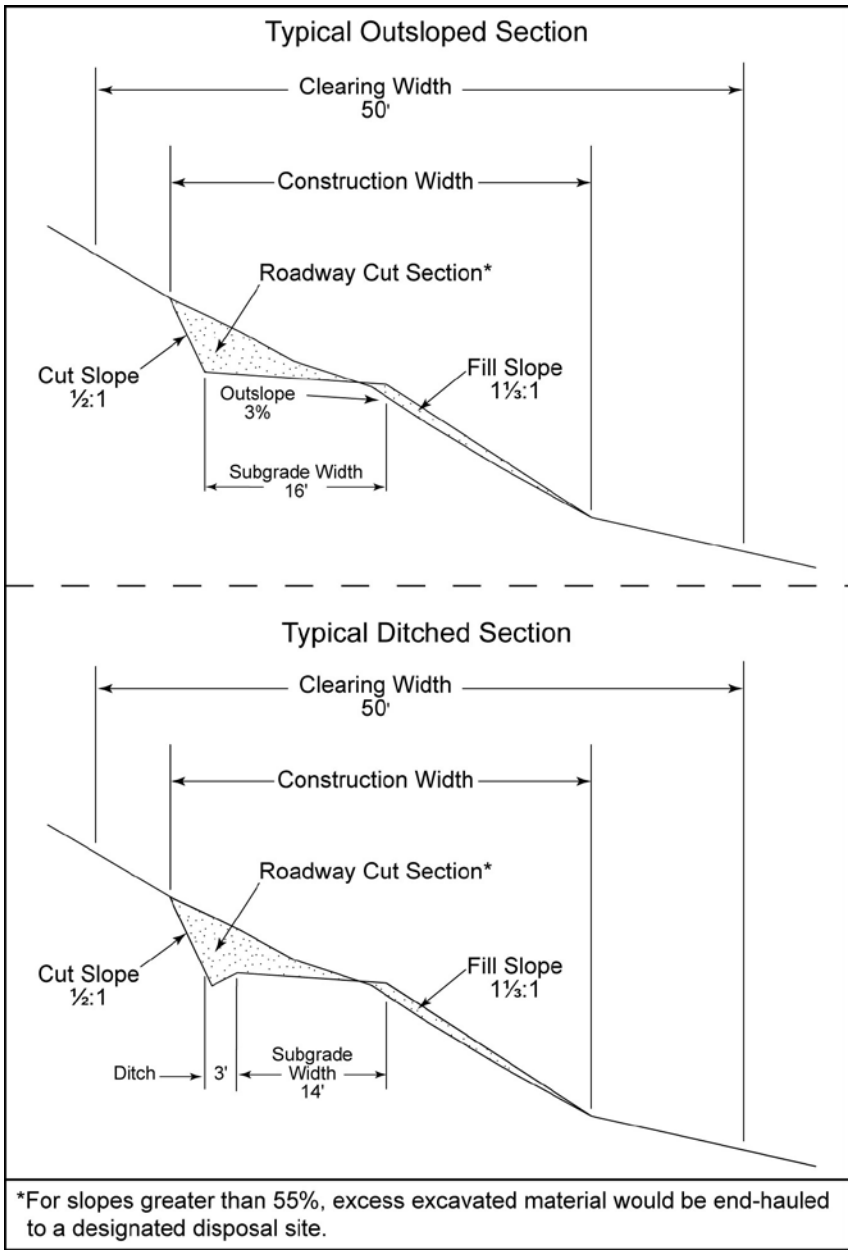
Figure 1. Aerial photograph of proposed right-of-way and road construction.



The new road would be 1,700 feet long (0.3 miles) with a 50-foot clearing width. The 14-foot useable road width would be surfaced with 6 inches of rock. Approximately 2 acres would be cleared of vegetation for road construction. Merchantable trees between 8 and 34 inches in diameter at breast height (dbh) would be removed within the proposed right-of-way. An estimated 25 thousand board feet of timber would be harvested during road clearing.

The road would be constructed along a ridge with a maximum road grade of 13 percent. About 300 feet of road would be located on sideslopes greater than 55 percent. Cut slopes would have no more than a ½:1 ratio and fill slopes would have no greater than a 1⅓:1 ratio (Figure 2). Excess materials would be end-hauled (removed from the site) to a designated area. Two culverts would be installed 400 feet apart on the steeper road grades. The culverts would be sized to accommodate a 100-year flood. Drainage ditches would be included along 700 feet of road to serve the culverts.

Figure 2. Typical road grading cross-section.



2.4 Project Design Features

Design features are those specific means, measures, or practices that are incorporated into the proposed action to reduce or avoid adverse effects. These design features were compiled using Best Management Practices identified in the ROD/RMP and resource protection measures identified by the project interdisciplinary team. The design features serve as a basis for resource protection in the implementation of the project and will be considered in the analysis of the project's impacts.

PDF 1. Limit all ground-disturbing construction activities to the dry season (generally May 15 to October 15) or when soil moisture content is below 25 percent.

PDF 2. Protect and stabilize bare soil exposed during construction activities with native plant seed and weed-free straw mulch prior to fall rains.

PDF 3. Increase road surfacing depth to no less than 10 inches of durable rock if road will be used for winter log hauling.

PDF 4. Place end-hauled waste material resulting from road construction in a designated location where sediment-laden runoff can be confined.

PDF 5. Wash logging and construction equipment, including undercarriages, before initial move-in and prior to all subsequent move-ins into the Project Area. Cleaning prior to entry onto BLM lands may be accomplished by use of a pressure hose. Cleaning is defined as removal of dirt, grease, plant parts, and material that may carry noxious weed seeds and parts onto BLM lands.

PDF 6. Stop work and notify the BLM within 12 hours if an archaeological site is discovered during the project.

PDF 7. Seasonally restrict disturbance activities, such as tree felling and yarding, road construction, and log hauling on roads not normally used by the public, from March 1 to June 30 within 200 feet of known northern spotted owl sites.

PDF 8. Seasonally restrict habitat removal activities from March 1 to September 30 within 0.25 mile of known northern spotted owl sites. The seasonal restriction will be waived if the BLM determines the site is not occupied or owls are not nesting.

3.0 Affected Environment and Environmental Consequences

This section provides the environmental analyses of the biological, physical, and social and economic elements relative to the proposed project. For each resource topic, the setting (affected environment) is presented first, followed by the impact analysis (environmental consequences). The setting describes the existing environmental conditions that serve as the baseline for determining project impacts.

3.1 Introduction

3.1.1 Physical Setting

The Cable Trust Right-of-Way Project Area occurs in a mixed conifer stand of Douglas-fir, incense cedar, ponderosa pine, and sugar pine. The overstory trees (trees greater than 20 inches dbh) are widely scattered with less than 10 trees per acre. The mid-canopy trees (trees 8 to 20 inches dbh) represent over 50 percent of the basal area of the stand and are dominated by Douglas-fir and madrone. The understory trees (trees less than 8 inches dbh) are a mix of Douglas-fir, madrone, and incense cedar. The species mix of the trees greater than 8 inches dbh is 50 percent madrone, 40 percent Douglas-fir, and 10 percent incense cedar and pine species.

The site is hot and dry with moisture limiting vegetative growth. Where soil is shallow, such as the ridgeline where the road construction is proposed, moisture stress is greater and, in combination with hardwood competition, conifer growth is reduced.

3.1.2 Land Use Allocations

The Project Area is located on lands designated as matrix in the 1995 ROD/RMP. Matrix lands are those lands located outside reserves and are managed according to management actions/directions contained in the ROD/RMP. The Northwest Forest Plan anticipated most timber harvest would occur on matrix lands.

3.1.3 Other Actions in the Project Area

The BLM and Mr. Cable made a previous attempt in 1997 to obtain an exchange of rights-of-way without success. The BLM was seeking access for proposed timber sale units in the Musty Donut Timber Sale. That timber sale was offered for sale in 1998 but was never awarded. Previously, Mr. Cable indicated the access road would initially be used for timber harvest on the private land; the road would also be used for long-term ingress and egress. In the 2007 application for exchange of right-of-way, the Cable Trust has requested long-term ingress and egress to the private land and has not indicated an intent to harvest timber.

The BLM analyzed an alternate route in the D.K. Cable Access Road Right-of-Way (OR 54024) and East Evans Watershed Project Addendum (EA No. OR 110-98-06). Page 3 of that EA states, “There is an existing road alignment that enters the private lands from the south. This old road is located within the riparian reserve of Morrison Creek and passes through a known northern spotted owl activity center (owl core). The road has naturally revegetated and rehabilitated and reconstruction would be expected to cause essentially the same level of disturbance as new construction. The ROD (p. 83) directs that rights-

of-way should be avoided in sensitive species habitat and should not be granted in avoidance areas when a feasible alternative route is available, and that rights-of-way should be issued to avoid adverse effects that retard or prevent attainment of Aquatic Conservation Strategy and riparian reserve objectives. The proposed route is considered a feasible alternative that would eliminate the need to grant the right-of-way in an avoidance area."

Although the Cable Trust Right-of-Way project analyzes authorization of road construction on BLM lands, Cable Trust must also construct about 1,100 feet of road across private timberland to the north of the Project Area. The additional 1,100 feet would provide access from the proposed new road to BLM road #34-2-4.

When the BLM receives a right-of-way permit application, policy under 43 CFR 2812 requires the BLM to determine if it appears necessary for the applicant to grant reciprocal rights to the U.S. for access. The BLM would obtain a reciprocal right-of-way across a corner, about 300 feet, of Cable Trust property in order to access BLM lands south of the Project Area. If the reciprocal right-of-way is obtained, it is reasonable to assume the BLM would consider future timber harvest on public lands in Section 5. Harvest locations, prescriptions, and systems are not known at this time and would be analyzed in a future environmental analysis document. Future harvest would implement management direction and best management practices from the ROD/RMP in effect at that time.

