U.S. Department of Interior
Bureau of Land Management
Roseburg District, Oregon

Environmental Assessment for the Swiftwater Field Office

ENGINEERING ROAD IMPROVEMENT AND REALIGNMENT ENVIRONMENTAL ASSESSMENT

EA #OR – 104 – 07 – 05

This environmental assessment analyzes the environmental impacts associated with the Swiftwater Field Office's proposal to improve and/or maintain selected roads in the Coast Range. The proposed improvements/realignment would occur in the Upper Umpqua Fifth-Field Watershed (Sections 19 and 21; T26S, R07W; W.M.) Two Bureau of Land Management roads; the 26-7-19.1 and the 26-7-20.3 roads in Hubbard Creek, need repair and realignment. These projects are within the General Forest Management Area Land Use Allocation and are designed to help meet the Roseburg District's annual allowable sale quantity of 45 million board feet declared in the Roseburg District *Record of Decision and Resource Management Plan* (ROD/RMP, pg. 8). This project is in conformance with management direction from the ROD/RMP.

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Chapter 1. Purpose and Need for Action

A. Background

Road improvement and renovation projects are generally categorically excluded by congress because they do not individually nor cumulatively have a significant effect on the human environment under the Department of the Interior Departmental Manual 516 DM 2 Appendix 17 as routine and continuing government business. The extent of improvements analyzed below is expected to exceed the impacts covered by the parameters of categorical exclusions.

The district engineering staff presented the Hubbard Creek Road (26-7-19.1) and the Swiftwater/Lone Rock Tie (26-3-15.0) for categorical exclusion. The environmental effects anticipated from repairing these roads are expected to exceed those allowed under categorical exclusion guidance. Therefore, the projects were elevated to the level of an environmental assessment. As the projects were being initiated the Long Ranch ERFO (Emergency Repair Federally Owned) project (26-7-20.3) was added to the Engineering Road Improvement and Realignment Environmental Assessment, because the projects were similar in nature. Subsequently, the work to be done on the Swiftwater/Lone Rock Tie was withdrawn from consideration in this document (pg. 12), leaving the Hubbard Creek Road and the Long Ranch ERFO project for detailed analysis.

The Engineering Road Improvement and Realignment Projects are proposed to be analyzed by the Swiftwater Field Office. Decisions for specific road improvements will tier to this document.

The Hubbard Creek Road (26-7-19.1) was likely built, for timber salvage, in the aftermath of a fire event in the early 1960's. The lower part of the road, from mile 0.00 to mile 0.72, is in a good location for drainage, but has never had turnouts. Improved drainage was installed in 1989 and the surface rocked in 1991 to reduce sedimentation into Hubbard Creek. The sedimentation was primarily created by wet season Off Highway Vehicle (OHV) traffic. Another lift of rock was applied in 2002.

The upper segment, approximately 2500 feet, is entrenched and is actively eroding. The road surface is deeply rutted and channels water. In 1989, fourteen drainage dips and ditchouts (see definitions, pg. 36) were constructed to drain the road. Because of the deep ruts the drainage structures no longer divert water off the road bed. This results in continued erosion of the road bed.

The Long Ranch Road (26-7-20.3) was, also, likely built in the aftermath of a fire event in the area and has been utilized to haul timber. This midslope road was located adequately for drainage considerations. The fill in two locations recently failed during the 2005-2006 wet season when rain fell in record amounts during December and January in Douglas County.

B. Proposed Action

The BLM proposes to repair and/or improve existing roads in the Upper Umpqua fifth-field watershed. BLM analyzed 1.3 miles of the existing 26-7-19.1 Road and 0.4 miles of the existing 26-7-20.3 Road.

Hubbard Creek Road 26-7-19.1:
The BLM proposes the renovation or improvement of approximately 1.23 miles of BLM road. In addition, the proposal would include realignment of approximately 0.3 miles of naturally surfaced 26-7-19.1 road a maximum of 100 feet from its existing center line, beginning at mile 0.70. The 0.3 miles of road realignment would be considered new road construction. Approximately 2.0 acres would be impacted by the realignment activities. The road would have culverts and turn-outs added at appropriate locations; some timber would be removed to facilitate construction activities. Mulching (weed-free straw), seeding and fertilizing would occur on the entire project area. In addition, 0.27 miles would have the berms removed on the outside edge of the road to allow for proper drainage.

Long Ranch Road 26-7-20.3:
The BLM also proposes to repair failures on the 26-7-20.3 road at two sites between miles 0.06 and 0.11 (Long Ranch Site #1) and between miles 0.76 and 0.81 (Long Ranch Site #2). The repair at Site 1 would move the road center line a maximum of 20 feet for approximately 200 feet into the slope onto stable ground above the existing failure. It would reduce the load on the top of the failure and reinforce it to stabilize the area. The repair at Site #2 would rebuild the road within the existing road prism by designing and constructing a Hilfiker wall, an interlocking wire and crushed rock retaining wall, to stabilize the failure and the slope. This wall would be approximately 15 feet tall and 150 feet long. Moving six feet into the existing cut bank may be necessary to establish the full road width required. The new road cut bank would be rock buttressed. The new cut bank would be buttressed where needed.

Table 1 below provides a summary of BLM's Proposed Action. Chapter 2 (pgs. 6-13) of this EA provides a detailed description of the Proposed Action Alternative.

Table 1. Engineering Road Improvement And Realignment Activity Summary.

Activity		Total
Timber Harvest	Road Right-of-Way Hubbard Creek Rd. Long Ranch ERFO Project.	2.2 acres 2.00 acres 0.20 acres
Yarding	Ground Based Hubbard Creek Rd. Long Ranch ERFO Project	2.2 acres 2.00 acres 0.20 acres
Hauling	Dry Season Hubbard Creek Rd. Long Ranch ERFO Project	9.2 miles 2.70 miles 6.50 miles
Road Activities	Roads to be Constructed Hubbard Creek Rd. Long Ranch ERFO Project Renovation of Existing Roads Hubbard Creek Rd. Long Ranch ERFO Project Improvement of Existing Roads Hubbard Creek Rd. Long Ranch ERFO Project Road Decommissioning Hubbard Creek Rd. Long Ranch ERFO Project	0.40 miles 0.30 miles. 0.10 miles. 0.10 miles. 0.00 miles. 0.10 miles. 0.93 miles 0.93 miles 0.00 miles 0.30 miles 0.30 miles 0.00 miles

C. Relevant Policies, Assessments, and Plans

National Policy and Northwest Forest Plan Level Guidance

This EA will consider the environmental consequences of the proposed action and no action alternatives in order to provide sufficient evidence for determining whether there would be impacts exceeding those considered in the Roseburg District PRMP/EIS which would require preparation of a Supplemental Environmental Impact Statement (SEIS). In addition to the PRMP/EIS, this analysis is tiered to assumptions and analysis of consequences provided by:

- The Final Supplemental Environmental Impact Statement (FSEIS) on Management of Habitat for Late-Successional and Old-Growth Related Species Within the Range of the Northern Spotted Owl (USDA, USDI 1994a);

- The FSEIS for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines in Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl (USDA, USDI 2001); and

Implementation of the proposed action would conform to management direction from the ROD/RMP which incorporates as management direction the standards and guidelines of the Record of Decision for Amendments (ROD) to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl (USDA, USDI 1994b). The ROD/RMP is further amended by the Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines in Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl (USDA, USDI 2001).

Transportation management on the Revested Oregon and California Railroad Lands (O&C Lands) managed by the Swiftwater Field Office is principally authorized and guided by: The Western Oregon Districts Transportation Management Plan (TMP) of 1996 (USDI), Updated in 2002).

- The function of the TMP is to "develop and maintain an environmentally sound road and trail system that meets the needs of the users" (pg. 2).

- The TMP goals includes providing "access to and through BLM managed lands," "maintain or improve water quality," Reduce adverse impacts to fish habitat," and provide and maintain a cost-effective transportation system," among others (pgs. 3-9).

- The Federal Land Policy and Management Act (FLPMA): Section 302 at 43 U.S.C. 1732(a), directs that "The Secretary shall manage the public lands . . .in accordance with the land use plans developed by him under section 202 of this Act when they are available . . ."

- Roseburg District Record of Decision/Resource Management Plan (ROD/RMP): The ROD/RMP (USDI, BLM 1995b), approved in accordance with the requirements of FLPMA, provides specific direction for timber management.

Roseburg District ROD/RMP Guidance

The ROD/RMP assumed that existing roads would be improved, maintained, or decommissioned, and new roads would be developed in support of managing a sustained yield timber management program. Once this decision was made, the primary unresolved issue was regarding which existing roads would be improved/maintained and which would be retired and to what extent (ROD/RMP, pg. 25).

The Proposed Action was developed in conformance with and within the scope of impacts anticipated/analyzed by the Final - Roseburg District Proposed Resource Management Plan / Environmental Impact Statement (PRMP/EIS) dated October 1994 and its associated Roseburg District Record of Decision and Resources Management Plan (ROD/RMP) dated June 2, 1995. These documents were written to be consistent with federal statute including the O&C Act, Endangered Species Act, and the Clean Water Act (PRMP/EIS, pg. 1-3).

Watershed Level Guidance

The Upper Umpqua Fifth-Field Watershed Decision (USDI, 2003; pg. 9) identified approximately 52 miles of road in need of improvement in the watershed. In addition, the Upper

Umpqua Fifth-Field Watershed Analysis identified approximately 10 miles for repair, improvement or decommissioning in Hubbard Creek (USDI, 2003; pg. E-4).

The Upper Umpqua Fifth-Field Watershed Analysis also specifically recommended the implementation of road renovations and improvements (USDI, 2003; pgs. 6-7). Road renovations and improvements within the project area are expected to reduce sediment reaching streams and/or adjacent riparian areas. Road improvements would decrease sediment production (Burroughs and King 1989, Luce and Black 1999), however, increased traffic would also cause sediment production to increase on gravel roads (Reid and Dunne 1984).

D. Objectives

The objective of the proposed project is to improve and maintain roads consistent with the objectives described in Appendix D of the Roseburg District ROD/RMP (pgs. 129-135).

The objectives of the proposed action are to implement the following management directions from the ROD/RMP, pertaining to transportation management on BLM administered roads in the Matrix land use allocations:

- Reconstructing roads [i.e., ruts, drainage features, etc.] and associated drainage features that pose a substantial risk to the aquatic environment (pg. 25),

- Prioritizing reconstruction based on current and potential impact to riparian resources and the ecological value of the riparian resources affected (pg. 25),

- Road operation and maintenance giving high priority to identifying and correcting road drainage problems that contribute to degrading riparian resources (pg. 25).

E. Decision Factors

Factors to be considered when selecting among alternatives will include:

- The degree to which the objectives previously described would be achieved including: type and location of road construction, renovation, and improvement, location of waste disposal areas, as well as the season(s) of operations;

- The nature and intensity of environmental impacts that would result from implementation and the nature and effectiveness of measures to mitigate impacts to resources including, but not limited to wildlife and wildlife habitat, soil productivity, water quality, air quality, and the spread of noxious weeds;

- Compliance with: management direction from the ROD/RMP; terms of consultation on species listed and habitat designated under the Endangered Species Act; the Clean Water Act, Clean Air Act, Safe Drinking Water Act and O&C Act, National Historic Preservation Act; and other programs such as Special Status and Survey & Manage Species.

Chapter 2. Discussion of Alternatives

This section describes the No Action and Proposed Action alternative, and alternatives considered but eliminated from detailed analysis. These alternatives represent a range of reasonable potential actions that would meet the reasons for taking this action, and the objectives to be met through taking the action. This section also discusses specific project design features that would be implemented under the proposed action alternative.

A. The No Action Alternative

The No Action Alternative provides a baseline for the comparison of the alternatives. This alternative describes the existing condition and continuing trends anticipated in the absence of the proposal but with the implementation of other reasonably foreseeable federal and private projects. If the no action alternative were selected there would be no improvement or repair of the existing road at this time. The OHV use of natural surfaced road Hubbard Creek road would continue.

B. The Proposed Action Alternative

This alternative proposes the improvement and/or realignment of existing roads within the Swiftwater Resource Area. The proposed action consists of the following activities (for a summary listing of these actions, see Table 1, page 3).

1. Road Activities (Construction, Improvement, Renovation, and Decommissioning)

The proposed project would include the cutting of brush trees. Following the PDFs described on pg. 8-11, road construction, improvement, renovation, and decommissioning would be restricted to the dry season (normally May 15 to Oct. 15).

a. ***Construction***

Approximately 0.40 miles of new road would be constructed. Approximately 0.30 miles of old road bed would be subsoiled and decommissioned. There would be no temporary road construction on this project.

Hubbard Creek Road 26-7-19.1:

The current roadbed used by class II (four-wheel drive vehicles) for mud running recreational experience would be altered. The new roadbed would be constructed to accommodate highway vehicle use. Road construction operations would realign 0.3 miles of the 26-7-19.1 road a

maximum of 100 feet from its original centerline on a gentle side slope and have a maximum road grade of 16.5 percent. The relocation would mainly be on the outside edge where the slope falls away, to obtain a cut/fill type road that allows for standard cross drains. The construction would include 12 inches of crushed aggregate along the entire length of road. Berms would be removed and culverts and turnouts would be added. Approximately 2.2 acres would be disturbed during construction. Bare soil areas would be mulched (weed-free straw), seeded, and fertilized after operations are completed.

Long Ranch Road 26-7-20.3:
The Long Ranch road work would be split between two sites. A culvert would be installed at each site and the construction would include 12 inches of crushed aggregate along the entire length of repairs. Areas disturbed during construction would be mulched, seeded, and fertilized after operations are completed.

Site #1 would require new construction to re-align 0.1 miles of road a maximum of 20 feet from its original centerline upslope from its original position on the slope.

b. Improvement
Hubbard Creek Road 26-7-19.1:
Approximately 0.93 miles of road would be improved to include the addition of turnouts, berm removal and culverts. The road would be rocked with a 12 inch lift of crushed aggregate rock.

Long Ranch Road 26-7-20.3:
No improvements would occur at the Long Ranch ERFO Sites #1 or #2.

c. Renovation
Hubbard Creek Road 26-7-19.1:
No renovation would take place on Hubbard Creek Road.

Long Ranch Road 26-7-20.3:
Renovation of 0.10 miles of road would occur at the Long Ranch ERFO Site #2. The Long Ranch road work would be split between two sites. Site #2 would renovate the road failure by constructing a 15 foot Hilfiker wall (an interlocking wire and crushed rock retaining wall) a length of 150 feet on the down slope side of the road to repair the existing road in its original location, to its original design.

d. Culverts
A total of ten culverts would have inlet basins cleaned. A total of 10 culverts would be (7 culverts on Hubbard Creek Road and 3 culverts on Long Ranch ERFO project) replaced or installed.

Hubbard Creek Road 26-7-19.1:
One culvert that was incorrectly installed would be reinstalled correctly in the improvement portion of the road and six culverts would be installed in the construction portion of the road.

Long Ranch Road 26-7-20.3:
One culvert would be placed at Site #1 and two culverts would be placed at Site #2.

e. Road Decommissioning

Hubbard Creek Road 26-7-19.1:

The Hubbard Creek site would have 0.30 miles of existing road decommissioned by placing fill material, subsoiling, planting and/or seeding native vegetation, and mulching with weed-free straw.

Long Ranch Road 26-7-20.3:

No decommissioning would take place on Long Ranch ERFO Sites #1 or #2.

f. Waste Disposal for Long Ranch Sites

Two waste disposal sites were selected. The closest site is in the road bed at the intersection of the 26-7-20.3 road and the 26-7-33.0 road. The second waste disposal site is located on an old landing, constructed in the 1960's, located off the 26-7-33.0 road in the SW1/4SE1/4 Section 21, T26S, R7W.

2. Timber Hauling

Approximately 9.2 miles of rocked road and paved road would be used for hauling timber. A total of 0.10 miles of existing road would be renovated (brought back to its original design) and could be used for wet/dry-season haul, if necessary. Approximately 0.93 miles of existing road would be improved (improved beyond its original design) and able to be used as wet/dry-season haul, if necessary.

3. Fuel Treatment

Prescribed burning of slash (burning under the direction of a written site specific prescription or "Burn Plan") would occur at machine-piled temporary log decking areas. Remaining fine fuels generated during the thinning process would be scattered throughout the treatment units.

C. Project Design Features as part of the Action Alternative

To protect riparian habitat:

a. Riparian habitat is not present in the project areas, therefore construction, renovation and improvement operation would not take place within any riparian habitat.

To minimize soil erosion as a source of sedimentation to streams and to minimize soil productivity loss from soil compaction, loss of slope stability or loss of soil duff layer:

a. Measures **to limit soil erosion and sedimentation from roads would consist of:**

(1) Maintaining existing roads (see Appendix B) to fix drainage and erosion problems. This would consist of maintaining existing culverts, installing additional culverts, stabilizing unstable cut and fill slopes, and replenishing road surface with crushed rock where deficient (BMP II H; RMP, pg. 137).

(2) Restricting road work (including decommissioning) and log hauling on naturally surfaced roads to the dry season (normally May 15th to October 15th). Operations during the dry season would be suspended during periods of heavy rains. This season could be adjusted if unseasonable conditions occur (e.g. an extended dry season beyond October

15 or wet season beyond May 15).

(3) Restricting improvement and renovation on rocked roads and the disposal of material at waste sites to the dry season (normally May 15th to October 15th). Operations during the dry season would be suspended during periods of heavy rains. This season could be adjusted if unseasonable conditions occur (e.g. an extended dry season beyond October 15th or wet season beyond May 15th).

(4) Prior to any wet season haul on surfaced roads, sediment reducing measures (e.g., placement of straw bales and/or silt fences) would be placed near stream crossings, if sediment is reaching the streams.

b. **Measures to limit soil erosion and sedimentation from logging would consist of:**
Limiting ground-based logging of the inside the road prism to the dry season as described above (BMP I C2d; RMP, pg. 131).

c. **Measures to limit soil compaction and improve soil productivity (RMP, pg. 37) would consist of:**

(1) Covering the bypassed Hubbard Creek (26-7-19.1) road bed where little soil remains between miles 26.1 to miles 43.6 with waste soil.

