

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

Environmental Assessment for the Swiftwater Field Office

Swiftwater Stream Crossing Upgrade Project

EA No. OR - 104 - 00 - 10

The Swiftwater Field Office proposes to upgrade or replace stream crossings in order to reduce potential sedimentation, improve fish passage and open additional stream habitat to Pacific salmonids. This project is located in the Canton Creek, Upper Umpqua and Rock Creek fifth-field watersheds in Sections 2, and 35, T24S R1W; Section 36, T24S R2W; Sections 2, 3, 18, and 22, T25S R1W; Sections 15, 28 and 30, T25S R2W; Section 36, T25S R3W; and Section 1, T25S R8W; W.M.

Acronyms Used:

ACS	-	Aquatic Conservation Strategy
BA	-	Biological Assessment
BO	-	Biological Opinion
BLM	-	Bureau of Land Management
BMP	-	Best Management Practices
EA	-	Environmental Assessment
FONSI	-	Finding Of No Significant Impact
FSEIS (SEIS)	-	Final Supplemental Environmental Impact Statement
FWS	-	U.S. Fish and Wildlife Service
LUA	-	Land Use Allocation
NEPA	-	National Environmental Protection Act
NFP	-	Northwest Forest Plan
NMFS	-	National Marine Fisheries Service
RMP	-	Resources Management Plan
ROD	-	Record Of Decision (used only to refer to the NFP ROD)
S&G	-	Standards & Guidelines
T&E	-	Threatened or Endangered
WA	-	Watershed Analysis

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INTRODUCTION

This Environmental Assessment (EA) has been prepared for the proposed **Swiftwater Stream Crossing Upgrade Project**. An EA is a site specific analysis of potential environmental impacts that could result with the implementation of a proposed action. The EA assists the Agency in project planning and insuring compliance with the National Environmental Protection Act (NEPA) and in making a determination as to whether any "significant" impacts could result from analyzed actions. "Significance" as defined by NEPA is found in regulation 40 CFR 1508.27. An EA provides evidence for determining whether to prepare an Environmental Impact Statement (EIS) or "Finding of No Significant Impact" (FONSI). The FONSI is a document that briefly presents the reasons why implementation of the proposed action will not result in "significant" environmental impacts (effects) beyond those already addressed in the Roseburg District's *Final Environmental Impact Statement* (FEIS).

A Decision Record would be completed after the FONSI is signed to document the decision. A notice of this decision will be placed in *The News Review*, a daily newspaper of general circulation in Roseburg, Oregon.

I. PURPOSE OF AND NEED FOR ACTION

This section provides a general overview of the proposed action. Included are: the need for the action, purpose of the action, a general description and objectives of the proposal, and conformance with existing land use plans.

A. Need for Action

The BLM has a need to implement the *Roseburg District Record of Decision and Resources Management Plan* (RMP). The RMP "responds to dual needs: the need for forest habitat and the need for forest products" (RMP, pg. 15). "The need for forest habitat is ... for a healthy forest ecosystem with habitat that will support populations of native species and includes protection for riparian areas and waters." Roads built in the past within the Swiftwater Resource Area, were constructed to older standards. The road crossings over perennial streams may have culverts that have the potential to introduce sedimentation into streams and affect water quality. In addition, many crossings are at the end of their serviceable life and are failing, posing risk to public safety and potential impact to the stream system if a failure occurs. Finally, many crossings were not designed to facilitate fish passage and effectively block access to additional habitat or do not meet the RMP Best Management Practice (pg. 134) of crossings being designed to meet 100 year flood events. Due to this need, many crossings are in need of maintenance upgrades or replacement to meet current standards.

This need is accomplished by the following objectives:

1. Protect the existing transportation network by reducing risk of culvert failure (RMP, pg. 137).
 - Properly size replacements to withstand 100-year flood events.
 - Design structures that are more easily maintainable.
 - Reduce hazards that failing stream crossings pose to public safety.

2. Reduce barrier to movement and dispersal of anadromous and resident fish (RMP pg. 40) and design structures that are “fish-friendly”.
3. Reduce the risk of culvert failure and input of sediment into the stream system (RMP pg. 19).