3.2 Soil

This section analyzes the potential impacts from the project on the soil resource. Terms used in Soil section are defined as follows:

Colluvium - Rock detritus and soil accumulated at the foot of a slope or cliff and brought there chiefly by gravity.

Regolith - A general term for loose material overlying bedrock.

Headwall – Steep concave slopes greater than 65 percent with the greatest potential for landslides or mass wasting.

Escarpment - A relatively straight, cliff-like face or steep slope formed by faulting or erosion.

3.2.1 Methodology

- The proposed flagged road grade was field checked by the Butte Falls Resource Area (BFRA) Soil Scientist to determine soil types and slope stability and to identify soil concerns related to the road construction.
- The Morrison Creek seventh field watershed was also field checked for existing road-related issues such as accelerated erosion and road prism instability.
- Field verifications for the soil types were made for consistency with the Jackson County Soil Survey (USDA National Cooperative Soil Survey 1993). It should be noted here that the BFRA Soil Scientist does not agree with the soil mapping units identified in the USDA (United States Department of Agriculture) National Cooperative Soil Survey 1993 for this project area. Upon field verification, the BFRA Soil Scientist determined the dominant soil type along this proposed right-of-way is the Goolaway silt loam.

3.2.2 Assumptions

- All project design features and road construction design will be appropriately implemented to meet soil and water resource objectives.
- The new road construction on the BLM-administered portion will be adequately maintained to a level that will ensure proper functioning of the road drainage design.

3.2.3 Affected Environment

The proposed project lies within the 3,600-acre Morrison Creek seventh field watershed and the 31,054-acre Upper Evans Creek sixth field watershed. The dominant soil type along the proposed right-of-way is the Goolaway soil which is formed in the colluvium from decomposed schistic rocks. Due to the unstable characteristics of this soil and its underlying regolith, the 1995 Medford District ROD/RMP identified this soil as fragile due to mineralogy (FM). The Goolaway soil is moderately deep (20-40″) to bedrock, is well drained, has medium runoff, and has a moderate to high water erosion potential (USDA National Cooperative Soil Survey 1993).

The proposed right-of-way road construction traverses across hillside slopes ranging from 15 to 55 percent. The area contains no major headwalls or indicators of unstable slopes; however, there are several remnants of older escarpments from past slumping just below the proposed right-of-way that have since stabilized and show no sign of recent instability. The portion of the proposed right-of-way road construction that would occur on the steepest sideslope (maximum 55 percent) is the most distant from Morrison Creek.

Field observations of the majority of roads in the 3,600-acre Morrison Creek seventh field watershed found roads in several locations are exhibiting signs of accelerated erosion from inadequate road surfacing and cutbank slumping. Presently, the erosion occurring from these locations is confined to adjacent cutbanks; the road running surface and has not moved to nearby stream channels. These effects were observed to be primarily the result of a lack of adequate road surfacing and timely maintenance. These roads were most commonly found on non-Federal roads in this watershed. One major road prism failure (approximately 300-400 cubic yards) observed on BLM road 33-2-31.1 is approximately 20 years old. Contributing factors appeared to be poor road drainage and construction waste material that was not end-hauled. The remaining escarpment has since stabilized.

3.2.4 Environmental Consequences

3.2.4.1 Effects of Alternative 1 (No Action) on Soil

Direct and Indirect Effects

In Alternative 1 (No Action), the exchange of rights-of-way would not be authorized and road construction would not take place. There would be no direct or indirect effects to the soil resource from implementation of this alternative. No soil disturbance would occur so there would be no increase in the potential for erosion or mass wasting.

Cumulative Effects

No ground disturbance would occur under Alternative 1 so no additional cumulative effects would result.

3.2.4.2 Effects of Alternative 2 (Proposed Action) on Soil

Direct and Indirect Effects

In Alternative 2 (Proposed Action), approximately 1,700 feet of road prism would be constructed through hillside slopes ranging from 15 to 55 percent. This would cause approximately 2 acres of soil disturbance along this right-of-way. The exposed soil and rock material created by the road construction would be subject to erosion and mass wasting. The amount of soil erosion and mass wasting is primarily dependent on (1) physical properties on the soil, (2) stability of the underlying parent material, (3) geomorphic features along the road prism, (4) soil moisture content at time of construction, and (5) effectiveness of road drainage and construction design features.

The greatest potential for erosion and mass wasting comes in the first 2 years after road construction (Luce and Black 2001). The erosion potential then becomes exponentially lower each year after construction until the road prism stabilizes (Megahan 1974). Under a typical rainfall scenario for southern Oregon forests, the rocked running surface of the road would become adequately compacted and sealed off creating a greater resistance to erosion and subsequent off-site sedimentation[1] within 3 years. It is also expected the exposed unconsolidated soil and rock material of the fillslopes would initially be stabilized with mulch and, over time, with vegetation.

As discussed in Section 3.2.3. Soil Affected Environment, the dominant soil type along this right-of-way is the Goolaway soil which is formed in decomposed schistic rocks. These soils are considered fragile due to mineralogy. To address this issue, the 1995 Medford District ROD/RMP (p. 155) identified special recommendations for new road construction on fragile soils. Following are the ROD/RMP recommendations and how the actions proposed in this project would address them:

- **Recommended Design Feature:** Avoid fragile soils when planning road systems.
- **Proposed Action:** BLM engineers and BLM road design standards consider many factors such as soil type, slope, road gradient, stream crossings, road use, and road surfacing when a new road is planned. Other potential road construction routes that would avoid fragile soils presented other problems such as stream crossings and riparian reserves. Ridges are generally considered stable positions for locating roads (ROD/RMP, p. 157).
- **Recommended Design Feature:** Design haul roads with rock surfacing on FM soils.
- **Proposed Action:** The proposed action would apply 6 inches of rock to the running surface of the road (section 2.3 Alternative 2 [Proposed Action]). If the proposed road was used for winter log hauling, the BLM would require a minimum of 10 inches of rock surfacing (PDF 3, Section 2.4, Project Design Features).
- **Recommended Design Feature:** Stabilize cutbanks, fillslopes, and ditchlines with vegetation, terracing, rock buttressing, and rock armoring ditchlines.
- **Proposed Action:** Native grass seed and straw mulch would be applied to fillslopes for erosion control (PDF 2, section 2.4 Project Design Features). Culverts would be designed to meet the 100-year flood standard, which would ensure proper sizing (Section 2.3, Alternative 2 [Proposed Action]). Rock buttressing would be used if cutbank slumping is indicated. Rock armoring of the ditchline would be used if ditchline scouring occurs (ROD/RMP, p. 162).
- **Recommended Design Feature:** Reduce road widths to minimize amount of excavation needed for the road prism.

[1] Undocumented field observations of 30 years soil and road engineering experience in Southern Oregon.

- **Proposed Action:** Outsloping approximately 60 percent of this road segment would minimize road width and cutbank height by eliminating the need for ditchlines. This would reduce the amount of exposed soil and rock material subject to erosion or mass wasting. On the remaining 40 percent of the road segment designed with ditchlines, properly spaced cross-drain culverts with energy dissipaters would disperse channelized runoff and minimize erosion (Section 2.3, Alternative 2 [Proposed Action]).

Other standard design features identified in the 1995 Medford District ROD/RMP (p. 157-162) for road construction would also be employed to meet erosion and mass wasting issues where applicable. The most critical project design for soils with unstable parent materials is end-hauling the excavated waste material from slopes greater than 55 percent to suitable disposal areas. This greatly reduces the amount of soil and rock material otherwise available for fillslope failure and mass wasting.

Other standard PDFs (Section 2.4, Project Design Features) to be incorporated are:

PDF 1. Limit all ground-disturbing construction activities to the dry season (generally May 15 to October 15) or when soil moisture content is below 25 percent.

PDF 2. Protect and stabilize bare soil exposed during construction activities with native plant seed and weed-free straw mulch prior to fall rains.

Other factors that would contribute to moderating the effects of the proposed action are:

- No major headwalls are present along the right-of-way.
- Maximum sideslopes are less than 60 percent.
- The new road would have low traffic volume.
- The right-of-way road construction would not cross streams.
- The steepest portion of the right-of-way road construction would be well outside of the riparian reserve.

In conclusion, the BLM expects that soil erosion and mass wasting from this road segment may increase over background levels initially in the short-term (1-2 years), but would subsequently decrease over time (3-5 years) to near background levels. Although the mass wasting potential would increase over existing levels, it is not expected that any possible future slumping or fillslope failure from this road segment would be large enough to reach or adversely affect water quality in Morrison Creek because of full riparian reserves and the implementation of PDFs.

Cumulative Effects

As discussed in Section 3.2.3, Soil Affected Environment, road-related erosion is currently observable on some roads in the Morrison Creek seventh field watershed primarily due to the fragile soil type (FM) and the lack of adequate road maintenance (primarily on non-Federal roads).

The construction of this right-of-way road (including the additional 1,070 feet across private land) would increase the potential for road-related erosion in the short term (1-2 years), which would be additive to the existing road erosion rates in this seventh field watershed.

At the Upper Evans Creek sixth field watershed scale, the effects of this right-of-way road construction would be negligible on current road erosion rates. This is expected because of the relatively small size of the Morrison Creek seventh field watershed and the implementation of the project design features.

3.3 Water Resources

This section analyzes the potential impacts from the project on water resources.

3.3.1 Methodology

The Water Resources analysis area is the Upper Evans Creek sixth field subwatershed. The watershed encompasses 31,054 acres (49 square miles) located within the Butte Falls Resource Area.