(2) Subsoiling up to 0.70 acre of the old bypassed 26-7-19.1 road bed, as necessary, to ameliorate compaction and the 0.12 acre of old landing adjacent to the 26-7-33.0 road after waste material is applied.

(3) Seeding native vegetation and mulching with weed-free straw or equivalent on bare soil. Slash placed with an excavator may be used as mulch in by-passed segments of the 26-7-19.1 road.

d. **Measures to protect the duff and surface soil layer (RMP, pg. 36) would consist of:**
Burning of slash during the late fall to mid-spring season when the soil and duff layer (soil surface layer consisting of fine organic material) moisture levels are high (BMP III D1b, pg. 140) and the large down logs have not dried. This practice would protect the soil duff layer and down logs from being totally consumed by fire and the surface layer from being negatively altered (i.e., loss of organic matter, erosion, change of soil physical properties, alteration of soil ecology and soil nutrients).

e. **Measures to protect slope stability would consist of:**
Locating new roads in stable locations (BMP II B2; RMP, pg. 132) with sufficient drainage structures (BMP II D; RMP, pg. 133).

To protect air quality:

All slash pile burning would have an approved "Burn Plan" and be conducted under the requirements of the Oregon Smoke Management Plan and done in a manner consistent with the requirements of the Clean Air Act (ODEQ, 1992).

To prevent and/or control the spread of noxious weeds:

Construction equipment would be required to be clean and free of weed seed prior to entry on to BLM lands (BLM Manual 9015-Integrated Weed Management).

To protect cultural resources:

If any objects of cultural value (e.g. historic or prehistoric ruins, graves, fossils or artifacts) are found during the implementation of the proposed action that were not found during pre-project surveys, operations would be suspended until the site has been evaluated for implementation of appropriate mitigation.

To protect Special Status, and SEIS Special Attention Plants and Animals:

a. Special Status (Threatened or Endangered, proposed Threatened or Endangered, Candidate Threatened or Endangered, State listed, Bureau Sensitive, Bureau Assessment, or Special Provision) and Special Attention plant and animal sites would be protected where needed to avoid listing of species and conserve candidate species, according to established management recommendations (RMP, pg. 40).

b. If during implementation of the proposed action, any Special Status Species are found that were not discovered during pre-disturbance surveys; operations would be suspended and appropriate protective measures would be implemented before operations would be resumed.

c. The proposed project is located in Marbled Murrelet Inland Management Zone 2, therefore road realignment and improvement projects within 100 yards or less of occupied and/or unsurveyed habitat would operate between two hours after sunrise and two hours before sunset (Daily Operating Restrictions) from April 1 until August 5.

d. There are currently no known sites, activity centers, or unsurveyed suitable habitat within 65 yards of the road segments proposed for improvement and realignment. Therefore, road realignment and improvement activities are not seasonally restricted due to northern spotted owl concerns, unless future surveys locate a nest site within 65 yards of the proposed project area.

e. Prescribed burning would not occur within 440 yards of any unsurveyed suitable habitat, known northern spotted owl nest site, or activity center from March 1st through June 30th, unless current calendar year surveys indicate: 1) spotted owls not detected, 2) spotted owls present, but not attempting to nest, or 3) spotted owls present, but nesting attempt has failed. Waiver of seasonal restriction is valid until March 1 of the following year. Prescribed burning is proposed within 440 yards and is therefore seasonally restricted.

f. Prescribed burning would not occur within 440 yards of the occupied marbled murrelet site from April 1st through August 5th and Daily Operating Restrictions from August 6th through September 15th.

To prevent and report accidental spills of petroleum products or other hazardous material and provide for work site cleanup:

The operator would be required to comply with all applicable State and Federal laws and regulations concerning the storage, use and disposal of industrial chemicals and other hazardous materials. All equipment planned for instream work (stream culvert replacement) would be inspected beforehand for leaks. Accidental spills or discovery of the dumping of any hazardous materials would be reported to the Authorized Officer (Sale Administrator) and the procedures outlined in the "Roseburg District Hazardous Materials (HAZMAT) Emergency Response Contingency Plan" would be followed. Hazardous materials (particularly petroleum products) would be stored in durable containers and located so that any accidental spill would be contained and would not drain into watercourses. All landing trash and logging and construction materials would be removed from the project area.

D. Monitoring

The RMP (pg. 85) specifies that management activities would be monitored and the results reported on an annual basis. Monitoring would be done in accordance with the RMP guidelines outlined in Appendix I.

When monitoring identifies previously unanticipated impacts, the information gained from that monitoring would be used in subsequent development of mitigating measures, including Best Management Practices, and considered in future watershed analyses (RMP, pg. 81).

E. Resources that Would be Unaffected by Either Alternative

1. **Resources Not in Project Area**
   The following resources or concerns are not present and would not be affected by either of the alternatives:

   Special areas (Areas of Critical Environmental Concern, Research Natural Areas, etc...)
   Minority populations or low income populations
   Farm Lands (prime or unique)
   Floodplains/ Wetlands
   Hazardous Waste
   Wild and Scenic Rivers
   Wilderness

2. **Cultural Resources**
   The Long Ranch ERFO part of the project was inventoried as part of the Bare Cupboard commercial thinning project (CRS No. SW0106). No cultural resources were found. The Hubbard Creek Road Improvement and Realignment part of the project falls within the Coast Range exemption area and does not require a pre-project inventory. Cultural resources will not be discussed further.

3. **Native American Religious Concerns**
   No Native American religious concerns were identified by the interdisciplinary team or through correspondence with local tribal governments.

4. **Indian Trust Resources**
   Secretarial Order No. 3175 (November 8, 1993) requires that any significant impact to Indian trust resources be identified and addressed in NEPA documents. There are no known Indian trust resources on the Roseburg District. Therefore, this project is expected to have no impacts to Indian Trust resources and will not be discussed further.

5. **Environmental Justice**
   The proposed action is consistent with Executive Order 12898 which addresses Environmental Justice in minority and low-income populations. The BLM has not identified any potential impacts to low-income or minority populations, either internally or through the public involvement process, arising from this type of activity.

6. **National Energy Policy**
   Executive Order 13212 provides that all decisions made by the BLM will take into consideration adverse impacts on the President's National Energy Policy. This project would not have a direct or indirect adverse impact on energy development, production, supply, and/or distribution and therefore would not adversely affect the President's National Energy Policy. Therefore, the President's National Energy Policy will not be discussed further in this EA.

7. **Healthy Lands Initiative**
   This project would be consistent with the Healthy Lands Initiative. This project would be in compliance with the Roseburg District ROD/RMP which has been determined to be consistent with the standards and guidelines for healthy lands (43 CFR 4180.1) at the land use plan scale and associated time lines. Therefore, the Healthy Lands Initiative will not be discussed further in this EA.

8. **Recreation**
   Although there are no designated recreation sites in or near the **Engineering Road Improvement and Realignment** project areas, it is located in an area and within the proposed Hubbard Creek OHV management area.

9. **Visual Resources**
   The **Engineering Road Improvement and Realignment** project is located on lands classified in the Roseburg District ROD/RMP as Visual Resource Management Classes IV, which, "… allows for major modification of the landscape." (ROD/RMP pg. 52).

10. **Repairs Critical Elements of the Human Environment**
    "Critical Elements of the Human Environment" is a list of elements specified in BLM Handbook H-1790-1 that must be considered in all EA's. These are elements of the human environment subject to requirements specified in statute, regulation, or Executive Order. Consideration of "Critical Elements of the Human Environment" is given in Appendix C of this EA.

F. Alternatives Eliminated from Detailed Analysis

1. Repairs to road # 26-3-15.0 (Swiftwater/Lone Rock Tie)

Road # 26-3-15.0 was eliminated from further detailed analysis because the funding to do the project was not sufficient to properly accomplish the repair.

2. Repairs to road # 26-7-20.3 Site 2

a. Repair the failure within the existing road prism by creating a fill slope below the road.

This option was eliminated, because the road repair would create a fill slope below the road. A "key" (a trench cut in the base of the slope) would be cut into the bedrock to retain the fill slope. This would be a stable repair, but the cost would be high and the work would go beyond the road prism. This would disturb more ground and more trees would need to be removed to accomplish it. Further, it would be necessary to acquire good quality riprap.

b. Repair the failure by moving the road into the bank.

This road repair would move the road into the bank. It would have a lower cost and simpler construction. It was eliminated because it would move the road outside the original road prism and it has the potential of destabilizing the ground above the road.

3. Waste areas for Long Ranch Sites #1 and #2

a. Landing in SW¼, NW¼, Section 21, T26S, R7W

This landing needed to remain functional for future harvest use. To retain operating width and still remain out of the existing plantation, the landing would be able to dispose of a small amount of fill material. Further, the curved approach to the landing has a 10 percent grade that would be increased if the landing were to be built up.

b. Entrenched loop of the 26-7-33.0 road in SW¼, NW¼, Section 21, T26S, R7W

This loop of road was bypassed in 2004 when the road was reconstructed. This potential waste area was eliminated because the approach was difficult and potentially a dangerous backing hazard. Also, the road would need to be closed for extended periods, preventing timber haul and recreational traffic.

Chapter 3. Affected Environment & Consequences by Resource

This chapter discusses specific resource values that may be affected, the nature of the short-term and long-term effects, including those that are direct, indirect and cumulative, that may result from implementation of the alternatives. The discussion is organized by individual resources. It addresses the interaction between the effects of the proposed thinning and density management with the current environment, describing effects that might be expected, how they might occur, and the incremental effects that could result.

The Council on Environmental Quality (CEQ) provided guidance on June 24, 2005, as to the extent to which agencies of the Federal government are required to analyze the environmental effects of past actions when describing the cumulative environmental effect of a proposed action in accordance with Section 102 of the National Environmental Policy Act (NEPA). CEQ noted the "[e]nvironmental analysis required under NEPA is forward-looking," and "[r]eview of past actions is only required to the extent that this review informs agency decision making regarding the proposed action." This is because a description of the current affected environment inherently includes effects of past actions. Guidance further states that "[g]enerally, agencies can conduct an adequate cumulative effects analysis by focusing on the current aggregate effects of past actions without delving into the historic details of individual past actions."

A. Forest Vegetation

2. Affected Environment

The dominant conifer species is Douglas-fir. Other conifer species in association includes incense-cedar, western hemlock, western red cedar, and grand fir. The following hardwoods and ground vegetation are common when there is sufficient light available: Pacific madrone, golden chinkapin, big leaf maple, salal, Oregon grape and sword fern (see also Botany, pg. 29).

3. Proposed Action Alternative

In the General Forest Management Area trees would be felled to allow construction, renovation and realignment to roads in the Upper Umpqua Watershed. There are approximately 650 trees less than 20 inches dbh and 35 trees 20 inches to 32 inches dbh that would be sold in a negotiated sale contract. Log haul would be restricted to rock and paved surfaced roads

4. Cumulative Effects

Timber harvest and fire have converted much of the original forest into young Douglas-fir plantations and the rest of the watershed is influenced by agriculture. The BLM manages 57,700 acres in the Upper Umpqua fifth-field watershed, representing 33 percent of all ownership. It is estimated that approximately 12,000 acres of BLM lands within Upper Umpqua fifth-field watershed were clear-cut harvested, the vast majority of these occurring between 1950 and 1990. About 2,000 acres of 60 to 80 year old forest stands were naturally regenerated presumably after a fire that occurred about 100 years ago. (Upper Umpqua Watershed Analyses, pgs. 10-14).

B. Wildlife

1. Federally Threatened & Endangered Wildlife Species

a) Bald Eagle

(1) Affected Environment

There are no known bald eagle nest sites within the proposed project area. Based on current surveys (2006) the nearest known bald eagle nest site (Woodruff Mountain) is located approximately 4.2 miles to the east. Therefore there would be no disturbance concerns for the bald eagle.

There is no critical habitat (a specific geographical area designated by the US Fish and Wildlife Service as containing habitat essential for the conservation of a Threatened and Endangered species) designated for the bald eagle. The proposed project area is located outside of the Umpqua River Corridor Bald Eagle Management Area.

(2) No Action Alternative

Under the no action alternative, there would be no impacts to suitable habitat (i.e. large trees with large limbs to support nesting platforms and roosting and large snags within close proximity of large bodies of water) for bald eagles.

(3) Proposed Action Alternative

The proposed action alternative would occur within the existing road prism. Mid-seral habitat is present on both sides of the existing road-bed, and does not contain suitable nesting habitat for the bald eagle. Therefore, the proposed action would not remove or modify suitable nesting habitat for the bald eagle.

b) Marbled Murrelet

(1) Affected Environment

The proposed project area is located within the nesting range of the marbled murrelet and is located within Marbled Murrelet Inland Management Zone 2 (35-50 miles from the Oregon coast). There are no known occupied murrelet sites within five miles of the proposed project area. The proposed action on road 26-7-20.3 would occur within approximately 54 yards of unsurveyed suitable marbled murrelet habitat. The proposed action on the Hubbard Creek 26-7-19.1 road would occur within 94 yards of unsurveyed suitable habitat.

The proposed project area is located outside designated critical habitat for the marbled murrelet. Therefore, there are no concerns for marbled murrelet critical habitat.

(2) No Action Alternative

Under the no action alternative, the roads would remain in their existing condition. Use of OHVs would likely continue, specifically on the 26-7-19.1 road. Thus, noise disturbance within 100 yards of nesting murrelets within suitable habitat would continue at their current levels.

(3) Proposed Action Alternative

The proposed action alternative would improve sections of two roads, but would not modify or remove suitable habitat (i.e. large limbs greater than 4", large crown depths, and large diameter trees) for the marbled murrelet. The road improvement would likely create conditions less desirable for OHV recreational use, thus reducing the amount of noise disturbance created by OHVs. Therefore, noise disturbance may decrease due to the reduced use of OHVs, specifically on the Hubbard Creek 26-7-19.1 road.

c) Northern Spotted Owl

(1) Affected Environment

Known Owl Activity Centers (KOAC) have been designated to minimize impacts and protect nest sites found before 1994 (USDI, 2005b). There are two spotted owl activity centers (Camp Creek- IDNO 1917, 1917A) located in a designated KOAC adjacent to the proposed project area. The proposed action on road 26-7-20.3 would occur within approximately 1300 yards of the KOAC. The proposed action on the Hubbard Creek 26-7-19.1 road would occur within approximately 750 yards of the Camp Creek KOAC. The roads planned for realignment are located within stands of dispersal habitat for the northern spotted owl.

This project would not occur within spotted owl designated Critical Habitat. Therefore, there is no concern for Critical Habitat for the spotted owl.

(2) No Action Alternative

Under the no action alternative the roads would remain in their existing condition. Recreational use (i.e., OHVs) of the roads would likely continue at their current levels, specifically on the 26-7-19.1 road. Recreational use of the roads may cause noise and visual disturbances to the spotted owl. Thus, spotted owls may avoid using the dispersal habitat within the vicinity where recreational road use is high.

(3) Proposed Action Alternative

The proposed action would not modify or remove suitable nesting, roosting, or foraging habitat for the spotted owl. Along the 26-7-19.1 road, there would be approximately 1.5 acres of ground disturbance along 0.5 miles of the existing road. Less than half of the ground disturbance would involve scattered removal of trees less than 12 inches in diameter at breast height. Spotted owl use of the narrow strip of dispersal/edge habitat is not expected on a regular basis along a road with frequent OHV use. Therefore, the loss of dispersal habitat would be insignificant to the spotted owl. In addition, the road improvement would likely create conditions less desirable for recreational use, thus reducing the amount of noise disturbance created by OHVs. An increase of through-traffic is expected to occur, however the disturbance would be of short duration. The capability of the habitat to function for dispersing spotted owls would be maintained or improved, specifically on the 26-7-19.1 road, by reducing noise and visual disturbances within dispersal habitat.

2. Wildlife Bureau Sensitive, Assessment, & Tracking Species

There is no known Bureau Sensitive or Bureau Assessment Species (e.g. nest site) that would be impacted by the proposed action. Those Bureau Sensitive (BS) and Bureau Assessment (BA) species that are suspected to occur within the project area and may be affected by the proposed action are discussed briefly in Appendices D and E.

3. Wildlife Survey & Manage Species

There is no known Survey and Manage wildlife species (e.g. nest site or known site) that would be impacted by the proposed action. The project area is outside of the range of the Siskiyou sideband (*Monadenia chaceana*) and the Crater Lake tighcoil (*Pristiloma arcticum crateris*) as described in Appendix F. The project area is within the range of the great grey owl (*Strix nebulosa*) and the red tree vole (*Arborimus longicaudus*) but does not contain suitable habitat as described below and in Appendix F.

Great Grey Owl

Pre-disturbance surveys for great grey owls are not required since there is no suitable nesting habitat within the project area. The required habitat characteristics of suitable habitat for great grey owls include: (1) large diameter nest trees, (2) forest for roosting cover, and (3) proximity [within 200m] to openings that could be used as foraging areas (*Survey Protocol for the Great Gray Owl within the range of the Northwest Forest Plan v3.0*, January 12, 2004).

The stands in the project area do not have proximity to natural-openings (Gayner, staff review, 2007) and pre-disturbance surveys are <u>not</u> suggested in suitable nesting habitat adjacent to man-made openings at this time (pg. 14, *Survey Protocol for the Great Gray Owl within the range of the Northwest Forest Plan v3.0*, January 12, 2004).

Red Tree Vole

According to the red tree vole survey protocol (Version 2.2, May 2003), the need for pre-disturbance surveys must meet three criteria, including:

> Criteria 1) the proposed activity (project) is within the known or suspected range of the species;
>
> Criteria 2) suitable habitat that may potentially contribute to a reasonable assurance of persistence occurs within the proposed project area (ROD S&G, pg. 23); and
>
> Criteria 3) the proposed activity has the potential to "cause significant negative effect on the species habitat or the persistence of the species at the site" (ROD S&G, p. 22).