B. Purpose of Action

The purpose of the action described in this EA is to upgrade or replace stream crossings in order to reduce potential sedimentation, improve fish passage and open additional stream habitat to Pacific salmonids. This EA analyzes projects for contract in fiscal year 2001 through 2005.

C. Description of the Proposal

The Swiftwater Field Office of the Bureau of Land Management (BLM) proposes to upgrade or replace 14 stream crossings in the Canton Creek, Upper Umpqua and Rock Creek fifth-field watersheds (see maps, Appendix A and B). Section II (pg. 3) of this EA provides a more detailed description of the Proposed Action Alternative.

D. Conformance with Existing Land Use Plans

The proposed action and all alternatives were developed to be in conformance with the *Final - Roseburg District Proposed Resources Management Plan / Environmental Impact Statement* (PRMP/EIS) dated October 1994 and its associated *Roseburg District Record of Decision and Resources Management Plan* (RMP) dated June 2, 1995. The RMP was written to be consistent with the *Final Supplemental Environmental Impact Statement on Management of Habitat for Late-Successional and Old Growth Forest Related Species Within the Range of the Northern Spotted Owl* (FSEIS); dated Feb. 1994 and its associated *Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl* (ROD) and *Standards and Guidelines for Management of Habitat for Late-Successional and Old Growth Related Species Within the Range of the Northern Spotted Owl* (S&G's) dated April 13, 1994; generally referred to as the "Northwest Forest Plan". The ROD establishes management direction consisting of "... extensive standards and guidelines including land allocations, that comprise a comprehensive ecosystem management strategy" (ROD pg. 1).

The ROD (pg. 6) divides the federal landbase into seven land use allocations (LUA) or categories. This project is within the "Riparian Reserves" LUA. The "Riparian Reserves are areas along all streams, wetlands, ponds, lakes, and unstable or potentially unstable areas where the conservation of aquatic and riparian-dependent terrestrial resources receives primary emphasis." (ROD, pg. 7).

II. ALTERNATIVES INCLUDING THE PREFERRED ALTERNATIVE

This section describes the No Action and Proposed Action alternatives, and any alternatives considered but eliminated from detailed analysis. These alternatives represent a range of reasonable potential actions that would meet the Purpose and Need. This section also discusses specific design features that would be implemented under the action alternatives.

A. The No Action Alternative

The No Action Alternative is required by NEPA to provide a baseline for the comparison of the alternatives. This alternative represents the existing condition. If this alternative were selected there would be no upgrade or replacement of crossing structures within the bounds of the project area.

B. The Proposed Action Alternative

Implementation of the Proposed Action Alternative would result in the upgrade or replacement of 14 crossings.

Four **temporary bypass roads** totaling approximately 1700 feet in length (0.40 ac. of disturbance) would need to be routed through private land in order to temporarily route traffic around the culvert replacement sites. These roads would be built, used and decommissioned in the same season.

C. Mitigating Measures and Project Design Features as part of the Action Alternative

This section describes mitigating measures (measures designed to avoid, minimize or rectify impacts on resources [40 CFR 1508.20]) that would be incorporated with the implementation of the action alternatives. Project design features are site specific measures, restrictions, requirements or physical structures included in the design of a project to reduce adverse environmental impacts. Additionally, the RMP (Appendix D, pg. 129) lists "Best Management Practices" (BMP's) and the ROD lists "Standards and Guidelines" (S&G's). BMP's are measures designed to protect water quality and soil productivity. S&G's are "... the rules and limits governing actions, and the principles specifying the environmental conditions or levels to be achieved and maintained." (S&G, pg. A-6). The proposed action alternative includes the following measures that would be included as part of the action alternative:

1. **To meet the objectives of the "Aquatic Conservation Strategy (ACS)" (RMP, pg. 19):**
 - a. **Riparian Reserves (Component #1)** were established. Riparian Reserves consist of lands incorporating permanently flowing (perennial) and seasonally flowing (intermittent) streams, the extent of unstable and potentially unstable areas that may directly impact streams, and wetlands.