This analysis employs the use of the following sources:

- Field reconnaissance in October 2009 to identify potential issues and to determine stability of area based on existing conditions.
- The *Watershed Analysis of East Evans Creek* (Bureau of Land Management 1996) to provide general water resources background information for the Project Area.
- Geographic Information System (GIS) analysis and BLM field visits to provide information on existing conditions in the Project Area.

3.3.2 Assumptions

This analysis makes the following assumptions:

- All proposed PDFs would be implemented to meet resource objectives.
- All proposed actions would take place outside of riparian buffers as designated in the Medford ROD/RMP (Bureau of Land Management 1995).

3.3.3 Affected Environment

The climate of the Upper Evans Creek sixth field subwatershed is considered a Mediterranean type which consists of cool, wet winters and hot, dry summers. Summer temperatures range from the 80s to the high 90s, occasionally reaching summer daytime high temperatures of 100+ degrees Fahrenheit. Winter lows drop regularly to 10 to 20 degrees F. Annual precipitation ranges from 35-50 inches. The elevation ranges from 1,480 to 4,600 feet. Most precipitation occurs in the late fall, winter, and early spring as rainfall with the exception of the upper ridges where snow may accumulate.

The existing road density in the Upper Evans Creek sixth field subwatershed is 5.2 miles per square mile. There are approximately 254 miles of existing road in the sixth field watershed. The right-of-way 50-foot clearing width would be 585 feet from the nearest perennial stream, Morrison Creek, and 235 feet from the nearest intermittent stream.

The dominant soil type is Goolaway soil. This soil is designated as fragile in the 1995 ROD/RMP and has a moderate to high water erosion potential. A full discussion of this soil type is included in Section 3.2, Soil.

The Oregon Environmental Quality Commission adopted water quality standards to protect designated beneficial uses. Water quality standards were set at a level to protect the most sensitive uses. The ODEQ (Oregon Department of Environmental Quality) 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. ODEQ's 2004/2006 303(d) list is the most recent listing of these streams (Oregon Department of Environmental Quality 2009). Within the Upper Evans Creek sixth field subwatershed, East Evans Creek is on the 303(d) list for temperature.

3.3.4 Environmental Consequences

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

Direct and Indirect Effects

In Alternative 1, the BLM would not authorize the Cable Trust right-of-way and the proposed road would not be constructed. No ground disturbance would occur; therefore, no sediment would reach stream channels beyond the possible natural occurrences of mass wasting and sediment input (Bureau of Land Management and US Forest Service 2003).

Cumulative Effects

This alternative would not result in additional cumulative effects because no ground disturbance would take place.

3.3.4.2 Effects of Alternative 2 (Proposed Action) on Water Resources

Direct and Indirect Effects

This project is not expected to affect stream sedimentation or stream temperatures, or cause any measurable changes to water quantity for the following reasons:

- The proposed road construction would implement PDFs to minimize the likelihood of mass wasting and reduce the rate of sediment transport. A more detailed explanation of how PDFs will minimize erosion is provided in section 3.2 Soil. Mass wasting related to roads is often the result of interactions between road segments and flows of water (Jones, et al. 2000). Because the proposed road construction is more than 200 feet above any stream channels, there would not be an expected increase in mass wasting events above natural occurrences (Bureau of Land Management and US Forest Service 2003). Sediment transport would occur along the road ditch line, but would be dispersed on the hillslope by culverts and out-slope drainage. Vegetation on the hillslopes would maintain a slow rate of transport by reducing overland flow, thereby minimizing the amount of sediment that can stay in solution.
- The road would not impact primary or secondary shade zones of any streams. This project would have no affect on stream temperature and, therefore, no affect on 303(d) listed streams.
- The road would be constructed during seasonally dry months, reducing the chance of sediment runoff during ground-disturbing activities.

Cumulative Effects

Effects related to road building in the Upper Evans Creek sixth field watershed include increased stream sedimentation and increased stream temperatures. This project is not expected to affect either of these water quality issues and, therefore, would not contribute cumulatively to road building and water quality impacts.

An additional 1,070 feet of road would also be constructed on private land to provide a link from BLM road 34-2-4 to the 1,700 feet of road that would be constructed on BLM land. The construction of approximately 2,770 feet (0.52 miles) of road would not substantially affect the road density at the sixth field watershed scale.

3.4 Fisheries

This section analyzes the potential impacts from the project on fisheries resources. Terms used in Fisheries section are defined as follows:

Anadromous: Animals that live their lives at sea and migrate to a freshwater river to spawn.

Critical habitat: Specific areas within the geographical area occupied by the species at the time of listing (under the ESA), if they contain physical or biological features essential to conservation, and those features may require special management considerations or protection; and specific areas outside the geographical area occupied by the species if the agency determines that the area itself is essential for conservation.

Essential fish habitat: Defined under the Magnuson-Stevens Fishery Conservation and Management Act as waters and substrate that are necessary to the fish species for spawning, breeding, feeding, or growth to maturity.

Evolutionary significant unit: A Pacific salmon population or group of populations that is substantially reproductively isolated from other conspecific (members of the same species) populations and that represents an important component of the evolutionary legacy of the species.

Smolt: Seaward migration stage of an anadromous salmonid.

3.4.1 Methodology

- The scale for analysis is the Morrison Creek seventh field watershed located in the Evans Creek fifth field watershed.
- *Watershed Analysis of East Fork Evan Creek* and *Mid Evans Creek Landscape Analysis* were used for background information.
- GIS and field visits by BLM specialists were used to analyze the existing condition of the Project Area. GIS was used for analysis and calculations.
- Literature related to fisheries, hydrology, and streams was also used for analysis.

3.4.2 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, Roni and Quinn 2001, Hilderbrand and Kershner 2000) to avoid short-term increases in sediment levels (Kahler, Roni and Quinn 2001).
- Coho salmon and steelhead trout numbers over Gold Ray Dam reflect the overall population trends for the entire Rogue River and SO/NC (Southern Oregon/Northern California) Coho Salmon ESU (evolutionary significant unit).
- The smolt trap program in West Evans Creek represents the overall trend for the Evans Creek fifth field watershed and, therefore, the Morrison Creek seventh field watershed.

3.4.3 Affected Environment

3.4.3.1 Fish Populations

Major fish species found in the Morrison 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 coho salmon.

NOAA Fisheries Service listed the SO/NC Coho Salmon ESU as “threatened” under the ESA in May 1997. As directed under the ESA, NOAA Fisheries designated SO/NC CCH (coho critical habitat) and EFH (essential fish habitat), 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 require special management and protection.

The nearest CCH is approximately 1.3 stream miles from the proposed road construction. The nearest population of cutthroat trout occurs 535 feet downstream from the Project Area in Morrison Creek. The nearest stream is intermittent and the headwaters are 235 feet from the proposed road construction.

The Morrison Creek seventh field watershed contains about 1 mile of CCH with an additional 4.8 miles of cutthroat habitat (Map 2).

3.4.3.2 Population Trends

Limited information related to current and historic populations is available for Morrison Creek. The BLM and ODFW (Oregon Department of Fish and Wildlife) conducted a joint smolt trap program in West Fork Evans Creek, located in the Evans Creek fifth field. The steelhead population numbers varied between 600 and 2,000 from 1998 to 2004; coho salmon numbers increased from about 2,000 to nearly 8,000 during the same time period (Figure 3). Over the 5-year study period, no trend was detectable for steelhead trout smolts (Vogt 2004). Although there was a decrease in coho salmon smolts from 2003 to 2004, the overall trend from 1998 to 2004 was upward.

In 2005, ODFW studied the population health of steelhead within the Rogue River Basin, which includes the Evans Creek fifth field watershed. The study found wild steelhead populations in the Rogue River Basin to be healthy and self sustaining. The goal for post-yearling steelhead trout was met in both pools and riffles in the Rogue River Basin (Oregon Department of Fish and Wildlife 2009b).

ODFW has monitored the coho salmon and steelhead trout populations for the Upper Rogue River Basin at Gold Ray Dam since 1942. The mouth of Evans Creek is located downriver from Gold Ray Dam on