The proposed road realignment project is located within the known geographic range of the red tree vole, within the Mesic Forest Distribution Zone, and therefore meets the first criteria. However, because the proposed ground-disturbing activity does not meet the remaining two criteria, pre-disturbance surveys for the red tree vole would not be required based on the reasons presented below.

To meet the second criteria, the stand or portion of the stand where the potentially habitat-disturbing activity would occur must be suitable habitat for red tree voles. Suitable habitat is

defined in the red tree vole survey protocol (Version 2.2, May 2003) as having the following characteristics:

(1) An estimated stand Quadratic Mean Diameter (QMD) greater than or equal to 18 inches diameter at breast height *and*

(2) is either a mature and old-growth conifer forest *or* conifer forest stand with a canopy closure of 60 percent or greater of the intermediate, co-dominant and dominant trees and with two or more predominant conifer trees per acre.

The stand in the project area has a QMD less than 18 inches and is a mid-seral stand (i.e. it is in the 50 year age class), not mature or old-growth conifer forest. There is no old growth or mature component in the stand in the proposed project area. The estimated QMD of the trees to be removed by the proposed Hubbard Creek Road and Long Ranch Road repair projects is 12.7 inches and 15.9 inches, respectively. Thus, the proposed project area is not considered suitable habitat for the red tree vole and does not meet the second criteria for pre-disturbance surveys.

Furthermore, prior to the release of version 2.2 of the red tree vole protocol, surveys were conducted within the proposed project area, along the Hubbard Creek road in 2001. Sixteen active red tree vole nest trees were located more than 220 meters north of the project and one nest tree was located 1,000 meters south of the proposed project area in habitat with an older Douglas-fir tree component within the stand. Scientific literature states that voles which occur in younger stands are believed to most likely be population sinks rather than sources and are unlikely to provide population persistence of red tree voles over the long term (Carey 1991).

Therefore, there would not be a significant negative effect on the species' habitat or on the persistence of the red tree vole at this site because: 1) the distribution of active nests from past survey results is outside of the project area, 2) the suitable habitat where red tree vole populations exist would not be removed or modified and, 3) if red tree voles were present within the proposed project area they would not be expected to provide a source for the population. Thus, the proposed project also does not meet the third criteria for pre-disturbance surveys.

4. Wildlife Cumulative Effects

The proposed project would not contribute additional road miles within the Upper Umpqua fifth-field watershed. Nor would this project cause a significant loss (approximately 0.01 percent of 11,900 acres) of mid-seral habitat within the watershed.

C. Fire and Fuels Management

1. Affected Environment

This project would occur outside the wildland urban interface boundary as described in the Roseburg District Fire Management Plan. The current fuels condition in this area is light (less than 10 tons) and do not currently pose a fire hazard.

2. No Action Alternative

Natural accumulation of down woody debris would occur.

3. Proposed Action Alternative

As part of the project, the fuels along the roadside would be cleared, small fuels would be scattered, and large accumulations burned in piles.

4. Cumulative Effects

Fine downed woody fuels would increase slightly in the treatment area but larger accumulations would be burned. This treatment should actually decrease the fire potential in the area from roadside fire starts for several years. The road improvement itself will also allow better access for fire fighting equipment should a fire occur (K. Kosel, 2006, pers. obs.)

D. Soils

1. Soil Productivity Affected Environment

The affected soils at all three sites formed in the sandstones and siltstones of the Tyee Formation.

Hubbard Creek Road – 26-7-19.1:
The soils at the 26-7-19.1 road site are mainly on slopes of 20 to 40 percent. They are predominantly well drained soils that are moderately deep to very deep (20 inches to greater than 60 inches) over soft bedrock and have silt loam/silty clay loam surfaces and silty clay subsoils. These textures are at the high end of moderately erodible under bare soil conditions. They were a contributing factor for the drainage and sedimentation problems associated with this road (See Background section on page 1for history). The first quarter mile of the road has shallow, well drained soils over hard sandstone.

There are too few drainage relief features and ditch erosion remains active on the lower rocked segment (mile 0.00 to mile 0.72). Fine earth deposited by mud-caked OHVs driving down the road now coats the rocked surface and is a source of sediment.

On the upper, natural surfaced segment (mile 0.72 to mile 1.20), the combined through-cut excavation-berm from the original road construction and approximately 45 years of erosion, aggravated by vehicle use entrenched the road as much as six feet deep on the outside edge. Currently, all of the drainage dip-ditchouts are either partially or totally non-functional; except the first one, at mile 0.00 that is rock-hardened. It remains fully functional, capturing all of the sediment volume that reaches it and depositing this sediment on the forest floor. Forty years of sediment removal from the road bed has left deposition trails below this lowest ditchout and at least one other ditchout that are over 500 feet in length and more than fifty feet wide at their widest point. These deposits are more than a feet deep in places and are very high in silt with little sand, clay and organic matter. The silt blocks necessary gases and water from reaching organisms and plants, damaging them. The road bed a bog during the wet season from mile 0.8 to 0.9 becomes. The upper segment from mile 1.0 to mile 1.2 has little earth remaining in the road bed where soft siltstone bedrock is partially exposed.

The affected slopes of the 26-7-19.1 road have been determined to be stable because of the following:

1) A landslide inventory using aerial photos covering the early 1960s to 2004 did not reveal any landslides.
2) No landslides or tension cracks were discovered during field investigations where road realignment would occur.
3) The shape of the conifers indicates little or no soil creep.
4) Steep slopes are absent where realignment would occur in the upper one half mile of road.

Long Ranch Road – 26-7-20.3:
The soils at the two Long Ranch fill failure sites are well drained and have gravelly loam surfaces and gravelly clay loam subsoils that are moderately erodible under bare soil conditions. The fill failures at both sites are very steep head scarps above moderately sloping deposited material and each cover about 0.20 acres. They are still largely devoid of vegetation and are actively eroding.

The ground above the 12 foot cut bank at Site #1 is on a 25 percent gentle stable slope just below the ridge line. The soil depths at this site are shallow to very deep (10 to greater than 60 inches) over hard sandstone. The cut bank and ditchouts are well covered with vegetation and exhibit little erosion.

The soils at Site # 2 are moderately deep to very deep over soft to hard sandstone. The soft sandstone readily breaks down to silty earth. The ground immediately above the road cut slope (above the road bed) directly overlooking the fill failure is a slightly hummocky concave slope of 75 percent that may be creeping down slope. The "S" curve shapes in the boles of some conifers, a leaning up-slope conifer along with the hummocky nature of the slope and a recent cut slope slough are indicators of potential instability. The risk of this slope failing and impacting the road is considered low because, historically, it has been stable for the past 45 year existence of the road. Possibly because the slip plane of the creeping ground does not intersect the road cut.

Waste Sites for Long Ranch Road projects:
The proposed waste disposal area, nearest Long Ranch Site #1, at the intersection of the 26-7-20.3 road and the 26-7-33.0 road, is in the road cut. It is on a stable, gently sloping ridge line of 10 to 30 percent. The second waste site is on a stable, gently sloping ridge line saddle overlooking a rocky cliff of hard sandstone to the east. The soil there was scraped away while constructing the old 1960's landing. Hard bed rock was exposed and a nearly level, entrenched pad covering about 0.12 acre was created. It is an unproductive site that supports sparse grasses and forbs because of the lack of soil and the occasional vehicle traffic there. Erosion levels are low.

Both waste sites are highly stable because they are located on high, gently sloping ridge top positions that are well drained and occur on bedrock. No land slides have occurred there since being area was originally disturbed. The small levels of sediment currently produced at both proposed waste sites from vehicle traffic do not move far and do not affect streams since they are on high ridge top positions far above streams. The sediment filters into the forest floor.

a. No Action Alternative

Hubbard Creek Road 26-7-19.1:

Ditch erosion would continue on the rocked portion of the 26-7-19.1 road. Mud caked on OHVs and their tires would continue to permeate the rock surface and be a source of sediment.

The entrenchment and erosion process accelerated by "mud running" would continue on the upper one half mile of the road. Where soils depths are now shallow in the road bed, the high erosion rates would continue to deplete soil material and become unavailable for effective future reclamation. All of the drainage dips and connecting ditchouts, with the exception of the bottom drainage dip and ditchout would in time be rendered ineffective (see Soil Productivity Affected Environment, pg. 19). Sediment deposition trails on the forest floor would continue to grow in size and depth where ditchouts are still delivering sediment. The lowest drainage dip-ditchout at the bottom of the natural surfaced segment would receive the bulk of this sediment. The adverse effects of the sediment deposition trails to the soil ecology and conifer health would correspondingly increase. The damaging physical properties (see Soil Productivity Affected Environment, pg. 19) of the sediment deposition trail would be long term. Ultimately, colonizing plants and organisms would incorporate organic matter, break up crusts and create porosity and soil structure.

Long Ranch Road 26-7-20.3:

At both Long Ranch sites the bare surface created by the fill failures would become largely stable to erosion over several years of vegetative growth. The head scarps (upper beginning of the slides) would likely advance into the remaining fill material, taking out more of the road beds and delaying the healing process. At site #2, the risk of the slope above the road failing and impacting the road would remain low.

Waste Sites for Long Ranch Road projects:

There would be no change at the proposed waste site. Both sites would remain stable and low levels of sediment would continue to be produced but not affect streams. The old landing would remain in an unproductive state due to compaction and continued vehicle use.

b. ***Proposed Action Alternative***

Hubbard Creek Road 26-7-19.1:

The drainage features installed on the lower rocked portion of the 26-7-19.1 road would greatly reduce ditch erosion after the first wet season, when loose sediments are washed out of the road system, and vegetation begins to stabilize the ditch surface. The mud spread over the rock surfaces by OHVs would largely be eliminated because of the removal of the mud source in the upper one half mile of road.

The realignment of the upper one half mile of the 26-7-19.1 road would disturb about 1.1 acres of surface where the soil is currently in a productive state and growing trees. These productive areas are the berms and the slopes below the berms. About 0.9 acres of this disturbance would be an irretrievable loss to soil productivity due to being covered by the new rocked road. The other 0.2 acres of this would be fill slopes that would successfully support trees and native vegetation. About 0.65 acres of old entrenched road bed would be decommissioned and

brought back into a productive state (see PDFs, pg. 8). There would be a net 0.25 acre irretrievable loss in soil productivity (-1.1 acres +0.2 acres +0.65 acres = -0.25 acres) when considering both newly disturbed and decommissioned lands.

Since drainage problems in the old road bed would be corrected and its surface vegetated, there would be little sediment production after the first wet season, when loose sediments are washed out of the road system. Landslides would not occur because of realignment since construction would occur on stable slopes of 20 to 40 percent per (see Soil Productivity Affected Environment, pg. 19).

Long Ranch Road 26-7-20.3:
At the Long Ranch site #1, cutting into the gentle slope above the cut slope would disturb about 0.1 acres and would be an irretrievable loss to soil productivity. This site is on stable slopes near the ridge. Some minor progressive cutting into the new cut bank slope would occur. Reshaping the fill slope to a gentle contour would help the failure to revegetate.

At the Long Ranch site #2 about 0.02 acres of steep forested slope adjacent to the fill failure would be disturbed when installing the Hilfiker wall. If cutting into the cut slope is necessary to reestablish road bed width, then an additional 0.02 acres would be disturbed for a maximum of 0.04 acres of irretrievably lost soil productivity. Any cutting into the cut slope could destabilize the potentially unstable slope above but that would be countered by rock buttressing the cut slope. This would keep the risk of cut slope failure low.

Waste Sites for Long Ranch Road projects:
The slopes at both waste sites would remain stable after the estimated 1000 cubic yards of material is added at each location for the following reasons:

1) The volume of waste is relatively small for sites of high stability. The additional earth would not destabilize the hard bedrock underneath.
2) Waste would replace cut material removed during road and landing construction without adding much more weight above what was there naturally (pre-1960s disturbance).

The 23-6-33.0 road waste site would be confined to the existing road bed and not affect the productivity of adjacent soils. The soil productivity of the 0.12 acre landing site would be enhanced, because soil material would be deposited, subsoiled, fertilized, planted and seeded with native vegetation. Sediment production would be slightly increased during the first wet season following activities. Sediment production at the 26-7-33.0 road would revert back to the low levels of the no action alternative, because the new surface would be rocked. After the establishment of vegetation, erosion and sediment production would be very small at the landing site. Sediment at both sites would filter into the forest floor and not affect streams.

2. Cumulative Effects

There would be an expected net irretrievable loss of 0.25 acres in soil productivity for all projects combined under this EA (Appendix I, Table B, pg. 57). This would not change the average road density at the seventh field watershed scale and larger.

E. Hydrology

1. Water Quality, & Beneficial Uses

a. Affected Environment

Hubbard Creek Road 26-7-19.1:

The Hubbard Creek Road is located in the Upper Hubbard Creek drainage within the Upper Umpqua River watershed. The drainage has one first-order intermittent ephemeral stream, one second-order intermittent seasonal stream, and one fifth-order perennial fish bearing stream crossed by the road renovation/reconstruction site. The primary beneficial uses of water near the projects' sites are resident fish and aquatic life, and salmonid fish spawning and rearing. Although they are very distant from the water intake (approximately 50 stream miles), the project site is located within the city of Elkton's Drinking Water Protection Area. Hubbard Creek is not currently listed on the Oregon Department of Environmental Quality's 2004/2006 303(d) List of Water Quality Limited Waterbodies (ODEQ, 2006). The first 0.72 miles of the road is rock surfaced and contributes some (unquantifiable, immeasurable) sediment from runoff to Hubbard Creek through locations where the road crosses tributary streams. However, most of the sediment from the road is routed onto the forest floor away from tributaries where it is filtered out and the amount of sediment contributed to the streams is minimal when compared to sediment delivery occurring throughout the entirety of the drainage. The current hydrologic impacts of the second portion of this road are more erosive.

All 0.5 miles of the Hubbard Creek Road is severely eroded due to water accumulating and channeling down the road. This entrenching allows further accumulation of water and sediment without being able to discharge flow off the road. This cycle of water accumulation, downcutting and attempts to drain the areas have been part of the problem rather than alleviating the problem. However, there is no discharge of water from this portion of road near any of the tributary streams to Hubbard Creek and instead the sediment laden water is routed to the forest floor where the sediment is filtered out.

Long Ranch Road 26-7-20.3:

The Long Ranch ERFO Site project is located in the Camp Creek drainage within the Upper Umpqua River watershed. In the Long Ranch ERFO sites project area; there is one first-order intermittent ephemeral stream near the road realignment site. The primary beneficial uses of water near the projects' sites are resident fish and aquatic life, and salmonid fish spawning and rearing. Although they are very distant from the water intake (approximately 50 stream miles), the project sites are located within the city of Elkton's Drinking Water Protection Area. Camp Creek is not currently listed on the Oregon Department of Environmental Quality's 2004/2006 303(d) List of Water Quality Limited Waterbodies (ODEQ, 2006). On the Long Ranch ERFO Sites project, the slope failure at mile 0.76 is near an intermittent ephemeral stream feature that contributes water and sediment to Camp Creek mainly from rain. At mile 0.81, there is no stream feature associated with the slope failure.

b. No Action Alternative

Hubbard Creek Road 26-7-19.1:

Due to the entrenched road and erosion described in the Affected Environment, continued erosion of the natural surface road in the Hubbard Creek Road Improvement and Realignment project would occur under the No Action Alternative. The locations where water from the

natural surface road discharges onto the adjacent landscape are not near any stream tributaries and therefore there would be no increase in sediment to Hubbard Creek due to that portion of the road. The rocked surface portion of the road would continue to contribute some (unquantifiable, immeasurable) sediment to Hubbard Creek through road runoff accessing the tributaries crossed by the road itself. As stated in the Affected Environment section, since most of the cross drains are not currently located near any of the tributaries to Hubbard Creek and there are only three road-stream crossings, the sediment contribution would be minimal when compared to sediment delivery occurring throughout the entirety of the drainage. Under the No Action Alternative, sediment delivery to the streams would not increase or would not increase measurably at the drainage level and therefore there would be no discernable change to the drinking water in the city of Elkton's Drinking Water Protection Area and no discernable change to water quality or Beneficial Uses of Water in Hubbard Creek.

Long Ranch Road 26-7-20.3:
Long Ranch ERFO Sites project, continued slope failure would occur near the road and could include the road itself. This would temporarily increase sediment load to the stream. However, despite the steep gradient, the stream feature near the slope failure has the capacity to store some (unquantifiable, immeasurable) sediment due to the large amount of wood and other debris in the channel (Montgomery and Buffington, 1997) and would dampen the delivery of sediment to Camp Creek. As with mile 0.76, if no action is taken, the slope failure could include the road, but would contribute an increase of sediment to Camp Creek through the loose accumulation rock debris or during large runoff producing events since no stream feature is present. However, the amount of sediment delivered to the streams would be minimal when compared to the delivery of sediment throughout the entirety of the drainage. Under the No Action Alternative, sediment delivery to the streams would not increase or would not increase measurably at the drainage level and therefore there would be no discernable change to the drinking water in the city of Elkton's Drinking Water Protection Area and no discernable change to water quality or Beneficial Uses of Water in Camp Creek.

c. Proposed Action Alternative

Hubbard Creek Road 26-7-19.1:
Under the Proposed Action Alternative, in the Hubbard Creek Road project, renovation to the first 0.72 miles of road would be within the existing road prism and would not cause additional sediment delivery to the streams since proper water routing from the road would be maintained onto the forest floor away from the streams where sediment can be filtered out. Likewise, runoff water from the newly constructed portion of road (the remaining 0.5 miles) would not discharge near any tributaries, but rather would be routed to the forest floor where the sediment would be filtered out. Less erosion would occur on this portion of road compared to no action as it would be adequately drained and rock surfaced. Additionally, construction would be performed in the dry season which would minimize the sediment delivery to Hubbard Creek from mechanical activities and culvert repair/replacement on the tributaries crossed by the road. Under the Proposed Action Alternative sediment delivery to Hubbard Creek would not increase or would not increase measurably at the drainage level and therefore there would have no discernable change to the drinking water in the city of Elkton's Drinking Water Protection Area and no discernable change to water quality or Beneficial Uses of Water in Hubbard Creek. The Proposed Action would not change the Hubbard Creek stream crossing and would not alter the current 100 year flood plain.