b. **Key Watersheds (ACS Component #2)** were established “as refugia ... for maintaining and recovering habitat for at-risk stocks of anadromous salmonids and resident fish species [RMP, pg. 20].” Portions of this project are in a Key Watershed (Canton Creek). An objective in a Key Watershed is to “Reduce existing system and nonsystem road mileage ...” ([RMP, pg. 20). No road decommissioning would be accomplished as part of this proposal.

c. **Watershed Analysis (ACS Component #3)** for the Canton Creek, Rock Creek and Rader Wolf Watersheds were used in this analysis and are available for public review at the Roseburg District office.

d. **Watershed Restoration (ACS Component #4)** would result from the implementation of the proposed improvements by reducing road related sedimentation at stream crossings.

2. **To minimize the loss of soil productivity (i.e. limiting erosion, reducing sedimentation, and protecting slope stability):**

a. Building, using and decommissioning temporary bypass roads in the same operating season (i.e. no over-wintering of bare erodible subgrade). Newly constructed bypass roads would be restored as close to preconstruction conditions as practicable. Temporary fills would be removed and embankments placed into excavated areas. The top width of temporary access roads would be 14 feet with the exception of McComas Creek where it will be 20 feet.

b. Accomplishing in-stream work (i.e. culvert replacement and fill removal) during periods of low flow (between July 1 and September 15). Backfill material over temporary culverts would be as soil free as practicable. Streams would be diverted around work areas to minimize sedimentation effects downstream.

c. All disturbed surfaces would be seeded and/or planted with native species or a sterile hybrid mix depending on availability after the project’s completion to stabilize exposed soils and prevent erosion and sedimentation.

d. Embankment for culvert backfill would be obtained from onsite excavation accumulated during culvert removal or from nearby developed borrow sources. Embankments would be constructed using controlled compaction. Embankment would be placed as close as practicable to its angle of repose, but in no case steeper than 1 ½ to 1.

e. Graded rip rap would be placed on the embankment at the inlet and outlet of each culvert to a level equal to full-bank flow elevation. The rip rap would be placed to a thickness to prevent embankment erosion and keyed below the streambed a minimum of three feet. The rip rap would be sized to prevent movement during high flow events. Rip rap would be placed in a way to minimize impacts to the active stream channel and maintain normal waterway capacity and configuration. Rip rap would be obtained from either commercial sources or developed rock quarries and pits and consist of clean non-erodible angular rock. A concrete and/or rip rap headwall would be placed at the inlet of each culvert. The head wall would extend a minimum of two feet above the top and a minimum of three feet below the bottom of the culvert.

f. An erosion control plan would developed by the contractor describing erosion control measures (e.g., sediment fences or other measures sufficient to prevent offsite movement of soil, use of an impervious cover over stockpiled embankments if unusual adverse weather conditions occur, and sediment traps or catch basins to settle out solids prior to ditch water from entering waterways) that would be taken to prevent sediment from entering the stream. Such plans would be reviewed and approved by the Contracting Officer's Representative (COR). These BMP's (RMP, pg. 136-7) are designed to minimize sedimentation and protect water quality.

3. To prevent and report accidental spills of petroleum products or other hazardous materials:

Hazardous materials (particularly petroleum products) would be stored in durable containers and located so that any accidental spill would be contained. All work site trash and materials would be removed. All equipment planned for instream work would be inspected beforehand for leaks. Accidental spills or discovery of the dumping of any hazardous materials would be reported to the Contracting Officer and the procedures outlined in the "Roseburg District Hazardous Materials (HAZMAT) Emergency Response Contingency Plan" would be followed.

4. To contain and/or reduce the spread of noxious weeds:

Prior to initial move-in, construction equipment would be steam cleaned or pressure washed to remove soil and vegetative material from the equipment to avoid the spread of noxious weeds (RMP, pg. 74; BLM Manual 9015 - Integrated Weed Management).

5. To protect Special Status and SEIS Special Attention Plants and Animals:

a. No blasting would occur in the Little Wolf quarry between April 1 to September 15 to avoid disturbance to the marbled murrelet that may be present in unsurveyed habitat within one mile of the quarry.

b. Special Attention plant and animal sites would be protected according to established management recommendations.

c. If, during implementation of the proposed action, any Special Status (threatened or endangered, proposed threatened or endangered, candidate, State listed, Bureau sensitive or Bureau assessment) species are found, evaluation for the appropriate type of mitigation needed for each species would be done. Stipulations would be placed in the contract to halt operations if any of these Special Status plants or animals are found to allow time to determine adequate protective measures before operations could resume.