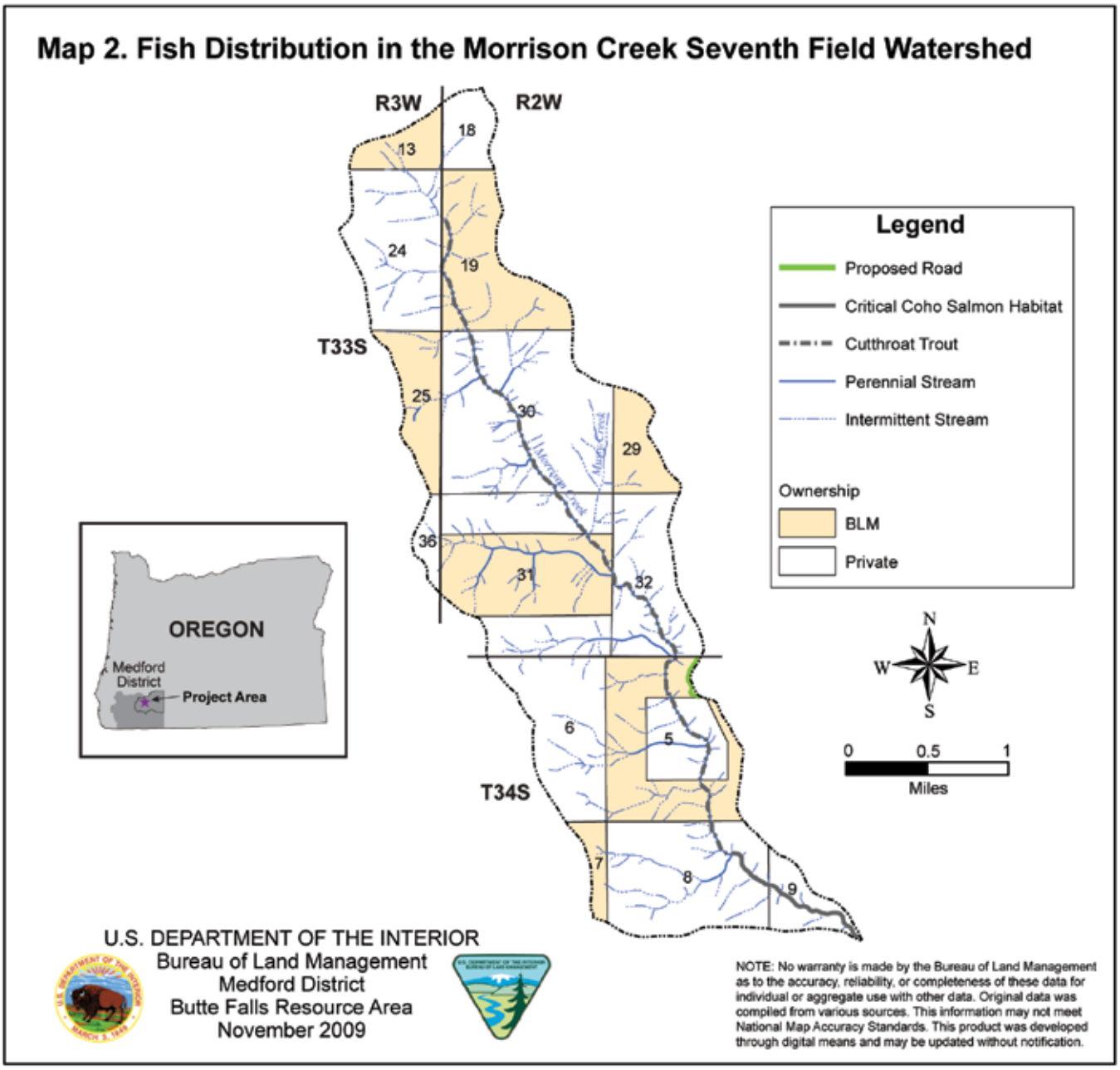
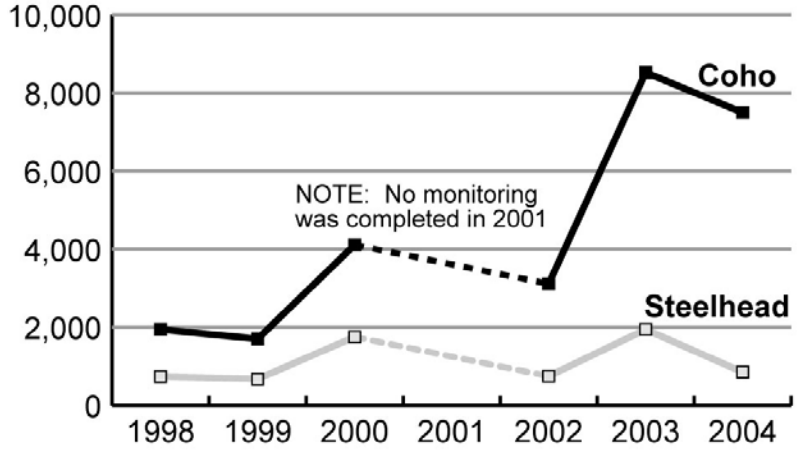
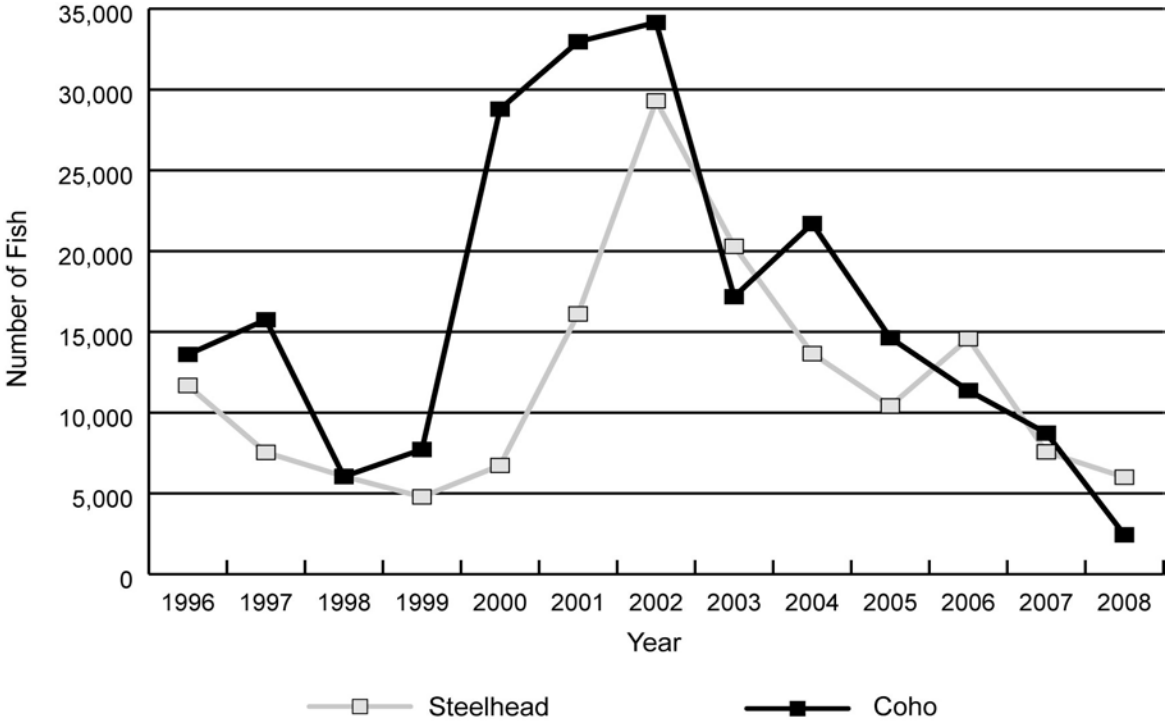


Figure 3: Coho salmon and steelhead trout smolt populations in West Fork Evans Creek.



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 (Figure 4).

Figure 4. Coho salmon and steelhead trout counts at Gold Ray Dam 1996-2008.



The wild adult coho salmon population had been on an upward trend since the extremely low years of 1964–1979, where numbers were as low as 12 returning adults (Sattherthwaite 2004). Since 2002, however, the wild adult coho and steelhead trout populations have been on downward trends and the 2008 returns are the lowest of the last 10 years (Oregon Department of Fish and Wildlife 2009a).

3.4.3.3 Habitat

Salmon and trout species need cool water temperatures, hiding cover, clean spawning gravels, rearing pools, and adequate food supply for good fish production. Fish production is largely determined by habitat quantity and quality (Bjornn and Reiser 1991).

Spawning gravel for salmon and trout ranges in size from 0.5 to 4 inches (Bjornn and Reiser 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 (Bjornn and Reiser 1991, Phillips, et al. 1975, Tappel and Bjornn 1983, Chapman 1988). 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.

The dominant soil type for the proposed road construction is Goolaway soil. This soil is designated FM in the 1995 ROD/RMP and has a moderate to high water erosion potential. A full discussion of this soil type is included in Section 3.2.3, Soil Affected Environment.

LWD (large woody debris) is important for providing cover for fish, forming pools, stabilizing channels, and trapping and sorting fine sediment (Bjornn and Reiser 1991). LWD also provides channel roughness

to dissipate stream energy that causes bank erosion and increases channel width (Montgomery and Buffington 1997)

3.4.3.4 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 good supply of LWD and increased shade levels. Private lands are still being managed for timber production and limited riparian areas remain after harvest, which keep riparian areas in a fractured state.

3.4.4 Environmental Consequences

3.4.4.1 Effects Common to Both Alternatives

Cumulative Effects

Since the Northwest Forest Plan was signed, riparian reserves on Federal lands have been maintained or improved for aquatic and terrestrial habitats, resulting in the recovery of aquatic and riparian areas. Future Federal actions in the Evans Creek fifth field watershed could include timber harvest, silviculture treatments, road maintenance, improved road drainage, and restoration of disturbed areas. Future Federal timber management could include riparian thinning in riparian reserves adjacent to thinned timber stands to maximize conifer growth rates and reduce stand susceptibility to insects by increasing stand and tree vigor (Dwire and Kauffman 2003). Riparian thinning improves LWD potential, enhances shade, and continues to allow the riparian areas to recover from previous timber management.

All future Federal actions would implement project design features and best management practices to minimize impacts and improve riparian and aquatic function. Therefore, future aquatic conditions on Federal lands would have higher LWD levels, reduced fine sediment levels, more complex pools, and increased stream canopy cover resulting in increased fish productivity.

On private or industrial forest lands, land in riparian areas would continue to be harvested under the Oregon Forest Practices Act on a 60-year harvest rotation. Due to the checkerboard pattern of private and federally administered land in the analysis area, riparian and aquatic habitat would continue to be fragmented across the landscape.

3.4.4.2 Effects of Alternative 1 (No Action) on Fisheries

Direct and Indirect Effects

Under the No Action Alternative, current conditions would continue. Aquatic and riparian habitats would continue at the current rate of recovery and would be subject to ongoing disturbances. Under the No Action Alternative, there would be no direct or indirect effects on fish populations or fish habitat on public lands.

3.4.4.3 Effects of Alternative 2 (Proposed Action) on Fisheries

Direct and Indirect Effects

Under the Proposed Action, no direct effects to fish would result from the implementation of the proposed action. There would be no mechanism for sediment to travel from the road to area streams and there would be low risk of mass wasting because the proposed road construction would be situated on a ridge top location outside of riparian reserves, there is no direct connection to streams at crossings, the road would be surfaced with rock, and construction would be limited to the dry season. Best management practices from the 1995 ROD/RMP would also be implemented to mitigate for constructing road in fragile soil. A more complete discussion of fragile soils is contained in Section 3.2, Soil.