Long Ranch Road 26-7-20.3:
In the Long Ranch ERFO Sites project, there could be an initial increase in sediment contribution to a tributary of Camp Creek at mile 0.76 as there would be freshly exposed sediment from constructing the Hilfiker Wall. However, as with the No Action Alternative, this stream feature would have the capacity to store some (unquantifiable, immeasurable) sediment (Montgomery and Buffington, 1998) and reduce the delivery of sediment to Camp Creek. Also, mitigation measures would be taken to stabilize the cut slopes through rock buttressing. Additionally, less sediment delivery to Camp Creek from the slope failure would result over time as the slope failure would become more stabilized from creating proper drainage structure to the hill-slope next to the road and from renovating the road with the proposed Hilfiker Wall. Under the Proposed Action Alternative sediment delivery to Camp Creek would not increase or would not increase measurably at the drainage level and therefore there would be no discernable change to the drinking water in the city of Elkton's Drinking Water Protection Area and no discernable change to water quality or Beneficial Uses of Water in Camp Creek.

2. Cumulative Effects

Reasonably foreseeable future actions within the Upper Umpqua Watershed (fifth-field HUC) include continued private and Federal forest management. At the fifth-field watershed scale, the scope of the proposed project is too small to substantively alter current watershed functions. Because the proposed action would not alter water quality or beneficial uses of water at the project level, it would not incrementally add to the cumulative effects beyond the project area or at any watershed scale beyond.

F. Fish Populations & Habitat

1. Affected Environment

Oregon Coast coho salmon, Oregon Coast steelhead, coastal cutthroat trout, Oregon Coast chinook salmon, and Pacific lamprey, and Umpqua chub are present in the Upper Umpqua fifth-field watershed (see Appendix H). The National Marine Fisheries Service determined that the Oregon Coast coho Ecologically Significant Unit does not warrant listing under the ESA at this time and therefore withdrew the proposed listing (Fed. Reg., Vol. 71 No. 12, Jan. 19, 2006). However, under OR/WA BLM guidelines the Oregon Coast Coho is considered Bureau Sensitive.

The Oregon Department of Fish and Wildlife (ODFW, 1994) has conducted stream habitat surveys in the Hubbard Creek sixth field watershed. These surveys generally show that fish-bearing streams within the watershed lack large wood, contain a high percentage of fine sediment within the stream channels, and have substrates dominated by bedrock (Upper Umpqua WA, Table 3.4).

a. No Action Alternative

Hubbard Creek Road 26-7-19.1:
Currently, the rocked surface portion of the Hubbard Creek Road project contributes some sediment to Hubbard Creek (a fish-bearing stream) through road runoff accessing tributaries crossed by the road itself (pg. 23). However, the sediment from this site is minimal when compared to sediment delivery occurring throughout the entirety of the drainage (pg. 23). Fish in Hubbard Creek will be unaffected by a sediment input of this level.

Long Ranch Road 26-7-20.3:

The Long Ranch ERFO Sites project would continue its slope failure and eventually increase sediment load to a tributary to Camp Creek (a fish-bearing stream). However, the sediment from this site would be minimal when compared to sediment delivery occurring throughout the entirety of the drainage (pg. 23). Fish in Camp Creek will be unaffected by a sediment input of this level.

Stream temperature, woody debris, and hydrologic processes would be unaffected by the No Action Alternative at both sites.

b. Proposed Action Alternative

(1) Large Woody Debris and Stream Temperature

The proposed action would maintain existing levels of large woody debris and would not affect the mechanisms for future recruitment. A small number of fir trees (< 20" in diameter) within the riparian reserve would be removed during the Hubbard Creek Road Improvement and Realignment. These trees are growing on the current road bed and should not affect future recruitment or stream shading. Douglas fir trees would also be removed in order to realign the upper section of Hubbard Creek road. These trees are outside of established riparian reserves and would not affect stream shading or future wood recruitment. Fish populations will be unaffected by these projects with respect to stream temperatures and large woody debris recruitment..

(2) Fine Sediment and Substrate

The majority of the proposed road improvement is located outside of Riparian Reserves in stable locations and would not be connected to the drainage network. A small portion (11 percent) of the project would be within the Hubbard Creek Riparian Reserve. With the guidelines specified in the project design features, the probability of adverse affects from this project on fish populations and their habitat is very low. This project would be implemented during the dry season, and without precipitation there would be no mechanism for the transport of fine sediment into adjacent or nearby streams.

The first sediment effects would occur during the first fall rains. These effects would be a short-term pulse and would not be noticeable above background levels. Road-derived sediment would actually decrease from current conditions due the construction of an aggregate road surface and a properly functioning cross drains. Sediment input from these actions would not increase measurably at the drainage level (pg. 25). Fish in Hubbard and Camp Creeks will be unaffected by a sediment input of this level.

(3) Fish Passage

There is one stream crossing over a fish bearing stream (Hubbard Creek) within the project area. This culvert is currently passable by juvenile and adult fish at most stream flows. The culvert will not be replaced by this project. Fish passage would be unaffected by this project.

c. Cumulative Effects

Reasonably foreseeable future actions within the Upper Umpqua Watershed include continued private and Federal forest management. The project will not alter the habitat components of large woody debris, stream temperature, fine sediment and substrate, or fish passage (stream connectivity) at the project level. Since the proposed action will not affect fish habitat at the project level, it will not incrementally add to the cumulative effects beyond the project area.

The culvert in Hubbard Creek that is a partial barrier to juvenile fish during higher streamflows will not be replaced by this project, but will be replace in the near future with a fish passage culvert.

2. Aquatic Conservation Strategy

The proposed action meets the objectives of the Aquatic Conservation Strategy (ACS) as described in the ROD/RMP (pg. 19) based on the following rationale:

a. Riparian Reserves (ACS Component #1)

Riparian Reserves were established. The ROD/RMP (pg. 24) specifies Riparian Reserve widths equal to the height of two site potential trees on each side of fish-bearing streams and one site-potential tree on each side of perennial or intermittent non-fish bearing streams, wetlands greater than an acre, and constructed ponds and reservoirs. The height of a site-potential tree for the Upper Umpqua River Watershed has been determined to be the equivalent of 180 feet. (Upper Umpqua Watershed Analysis, pg. 3).

b. Key Watersheds (ACS Component #2)

Key Watersheds were established "as refugia . . . for maintaining and recovering habitat for at-risk stocks of anadromous salmonids and resident fish species [RMP, pg. 20]." These projects are not in Key Watersheds.

c. Watershed Analysis (ACS Component #3)

The Upper Umpqua Watershed Analyses was used in this assessment and is available for public review at the Roseburg District office or can be viewed under "Plans & Projects" on the Roseburg District website at www.blm.gov/or/districts/roseburg/index.htm.

d. Watershed Restoration (ACS Component #4)

Restoration associated with this project includes the improvement or restoration of approximately 1.03 miles of existing roads to reduce sedimentation to streams.

3. Essential Fish Habitat

Essential Fish Habitat (EFH) is designated by the Magnuson-Stevens Fishery Conservation and Management Act of 1996 as habitat that is currently or was historically available to Oregon Coast coho and chinook salmon (Federal Register 2002 Vol. 67, No. 12). The nearest EFH is 250 feet downslope of the Hubbard Creek road project and 400 feet downslope of the Long Ranch road project.

The following components were analyzed to assess the effects of the proposed project on EFH and the appropriate page(s) of this document are referenced:

Substrate characteristics – Sediment input would be minimal and not distinguishable above background levels. Sediment input would not increase measurably at the drainage level. Fisheries habitat would not be affected by this minimal increase in sediment. This project would result in an overall decrease in the amount of sediment delivered to the stream over time.

Large woody debris (LWD) within the channel and LWD source areas – There would be no effect to large woody debris or large woody debris source areas as a result of the Proposed Action Alternative.

Channel geometry – There would be no measurable impact to fisheries or aquatic organisms from peak flows capable of altering the channel geometry.

Fish passage – There would be no effect to fish passage. There are no new crossings along fish bearing streams and culverts currently impassable to fish would remain unaffected.

Forage species (aquatic and terrestrial invertebrates) – Forage for coho and Chinook salmon would remain unaffected. Riparian vegetation would continue to provide sources of terrestrial invertebrates. Aquatic invertebrate populations would be unaffected since there is no measurable effect to water quality or substrate.

Federal agency conclusions regarding the effects of the action on EFH:
The proposed action "*Will Not Adversely Effect*" (WNAE) EFH for coho or Chinook salmon in Hubbard Creek, Camp Creek, or their tributaries.

Proposed mitigation (if applicable):
Without any mechanisms for an adverse affect on EFH, there are no mitigation measures proposed. The road improvement project would result in an overall decrease in the amount of sediment delivered to fish bearing streams over time.

G. Botany

1. Botanical Special Status Species

a. Affected Environment

The following analysis considers Special Status Plants whose known range is within the Project Area, are documented or suspected to occur in the Project Area, and whose habitat is documented or suspected to occur within the Project Area. The Project Area is within the known range of Kincaid's Lupine (*Lupinus sulphureus* ssp. *kincaidii*), a federally Threatened plant. Field surveys were conducted in the Hubbard Creek Project Area in the summer of 2005 (as part of the Bare Cupboard Commercial Thinning project). There were no Special Status Plants detected in this Commercial Thinning project area that intersects with the Engineering Road Improvement and Realignment Project Area.

2. Botanical Survey & Manage Species

a. Affected Environment

Pre-disturbance surveys were completed from May to June 2005 in accordance with the reinstated 2001 *Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measure Standards and Guidelines* (January, 2001) (2001 ROD), including any amendments or modifications in effect as of March 21, 2004. No known sites of Survey and Manage botanical species were found in the proposed Project Area.

3. Noxious Weeds

a. Affected Environment

There are infestations of noxious weeds (Scotch Broom *Cytisus scoparius*, Himalayan blackberry *Rubus discolor*) scattered throughout the Project Area. Infestations range from low to high, and are mostly located within the road prisms.

The Project Area would receive future treatment (2006-2007) under the Roseburg District Integrated Weed Control Plan (USDI, 1995a). Treatments have been and would continue to be performed by manual removal and/or application of an approved herbicide.

b. No Action Alternative

Noxious weeds currently located in the Project Area are being controlled with either the application of approved herbicides, or by manual removal (USDI Roseburg District Integrated Weed Control Plan, as amended. 1995; EA #OR-100-94-11). Over time, the distribution and abundance of noxious weeds in the Project Area would decline due to continued and repeated treatments in accordance to the Weed Control Plan.

c. Proposed Action Alternative

There would be a short term increase in the distribution and abundance of noxious weeds expected in the Project Area following road improvement and/or realignment. Soil disturbance related to the Proposed Action (e.g. new road construction, road reconstruction, creation of berms, installation of cross drains, creation of disposal areas, etc.) would create areas of exposed mineral soil which could serve as habitat for noxious weeds. New infestations on exposed mineral soils would be expected to be short lived (less than 10 years), as the conifer canopy within the road prism closes. Native species would eventually overtop and out-compete weeds for sunlight, soil moisture, and soil nutrients.

In addition, as stated in the PDFs (pg. 10), construction equipment would be required to be clean and free of weed seed prior to entry on to BLM lands to help control or prevent the spread of noxious weeds in the Project Area. The Project Area would be monitored following implementation of the Proposed Action, and new weed infestations would be treated in accordance with the Roseburg District Integrated Weed Control Plan.

H. Recreation

1. Affected Environment

This project (Hubbard Creek road 26-7-19.1) will occur within the proposed Hubbard Creek OHV area. The Hubbard Creek road has been used for the more than 50 years as an OHV challenge area. Deep incised ruts and mud areas create a challenge for both Class II and III (ATV's) OHVs for a slow uphill crawl. This area has had significant use during this time, the mud ruts are 8 to 10 feet deep in places along the bottom portion of this road. Local OHV clubs claim that the "Hubbard Creek area, specifically road Hubbard Creek road has the best mud in the west".

2. No Action Alternative

The OHV use of the natural surfaced Hubbard Creek road would continue.

3. Proposed Action Alternative

The existing OHV recreational opportunities along this road would be eliminated by the proposed action. The OHV use of the Hubbard Creek road for mud and rut crawl would be eliminated. Deep incised ruts and mud areas would be eliminated and the native surface road would be leveled and graveled.

4. Cumulative Effects

The 11,681 acre Hubbard Creek area provides an array of existing native surface roads and trails for OHV recreational opportunities. The Hubbard Creek road is a part of the proposed Hubbard Creek OHV management area. This project proposal would eliminate the opportunity for the class II & III OHV enthusiasts to experience mudding, rut crawl and uphill climb. Cumulatively, piece by piece, the proposal to establish a management plan for the Hubbard Creek OHV area (RMP, Chapter 2-44) is being precluded by road hardening. Over the past year 2005-06, the private timber companies following the reciprocal right-a-way agreements they have with the BLM, have been authorized to level and gravel approximately seven miles of the best natural surface OHV roads and trails in the Hubbard Creek Area.

Chapter 4. Contacts, Consultations, and Preparers

A. Agencies, Organizations, and Persons Consulted

The Agency is required by law to consult with certain federal and state agencies (40 CFR 1502.25).

1. **Threatened and Endangered (T&E) Species Section 7 Consultation -** The Endangered Species Act of 1973 (ESA) requires consultation to ensure that any action that an Agency authorizes, funds or carries out is not likely to jeopardize the existence of any listed species or destroy or adversely modify critical habitat.

a. A Letter of Concurrence was received from the US Fish and Wildlife Service (USFWS) (*Reinitiation of consultation on Roseburg District Bureau of Land Management FY 2005-2008 Management Activities* [Ref. # 1-15-05-I-0511]) dated June 24, 2005 which concurred with the Roseburg District's conclusion that the proposed road realignment and decommission activities are *not likely to adversely affect* Northern spotted owls or marbled murrelets as a result of disturbance (pgs. 23-25, 14-15).

b. The Swiftwater Field Office determined that the proposed action "*Will Not Adversely Effect"* EFH for coho or Chinook salmon in Hubbard Creek, Camp Creek, or their tributaries (pg. 42). There are currently no listed, or proposed for listing, fish species in the Roseburg District. There are currently, no further consultation obligations with the National Marine Fisheries Service.

2. **Cultural Resources Section 106 Compliance –** Compliance with Section 106 of the National Historic Preservation Act under the guidance of the 1997 National Programmatic Agreement and the 1998 Oregon Protocol has been documented with a Project Tracking Form dated March 20, 2007. A "No Effect" determination was made.

B. Public Notification

1. Notification was provided (October 2006) to affected **Tribal Governments** (Confederated Tribes of Grand Ronde, Confederated Tribes of Siletz, and the Cow Creek Band of Umpqua Tribe of Indians). No comments were received.

2. Two **adjacent landowner**s were notified at the annual right away meeting (February 14, 2006). No comments were received. No commenters requested to be added to the mailing list for future documents regarding this project and another expressed general support of the proposed project.

3. The **general public** was notified via the *Roseburg District Planning Update* (Winter 2006) which was sent to approximately 150 addressees. These addressees consist of members of the public that have expressed interest in Roseburg District BLM projects.

4. This EA, and its associated documents, would be provided to certain **State, County and local government** offices including: USFWS, NMFS, Oregon Department of Environmental Quality,

and the Oregon Department of Fish and Wildlife. If the decision is made to implement this project, it will be sent to the aforementioned State, County, and local government offices.

5. A 30-day **public comment period** would be established for review of this EA. A Notice of Availability would be published in *The News-Review*. The public comment period will begin with publication of the notice published in *The News-Review* on May 22, 2007 and end close of business June 06, 2007. Comments must be received during this period to be considered for the subsequent decision. This EA and its associated documents will be sent to all parties who request them. If the decision is made to implement this project, a notice will be published in *The News-Review* and notification sent to all parties who request them.

C. List of Preparers

Core Team

Randy Lopez	Project Leader
Timothy Sell	Layout Forester
Jeffrey McEnroe	Fisheries
Daniel Cressy	Soils
Brooke Shakespeare	Hydrology
Elizabeth Gayner	Wildlife
William May	Engineering
Dave Harman	Engineering
Evan Olson	Botany
Jeffrey Wall	EA Preparer

Expanded Team (Consulted)

Isaac Barner	Cultural Resources
Krisann Kosel	Fuels Management
Ron Murphy	Recreation / VRM
Trixy Moser	Silviculture

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Acronyms

ACS	-	Aquatic Conservation Strategy
BLM	-	Bureau of Land Management
BMP	-	Best Management Practice
CWD	-	Coarse Woody Debris
cy	-	Cubic Yard
cu ft	-	Cubic Foot
DBH	-	Diameter at Breast Height
EA	-	Environmental Assessment
EIS or FSEIS	-	Environmental Impact Statement / Final Supplemental EIS
FEMAT	-	Forest Ecosystem Management Assessment Team
GFMA	-	General Forest Management Area
HUC	-	Hydrologic Unit Code
LWD	-	Large Woody Debris
NEPA	-	National Environmental Policy Act
NFP or NWFP	-	Northwest Forest Plan
PDF	-	Project Design Features
RMP	-	Resources Management Plan
ROD	-	Record of Decision
S&G	-	Standards & Guidelines (NFP)
T&E	-	Threatened or Endangered

Definitions

Coarse Woody Debris: Those portions of trees that has fallen to the ground at least 20" in diameter.

Ditchout: Large ditches cut through berms and angled away from the road to channel water out of road drainage dips.

Early-Seral (Successional) Forest: Stage in forest development from disturbance to crown closure, usually 0-15 years. Grass, herbs, and brush are plentiful.

Entrenched: A deepened road bed excavated below the natural slope on both sides. This creates in effect a trench enclosed by two raised fill slopes.

Intermittent Stream: Any nonpermanent flowing feature having a definable channel and evidence of scour and deposition. Normally streams with seasonal flow.

Large Woody Debris (LWD): Large woody debris is fallen trees within the riparian areas that are at least 2 feet (0.6m) in diameter and 33 feet (10m) in length (ODFW, Methods for Stream Habitat Surveys).