6. To protect cultural resources:

Stipulations would be placed in the contract to halt operations and evaluate the appropriate type of mitigation needed to provide adequate protection; if any objects of cultural value (e.g. historical or prehistorical ruins, graves, fossils or artifacts) are found during the implementation of the proposed action.

D. Alternatives Considered but not Analyzed in Detail

The replacement of the Kelly Creek crossing was considered during the formulation of this project but was rejected due to the need for a temporary bypass road and the access problems associated with it. The District Engineer estimates that ten years of useful life remains. Due to the complexity of this site a future “stand alone” EA would be more appropriate.

III. AFFECTED ENVIRONMENT

This section describes the existing environment and forms a baseline for comparison of the effects created by the alternatives under consideration. This section does not attempt to describe in detail every resource within the proposed project area that could be impacted but only those resources which could be significantly impacted. Appendix F (Analysis File) contains Specialist's Reports with supporting information and greater detail for this analysis.

The Roseburg District Proposed Resource Management Plan/Environmental Impact Statement (PRMP/EIS, pp. 3-3 through 3-71) provides a detailed description of BLM administered lands on the Roseburg District.

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. The Little Wolf Creek site is within the Confederated Tribes of Coos, Lower Umpqua, and Siuslaw Indians' Tribal Consolidation Area. According to 1990 Census data less than four percent of the population of Douglas County was classified with minority status. It is estimated that approximately 15% of the county is below the poverty level (Frewing-Runyon, 1999).

A. General Setting

Site Description - One culvert replacement site (Little Wolf Creek) and one borrow/disposal site occur in **soils** of the Tye formation sandstones and siltstones of the southern Coast Range geomorphic province. The other thirteen culvert replacement sites and five borrow/disposal sites (in the Rock Creek and Canton Creek watersheds) occur in the Little Butte formation volcanic rocks of the Western Cascade geomorphic province (see Soil's Report, Appendix F). The existing culvert fills have slopes typically in the 70 to 75 range. The fill materials are typically a mixture of bedrock fragments in a matrix of soil with clay loam/silty clay loam textures and would be moderately erodible under bare soil conditions. The exception is the Hurry Up Creek crossing which is composed mostly of hard rock fragments with low bare soil erodibility. The existing fills have good vegetative cover ranging from open grass and forb communities to second growth stands. They are currently stable to erosion and have not been experiencing mass wasting.

B. Affected Resources

Botanical - All proposed activities on BLM owned lands would occur within the road prism of the roadway. There is extremely low potential for the occurrence of any Special Status or Special Attention

plant species within the proposed activity area. Noxious weeds consist of only scattered individuals of *Hypericum perforatum* (St. John's Wort), *Cirsium* species (Thistle), and *Chrysanthemum leucanthemum* (Oxeye-daisy). A few individuals of *Centaurea pratense* (Meadow Knapweed) were noted at the Woodstock #2 culvert replacement site. The only moderate weed infestation of *Cytisus scoparius* (Scotch broom) was along the Miller Creek Road (#25.2.16.0).

Cultural Resources - No cultural resources were found in the project area as the result of surveys.

Fisheries - Rader-Wolf is located off of the main stem of the Umpqua River, between Elkton and Umpqua, within the Upper Umpqua River fifth-field watershed. The native anadromous fish species that are found in the Rader-Wolf watershed consists of Coho salmon, Sea-run Cutthroat trout, Winter Steelhead trout, Fall Chinook salmon, and Pacific Lamprey. Coho salmon are federally listed as a Threatened species and Steelhead are a Proposed Candidate species. ODFW Aquatic Habitat inventories have been conducted throughout most of the drainage (Rader/Wolf/Cougar WA pp. 66-71). All of the streams rated either Fair or Poor. This equates to an At Risk or Not Properly Functioning rating in the NMFS Matrix of Pathways and Indicators. LWD is lacking, much of the substrate is dominated by bedrock, and there is a high percentage of fine sediment within the stream channels. Road density is high (4.8 mi/mi²) and many roads are located along stream valley bottoms. Coho numbers are the most stable within the watershed.