Instream LWD or LWD potential would not be affected because of the long distance from streams to the road construction. As a result, the road construction would not affect cutthroat trout or coho salmon populations, EFH, or CCH.

Current conditions in the aquatic and riparian habitats of the Morrison Creek seventh field watershed would continue at the current rate of recovery and would be subject to ongoing disturbances.

Endangered Species Act and Essential Fish Habitat Determination
The proposed road construction would have a "No Effect" determination on coho salmon populations, CCH, or EFH.

3.5 Botanical Resources

This section analyzes the potential impacts from the project on botanical resources. Terms used in the Botanical Resources section are defined as follows:

Special status plants: Those plant species listed under the Endangered Species Act as threatened or endangered (including proposed and candidate species); listed by a state as threatened, endangered, or candidate species; and listed by the BLM as a sensitive species.

3.5.1 Methodology

- The analysis area for special status plants is the proposed right-of-way area. The analysis area for noxious weeds includes the road systems off East Evans Creek Road passing through T33S, R2W, section 32 and T34S, R2W, sections 4 and 5.
- The proposed road construction is within the range and contains suitable habitat for one federally listed endangered plant, *Fritillaria gentneri* (Gentner's fritillary). Project Design Criteria (PDCs) for new road construction in the programmatic consultation for activities that may affect federally listed plants are conducting 1-year surveys in suitable habitat along the proposed road right-of-way and protecting occurrences using 100-foot minimum buffers, with no disturbance within the buffer (Bureau of Land Management 2008, 27).
- Qualified botanists conducted surveys for T&E (Threatened and Endangered) and sensitive vascular and nonvascular plants and noxious weeds along the proposed road route on April 20 and September 9, 2009. Surveys on these dates would detect rare plants and noxious weeds that potentially occur in the project area. The BLM does not require predisturbance surveys for special status fungi (Bureau of Land Management 2004, 1-2).

3.5.2 Assumptions

- Protecting known sensitive fungi 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.
- 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 proposed road route follows a ridgeline between 2,480 and 2,600 feet elevation through a mid- to late seral dry, mixed hardwood-conifer stand in the ponderosa pine/Douglas-fir conifer series. Dominant trees include Douglas-fir, sugar pine, ponderosa pine, incense cedar, black oak, and madrone. Shrub and ground cover vegetation layers are sparse. Several small, rock outcrops occur along the ridgeline. Vascular plant and bryophyte species diversity is low at the site; lichen diversity is moderate and consists of common species for the habitat type.

Botanists detected no *Fritillaria gentneri*, special status vascular or nonvascular plants, or noxious weeds during project surveys. It is unknown if Sensitive fungi occur in the Project Area because surveys are not required; however, the 20 sensitive fungi species documented or suspected of occurring in the Medford District are very rare. The likelihood of a population occurring in the Project Area is very small.

3.5.4 Environmental Consequences

3.5.4.1 Effects of Alternative 1 (No Action) on Botanical Resources

Direct and Indirect Effects

Under Alternative 1, the right-of-way would not be authorized and no road would be constructed. T&E or sensitive plants would not be affected because no populations were detected 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 Effect” 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 from other factors such as road traffic, recreational use, and natural processes. The BLM’s noxious weed program of detection and treatment is performed as part of the normal program of work and is aimed at combating the spread of nonnative invasive plants from ongoing and planned activities throughout the Medford District although treatments are dependent upon funding from year to year.

Cumulative Effects

Past and present activities on both private and public lands in the East Evans Creek area that may have negatively affected rare plants or fungi and contributed to the introduction and spread of noxious weeds include 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 would continue in the future. The No Action Alternative would add no additional effects to Special Status plants or fungi or noxious weeds because no ground disturbing activities would occur.

3.5.4.2 Effects of Alternative 2 (Proposed Action) on Botanical Resources

Direct and Indirect Effects

New road construction presents potential impacts to special status plants and creates a risk of introducing or spreading noxious weeds. The BLM is directed in the ESA, in land management plans, and through other policies to protect and conserve Federal listed plant species, manage for the conservation of sensitive plant and fungi species and prevent the introduction or spread of noxious weeds.

Surveying for special status plants prior to construction and designing protection measures for known sites would prevent impacts to special status plant sites. The BLM completed surveys for T&E and Sensitive plant species and no populations were detected. Constructing the proposed road would be "No Effect" to T&E plants and would not trend Sensitive plant species toward listing.

It is unknown if sensitive fungi populations occur in the project area. If present, they could 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 ranges, the disturbed area would be very small (approximately 2 acres). 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 (Bureau of Land Management 2004, 5-2).

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. The use of PDFs and the BLM's ongoing noxious weed program would reduce the risk of introducing noxious weeds during road construction. 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 nonnative invasive plants.

Cumulative Effects

Past and present activities on both private and public lands in the East Evans Creek area that may have negatively affected rare plants or fungi and contributed to the introduction and spread of noxious weeds include 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 would 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 would be small (approximately 2 acres) and the 20 Sensitive

fungi suspected or documented in the Medford District are very rare, the risk of impacting sites during road construction would also be very small. Therefore, construction of the proposed road would not add cumulative effects to Sensitive fungi 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 (Bureau of Land Management 2004, 5-2).

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 ongoing 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.

3.6 Wildlife

This section analyzes the potential impacts from the project on wildlife resources.

3.6.1 Methodology

- The project wildlife biologist considered the effects of the proposed actions on the wildlife habitat occurring in the section where the right-of-way is proposed: Township 34 South, Range 2 West, section 5. This is the wildlife analysis area.
- The project biologist reviewed the Butte Falls Resource Area Special Status Species Assessment Table (Appendix A, Table A-1). This table includes a list of the T&E and Bureau sensitive wildlife species known or suspected to be present in lands administered by Butte Falls Resource Area.
- The Butte Falls Resource Area Special Status Species Table was compiled using the BLM OR/WA Special Status Species List (updated in January 2008), which was based on information from the Oregon Natural Heritage Program and BLM site-specific information. The table also includes USFWS (U.S. Fish and Wildlife Service) Neotropical Migratory Birds of Concern, these species which are on the 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 methods used to assess and review the potential effects to these species followed the techniques described in the OR/WA Special Status Species Policy (Bureau of Land Management 2003). For a list of all special status species evaluated for this report, see Appendix A, Wildlife, Table A-1.

3.6.2 Assumptions

- If no T&E or special status species habitat is known or suspected to be present in the Project Area or the area is outside the species home range, then no further analysis is needed. If habitat is present, but no activities are planned in that habitat or the project would not impact the population, then no further analysis is needed.
- The Northwest Forest Plan designated 100 acres of the best habitat on Federal lands to be retained as close as possible to a northern spotted owl nest site, or owl activity center, for all

sites known as of January 1, 1994. This was intended to preserve an intensively used portion of the breeding season home range close to a nest site or center of activity (Medford District ROD/ RMP and Northwest Forest Plan).

Northern spotted owls prefer coniferous forest with multiple vertical layers of vegetation, a variety of tree species and age classes, and the presence of large logs and large diameter live and dead trees (snags) for nesting, roosting and foraging. Northern spotted owls may also be found in younger stands with multi-layered closed canopies, large diameter trees, and abundance of dead and down woody material. Based on studies of owl habitat selection, including habitat structure and use and prey preference throughout the range of the owl, northern spotted owl habitat consists of four components: nesting, roosting, foraging, and dispersal (Table 1) (Thomas, et al. 1990).

Table 1. Northern Spotted Owl Habitat Types

Habitat Type	Description
Suitable Nesting, Roosting, Foraging (NRF)	NRF habitat meets all northern spotted owl life requirements. These forests have a high canopy closure (greater than 60 percent), a multi layered structure, and large overstory trees. Deformed, diseased, and broken-top trees, as well as large snags and down logs, are also present. This meets USFWS Recovery Action #32 (US Fish and Wildlife Service 2008).
Dispersal	Dispersal habitat is not suitable for nesting, but provides northern spotted owls with roosting, foraging, and dispersal habitat. Canopy closure is usually greater than 40 percent but with a more uniform structure and moderately-sized overstory trees. Dispersal habitat is not structurally complex. Trees are generally smaller; deformed and broken top trees, snags, and down wood are absent or present in very low numbers.
Capable	Capable habitat does not presently meet northern spotted owl needs but has the potential to grow into dispersal and NRF habitat.
Non-capable	Non-capable habitat does not have the potential of developing into late-successional forest or supporting old growth dependent species.

- Habitat removal would be seasonally restricted within 0.25 mile of known or suspected northern spotted owl sites from March 1 through September 30, unless surveys by BLM biologists indicate the sites are vacant or the resident owls are not nesting that year. The seasonal restriction would be waived if the owls are not nesting or after the young have fledged.

3.6.3 Affected Environment

3.6.3.1 Threatened and Endangered Species

Northern Spotted Owl - Federally Threatened

The Project Area is within the range of the northern spotted owl. There are 302 acres of NRF spotted owl habitat and 157 acres of dispersal habitat on BLM-administered lands within the wildlife analysis area. The Project Area contains mixed conifer trees: Douglas-fir, incense cedar, ponderosa pine, and sugar pine. The overstory is composed of trees greater than 20 inches dbh widely scattered at less than 10 trees per acre. The understory layer is a mix of Douglas-fir, madrone and incense cedar. Part of the proposed right-of-way road construction follows an abandoned jeep road on a ridgeline in an area that is relatively hot and dry with low moisture and shallow soils. Canopy closure is usually greater that 40 percent, but with a more uniform structure and moderately-sized overstory trees. The Project Area contains little coarse wood; large deformed trees and large snags are absent.