Late-Seral (Successional) Forest: Stage in forest development that includes mature and old-growth forest, generally 80 years and greater (FEMAT, pg. IX-18).

Peak Flow: The highest of stream or river flow occurring in a year or from a single storm event (FEMAT, pg. IX-25).

Perennial Stream: A stream that typically has running water on a year-round basis (FEMAT, pg. IX-26).).

Regeneration harvest: Harvest of timber to allow the re-establishment of a new forest stand (RMP, pg. 110).

Relative Density Index: Compares the current density of a stand with the theoretical maximum density. In general terms it means that for a given average diameter, a stand can support a maximum number of trees per acre. Conversely, for a given number of trees per acre, there is a maximum average diameter possible. Relative density indicates whether the stand is growing well, is in need of thinning, can support an understory, or is experiencing suppression mortality.

Road Construction: Work done that builds a new road or moves an old road to a new location.

Road Improvement: Work done to an existing road which improves it beyond its original design; adding new or additional culverts, turnouts, etc. (Standard Timber Sale Contract Stipulations, Section 102).

Road Renovation: Work done to an existing road which restores it to its original design; i.e. replacing culverts, grading the road, adding new rock to the existing rocked road (Standard Timber Sale Contract Stipulations, Section 102).

Snag: Standing dead or partially dead trees at least 10 inches in diameter at breast height, and at least six feet tall (FEMAT, pg. IX-33).

Subsoiling: The practice that shatters soil compaction, thereby reducing the effects to soil productivity and improving water infiltration. This is accomplished by a device known as a winged subsoiler which is a pulled by or attached to a crawler tractor, or mounted to the arm of an excavator.

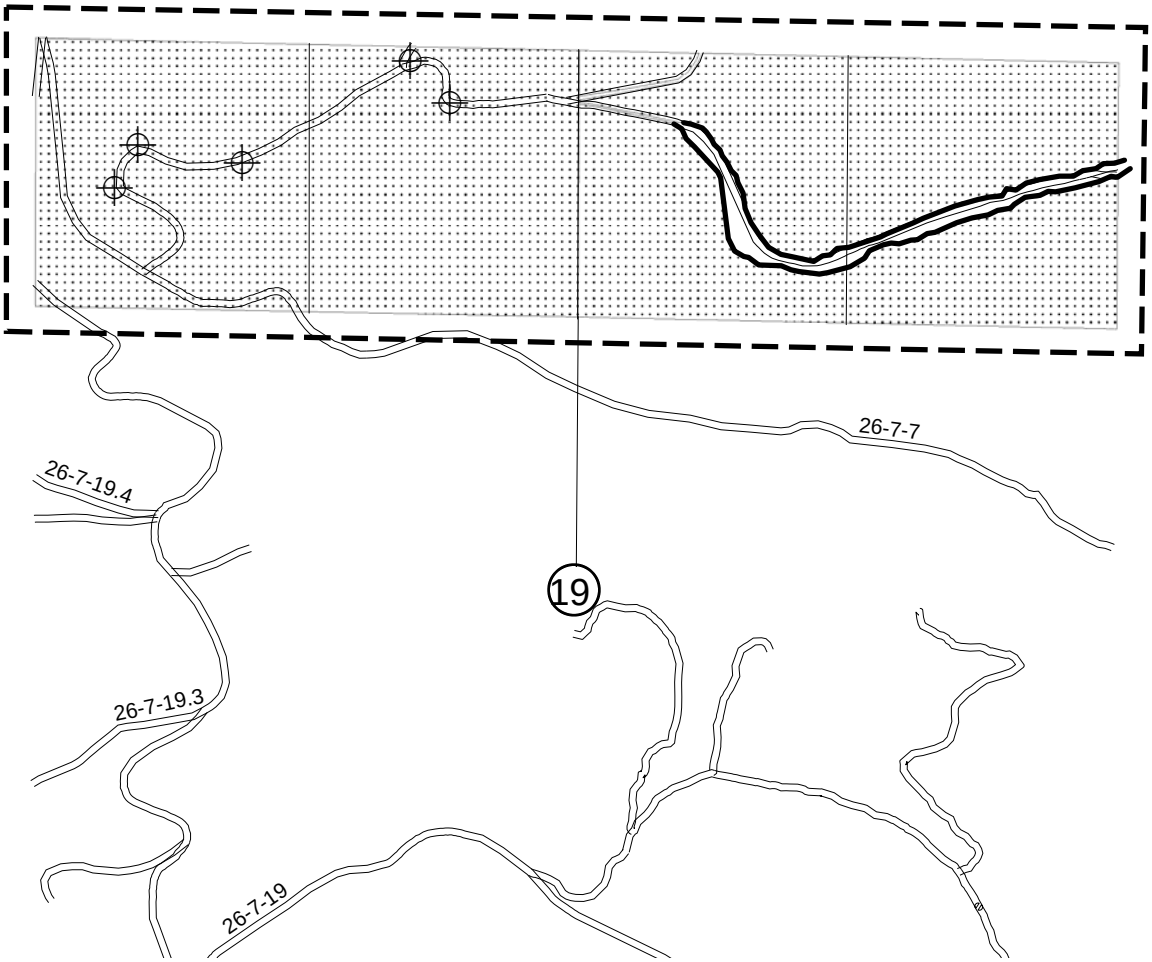
Appendix A

U.S. Department of Interior
Bureau of Land Management

EXHIBIT "A"
Sheet 1of 2

Hubbard LongRanch Neg. T.S.
Sale No. 07-20?

District	Township	Range	Section	Meridian	Contract Number
ROSEBURG	*26S*	*7W*	*19 & 21*	*WILLAMETTE*	*OR-10-TS07-20?*



LEGEND

R\W Cutting Boundary

Blue Marked Trees to be Cut

Reserve Area (238 Ac)

Boundary of Contract Area

Existing Roads

Waste Area

Scale: 1' = 1000 ft

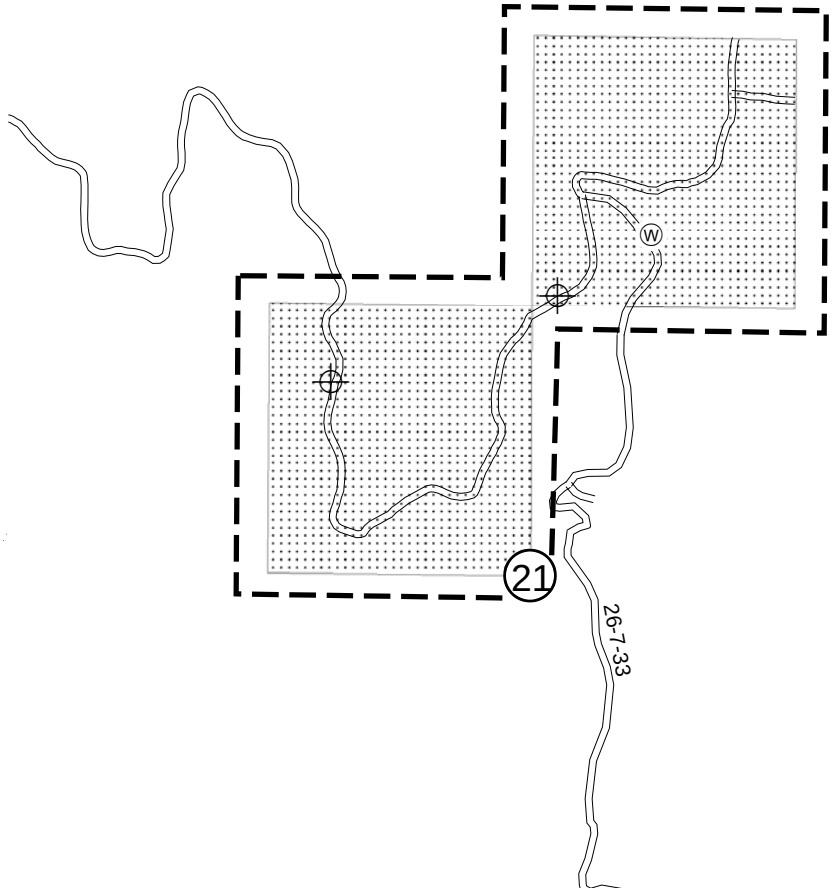
Appendix A

U.S. Department of Interior
Bureau of Land Management

EXHIBIT "A"
Sheet 2 of 2

Hubbard LongRanch Neg. T.S.
Sale No. 07-20?

District	Township	Range	Section	Meridian	Contract Number
ROSEBURG	*26S*	*7W*	*19 & 21*	*WILLAMETTE*	*OR-10-TS07-20?*



LEGEND

R\W Cutting Boundary

Blue Marked Trees to be Cut

Reserve Area (238 Ac)

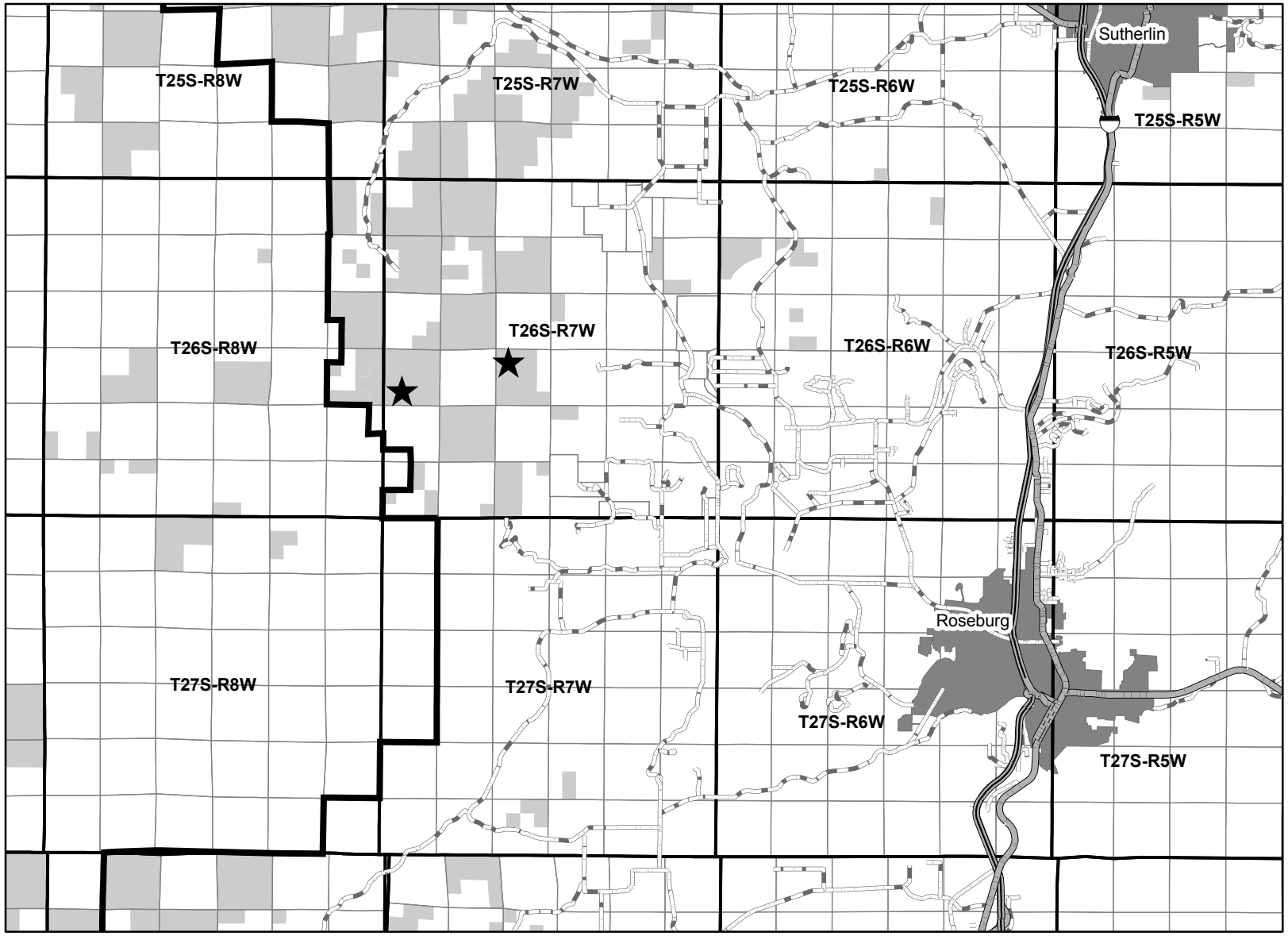
Boundary of Contract Area

Existing Roads

W Waste Area

Scale: 1' = 1000 ft

Engineering Road Improvement and Maintenance



United States Department of the Interior
Bureau of Land Management
Roseburg District Office
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1 0 1 2 Miles

Map Projection UTM
North American Datum 1983

Transportation
- Interstate Highway
- State Highway
- County Road

Other Features
- BLM Administered Land
- Roseburg District Boundary
- 1 Hubbard Creek Road Project (26-7-19.1)
- 2 Long Ranch ERFO Projects (26-7-20.3)

Appendix C. Critical Elements of the Human Environment

Element	Relevant Authority	Environmental Effect
Air Quality	The Clean Air Act (as amended)	Impacts to areas designated for attainment of federal Clean Air standards is not considered likely since the units would be burned under parameters of the Oregon Smoke Management Plan which prescribes smoke emission reduction measures (e.g., rapid ignition and aggressive mop-up) and directs burning under conditions when smoke would rise high in the atmosphere and be transported away from designated areas.
Areas of Critical Environmental Concern	Federal Land Policy and Management Act of 1976 (FLPMA)	**None** - Project area is not within or near a designated or candidate ACEC.
Cultural Resources	National Historic Preservation Act of 1966 (as amended)	**"No Affect"** - See Project Tracking Form (Mar. 20, 2007).
Environmental Justice	E.O. 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (Feb. 02, 1994). ***This EO requires that agencies insure that adverse health or environmental effects do not disproportionately affect minority or low-income populations.***	**None** - The proposed project areas are not known to be used by, or disproportionately used by, Native Americans, minorities or low-income populations for specific cultural activities, or at greater rates than the general population. According to 2004 U.S. Census Bureau data approximately six percent of the population of Douglas County was classified as minority status. It is estimated that approximately 14 percent of the county is below the poverty level (2003 U.S. Census Bureau data).
Farm Lands (prime or unique)	Surface Mining Control and Reclamation Act of 1977. ***This act seeks to identify and restore prime farmlands and other unique federal land characteristics.***	**None** - "No discernable effects are anticipated," since no prime and unique farmlands would be involved (PRMP, pgs. 1-7).
Floodplains	E.O. 11988, as amended, Floodplain Management (May 24, 1977). ***This EO requires agencies to determine if a proposed action will occur in a floodplain and that the action will avoid adverse impacts associated with occupancy and modification of floodplains and avoids floodplain development.***	**None** - Project would not alter current 100 yr. floodplain function.

Element	Relevant Authority	Environmental Effect
Invasive and Nonnative Species	Lacey Act, as amended; Federal Noxious Weed Act of 1974 as amended; Endangered Species Act of 1973, as amended; and EO 13112 on Invasive Species dated Feb. 03, 1999. ***This EO requires the prevention of introduction of invasive species and to provide for their control to minimize their economic, ecological, and human health impacts.***	Infestations of noxious weeds are being treated under the Roseburg District Integrated Weed Control Plan (1995). Project design features are included in the proposed action to prevent or control the spread of noxious weeds (EA, pg. 10).
Native American Religious Concerns	American Indian Religious Freedom Act of 1978. ***This act seeks to protect and preserve for American Indians the right of exercise of traditional religion including access to religious sites.***	No concerns were noted as the result of public and tribal contact including impacts to Indian Trust Resources.
Threatened or Endangered Species	Endangered Species Act of 1973 (as amended); The Pacific Coast Recovery Plan for the American Peregrine Falcon (1982); Columbian White-tailed Deer Recovery Plan (1983); Recovery Plan for the Pacific Bald Eagle (1986); and Recovery Plan for the Marbled Murrelet (1997).	**Botany** – Surveys were performed in 2005 and Kincaid's Lupine (federally threatened) and the rough popcorn flower (federally endangered) were not detected (EA, pg. 28). **Wildlife** – The USFWS concurred with the Roseburg District's determination that the proposed action is "*not likely to adversely affect*" the marbled murrelet or northern spotted owl (EA, pg. 15). The proposed action has *no effect* on the bald eagle. (EA, pg. 15). **Fisheries** – The proposed action "*Will Not Adversely Affect*" EFH for coho or Chinook salmon in Hubbard Creek, Camp Creek, or their tributaries. There are currently no listed or proposed fish species in the project area (EA, pg. 28).
Wastes, Hazardous or Solid	Resource Conservation and Recovery Act of 1976; Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (as amended). ***These laws regulate hazardous waste that endangers public health or the environment.***	**None** - Applicable HazMat policies would be in effect.
Water Quality, Drinking / Ground	Clean Water Act of 1987; Safe Drinking Water Act Amendments of 1996; EO 12088, Federal compliance with pollution control standards (Oct. 13, 1978); EO 12589 on Superfund implementation (Feb. 23, 1987); and EO 12372 Intergovernmental review of federal programs (July 14, 1982).	**None** - Project is not in a municipal watershed covered under a Memorandum of Understanding. No domestic water users have been identified within one mile downstream from the project area.
Wetlands/Riparian Zones	E.O. 11990, Protection of Wetlands (May 24, 1977). ***This EO requires federal agencies to avoid destruction or modifications of wetlands and to avoid undertaking or providing assistance for new construction located in wetlands.***	**None** - "The selected alternative [of the FEIS] complies with [E.O. 11990]..."(ROD pg. 51, para.7).

Element	Relevant Authority	Environmental Effect
Wild and Scenic Rivers	Wild and Scenic Rivers Act of 1968 (as amended); The North Umpqua Wild and Scenic River Plan (July 1992).	**None** - Project is not within the North Umpqua Scenic River corridor.
Wilderness	Federal Land Policy and Management Act of 1976; Wilderness Act of 1964.	**None** - "There are no lands in the Roseburg District which are eligible as Wilderness Study Areas." (ROD/RMP pg. 54).