Rock Creek is an important fisheries producer of numerous salmonid species within the North Umpqua River system. Spring Chinook spawn in the main stem, Coho salmon in the lower tributaries, and Summer and Winter Steelhead trout in the higher tributaries. Sea-run and resident Cutthroat trout and Pacific lamprey also utilize the Rock Creek watershed. Summer and Winter Steelhead, and Spring Chinook salmon are considered to be healthy. Aquatic stream habitat data is available for 18 streams within the watershed. Three streams are rated Good, while the remaining 15 are rated Fair (Rock Creek WA pp.8-14 through 8-17). This equates to Properly Functioning and At Risk ratings in the NMFS Matrix of Pathways and Indicators.

Canton Creek is a Tier I Key Watershed. This watershed supports populations of Summer and Winter Steelhead trout, resident and migratory Cutthroat trout, Pacific lamprey, sculpins, and speckled and Umpqua dace. The lower reaches of the main stem support seasonal populations of Coho salmon, pike minnows, suckers, and Spring Chinook salmon. Canton Creek is considered a stronghold for steelhead within the Steamboat watershed. For this reason, all of the Steamboat watershed, including Canton Creek, are prohibited from angling. ODFW has conducted aquatic habitat inventories on Canton Creek, Pass Creek, and numerous tributaries to these creeks (Canton Creek WA, pp.53-54). Overall, these inventories indicate that the condition of the watershed is in Fair to Good condition. This equates to an At Risk or Properly Functioning rating in the NMFS Matrix of Pathways and Indicators.

Hydrology - The proposed culverts are located within the Rock Creek, Canton Creek and Upper Umpqua fifth-field watersheds. Canton Creek has been identified by the Oregon Department of Environmental Quality (DEQ) as water quality limited for temperature, sedimentation, and habitat modification. Rock Creek is listed only for temperature (Oregon DEQ, 1998).

Wildlife - Federally threatened and endangered (T&E) species known to occur in the Roseburg District include the northern spotted owl (*Strix occidentalis caurina*), marbled murrelet (*Brachyramphus marmoratus*), bald eagle (*Haliaeetus leucocephalus*), Columbian white-tailed deer (*Odocoileus virginianus*), Canada lynx (*Lynx canadensis*) and Fender's blue butterfly (*Icaricia icarioides fenderi*). There are no known northern spotted owl nest sites within 0.25 miles of any of the proposed culvert replacements. Two culverts are adjacent to unsurveyed northern spotted owl suitable habitat. One of the proposed culvert replacements falls within the 35 mile marbled murrelet zone 1. There is suitable marbled murrelet habitat adjacent to the culvert site and to the Little Wolf quarry which may be used as a rock source for the project. The habitat within 0.25 miles of both sites has been surveyed to protocol and is considered unoccupied. There are no known bald eagle nests which could be affected by disturbance above ambient noise levels within 0.25 miles of any of the project areas. The remaining T&E species do not occur in the project area.

IV. ENVIRONMENTAL CONSEQUENCES

This section provides the evidence and analytical basis for the comparisons of the alternatives. The probable environmental consequences (impacts, effects) to the human environment that each alternative would have on selected resources are described. This section is organized by the alternatives and the effects on the key issue(s) identified in Appendix D, as well as the selected resources. Analysis considers the direct impacts (effects caused by the action and occur at the same place and time), indirect impacts (effects caused by the action and occur later in time or farther removed in distance) and cumulative impacts (effects of the action when added to other past, present and reasonably foreseeable future actions) on the resource values. Appendix F (Analysis File) contains additional supporting information for this analysis. The EIS and FSEIS analyzes the environmental consequences in a broader context. This EA does not attempt to reanalyze impacts that have already been analyzed in these documents but rather to identify the particular site specific impacts that could reasonably occur.