The proposed right-of-way would pass through northern spotted owl dispersal habitat on BLM land.

Northern spotted owl dispersal habitat is forested habitat more than 40 years old, with canopy closure more than 40 percent, with an average tree diameter greater than 11 inches and flying space for owls in the understory, but does not provide the components found in NRF (e.g., older, more structurally complex multi-layered conifer forests with large diameter trees; high amounts of canopy cover; and broken topped live trees, mistletoe, cavities, large snags and fallen trees). The area provides temporary shelter for owls moving through the area between NRF habitats and provides some opportunities for owls to find prey, but does not provide all of the requirements to support an owl throughout its life.

There is a Northwest Forest Plan 100-acre northern spotted owl activity center on BLM-administered lands in the southern part of the wildlife analysis area. An active northern spotted owl pair is associated with the activity center. The pair has historically nested in the activity center as well as in the south and southwest part of the wildlife analysis area outside the activity center. The proposed right-of-way is within the 1.3-mile northern spotted owl provincial radius. The nearest known nest is over 0.5 mile from the proposed right-of-way. The proposed right-of-way is not within the 300-meter nest patch and the road construction would not remove habitat within the 100-acre activity center.

3.6.3.2 Special Status Species

See Appendix A-Wildlife, Table A-1, for special status species habitat presence and analysis.

Neotropical Migratory Birds of Concern

Based on the evaluation of special status species that could be present within the right-of-way, the following Neotropical migratory or game birds below desired condition could be present within the wildlife analysis area: band-tailed pigeon, olive-sided flycatcher, purple finch, and rufous hummingbird.

Band-tailed pigeons inhabit coniferous forests (Marshall, Hunter and Contreras, Birds of Oregon, A General Reference 2003). They generally nest in Douglas-fir, but will also nest in hardwoods and shrubs within closed-canopy conifer or mixed hardwood/conifer stands. Band-tailed pigeons are often found near mineral springs or seeps.

Breeding habitat for olive-sided flycatchers is conifer habitat, especially within forest burns where snags and scattered tall, live trees remain, and at the juxtaposition of late- and early-seral forests such as open or semi-open forest with a low percentage of canopy cover (Marshall, Hunter and Contreras, Birds of Oregon, A General Reference 2003).

Purple finches mainly breed in moderately moist, open conifer forests, and edge habitat at low to mid elevations. They use a variety of habitats including deciduous woodlands, riparian corridors, and edge habitat (Marshall, Hunter and Contreras, Birds of Oregon, A General Reference 2003).

Rufous hummingbirds are found in a wide variety of habitats. They appear to have a preference for wooded areas with a fairly high canopy and well-developed understory. They build nests up to 16 feet from the ground in understory foliage or low branches of evergreen trees. They feed on flowering plants such as current, salmonberry, and pacific madrone.

Mammals

Two Bureau Sensitive bats were either confirmed or suspected to be present in wildlife analysis area: fringed myotis and Townsend's big-eared bat.

Fringed myotis bats appear adapted to live in areas with diverse vegetative substrates. They seem to primarily roost in caves, mines, crevices in buildings, and large trees with holes (Verts and Carraway 1998). Townsend's big-eared bats roost in mines, caves, cavities in trees, and buildings.

Two abandoned mine adits are located in the wildlife analysis area and past mine surveys located Townsend's big-eared bats in both mines. The most recent mine inventories in 2000 determined that one mine had eroded closed but Townsend's big-eared bats were observed roosting in the second adit. No other bat species were observed during the surveys; however, fringed myotis also use mines and potentially could be present, although they were not observed during surveys. The mines are each over 0.25 mile from the proposed right-of-way.

3.6.4 Environmental Consequences

3.6.4.1 Effects of Alternative 1 (No Action) on Wildlife

Direct and Indirect

Threatened and Endangered Species

Northern Spotted Owl - Federally Threatened

In Alternative 1 (No Action), the BLM would not authorize a right-of-way exchange with Cable Trust. There would be no impacts to northern spotted owl because the road would not be built and there would be no disturbance.

Special Status Species

Neotropical Migratory Birds of Concern

There would be no potential impacts to any Neotropical migratory birds of concern or game birds below desired condition (band-tailed pigeon, olive-sided flycatcher, purple finch, and rufous hummingbird) with No Action because the road would not be built and there would be no disturbance.

Mammals

There would be no potential impacts to any of the two bat species, fringed myotis and Townsend's big-eared bat, with No Action because the road would not be built and there would be no disturbance.

Cumulative Effects

In Alternative 1 (No Action), there would be no cumulative effects with No Action because the right-of-way would not be authorized and the road would not be built so there would be no disturbance.

3.6.4.2 Effects of Alternative 2 (Proposed Action) on Wildlife

Direct and Indirect Effects

Threatened and Endangered Species

Northern Spotted Owl - Federally Threatened

The Proposed Action would remove approximately two acres of northern spotted owl dispersal habitat on BLM-administered land habitat along a linear corridor 1,700 ft. and approximately 40-50 feet wide. The proposed right-of-way would avoid northern spotted owl NRF habitat and would not occur within a northern spotted owl nest patch or nest core. No northern spotted owl nest trees would be removed.

The proposed right-of-way road construction would not remove spotted owl NRF habitat. Only 2 acres of northern spotted owl dispersal habitat is proposed for removal within the 1,700-foot right-of-way. Dispersal habitat would continue to provide flying space and prey species for dispersing northern spotted owls after the action. No large hardwoods greater than 32 inches dbh would be cut. Northern spotted owls would still be able to use the dispersal habitat as they did prior to the proposed action because the road prism is a narrow linear opening through dispersal habitat that partially follows an old existing jeep road.

Because of the low amount of vegetation removed in dispersal habitat and the fact that the northern spotted owls would continue to be able to disperse through the area, the project impact was “May Affect, Not likely To Adversely Affect” northern spotted owls. This project was consulted with USFWS and is covered by a LOC (letter of concurrence) dated October 15, 2009 (US Fish and Wildlife Service 2009).

Special Status Species

Due to the small amount of habitat (approximately 2 acres) that would be removed, there would be no discernable impacts to the special status species that could be present in the area (Appendix A, Wildlife, Table A-1).

Neotropical Migratory Birds of Concern

The proposed right-of-way does not impact any mineral springs or seeps that could be used by band-tailed pigeon. There are no large perch trees at the edge of a large opening in the right-of-way that would remove habitat for olive-sided flycatchers. Purple finches use a variety of habitats including deciduous woodlands, riparian corridors and edge habitat (Marshall, Hunter and Contreras 2003). The right-of-way is on a hot, dry ridge with low moisture. The proposed right-of-way could remove some forbs and mixed conifer-mixed hardwood habitat that could be used by rufous hummingbirds for foraging and possibly nesting.

Under the Proposed Action, 2 acres of mixed conifer/hardwood forest would be removed along a linear path. Although there could be some disturbance and loss of smaller trees in 2 acres along a linear path during construction, the composition of the adjoining forest would not change. Habitat would be retained in the adjacent forest within the section. Impacts from right-of-way activities would have no impacts to the persistence of the species in the wildlife analysis area.

Mammals

There are no documented occurrences of fringed myotis in the section. They were not observed in the mines. The proposed right-of-way road construction would not remove any large trees or snags with holes which fringed myotis could use for roosting. The mines are over 0.25 mile from the proposed right-of-way. The propose right-of-way would have no known impact on the species in the wildlife analysis area.

Townsend's big-eared bats have been documented in two mines in the wildlife analysis area. One of the mines has eroded shut and no longer functions as a roost site. The right-of-way would not pass within 0.25 mile of the mines. The proposed right-of-way does not remove any large trees or snags with holes that these bats could use for roosting. The proposed right-of-way would not preclude bats from foraging in the watershed and may provide a corridor where they could fly and hunt for insects. The proposed right-of-way would not affect persistence of the species in the section.

Cumulative Effects

The lands outside the 100-acre northern spotted owl activity center in Township 34 South, Range 2 West, section 5 are designated as matrix lands in the 1995 ROD/RMP. The proposed road may be used for future access for BLM timber harvest within the northwestern part of the section, which could include NRF habitat.

Currently, there is uncertainty whether the older forest stands on BLM lands would be harvested. Recovery Action 32, in the 2008 *Recovery Plan for the Northern Spotted Owl* recommends that Federal agencies "maintain substantially all of the older and more structurally complex multi-layered conifer forests on Federal lands." This plan, which was withdrawn in 2009, is scheduled to be reviewed and may be rewritten by the USFWS. Future harvest plans would follow Northern Spotted Owl Recovery Plan requirements as well as the BLM ROD/RMP requirements that apply to the project.

The right-of-way would give access to the private lands within the center of the section that are surrounded by BLM-administered lands. The applicant has indicated they need legal access to their property in the center of the section, but there are no indications of future planned actions on the private lands. The private lands in the center of the section are predominately spotted owl dispersal habitat.

Cable Trust would remove 1 acre of forested habitat on private lands in Township 33 South, Range 2 West, section 32, north of section 5, to connect the new road construction with BLM road 33-2-32.1. This area was recently harvested and does not provide habitat for spotted owls.

4.0 Consultation

This section describes any public participation and interagency coordination that occurred during the preparation of this EA.

The project wildlife biologist consulted with USFWS on a "May Affect, Not Likely to Adversely Affect" determination for the Cable Trust Right-of-Way project and received an LOC dated October 15, 2009. The project received a "No Effect" determination for T&E fish and plant species, so no consultation was necessary.