OTHER RESOURCES CONSIDERED

Resource	Environmental Effect / Concerns
Land Use (Leases, Grazing etc.)	**None** – The proposed project has no conflicting land uses. Roads are encumbered under Right-of-Way Agreement #R-676 (Lone Rock Timber).
Minerals	**None** - Project has no mining claims or leases of record.
Recreation	**Minimal short-term impacts** – The proposed action would alter the existing OHV recreational opportunities within the project area (EA, pg. 6) by straightening, widening, leveling and graveling natural surface roads. The majority of the BLM roads in the Hubbard Creek area have been used for trailing, mudding, crawling, and off road activities for all three classes of OHVs over the past 50 or more years. This project would preclude the use and development of the natural surface roads for inclusion in a potential Hubbard Creek OHV management plan.
Visual Resources	**None** - The VRM classification for this area is IV. This classification allows major modification of the landscape. The proposed action would be consistent with ROD/RMP direction (EA, pg. 12).
Other (Adjacent Landowners)	**None -** Adjacent landowners are in the vicinity of this sale were notified (Feb. 14, 2006) and no comments were received (EA, pg. 48).

Appendix D. Bureau Sensitive, Assessment, & Tracking Wildlife Species.

Roseburg District BLM – Swiftwater Field Office

Project Name: Engineering Road Improvement and Realignment Project
Project Type: Road Improvement and Realignment
Location: T26S-R07W-Sections 19, and
T26S-R07W-Sections 21

Prepared By: Elizabeth Gayner
Date: March 21, 2007

The following tables include those species which are documented or suspected to occur within the Roseburg District BLM. Those Bureau Sensitive or Bureau Assessment species which are suspected or documented to occur within the project area are detailed in **Table 1: Wildlife Summary** and may be further discussed in the body of the EA as appropriate.

Table 3a. Bureau Sensitive & Bureau Assessment Species. BLM districts are responsible to assess and review the effects of a proposed action on *Bureau Sensitive* and *Bureau Assessment* species. To comply with Bureau policy, Districts may use one or more of the following techniques:

- **a.** Evaluation of species-habitat associations and presence of potential habitat.
- **b.** Application of conservation strategies, plans, and other formalized conservation mechanisms.
- **c.** Review of existing survey records, inventories, and spatial data.
- **d.** Utilization of professional research and literature and other technology transfer methods.
- **e.** Use of expertise, both internal and external, that is based on documented, substantiated professional rationale.
- **f.** Complete pre-project survey, monitoring, and inventory for species that are based on technically sound and logistically feasible methods while considering staffing and funding constraints.

When Districts determine that additional conservation measures are necessary, options for conservation include, but are not limited to: modifying a project (e.g. timing, placement, intensity), using buffers to protect sites, or implementing habitat restoration activities (IM-OR-2003-054).

Species	Status[1]	Present in Project Area?[1]	General Habitat Requirements
BUREAU SENSITIVE			
American Peregrine Falcon *Falco peregrinus anatum*	BS, SE	No Habitat	Cliffs, rock outcrops; open habitats for hunting birds
Chace Sideband *Monadenia chaceana*	BS	Out of Range	Rocky, talus habitats in the Klamath Province and southwards
Columbian White Tailed Deer *Odocoileus virginianus leucurus*	BSO, CR	No Habitat	Bottomlands, oak/hardwood forests; cover for fawning
Crater Lake Tightcoil *Pristiloma arcticum crateris*	BSO	Out of Range	Perennially wet areas in late seral forests above 2000ft elevation and east of Interstate-5; seeps, springs, riparian areas
Green Sideband *Monadenia fidelis beryllica*	BSO	No Habitat	Coast Range, riparian forests at low elevations; deciduous trees & shrubs in wet, undisturbed forest
Klamath Tail-Dropper *Prophysaon sp. nov.*	BS	Out of Range	Moist, open areas along streams or springs in Ponderosa Pine forests; as far North as Crater Lake
Lewis' Woodpecker *Melanerpes lewis*	BSO, CR	No Habitat	Open woodland habitat near water; open woodland canopy and large diameter dead/dying trees, snag cavities
Northern Goshawk *Accipiter gentilis*	BSO, XC, CR	No Habitat	Mature and older conifer forests; multi-storied canopies and great structural diversity
Northwestern Pond Turtle *Clemmys marmorata marmorata*	BSO, XC, CR	No Habitat	Ponds, low gradient rivers; upland over-wintering habitat, CWD
Oregon Shoulderband *Helminthoglypta hertleini*	BSO	No Habitat	Talus and rocky substrates, grasslands or other open areas with low-lying vegetation

Species	Status[1]	Present in Project Area?[1]	General Habitat Requirements
Oregon Vesper Sparrow *Pooecetes gramineus affinis*	BSO, CR	No Habitat	Open habitats such as grasslands, meadows, farmlands
Purple Martin *Progne subis*	BSO, CR	No Habitat	Snags cavities in open habitats (e.g. grasslands, brushlands, open woodlands)
Rotund Lanx *Lanx subrotundata*	BSO	No Habitat	Major rivers and large tributaries with cold, well-aerated water and rocky substrate
Scott's Apatanian Caddisfly *Allomyia scotti*	BSO	Out of Range	High-elevation (>4,000ft), cold streams in the mountainous regions of Oregon
Spotted Tail-dropper *Prophysaon vannattae pardalis*	BS	No Habitat	Mature conifer forests in the Coast Range; associated with significant deciduous tree/shrub component
Townsend's Big-eared Bat *Corynorhinus townsendii*	BSO, XC, CR	No Habitat	Late successional forests; Caves, mines, buildings, bridges, tunnels
BUREAU ASSESSMENT			
Foothill Yellow-legged Frog *Rana boylii*	BAO, XC, V	No Habitat	Low gradient streams/ponds; gravel/cobble, bedrock pools
Fringed Myotis *Myotis thysanodes*	BAO, XC, V	No Habitat	Late-successional conifer forests, associated with water; caves, mines, bridges, rock crevices
Harlequin Duck *Histrionicus histrionicus*	BAO, XC, U	Out of Range	Mountain Streams in forested areas on west slope of the Cascade Mountains
Pacific Pallid Bat *Antrozous pallidus pacificus*	BA	No Habitat	Usually rocky outcroppings near open, dry open areas; occasionally near evergreen forests
Pallid Bat *Antrozous pallidus*	BA	No Habitat	Usually rocky outcroppings near open, dry open areas; occasionally near evergreen forests
White-Tailed Kite *Elanus leucurus*	BAO	No Habitat	Open grasslands, meadows, emergent wetlands, farmlands, lightly, wooded areas; wooded riparian habitats close to open hunting; tall trees and shrubs

[1] *A "Suspected" species has not been documented, however based on literature review, species is expected to occur.*

Table 3b. Bureau Tracking Species. To enable an early warning for species which may become threatened or endangered in the future, Districts are encouraged to collect occurrence data on species for which more information is needed to determine status within the state. Until status of such species changes, Bureau Tracking species will not be considered as Special Status Species for management purposes (IM-OR-2003-054).

Species	Status[1]	Present in Project Area?[1]	General Habitat Requirements	Source of Detection
BUREAU TRACKING				
Acorn Woodpecker *Melanerpes formicivorus*	BT	No Habitat	Mixed oak woodlands; snags	-
American Marten *Martes americana*	BTO, V	Suspected	Late-successional forest; large CWD, snags, uneven age stands with adequate cover	-
Brazilian Free-tailed Bat *Tadarida brasiliensis*	BTO	No Habitat	At low elevations where climatic conditions are warm; roosts in caves, mines, buildings	-
Broadwhorl Tightcoil *Pristiloma johnsoni*	BT	Suspected	Moist forest sites, typically with deciduous component; Coast/Cascades in WA, Coast Range in OR, as far south as Lane County	-
California Mountain Kingsnake *Lampropeltis zonata*	BT, V	No Habitat	Pine forests, oak woodlands, chaparral; rotting logs, loose soil	-
California Myotis *Myotis californicus*	BT	Suspected	Forested areas, shrub-steppe areas, arid grasslands; forage over water and tree canopies where insects congregate	-
Cascades Frog *Rana cascadae*	BT	No Habitat	Lakes, ponds, streams in meadows above elevations of 2600 feet; muddy or silty substrate of shallow waters	-
Clouded Salamander *Aneides Ferreus*	BTO, U	Suspected	Forested Habitats; CWD, talus	-
Common Kingsnake *Lampropeltis getula*	BT	No Habitat	Grassland, mixed oak woodlands; riparian	-
Common Nighthawk *Chordeiles minor*	BT	Suspected	Forest mountain clearings, open woodlands & meadows, urban areas; (nests on ground)	-
Del Norte Salamander *Plethodon elongates*	BT	Out of Range	Late-successional conifer forests; rock rubble or talus slopes	-
Great Gray Owl *Strix nebulosa*	BT, V	No Habitat	Coniferous forests; meadows and natural openings (>10ac) near late-seral nesting habitat	-
Hoary Bat *Lasiurus cinereus*	BT	No Habitat	Open, grassy areas and/or lakes near forest lands; large trees for roosting and access to hatching aquatic insects are important features	-
Indian Paintbrush Bug *Polymerus castilleja*	BTO	No Habitat	Old-growth and late-successional conifer forests, mature riparian woodlands; Indian Paintbrush (*Castilleja spp.*)	-
Long-eared Myotis *Myotis evotis*	BT, XC, U	No Habitat	Late-successional conifer forests, associated with water; roosts in caves, mines, bridges, snags	-
Long-legged Myotis *Myotis volans*	BT, XC, U	No Habitat	Late-successional conifer forests, associated with water; roosts in caves, mines, bridges, loose bark, rock crevices	-
Northern Red-legged Frog *Rana aurora aurora*	BT	No Habitat	Low gradient streams/ponds with aquatic vegetation	-
Olive-sided Flycatcher *Contopus cooperi*	BTO, XC, V	No Habitat	Coniferous forests; uneven canopy with snags and tall trees	-
Oregon Floater *Anondonta oregonensis*	BT	No Habitat	Slow-moving reaches of permanent streams; sand/gravel substrates in very cold, clear water w/o macrophytes; historically in Umpqua R. and major tribs.	-

Species	Status[1]	Present in Project Area?[1]	General Habitat Requirements	Source of Detection
Oregon Megomphix *Megomphix hemphilli*	BTO	No Habitat	Moist conifer/hardwood forests up to 3000ft; HWD leaf litter and decaying HWD matter under big leaf maple trees, sword fern	-
Oregon Red Tree Vole *Arborimus longicaudus longicaudus*	BTO, U	Documented[2]	Late-successional and mid seral Douglas-fir forests; arboreal platform structures	BLM 2001
Pileated Woodpecker *Dryocopus pileatus*	BT, V	No Habitat	Forests 40 years and older; Large diameter snags, CWD	-
Pristine Springsnail *Pristinicola hemphilli*	BT	No Habitat	Shallow, cold, clear springs/seeps; strongly spring-influenced streams, slow-moderate flow; Umpqua R. drainage	-
Ringtail *Bassariscus astutus*	BTO, U	Suspected	Coniferous forests, mixed woodlands; vertical structure to habitat. Streams and rivers	-
Sharp-tailed Snake *Contia tenuis*	BT, V	Suspected	Forested Habitats; CWD, talus, riparian	-
Silver-haired Bat *Lasionycteris noctivagans*	BTO, U	No Habitat	Late-successional conifer forests, associated with water; caves/mines, bridges, loose bark, rock crevices, snags	-
Slender-billed Nuthatch *Sitta carolinensis aculeate*	BT	No Habitat	Open woodlands, preferring oak woodlands in Western OR; nests in cavities	-
Southern Torrent (Seep) Salamander *Rhyacotriton variegatus*	BTO, XC, V	No Habitat	Springs and streams; riparian/wetland, CWD	-
Tailed Frog *Ascaphus truei*	BT	No Habitat	High gradient, perennial streams; cobbles/boulders	-
Western Bluebird *Sialia mexicana*	BT, V	No Habitat	Open habitats (incl. clearcuts), tree cavities	-
Western Gray Squirrel *Sciurus griseus*	BTO, U	No Habitat	Oak/hardwood forests, conifer forests, riparian; broad-leafed component in habitat	-
Western Pearlshell *Margaritifera falcata*	BT	No Habitat	Fast, clear, very cold streams with coarse substrate; hosts include Chinook salmon, trout, speckled dace; Umpqua R. and major tribs.	-
Western Ridgemussel *Gonidea angulata*	BT	No Habitat	Creeks, rivers, coarse substrates; Umpqua R. and possibly major tribs.	-
White-footed Vole *Arborimus albipes*	BTO, XC	Suspected	Riparian habitats within conifer forests in the Coast Range; small clearings supporting forb growth	-
Willow Flycatcher *Empidonax traillii brewsteri*	BT, XC, V	No Habitat	Riparian, edges of forest clearings; willows brushy vegetation	-
Yellow-breasted Chat *Icteria virens*	BT	No Habitat	Dense streamside/riparian vegetation, marshes	-
Yuma Myotis *Myotis yumanensis*	BTO, XC	No Habitat	Late-successional conifer forests, associated with water; roosts in caves, mines, bridges, buildings, snags	-

[1] *A "Suspected" species has not been documented, however based on literature review, species is expected to occur.*
[2] *Pre-project clearance surveys associated with a timber sale were completed in 2001.*

Appendix E. Wildlife Summary

Roseburg District BLM – Swiftwater Field Office

Project Name: Engineering Road Improvement and Realignment Project
Project Type: Road Improvement and Realignment
Location: T26S-R07W-Sections 19, and T26S-R07W-Sections 21

Prepared By: Elizabeth Gayner
Date: March 21, 2007

Critical Habitat				Management Concerns	
Species	**Present (Y / N)**	**Concern (Y / N)**	**Critical Habitat Unit(s) (CHU #)**	**Habitat Removal or Modification or Both?**	**Critical Habitat Affected by Project (acres)**
Marbled Murrelet	N	N	-	-	-
Spotted Owl *(see also Table 2)*	N	N	-	-	-

Species	Within Species Range?	Habitat Present?	Species Present?[2]	Wildlife Concern[1]?	Reason for concern or no concern[1]	Mitigation Measures: Seasonal Restriction Required?	Daily Operating Restriction Required?	Buffers Required?
Threatened & Endangered Species								
Bald Eagle	Yes	N	N	N	No Roost or Nest sites	N	N	N
Canada Lynx	N	N	N	N	Out of Species Range	N	N	N
Fender's Blue Butterfly	Yes	N	N	N	No Suitable Habitat	N	N	N
Marbled Murrelet	Yes	Adjacent	Suspected	N	No Suitable Habitat	N	Yes	N
Northern Spotted Owl *(see also Table 2)*	Yes	Yes	Yes	Yes	Degradation of Dispersal Habitat	N	N	N
Bureau Sensitive Species								
American Peregrine Falcon	Yes	N	N	N	No cliffs/ rock outcrops within units	N	N	N
Northern Goshawk	Yes	N	N	N	No Suitable Habitat	N	N	N
Northwestern Pond Turtle	Yes	N	N	N	No Suitable Habitat	N	N	N
Oregon Vesper Sparrow	Yes	N	N	N	No Suitable Habitat	N	N	N
Purple Martin	Yes	N	N	N	No Suitable Habitat	N	N	N
Rotund Lanx	Yes	N	N	N	No Suitable Habitat	N	N	N
Spotted Tail-dropper	Yes	N	N	N	No measurable impact of treatment to habitat	N	N	N
Townsend's Big-eared Bat	Yes	N	N	N	No suitable habitat	N	N	N
Bureau Assessment Species								
Foothill Yellow-legged Frog	Yes	N	N	N	No aquatic effects due to PDFs	N	N	N
Fringed Myotis	Yes	N	N	N	No suitable habitat	N	N	N
Survey and Manage Species								
Red Tree Vole	Yes	N	Yes	N	Does not meet criteria required for pre-project clearance surveys	N	N	N
Other Species of Interest								
None								

[1] *Wildlife concerns and rationale are discussed more fully in Engineering Road Improvement and Realignment EA.*
[2] *Suspected = species has not been documented, however based on literature review, species is expected to occur.*
[3] *Species would be expected to forage in the area if suitable habitat is present within one mile of the project area.*

Appendix F. 2001 ROD Compliance: Survey & Manage Wildlife Species

Roseburg District BLM – Swiftwater Field Office

Project Name: Engineering Road Improvement and Realignment Project
Project Type: Road Improvement and Realignment
Location: T26S-R07W-Sections 19, and T26S-R07W-Sections 21

Prepared By: Elizabeth Gayner
Date: March 21, 2007

Table A. Survey & Manage Wildlife Species Known and Suspected on the Roseburg BLM District. Species listed below were compiled from the 2003 Annual Species Review (IM-OR-2004-034) and incorporates those vertebrate and invertebrate species whose known or suspected range includes the Roseburg District Bureau of Land Management according to *Survey Protocols for Amphibians under the Survey & Manage Provision of the Northwest Forest Plan v3.0* (Oct. 1999), *Survey protocol for the Great Gray Owl within the Range of the Northwest Forest Plan v3.0* (Jan. 2004), *Survey Protocol for the Red Tree Vole v2.1* (Oct. 2002) and *Survey Protocol for S&M Terrestrial Mollusk Species v3.0* (Feb. 2003). There are no known Category B, D, E, and F wildlife species within the vicinity of the proposed road reconstruction.

Species	S&M Category	Survey Triggers			Survey Results			Buffers?
		Within range of the species?	Project Area contains suitable habitat?	Project may negatively affect species/habitat?	Surveys required?	Survey date (month/year)	Sites known or found?	
Vertebrates								
Great Gray Owl (*Strix nebulosa*)	A	Yes	No[1]	No	No[1]	No	0	None
Red Tree Vole (Arborimus longicaudus)	C	Yes	No[2]	No	No[2]	No	0	None
Mollusks								
Siskiyou Sideband (*Monadenia chaceana*)	B[3]	No	No	No	No[3]	No	0	None
Crater Lake Tightcoil (*Pristiloma arcticum crateris*)	A	No[4]	No	No	No[4]	No	0	None

[1] Pre-disturbance surveys for great grey owls are not required since there is no suitable nesting habitat within the project area. The required habitat characteristics of suitable habitat include: (1) large diameter nest trees, (2) forest for roosting cover, and (3) proximity [within 200m] to openings that could be used as foraging areas (*Survey Protocol for the Great Gray Owl within the range of the Northwest Forest Plan v3.0*, January 12, 2004). The stands in the project area do not have proximity to natural-openings (Gayner, staff review, 2007) and pre-disturbance surveys are not suggested in suitable nesting habitat adjacent to man-made openings at this time (pg. 14, *Survey Protocol for the Great Gray Owl within the range of the Northwest Forest Plan v3.0*, January 12, 2004).