Some irreversible and irretrievable commitment of resources would result from the implementation of this project. An irreversible commitment is a commitment that cannot be reversed whereas an irretrievable commitment is a commitment that is lost for a period of time. An irreversible commitment of petroleum fuels for logging and timber hauling as well as the loss of rock from quarries for crushed rock used in the renovation of the road system would result from the proposed action. The irretrievable loss of old-growth forest would result, if this area is managed on an 80 to 150 year rotation.

When encountering a gap in information, the question implicit in the Council on Environmental Quality regulations on incomplete and unavailable information was posed: Is this information "essential to a reasoned choice among the alternatives"? (40 CFR 1502.22(a)). While additional information would often add precision to estimates or better specify a relationship, the basic data and central relationships are sufficiently well established that any new information would not likely reverse or nullify understood relationships. Although new information would be welcome, no missing information was determined as essential to making a reasoned choice among the alternatives.

A. No Action Alternative

This alternative would not meet the Purpose and Need of the RMP (pg. 15) or this EA (pg. 1) objective of reducing potential sedimentation and providing fish passage at stream crossings.

Botanical - Direct effects are those actions that cause direct mortality of Special Status and SEIS Special Attention Plants such as ground disturbance or alteration of microclimatic conditions favorable to the sustained viability of plants. Indirect effects include possible spread of noxious weeds. A potential culvert failure or road wash out would result in an immediate alteration of the plant community through the deposition of sediment and the loss of vegetative cover. Any culvert or road failure has a potential to promote the spread of noxious weeds by providing bare soil conditions. Exposed soil is highly preferred by noxious weeds and invasive nonnative species.

Fisheries - Direct effects to fisheries are those actions that cause direct mortality, such as accidental chemical spills and direct disturbance of redds. Generally, direct impacts occur from work within or adjacent to fish bearing streams. Indirect effects include increased sediment and water temperature, altered stream flows and large woody inputs. No work would be done on any of the stream crossings under the No Action Alternative. Fish species would continue to be prohibited from accessing 6.45 anadromous miles and 8.45 resident miles of suitable habitat. East Fork, Ringtail, and Hurry Up culverts would remain at a high risk of failure.

Hydrology - Direct effects are those actions that cause direct changes to the stream channel morphology, hydraulic geometry, or water quality. No direct effects on water quality and stream hydrology would occur. Stream temperature, water quality and hydrologic processes would continue at existing rates and levels. Indirect effects are actions that indirectly effect hydrology and water quality including changes in road densities routing runoff and transporting sediment, streamside shading, and large woody debris recruitment. Potential benefits from deferring crossing enhancements would be no short-term delivery of additional sediment from earth moving activities. Activities designed to reduce the risk of catastrophic sediment delivery from potential failure of existing culverts, however, would not be completed. Without culvert replacements the risk of fill failure would remain.

Soils - Direct effects to the soils resource consists of those actions that cause a reduction in soil productivity such as compaction due to temporary road construction, soil loss through erosion, and displacement of soil through mechanical means (road building). The primary indirect effects is any project-related fill failures that might occur as a result of the action alternative. Under the No Action Alternative the fill slopes at the creek crossings would continue to be stable to surface erosion until culvert failures occur which would result in massive amounts of sedimentation. Six of the culverts are in poor enough condition where the probability of failure in the near future is quite high. Adjacent stream channels and inner gorge slopes where bypasses would go under the action alternative would remain quite stable to erosion and mass wasting under the present vegetative cover.

Wildlife - Direct effects consists of direct mortality or disturbance to species. Indirect effects include the alteration of habitat that would affect species. Harvest related impacts would not occur under this alternative. Wildlife populations and diversity would be expected to remain static.

B. Proposed Action Alternative

Botanical - Construction work that occurs within the road prism would have no affect on Bureau Special Status Plant Species, or SEIS Special Attention Plant species. These species are not known to occur on roads. The sites that have proposed bypasses have the potential to affect the above category of plants, however these locations are all on private lands. Soil disturbance as a result of this action could indirectly promote noxious weed spread; however, exposed soil would be less with culvert replacement than if the culverts fail.