This EA was posted on the Medford District Web site. A Notice of Availability was published in the Medford Mail Tribune. This EA was mailed to five individuals and the following tribes, organizations, and agencies:

American Forest Resource Council
Association of O&C Counties
Audubon Society
Cable Trust
Cascadia Wildlands Project
Confederated Tribes of Siletz
Cow Creek Band of Umpqua Tribe of Indians
Department of Environmental Quality
D.R. Johnson Lumber Company
Jackson County Commissioners
Klamath Siskiyou Wildland Center
Motorcycle Riders Association
National Center for Conservation Science and Policy
Oregon Department of Fish and Wildlife
Oregon Department of Forestry
Oregon Hunters Association
Oregon State University Library
Oregon Wild
Plum Creek Timber
Siskiyou Project
SOTIA
Southern Oregon University Library
The Confederated Tribes of Grand Ronde
The Nature Conservancy
Umpqua Watersheds

5.0 List of Preparers

This section lists the BLM staff who prepared the EA, their job title, and their area of responsibility.

Jon Raby	Butte Falls Field Manager	Decision Maker
Matt Azhocar	Natural Resource Staff Administrator	Management Guidance
Robyn Wicks	Natural Resource Specialist	Project Lead/NEPA Compliance
Ken Van Etten	Soil Scientist	Soil
Alex Benavides	Hydrology Technician	Water Resources
Angela San Filippo	Fisheries Technician	Fisheries
Marcia Wineteer	Botanist	Botanical Resources
Linda Hale	Wildlife Biologist	Wildlife
Randy Bryan	Engineer	Roads and Engineering

Appendix A – Wildlife

Special Status Species Assessment for the Cable Trust Right-of-Way Project

Table A-1 shows the special status species assessment the project wildlife biologist completed for the Butte Falls Resource Area. The assessment is compiled from the BLM OR/WA Special Status Species list (updated January 2008), Oregon Natural Heritage Program information, and BLM site-specific information. The table contains only the Bureau Sensitive (BS) Species known or suspected to be present within 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 (Bureau of Land Management 2003).

The list includes USFWS Neotropical Migratory Birds of Concern (MBC) that were 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 (GBBDC).

Table A-1. BFRA Special Status Species Assessment for Cable Trust Right-of-Way

Species	Status	Range	Presence in Project Area	Conclusions
Amphibians				
Foothill yellow-legged frog	BS	Yes	Absent	• Yellow-legged frogs are generally found in permanent slow-flowing streams from sea level to about 1,800 feet (Corkran and Thoms 1996). They are closely associated with permanent streams and are most common in and near streams with rocky, gravelly, or sandy bottoms (Leonard, et al. 1993). • The proposed right-of-way follows a ridge and does not cross any perennial streams. Streamside vegetation would not be impacted. • No impacts from proposed right-of-way.
Reptiles				
Northwestern pond turtle	BS	Yes	Absent	• Northwestern pond turtles live in freshwater environments with abundant aquatic vegetation, basking spots, and terrestrial surroundings for nesting and overwintering (Brown, et al. 1995). • The proposed right-of-way follows a ridge and does not cross any perennial streams. Streamside vegetation would not be impacted. No pond habitat occurs in or adjacent to the proposed right-of-way. • No impacts from proposed right-of-way.

Table A-1. BFRA Special Status Species Assessment for Cable Trust Right-of-Way

Species	Status	Range	Presence in Project Area	Conclusions
Birds				
Bald eagle	BS	Yes	Absent	• Bald eagles may forage near East Evans Creek and the Rogue River in the winter. Within the Butte Falls Resource Area, bald eagles nest near the Rogue River, lakes, and larger streams. They nest in larger trees at the edges of openings on ridges and along streams. The nearest known nest is located near the Rogue River approximately 10 miles east of the right-of-way. • No suitable nest trees are present in the proposed right-of-way and no large potential nest trees would be removed. • No impacts from the proposed right-of-way.
Band-tailed pigeon	GBBDC	Yes	Suspected; transient	• Band-tailed pigeons inhabit coniferous forests (Marshall, Hunter and Contreras 2003). They generally nest in Douglas-fir, but will also nest in hardwoods and shrubs within closed-canopy conifer or mixed hardwood/conifer stands. Band-tailed pigeons are often found near mineral springs or seeps. • The proposed right-of-way does not impact any mineral springs or seeps. Conifer forest landscape with a variety of forest stand age and structure would be available adjacent to the right-of-way and throughout the sixth field watershed. Only 2 acres of younger conifer forest would be removed along a linear path. • Impacts from right-of-way activities would be inconsequential to the persistence of the species in the section containing the Project Area.
Lewis' Woodpecker	BS	Yes	Absent	• Lewis' woodpeckers winter in the lower elevation oak savannah lands near Antioch and Meadows Roads. They are not known to nest in the Project Area in the summer. They are associated with open woodland habitat near water and breed mostly in Oregon white oak, pine, and riparian cottonwood communities. • The proposed right-of-way does not pass through suitable nesting habitat (open oak woodlands). • No impacts from the proposed right-of-way.
Mallard	GBBDC	Yes	Absent	• Mallards are widespread throughout the Butte Falls Resource Area and are found on the Rogue River, farm ponds, lakes, and larger creeks. • The proposed right-of-way follows a ridge and does not cross any stream channels. Natural water flows and streamside vegetation would not be impacted. No pond habitat occurs in or adjacent to the proposed right-of-way. • No impacts from proposed right-of-way.

Table A-1. BFRA Special Status Species Assessment for Cable Trust Right-of-Way

Species	Status	Range	Presence in Project Area	Conclusions
Mourning dove	GBBDC	Yes	Present	• Mourning doves are adapted to a wide range of habitats from open forests and clear-cuts to urban and agricultural areas (Marshall, Hunter and Contreras 2003). The mourning dove is a nest-site generalist that nests in trees, on the ground, under shrubs, and on structural components of buildings. They avoid dense forests. They can produce young with up to four nesting attempts per year. They are common in the Butte Falls Resource Area. • The proposed right-of-way would occur in mixed conifer/hardwood forest and could remove some nesting habitat along the right-of-way. Mourning doves are more likely to be found in grass, shrub, suburban, and urban areas and tend to frequent edges where trees are present. • No impacts from the proposed right-of-way.
Northern spotted owl	FT	Yes	Present (Dispersal Habitat)	• The proposed right-of-way passes through spotted owl dispersal habitat. • The proposed action may affect, but is not likely to adversely affect northern spotted owl. The BLM consulted with USFWS on the proposed action; USFWS issued a letter of concurrence.
Olive-sided flycatcher	MBC	Yes	Present	• Breeding habitat for olive-sided flycatchers is conifer habitat, especially within forest burns where snags and scattered tall, live trees remain, and at the juxtaposition of late- and early-seral forests such as open or semi-open forest with a low percentage of canopy cover (Marshall, Hunter and Contreras 2003). • A conifer forest landscape with a variety of forest stand age and structure would be available adjacent to the right-of-way and within the sixth field watershed. Only 2 acres of younger conifer forest would be removed along a linear path; large openings would not be created by the proposed action. • Impacts from right-of-way activities would be inconsequential to the persistence of the species in the section containing the Project Area.
Oregon vesper sparrow	MBC	Yes	Absent	• Habitat for the Oregon vesper sparrow is the dry grassy foothills of the Rogue River valley. Habitat includes elevated perches for singing and a grass-dominated understory for foraging and nesting. They may use open habitats of mixed-conifer forest (Marshall, Hunter and Contreras 2003). • No records of sparrow's presence in the right-of-way. Habitat in the proposed right-of-way does not fit habitat used by Oregon vesper sparrows. • No impacts from the proposed right-of-way.
Peregrine falcon	BS, MBC	Yes	Absent	• Primary peregrine falcon nesting habitat is tall cliffs. • No cliff habitat is present in the Project Area. • No impacts from the proposed right-of-way.

Table A-1. BFRA Special Status Species Assessment for Cable Trust Right-of-Way

Species	Status	Range	Presence in Project Area	Conclusions
Purple finch	MBC	Yes	Present	• Purple finch mainly breed in moderately moist, open conifer forests, and edge habitat at low -to-mid elevations. They use a variety of habitats including deciduous woodlands, riparian corridors and edge habitat (Marshall, Hunter and Contreras 2003). • The proposed right-of-way would occur in dry conifer-mixed hardwood habitat and could remove some potential nesting habitat (no more than 2 acres) along the right-of-way on BLM-administered land. Riparian corridors are not present in the Project Area. • Impacts from right-of-way activities would be inconsequential to the persistence of the species in the section containing the Project Area.
Rufous hummingbird	MBC	Yes	Present	• Rufous hummingbirds are found in a wide variety of habitats. They appear to have a preference for wooded areas with a fairly high canopy and well-developed understory. They build nests between the ground and 16 feet in understory foliage or low branches of evergreen trees. They feed on flowering plants such as current, salmonberry, and pacific madrone. • Proposed right-of-way would remove some forbs which could be used for foraging. Habitat would remain outside the right-of-way within the section. Only 3 acres of younger conifer forest would be removed along a linear path. • Impacts from right-of-way activities would be inconsequential to the persistence of the species in the section containing the Project Area.
Streaked horned lark	BS	No	Absent	• 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 the Butte Falls Resource Area in the spring and fall (Marshall, Hunter and Contreras 2003). • Proposed right-of-way would not occur in habitat. • No impacts from proposed right-of-way.
Tri-colored blackbird	BS	No	Absent	• Oregon breeding colonies occur in hard stem bulrush, cattail, nettles, willows, and Himalayan blackberries. They forage in irrigated pastures and lightly grazed rangelands and hay fields. • Project Area is outside the range of the species. Nearest population is at Denman Wildlife Refuge. Habitat present in the proposed right-of-way does not fit habitat used by tri-colored blackbirds. • No impacts from proposed right-of-way.