[2] Pre-disturbance surveys are not required since there is no suitable habitat for the Red Tree Vole within the project area. The need for pre-disturbance surveys must meet three criteria (*Survey Protocol for the Red Tree Vole v2.2*, 2003), including: 1) the proposed activity (project) is within the known or suspected range of the species; 2) suitable habitat that may potentially contribute to a reasonable assurance of persistence occurs within the proposed project area (ROD S&G, p. 23); AND 3) the proposed activity has the potential to "cause significant negative effect on the species habitat or the persistence of the species at the site" (ROD S&G, p. 22). The proposed project would not meet criteria 2 and 3 (see discussion in EA), and therefore pre-disturbance surveys are not required (*Survey Protocol for the Red Tree Vole v2.2*, 2003).

[3] Equivalent-effort pre-disturbance surveys are required for the Siskiyou Sideband (IM-OR-2004-034). However, the Swiftwater Resource Area is outside of the known range of this species and equivalent-effort surveys are therefore not required (*Survey Protocol for S&M Terrestrial Mollusk Species v3.0*, 2003).

[4] The range for the Crater Lake tightcoil is above 2,000 feet elevation and east of Interstate-5 within the Roseburg District (pg. 39, *Survey Protocol for S&M Terrestrial Mollusk Species v3.0*, 2003). The proposed project is located outside of the known range of this species, and equivalent-effort surveys are therefore not required (*Survey Protocol for S&M Terrestrial Mollusk Species v3.0*, 2003).

Statement of Compliance: Pre-disturbance surveys and management of known sites required by protocol standards to comply with the *2001 Record of Decision and Standard and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measure Standards and Guidelines* (as the 2001 ROD was amended or modified as of March 21, 2004) were not required for the proposed road work. There are no known Category B, D, E, and F wildlife species within the vicinity of the proposed action.

Therefore, based on the preceding information (refer to Table A above) regarding the status of surveys and site management for Survey & Manage wildlife species, it is my determination that proposed road construction complies with the provisions of the *2001 Record of Decision and Standard and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measure Standards and Guidelines* (as the 2001 ROD was amended or modified as of March 21, 2004). For the foregoing reasons, this EA is in compliance with the 2001 ROD as stated in Point (3) on page 14 of the January 9, 2006, Court order in Northwest Ecosystem Alliance et al. v. Rey et al.

Appendix G. Soils

Roseburg District BLM – Swiftwater Field Office

Project Name: Engineering Road Improvement and Realignment Project
Project Type: Road Improvement and Realignment
Location: T26S-R07W-Sections 19, and
T26S-R07W-Sections 21

Prepared By: Daniel Cressy
Date: April 2, 2007

ISSUE IDENTIFICATION:

Table A. Mass Wasting & Landslides in the Action Area. The action area considered is within the Elk Creek/Upper Umpqua 5th Field Watershed and covers approximately 660 acres. An analysis of mass wasting events for both the BLM and private lands in the vicinity of the proposed activities was done using aerial photo interpretation covering 1958 to 2004 and field reconnaissance.

Timeframe	# Debris Torrents	# Landslides			
	Large (>0.5 acre)	Small (< 0.1 acre)	Medium (0.1-0.5 acre)	Large (> 0.5 acre)	All
Project Level Perspective[1]	0	0	2	0	(0.4 acres)
Probability of occurrence expected within the project areas:					
No Action Alternative[2]	none	low & medium	low	low	low
Action Alternative (Harvest)	none	low	low	low	low
Cumulative Effects[3]	Unchanged[2]	Unchanged[2]	Unchanged[2]	Unchanged[2]	Unchanged[2]

[1] The identified landslides are the two fill failures at the Long Ranch #1 and #2 sites. Material from the Site #1 failure did not reach a stream. Some *(unquantifiable, immeasurable)* material from the Site #2 failure reached a small ephemeral stream. Above the Site #2 road cut bank is a potentially unstable slope with a low potential for failure. No landslides have occurred at the Hubbard Creek 26-7-19.1 road location which is on stable ground.

[2] The medium risk corresponds to likelihood that the head scarps of the two Long Ranch fill failures would advance further into the remaining road fill.

[3] "Unchanged" indicates that the current conditions and current probabilities of mass wasting or landslide events are expected to be essentially the same at the 6th field watershed scale.

Table B. Soil Productivity. The Spatial Extent of the short-term losses and subsequent short-term gains of soil productivity under the proposed action. The gains would be through amelioration that includes adding soil material to soil deficient sites and sub-soiling. A negative figure represents acres with a net loss in soil productivity. A positive figure represents acres with a gain.

Road Effects (Unit)	**Losses to Soil Productivity due to the Action (prior to sub-soiling)**				**Improvements to Soil Productivity primarily due to adding soil material and sub-soiling**		**Effective Net Change** (acres)
	New Construction		**Use of Existing Natural Surfaced Roads & Trails**		**Actual Improved Area[1]** (acres)	**Effective Improved Area[2]** (acres)	
	Rocked Roads (acres)	Natural Surfaced Roads (acres)	Permanent Roads (acres)	Temporary Roads (acres)			
7-6-19.1 rd	-0.90	0	0	0	+0.65	+0.65	-0.25
L Ranch #!	-0.10	0	0	0	+0.02	+0.02	-0.08
L Ranch #2	-0.04	0	0	0	0	0	-0.04
Waste Areas	0	0	0	0	+0.12	+0.12	+0.12
Road Total	-1.04	0	0	0	+0.79	+0.79	-0.25
Unit Effects (Unit)	**Harvest Operations**				**Actual Improved Area[1]** (acres)	**Effective Improved Area[2]** (acres)	**Effective Net Change** (acres)
	Helicopter Yarding (acres)	Skyline Cable Yarding (acres)	Ground-based Yarding (acres)	Other Method?			
7-6-19.1 rd	0	0	0	0	0	0	0
L Ranch #!	0	0	0	0	0	0	0
L Ranch #2	0	0	0	0	0	0	0
Waste Areas	0	0	0	0	0	0	0
Unit Total	0	0	0	0	0	0	0
Grand Total	**-1.04**				**+0.79**	**+0.79**	**-0.25**

[1] The areas under this heading encompass most of the bypassed road bed of the 7-6-19.1 road, the recontoured head of the fill failure at the Long Ranch #2 site and the surface of the old land adjacent to the 26-7-33.0 road.

[2] "Effective Improved Area" takes into account the effectiveness of sub-soiling in restoring soil productivity where compaction occurs on previously undisturbed surface. For the purposes of analysis, 80 percent short-term recovery is assigned to the subsoiling of lighter compacted areas such as trails and 60 percent to the heavier compacted areas such as roads (based on the degree of shattering of the compaction given in subsoiling studies). For the engineering projects in this EA, subsoiling would occur where surfaces were already highly disturbed prior to the proposed action. With subsoiling they would be in a productive state higher than the pre-action level. Hence there would be no effective reduction adjustments in acres of soil productivity gains.

Appendix H. Fisheries

Roseburg District BLM – Swiftwater Field Office

Project Name: Engineering Road Improvement and Realignment Project
Project Type: Road Improvement and Realignment
Location: T26S-R07W-Sections 19, and
T26S-R07W-Sections 21

Prepared By: Jeffrey McEnroe
Date: September 28, 2006

ISSUE IDENTIFICATION:

Table 1. Special Status Fish Species within the Project Area. The project area for fisheries analysis includes the proposed harvest units and associated haul routes where an effect to fisheries may occur.

Species	Status	Present in Project Area?	Source of Detection
THREATENED & ENDANGERED			
Or. Coast ESU Steelhead (Winter Run) *Oncorhynchus mykiss ssp.*	FCO[1]	Documented	Streamnet 2005 Personal Obs. (McEnroe)
BUREAU SENSITIVE			
Chum Salmon *Oncorhynchus keta*	BSO	Out of Range[2]	-
Coho Salmon (North of Cape Blanco) *Oncorhynchus kisutch*	BSO[4]	Documented	Streamnet 2005 Personal Obs. (McEnroe)
Umpqua Oregon Chub *Oregonichthys kalawatseti*	BSO	Suspected[3]	-
BUREAU ASSESSMENT			
None	-	-	-
BUREAU TRACKING			
Coastal Cutthroat (Or. Coast) *Oncorhynchus clarki clarki*	BTO	Documented	Streamnet 2005
Pacific Lamprey *Lampetra tridentata*	BT	Suspected[3]	-

[1] Oregon Coast ESU Steelhead is no longer considered a federally listed species. NOAA Fisheries has placed OC Steelhead on the newly created "Species of Concern" list. OC Steelhead are included in the table as a placeholder, and until the BLM formally decides what status, if any, to give to species on the "Species of Concern" list.
[2] Chum Salmon are occasionally documented crossing over Winchester Dam in small numbers. These fish are thought to be strays and not part of an independent population.
[3] Umpqua Chub and Pacific Lamprey are documented in the watershed but have not been documented in the Project Area.
[4] Oregon Coast ESU coho is no longer considered a federally listed species, however, OC coho are still identified as "Critical" by ODFW and also are on ONHP list 1. This confers Bureau Sensitive status to the species.

FCO = Federal Candidate in Oregon
BSO = Bureau Sensitive Oregon
BTO = Bureau Tracking Oregon
BT = Bureau Tracking

Table B. Nearest Location of Special Status Fish Species to the Proposed Units.

Site Name	Stream Type At Unit	Stream Name	Location (T-R-S)	Distance to Proposed Units (miles)				
				OC Coho Salmon	OC Steelhead	Coastal Cutthroat Trout	Pacific Lamprey	Umpqua Chub
				Bureau Tracking	Bureau Tracking	Bureau Tracking	Bureau Tracking	Bureau Sensitive
Hubbard Creek Road Project	Perennial	Hubbard Creek	26S-7W-19	0.1	0.1	0.1	Unknown	Unknown
Long Ranch ERFO Site	Perennial	Camp Creek	26S-7W-21	0.1	0.1	0.1	Unknown	Unknown

Appendix I. Botany Summary

Roseburg District BLM – Swiftwater Resource Area

Project Name: Engineering Road Improvement and Realignment Project
Project Type: Road Improvement and Realignment
Location: T26S-R07W-Sections 19, and
T26S-R07W-Sections 21

Prepared By: Evan Olson
Date: March 22, 2007

ISSUE IDENTIFICATION:
The following tables include those species which are documented or suspected to occur within the Roseburg District BLM. Those Bureau Sensitive or Bureau Assessment species which are suspected or documented to occur within the project area are detailed in **Table A** and may be further discussed in the body of the decision as appropriate.

Table A. Bureau Sensitive & Bureau Assessment Species. BLM districts are responsible to assess and review the effects of a proposed action on *Bureau Sensitive* and *Bureau Assessment* species. To comply with Bureau policy, Districts may use one or more of the following techniques:

- **a.** Evaluation of species-habitat associations and presence of potential habitat.
- **b.** Application of conservation strategies, plans, and other formalized conservation mechanisms.
- **c.** Review of existing survey records, inventories, and spatial data.
- **d.** Utilization of professional research and literature and other technology transfer methods.
- **e.** Use of expertise, both internal and external, that is based on documented, substantiated professional rationale.
- **f.** Complete pre-project survey, monitoring, and inventory for species that are based on technically sound and logistically feasible methods while considering staffing and funding constraints.

When Districts determine that additional conservation measures are necessary, options for conservation include, but are not limited to: modifying a project (e.g. timing, placement, and intensity), using buffers to protect sites, or implementing habitat restoration activities (IM-OR-2003-054).

Species	Within species range?	Habitat Present?	Species Present?	Reason for concern or no concern[1]	Surveys Completed	Mitigation Measures
Threatened & Endangered Species						
Lupinus sulphureus ssp. *kincaidii* Kincaid's lupine (T)	**Yes**	**Yes**	No	Surveys performed, not detected.	May-June 2005	N/A
Plagiobothrys hirtus Rough popcorn flower (E)	**Yes**	No	No	No habitat present.	N/A	N/A
Bureau Sensitive						
Chiloscyphus gemmiparus Liverwort	**Yes**	No	No	No habitat present.	N/A	N/A
Trematodon boasii Moss	**Yes**	No	No	No habitat present.	N/A	N/A
Arcangeliella camphorata Fungus	**Yes**	No	N/A	Surveys Not Practical.[2]	N/A	N/A
Bridgeoporus nobilissimus Giant polypore fungus	No	No	N/A	No habitat present.	N/A	N/A
Dermocybe humboldtensis Fungus	**Yes**	No	N/A	Surveys Not Practical.[2]	N/A	N/A
Phaeocollybia californica Fungus	**Yes**	No	N/A	Surveys Not Practical.[2]	N/A	N/A
Phaeocollybia gregaria Fungus	**Yes**	No	N/A	Surveys Not Practical.[2]	N/A	N/A

Species	Within species range?	Habitat Present?	Species Present?	Reason for concern or no concern[1]	Surveys Completed	Mitigation Measures
Phaeocollybia olivacea Fungus	**Yes**	No	N/A	Surveys Not Practical. [2]	N/A	N/A
Phaeocollybia oregonensis Fungus	**Yes**	No	N/A	Surveys Not Practical. [2]	N/A	N/A
Ramaria spinulosa var. *diminutiva* Fungus	**Yes**	**Yes**	N/A	Surveys Not Practical. [2]	N/A	N/A
Rhizopogon chamalelotinus Fungus	**Yes**	**Yes**	N/A	Surveys Not Practical. [2]	N/A	N/A
Rhizopogon exiguus Fungus	**Yes**	**Yes**	N/A	Surveys Not Practical. [2]	N/A	N/A
Eucephalus vialis Wayside aster	**Yes**	**Yes**	No	Surveys performed, not detected.	May-June 2005	N/A
Calochortus coxii Crinite mariposa-lily	**Yes**	No	N/A	No habitat present.	N/A	N/A
Calochortus umpquaensis Umpqua mariposa-lily	**Yes**	No	N/A	No habitat present.	N/A	N/A
Arabis koehleri var. *koehleri* Koehler's rockcress	**Yes**	No	N/A	No habitat present.	N/A	N/A
Bensoniella oregana Bensonia	**Yes**	No	N/A	No habitat present.	N/A	N/A
Cimicifuga elata Tall bugbane	**Yes**	**Yes**	No	Surveys performed, not detected.	May-June 2005	N/A
Frasera umpquaensis Umpqua swertia	**Yes**	No	N/A	No habitat present.	N/A	N/A
Horkelia congesta ssp. *congesta* Shaggy horkelia	**Yes**	No	N/A	No habitat present.	N/A	N/A
Kalmiopsis fragrans Fragrant kalmiopsis	**Yes**	No	N/A	No habitat present.	N/A	N/A
Lathyrus holochlorus Thin-leaved peavine	**Yes**	No	N/A	No habitat present.	N/A	N/A
Limnanthes gracilis var. *gracilis* Slender meadow-foam	**Yes**	No	N/A	No habitat present.	N/A	N/A
Perideridia erythrorhiza Red-rooted yampah	**Yes**	No	N/A	No habitat present.	N/A	N/A
Romanzoffia thompsonii Thompson's mistmaiden	**Yes**	No	N/A	No habitat present.	N/A	N/A
Sisyrinchium hitchcockii Hitchcock's blue-eyed grass	**Yes**	**Yes**	No	Surveys performed, not detected.	May-June 2005	N/A
BUREAU ASSESSMENT						
Crumia latifolia Moss	**Yes**	No	N/A	No habitat present.	N/A	N/A
Diplophyllum plicatum Liverwort	**Yes**	No	N/A	No habitat present.	N/A	N/A
Funaria muhlenbergii Moss	**Yes**	No	N/A	No habitat present.	N/A	N/A
Pseudoleskeella serpentinensis Moss	**Yes**	No	N/A	No habitat present.	N/A	N/A
Schistostega pennata Moss	**Yes**	No	N/A	Outside of elevational range.	N/A	N/A
Tayloria serrata Moss	**Yes**	**Yes**	No	Surveys performed, not detected.	May-June 2005	N/A
Tetraphis geniculata Moss	**Yes**	No	N/A	No Habitat present.	N/A	N/A

Species	Within species range?	Habitat Present?	Species Present?	Reason for concern or no concern[1]	Surveys Completed	Mitigation Measures
Tetraplodon mnioides Moss	**Yes**	**Yes**	No	Surveys performed, not detected.	May-June 2005	N/A
Tripterocladium leucocladulum Moss	**Yes**	No	N/A	No habitat present.	N/A	N/A
Bryoria subcana Lichen	No	No	N/A	No habitat present, outside of current known range.	N/A	N/A
Calicium adspersum Lichen	**Yes**	No	N/A	Surveys Not Practical. [2]	N/A	N/A
Lobaria linita Lichen	**Yes**	No	N/A	No habitat present.	N/A	N/A
Pannaria rubiginosa Lichen	**Yes**	No	N/A	No habitat present.	N/A	N/A
Pilophorus nigricaulis Lichen	**Yes**	No	N/A	No habitat present.	N/A	N/A
Stereocaulon spathuliferum Lichen	**Yes**	No	N/A	No habitat present.	N/A	N/A
Sulcaria badia Lichen	**Yes**	No	No	No habitat present.	N/A	N/A
Adiantum jordanii California maiden-hair	**Yes**	No	N/A	No habitat present.	N/A	N/A
Asplenium septentrionale Grass-fern	**Yes**	No	N/A	No habitat present.	N/A	N/A
Carex brevicaulis Short stemmed sedge	**Yes**	No	N/A	No habitat present.	N/A	N/A
Carex comosa Bristly sedge	**Yes**	No	No	No habitat present.	N/A	N/A
Carex gynodynama Hairy sedge	**Yes**	**Yes**	No	Surveys performed, not detected.	May-June 2005	N/A
Carex serratodens Saw-tooth sedge	**Yes**	No	No	No habitat present.	N/A	N/A
Cicendia quadrangularis Timwort	**Yes**	No	N/A	No habitat present.	N/A	N/A
Eschscholzia caespitosa Gold poppy	**Yes**	No	No	No habitat present	N/A	N/A
Festuca elmeri Elmer's fescue	**Yes**	No	No	No habitat present	N/A	N/A
Horkelia tridentata ssp. *tridentate* Three-toothed horkelia	**Yes**	No	N/A	No habitat present.	N/A	N/A
Iliamna latibracteata California globe-mallow	**Yes**	No	No	No habitat present	N/A	N/A
Pellaea andromedifolia Coffee fern	**Yes**	No	N/A	No habitat present.	N/A	N/A
Polystichum californicum California sword-fern	**Yes**	No	N/A	No habitat present.	N/A	N/A
Scirpus subterminalis Water clubrush	**Yes**	No	N/A	No habitat present.	N/A	N/A
Utricularia gibba Humped bladderwort	**Yes**	No	N/A	No habitat present.	N/A	N/A
Utricularia minor Lesser bladderwort	**Yes**	No	N/A	No habitat present.	N/A	N/A
Wolffia borealis Dotted water-meal	**Yes**	No	N/A	No habitat present.	N/A	N/A
Wolffia columbiana Columbia water-meal	**Yes**	No	N/A	No habitat present.	N/A	N/A

[1] *Botanical concerns and rationale are discussed more fully in the Decision Record.*
[2] *Surveys are considered not practical for these species (Category B) or their status is undetermined (Category E or F) based on the 2003 Annual Species Review (IM-OR-2004-034).*

Table B. Bureau Tracking Species. Surveys are conducted for Bureau Tracking species. To enable an early warning for species which may become threatened or endangered in the future, Districts are encouraged to collect occurrence data on species for which more information is needed to determine status within the state. Until status of such species changes, Bureau Tracking species will not be considered as Special Status Species for management purposes (IM-OR-2003-054).

Scientific Name	ONHP Rank[1]	Roseburg Occurrence?	Occurrence in the Project Area?
Bryophytes			
Cephaloziella spinigera	3	Suspected	None Observed
Fissidens grandifrons	3	Suspected	None Observed
Grimmia anomala	3	Suspected	None Observed
Scouleria marginata	3	Suspected	None Observed
Tortula mucronifolia	3	Suspected	None Observed
Fungi			
Albatrellus ellisii	4	Documented	None Observed
Cazia flexiascus	3	Suspected	None Observed
Choiromyces alveolatus	3	Suspected	None Observed
Clavariadelphus sachalinensis	3	Suspected	None Observed
Clavariadelphus subfastigiatus	3	Documented	None Observed
Cudonia monticola	3	Documented	None Observed
Endogone oregonensis	3	Documented	None Observed
Glomus pubescens	3	Suspected	None Observed
Gomphus bonarii	3	Documented	None Observed
Gomphus kauffmanii	3	Documented	None Observed
Gymnomyces monosporus	3	Documented	None Observed
Gyromitra californica	2	Suspected	None Observed
Helvella crassitunicata	2	Suspected	None Observed
Helvella elastica	3	Documented	None Observed
Helvella maculata	3	Suspected	None Observed
Hygrophorus albicarneus	3	Suspected	None Observed
Leucogaster citrinus	3	Documented	None Observed
Mycena quinaultensis	3	Suspected	None Observed
Nolanea verna var. *isodiametrica*	3	Suspected	None Observed
Otidea smithii	3	Documented	None Observed
Phaeocollybia attenuata	4	Documented	None Observed
Phaeocollybia dissiliens	3	Suspected	None Observed
Phaeocollybia piceae	4	Suspected	None Observed
Phaeocollybia pseudofestiva	3	Suspected	None Observed
Phaeocollybia scatesiae	3	Suspected	None Observed
Phaeocollybia sipei	3	Suspected	None Observed
Phaeocollybia spadicea	3	Documented	None Observed
Plectania milleri	3	Suspected	None Observed
Psathyrella quercicola	3	Suspected	None Observed
Ramaria abietina	3	Documented	None Observed
Ramaria amyloidea	2	Suspected	None Observed
Ramaria aurantiisiccescens	4	Suspected	None Observed
Ramaria botrytis var. *aurantiramosa*	3	Suspected	None Observed
Ramaria concolor f. *tsugina*	3	Suspected	None Observed

Scientific Name	ONHP Rank[1]	Roseburg Occurrence?	Occurrence in the Project Area?
Ramaria conjunctipes var. *sparsiramosa*	3	Suspected	None Observed
Ramaria coulterae	3	Suspected	None Observed
Ramaria gelatinaurantia	3	Suspected	None Observed
Ramaria largentii	3	Documented	None Observed
Ramaria rubribrunnescens	3	Suspected	None Observed
Ramaria suecica	3	Documented	None Observed
Ramaria thiersii	3	Suspected	None Observed
Rhizopogon brunneiniger	3	Suspected	None Observed
Rhizopogon clavitisporus	3	Suspected	None Observed
Rhizopogon flavofibrillosus	3	Documented	None Observed
Rhizopogon truncatus	4	Documented	None Observed
Rhizopogon variabilisporus	3	Suspected	None Observed
Sarcodon fuscoindicus	3	Documented	None Observed
Sarcosoma latahense	3	Suspected	None Observed
Sowerbyella rhenana	3	Documented	None Observed
Lichens			
Buellia oidalea	3	Suspected	None Observed
Calicium abietinum	4	Documented	None Observed
Cetrelia cetrarioides	3	Suspected	None Observed
Chaenotheca ferruginea	3	Documented	None Observed
Chaenotheca furfuracea	4	Documented	None Observed
Chaenothecopsis pusilla	3	Documented	None Observed
Dermatocarpon luridum	3	Documented	None Observed
Hypogymnia duplicata	3	Suspected	None Observed
Lecanora pringlei	3	Suspected	None Observed
Lecidea dolodes	3	Suspected	None Observed
Leptogium cyanescens	3	Documented	None Observed
Leptogium rivale	4	Documented	None Observed
Leptogium teretiusculum	3	Documented	None Observed
Nephroma occultum	4	Documented	None Observed
Parmelina quercina	3	Suspected	None Observed
Peltula euploca	3	Suspected	None Observed
Platismatia lacunosa	3	Documented	None Observed
Pseudocyphellaria perpetua	3	Suspected	None Observed
Pseudocyphellaria rainierensis	4	Documented	None Observed
Pseudocyphellaria sp. 1	3	Suspected	None Observed
Usnea hesperina	3	Suspected	None Observed
Usnea longissima	3	Documented	None Observed
Vezdaea stipitata	3	Documented	None Observed
Vascular Plants			
Ammannia robusta	3	Suspected	None Observed
Astragalus umbraticus	4	Documented	None Observed
Botrychium minganense	4	Suspected	None Observed
Camissonia ovata	3	Suspected	None Observed
Carex barbarae	3	Documented	None Observed
Carex leptalea ssp. *leptalea*	4	Suspected	None Observed

Scientific Name	ONHP Rank[1]	Roseburg Occurrence?	Occurrence in the Project Area?
Cypripedium californicum	4	Documented	None Observed
Cypripedium montanum	4	Documented	None Observed
Dichelostemma ida-maia	4	Documented	None Observed
Enemion stipitatum	4	Documented	None Observed
Epilobium luteum	3	Suspected	None Observed
Epilobium palustre	3	Suspected	None Observed
Erigeron cascadensis	4	Suspected	None Observed
Euonymus occidentalis	4	Documented	None Observed
Hazardia whitneyi var. *discoidea*	4	Suspected	None Observed
Helianthella californica var. *nevadensis*	3	Suspected	None Observed
Lewisia cotyledon var. *howellii*	4	Documented	None Observed
Linanthus bakeri	3	Suspected	None Observed
Lycopodium annotinum	4	Suspected	None Observed
Mimulus douglasii	4	Documented	None Observed
Mimulus kelloggii	4	Documented	None Observed
Minuartia californica	4	Suspected	None Observed
Montia howellii [2]	4	Documented	None Observed
Navarretia tagetina	3	Suspected	None Observed
Phacelia verna	4	Documented	None Observed
Sedum laxum ssp. *heckneri*	4	Suspected	None Observed
Sedum spathulifolium ssp. *purdyi*	4	Documented	None Observed
Sidalcea cusickii	4	Documented	None Observed
Vaccinium oxycoccos	4	Suspected	None Observed
Verbena hastata	3	Suspected	None Observed

[1] ONHP = Oregon Natural Heritage Program Lists; List 3 = taxa for which more information is needed before status can be determined, but which may be threatened or endangered in Oregon or throughout their range; List 4 = taxa of concern which are not currently threatened or endangered (Bureau Tracking are generally ONHP Lists 3 and 4)

[2] *Montia howelli* is a candidate species for listing under the Oregon state threatened and endangered program.

Appendix J. - ACS Consistency

The Aquatic Conservation Strategy must strive to maintain and restore ecosystem health at watershed and landscape scales, to protect habitat for fish and other riparian-dependent species and resources, and restore currently degraded habitats. This approach seeks to prevent further degradations and restore habitat over broad landscapes as opposed to individual projects or small watersheds (NFP ROD, P. B-9).

The Engineering Road Improvement and Realignment project proposes to repair, maintain, and/or improve existing roads in the Upper Umpqua Watershed. Three road segments will be relocated to stable locations to correct existing erosion and road failure problems. The road projects analyzed in this environmental assessment would be designed to reduce chronic sediment production and/or potential risk of catastrophic road failure and subsequent sediment delivery to downstream aquatic systems. As such, this project is considered to be restorative in nature. *Watershed Restoration* is one of the four components of the Aquatic Conservation Strategy, and is the only component that is an action (the others are location-based or process-based).

The proposed action is consistent with the Aquatic Conservation Strategy (ACS) as described in the ROD/RMP (pg. 19) based on the following rationale:

ACS Components:

1. *Riparian Reserves (ACS Component #1)*

   Riparian Reserves were established. The ROD/RMP (pg. 24) specifies Riparian Reserve widths equal to the height of two site potential trees on each side of fish-bearing streams and one site-potential tree on each side of perennial or intermittent non-fish bearing streams, wetlands greater than an acre, and constructed ponds and reservoirs. The height of a site-potential tree for the Upper Umpqua River Watershed has been determined to be the equivalent of 180 feet. (Upper Umpqua Watershed Analysis, pg. 3).

2. *Key Watersheds (ACS Component #2)*

   Key Watersheds were established "as refugia . . . for maintaining and recovering habitat for at-risk stocks of anadromous salmonids and resident fish species [RMP, pg. 20]." These projects are not in Key Watersheds.

3. *Watershed Analysis (ACS Component #3)*

   The Upper Umpqua Watershed Analyses was used in this assessment and is available for public review at the Roseburg District office or can be viewed under "Plans & Projects" on the Roseburg District website at www.blm.gov/or/districts/roseburg/index.htm.

4. *Watershed Restoration (ACS Component #4)*

   Restoration associated with this project includes the improvement or restoration of approximately 1.03 miles of existing roads to reduce sedimentation to streams.

Project Specific Evaluation:

Appropriate Information - To develop the project, the Upper Umpqua Watershed Analysis (USDI 2002), was used to evaluate existing conditions, establish desired future conditions, and assist in the formulation of appropriate alternatives.

Standard and Guidelines - Implementation of actions proposed in this analysis would conform to requirements of the ROD/RMP, which incorporates as management direction the standards and guidelines of the *Record of Decision for Amendments* (ROD) *to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl* (USDA and USDI 1994b), as amended by the *Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines in Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl* (USDA and USDI 2001b), and the *Record of Decision and Resource Management Plan Amendment for Management of Port-Orford-Cedar in Southwest Oregon, Coos Bay, Medford, and Roseburg Districts* (USDI, BLM 2004).

Transportation management on the Revested Oregon and California Railroad Lands (O&C Lands) managed by the Swiftwater Field Office is principally authorized and guided by: The Western Oregon Districts Transportation Management Plan (TMP) of 1996 (USDI), Updated in 2002).

- The function of the TMP is to "develop and maintain an environmentally sound road and trail system that meets the needs of the users" (pg. 2).

- The TMP goals includes providing "access to and through BLM managed lands," "maintain or improve water quality," Reduce adverse impacts to fish habitat," and provide and maintain a cost-effective transportation system," among others (pgs. 3-9).

- The Federal Land Policy and Management Act (FLPMA): Section 302 at 43 U.S.C. 1732(a), directs that "The Secretary shall manage the public lands . . . in accordance with the land use plans developed by him under section 202 of this Act when they are available . . ."

- Roseburg District Record of Decision/Resource Management Plan (ROD/RMP): The ROD/RMP (USDI, BLM 1995b), approved in accordance with the requirements of FLPMA, provides specific direction for timber management.

Roseburg District ROD/RMP Guidance

The Proposed Action was developed in conformance with and within the scope of impacts anticipated/analyzed by the Final - Roseburg District Proposed Resource Management Plan / Environmental Impact Statement (PRMP/EIS) dated October 1994 and its associated Roseburg District Record of Decision and Resources Management Plan (ROD/RMP) dated June 2, 1995. These documents were written to be consistent with federal statute including the O&C Act, Endangered Species Act, and the Clean Water Act (PRMP/EIS, pg. 1-3).

The ROD/RMP assumed that existing roads would be improved, maintained, or decommissioned, and new roads would be developed in support of managing a sustained yield timber management program. Once this decision was made, the primary unresolved issue was regarding which existing roads would be improved/maintained and which would be retired and to what extent (pg. 25).

Watershed Level Guidance

The Upper Umpqua Fifth-Field Watershed Decision (USDI, 2003; pg. 9) identified approximately 52 miles of road in need of improvement in the watershed. In addition, the Upper Umpqua Fifth-Field Watershed Analysis identified approximately 10 miles for repair, improvement or decommissioning in Hubbard Creek (USDI, 2003; pg. E-4).

The Upper Umpqua Fifth-Field Watershed Analysis also specifically recommended the implementation of road renovations and improvements (USDI, 2003; pgs. 6-7). Road renovations and improvements within the project area are expected to reduce sediment reaching streams and/or adjacent riparian areas.

Existing Watershed Condition – Existing conditions were evaluated in the EA on pages 14-30. Specific points that pertain to watershed condition and watershed health are listed below.

- The 26-7-19.1 road site is mainly on slopes of 20 to 40 percent. There are too few drainage relief features and ditch erosion remains active on the lower rocked segment (mile 0.00 to mile 0.72). On the upper, natural surfaced segment (mile 0.72 to mile 1.20), the combined through-cut excavation-berm from the original road construction and approximately 45 years of erosion, aggravated by vehicle use entrenched the road as much as six feet deep on the outside edge. Currently, all of the drainage dip-ditchouts are either partially or totally non-functional. Forty years of sediment removal from the road bed has left deposition trails that are over 500 feet in length and more than fifty feet wide at their widest point, and over a foot deep (pg. 19).
- In the Long Ranch ERFO project the slope failure at mile 0.76 is near an intermittent ephemeral stream feature that is likely to contribute water and sediment to Camp Creek only from rains. At mile 0.81, there is no stream feature associated with the slope failure (pg. 23).

Expected Effects at the Site Level – Site level effects were evaluated in the EA on pages 14-30. Specific points that pertain to watershed condition and watershed health are listed below.

- Under the Proposed Action Alternative, in the Hubbard Creek Road project, renovation to the first 0.72 miles of road would be within the existing road prism and would not cause additional sediment delivery to the streams since proper water routing from the road would be maintained onto the forest floor away from the streams where sediment can be filtered out. Likewise, runoff water from the newly constructed portion of road (the remaining 0.5 miles) would not discharge near any tributaries, but rather would be routed to the forest floor where the sediment would be filtered out. Less erosion would occur on this portion of road compared to no action as it would be adequately drained and rock surfaced. Additionally, construction would be performed in the dry season which would minimize the sediment delivery to Hubbard Creek from mechanical activities and culvert repair/replacement on the tributaries crossed by the road (pg. 24).
- Under the Proposed Action Alternative sediment delivery to Hubbard and Camp Creek streams would not increase or would not increase measurably at the drainage level and therefore there would be no discernable change to water quality or Beneficial Uses of Water in Hubbard Creek and Camp Creek (pg. 25).
- The majority of the proposed road improvement is located outside of Riparian Reserves in stable locations and would not be connected to the drainage network (pg. 26).

Cumulative Effects – Cumulative effects were evaluated in the EA on pages 14-30. Specific points that pertain to watershed condition and watershed health are listed below.

- The proposed project would not contribute additional road miles within the Upper Umpqua fifth-field watershed. Nor would this project cause a significant loss (approximately 0.01 percent of 11,900 acres) of mid-seral habitat within the watershed (pg. 18).
- At the fifth-field watershed scale, the scope of the proposed project is too small to substantively alter current watershed functions. Because the proposed action would not alter water quality or beneficial uses of water at the project level, it would not incrementally add to the cumulative effects beyond the project area or at any watershed scale beyond (pg. 25).
- The proposed project consists of road improvement measures that, by design, have no long term adverse impacts to the immediate drainage basin. Sediment regime, stream temperature, water chemistry, peak flows, and water yield together influence fish habitat or aquatic species. This project would not affect stream temperature, water chemistry, peak flows, or water yield (pg. 27).
- Sediment delivery to the stream would be a short-term pulse that would be indistinguishable from background levels. The purpose of the project is to stabilize the road, thereby reducing the potential of sediment input into adjacent creeks. Therefore, the overall cumulative impacts associated to the proposed project would be beneficial (pg.27).

Summary – Based upon the information listed above, and the over-riding fact that this action is considered to be a watershed restoration project, this action is consistent with the Aquatic Conservation Strategy, and its objectives.