Table A-1. BFRA Special Status Species Assessment for Cable Trust Right-of-Way

Species	Status	Range	Presence in Project Area	Conclusions
White-headed woodpecker	BS	No	Absent	• White-headed woodpeckers occur in open ponderosa pine and mixed conifer forests dominated by ponderosa pine. They have been reported in the Mount Ashland area and the Dead Indian Plateau. There are no confirmed sightings in the Evans Creek watershed. • The area is not open ponderosa pine forest and does not have suitable habitat for white-headed woodpeckers. Proposed right-of-way is outside the known range of the species. • No impacts from proposed right-of-way.
Wood duck	GBBDC	Yes	Absent	• Breeding habitat is wooded swamps and wooded riparian zones of rivers, streams, marshes, sloughs, and lakes (Marshall, Hunter and Contreras, Birds of Oregon, A General Reference 2003). • The proposed right-of-way follows a ridge and does not cross any stream channels. No breeding habitat occurs in or adjacent to the proposed right-of-way. • No impacts from the proposed right-of-way.
White-tailed kite	BS	No	Absent	• White-tailed kites are present in the Rogue River Valley agriculture lands near Medford and Ashland, Oregon. They could be present in the agriculture lands along East Evans Creek approximately 3 miles from the Project Area; however, there are no records of presence there. • The proposed right-of-way would not impact agriculture lands or remove nesting habitat. • No impacts from proposed right-of-way.
Mammals				
Fisher	FC	Yes	Absent	• Fishers use a variety of forested habitats. They use late-successional forests for denning and rearing young (Raley and Aubry 2002). The BLM conducted protocol fisher surveys in 2005 in the section where the right-of-way is proposed. No fishers were detected. • The proposed right-of-way would not remove denning or rearing habitat for fisher as it is younger forest with scattered Douglas-fir trees. No large snags or large coarse woody debris are present in the right-of-way. Foraging habitat is present throughout the sixth field watershed outside the right-of-way. Fishers could continue to forage in and disperse through the proposed right-of-way area. • There would be no known impacts from the proposed right-of-way.

Table A-1. BFRA Special Status Species Assessment for Cable Trust Right-of-Way

Species	Status	Range	Presence in Project Area	Conclusions
Fringed myotis	BS	Yes	Suspected	• Fringed myotis bats appear adapted to live in areas with diverse vegetative substrates. They seem to primarily roost in caves, mines, crevices in buildings, and large trees with holes (Verts and Carraway 1998). • There are no documented occurrences in the sixth field watershed. Two mines are located in section 5, but the right-of-way would not pass within 0.25 mile of either mine. Past surveys in the mines did not detect fringed myotis. The proposed right-of-way would not remove large trees with holes. • The proposed right-of-way would not affect persistence of the species in the watershed.
Pallid bat	BS	Yes	Suspected	• Pallid bats are generally associated with drier areas. Their range west of the Cascade Mountains is restricted to the drier interior valleys of the southern portion of the state (Verts and Carraway 1998). Pallid bats were not detected during bat surveys in the western part of the Butte Falls Resource Area. • There are no documented occurrences in sixth field watershed. Proposed right-of-way does not remove large trees with holes. There are no large snags within the proposed right-of-way. • No impacts from the proposed right-of-way; pallid bats are not known to occur in the section containing the Project Area or within the 6th field watershed.
Townsend's big-eared bat	BS	Yes	Present	• Townsend's big-eared bats roost in mines, caves, cavities in trees, and buildings. • They have been documented in two mines in the section where the right-of-way is proposed. The proposed right-of-way does not remove any potential nest trees and would not pass within 0.25 mile of the mine adits. There are no large snags within the proposed right-of-way. • The proposed right-of-way would not preclude the bats from foraging in the watershed and may provide a corridor where they could fly and hunt for insects. The proposed right-of-way would not affect persistence of the species in the watershed.

Table A-1. BFRA Special Status Species Assessment for Cable Trust Right-of-Way

Species	Status	Range	Presence in Project Area	Conclusions
Mollusks				
Chace sideband (snail) (*Monadenia*)	BS	Yes	Absent	• The BLM completed protocol surveys in areas east and west of the proposed right-of-way with no detections of *Monadenia chaceana*. *Monadenia chaceana* may be found within 30 meters of rocky areas, talus deposits, and associated riparian areas in the Klamath physiographic province (Duncan, et al. 2003). Areas that contain moist, shaded rock surfaces are preferred for daily refuge. • Forest habitats without either rock features or large woody debris are not currently considered to be suitable habitat for the species. The proposed right-of-way does not cross rock features and would not remove large wood. • The proposed right-of-way would not impact habitat.
Crater Lake tightcoil (snail) (*Pristiloma*)	BS	No	Absent	• Surveys have never detected Crater Lake tightcoil in the Butte Falls Resource Area. The closest location 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 right-of-way. • No impacts from the proposed right-of-way.
Oregon shoulderband (snail) (*Helminthoglypta*)	BS	Yes	Absent	• The BLM conducted protocol surveys in areas east and west of the proposed right-of-way with no detections of *Helminthoglypta*. 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 groundcover or moisture is available. This may include rock fissures or large woody debris sites (Duncan, et al. 2003). • The proposed right-of-way is on a ridgeline in an area that is relatively hot and dry with low moisture and shallow soils. • No identified impacts from proposed right-of-way.
Insects				
Johnson's hairstreak butterfly	BS	Unknown	Unknown	• No records of presence in the Butte Falls Resource Area. 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, *Arceuthobium camplopodum* is found. They appear to be an old-growth obligate (Pyle 2002). • The proposed right-of-way does not contain old growth habitat. • No identified impacts from proposed right-of-way.

Table A-1. BFRA Special Status Species Assessment for Cable Trust Right-of-Way

Species	Status	Range	Presence in Project Area	Conclusions
Siskiyou short-horned grasshopper	BS	Unknown	Absent	• Surveys indicate habitat is clear-cuts and natural grassy meadows. They may be associated with grasses, forbs and elderberry, and grasslands (Fouts, Wier and Manger 2008). Nearest known locations are Mount Ashland and Woodruff Meadows on USFS lands. • They have not been documented in the Butte Falls Resource Area. The proposed right-of-way does not contain elderberry and is not native grassland. • No known effects identified from proposed project.
Crustaceans				
Vernal pool fairy shrimp	FT	No	Absent	• The proposed project is outside the range of the species.

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) – USFWS Migratory Bird Program Strategic Plan 2004-2014 list of species whose populations are below long-term averages or management goals (from draft list).

Appendix B – Aquatic Conservation Strategy

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 (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 Cable Trust right-of-way 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" (Bureau of Land Management 1995, 22). These watersheds have a high potential for being restored as part of a watershed restoration program. The Cable Trust project is located in the Upper Evans Creek (HUC # 171003080301) sixth field watershed within the larger Evans Creek fifth field watershed. The Cable Trust 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 (Bureau of Land Management 1995, 152).

The relevant watershed analysis for this project is the *Watershed Analysis for East Evans Creek* (1996).

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" (Bureau of Land Management 1995, 23).

B.2 Project Summary

The Medford District BLM, Butte Falls Resource Area received a request for a right-of-way from the Cable Trust for construction of 1,700 feet (0.3 miles) of road across BLM-administered land. The right-of-way would provide Cable Trust access to their lands that are surrounded by BLM-administered land.

The proposed action would authorize right-of-way number OR 063104 FD to Cable Trust to construct and use a 1,700 foot road located on BLM-administered lands in Township 34 South, Range 2 West, section 5 to access private property.

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

PDF 1. Limit all ground-disturbing construction activities to the dry season (generally May 15 to October 15) or when soil moisture content is below 25 percent.

PDF 2. Protect and stabilize bare soil exposed during construction activities with native plant seed and weed-free straw mulch prior to fall rains.

PDF 3. Increase road surfacing depth to no less than 10 inches of durable rock if road will be used for winter log hauling.

PDF 4. Place end-hauled waste material resulting from road construction in a designated location where sediment-laden runoff can be confined.

PDF 5. Wash logging and construction equipment, including undercarriages, before initial move-in and prior to all subsequent move-ins into the Project Area. Cleaning prior to entry onto BLM lands may be accomplished by use of a pressure hose. Cleaning is defined as removal of dirt, grease, plant parts, and material that may carry noxious weed seeds and parts onto BLM lands.

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 Cable Trust 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; therefore, all essential habitat elements would be retained. In addition, PDFs would limit effects to the aquatic environment. By staying outside riparian reserves and implementing PDFs, 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. As a result, 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 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 Project Area would continue to function and would maintain and restore spatial and temporal connectivity within and between watersheds because there would be no disturbance in riparian reserves.

Watershed Scale

Short-Term/Long-Term: Riparian reserves throughout the entire Project Area would not be entered and would continue to function and 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 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 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/Long-Term: Riparian reserves would continue to maintain the sediment regime. 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 **Invalid source specified.**. 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.

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 Cable Trust project would maintain the timing, variability, and duration of floodplain inundation and water table elevation in meadows and wetlands because 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 Cable Trust 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 Cable Trust 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 Cable Trust project would maintain the timing, variability, and duration of floodplain inundation and water table elevation in meadows and wetlands because there would be no disturbance in these areas.

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 Cable Trust 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 Cable Trust 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 Cable Trust 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 and PDFs would be in place to reduce the risk of spreading noxious weeds.

Watershed Scale

Short-Term/Long-Term: The Cable Trust 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 and limit the risk of spreading noxious weeds.

B.4 Conclusion

The Cable Trust project would maintain all Aquatic Conservation Strategy objectives in the short- and long-term at both the site and watershed scales because the amount of construction is small (0.3 mile), no road construction would occur within riparian reserves, 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.

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