Fisheries - Removal and new construction of the culvert passageway would occur within the stream channel. With the guidelines specified in the project design features, the probability of a fish losing its life to a direct impact is extremely low. This potential impact would be further minimized through the use of Best Management Practices and ODFW guidelines for in-stream work. The indirect impact of fine sediment being flushed from the action site by the first winter storm events would occur, however, this amount is considered negligible.

Hydrology - Construction activities would result in direct impacts of a small but temporary increase in turbidity due to the introduction of sediment. Impacts would be short-term and minimized by only allowing work during low flows and adhering to Best Management Practices . An indirect impact would be long-term reduction in the risk of sedimentation resulting from road fill failures. Overall, a long-term decrease in sediment delivery to streams originating at the project area would be expected. No change in stream temperature, large woody debris, water pH, dissolved oxygen, or other chemical parameters is likely to occur as a result of the Proposed Action Alternative.

Soils - A direct impact of sedimentation would result from the construction of the four temporary road bypasses. Approximately 45% of these bypasses are on existing roadbeds involving minimal new disturbance. The remaining 950 ft. of new construction would create about 0.40 acres of disturbance. On new construction, pull back of the temporary fill crossings into the cuts for reclamation would be accomplished. The disturbed stream banks should satisfactorily revegetate. Use of the designated borrow/disposal sites and quarries would not create sedimentation into streams. No natural surfaces adjacent to the quarries and borrow sites would be disturbed. The indirect impact of erosion and sedimentation as the result of culvert replacements is expected to be small and temporary. Culvert replacement projects recently completed in the South Fork of Smith River have gone through one or two wet seasons. The fills at these sites, with the except Hurry Up Creek, are of similar composition and size as the proposed replacement sites. No rilling or slumping and sloughing of fill material have occurred to date. Current coverage of vegetation ranges from 95 to greater than 99 percent. Sediment into the streams from the fill slopes has been completely arrested (D. Cressy, personal observation). The design features of the culverts and fills of the South Fork of Smith River projects are essentially the same as being proposed for this action. Based on this experience, it is expected that the of erosion and sedimentation would be small and temporary. Vegetation would rapidly re-establish.

Wildlife - Direct effects consists of potential disturbance to the spotted owl and the marbled murrelet nesting due to the use of heavy equipment and possible blasting. Since no activity would occur within 0.25 miles of any known owl or murrelet nest site, operating restrictions would not be needed to mitigate disturbance activities. No blasting would occur between April 1 to September 15 to avoid disturbance for unsurveyed marbled murrelet habitat within one mile of the Little Wolf quarry. No bald eagle habitat would be altered by the project. Columbian white-tailed deer are limited in distribution to the oak-savannah woodlands typical of the lowland landscape in the Umpqua Valley. None of the proposed project would remove or significantly alter habitat or cause disturbance to the deer.

C. Cumulative Impacts Analysis

The following paragraph discusses the cumulative impacts (i.e. the incremental effects of the action when added to other past, present and foreseeable future actions). These impacts are described for federal lands in the FSEIS beginning on page 3&4-4 and throughout chapter 3&4 based on the resource affected. There has been a continued conversion of late seral and old-growth habitat on private, industrial forest lands to early seral stages. Current management strategies on most of this private land would preclude the development of older seral conditions in the future.

Botanical - An increase in the abundance of noxious weeds could occur. The cumulative impacts would be less than if a crossing failure would occur (no action).

Fisheries - An additional 6.45 miles of habitat would be made available to anadromous fish species. This action would assist in the recovery of these fish species.

Hydrology - Impacts are measured as an increase in harvested acres and road miles within the watershed. This action may result in an unquantifiable but small and temporary increase in turbidity below each project site. No harvest of trees or increase in the miles of permanent road would occur under the Proposed Action Alternative.

Soils - Impacts to long-term soil productivity would be very minor at the fifth field watershed scale.

Wildlife - No cumulative effects are anticipated.

V. CONTACTS, CONSULTATIONS, AND PREPARERS

A. Agencies, Organizations, and Persons Consulted

The Agency is required by law to consult with the following 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. The Roseburg District's Biological Assessment (BA) for T&E wildlife species consultation was submitted to the **US Fish and Wildlife Service (FWS)** on September 18, 2000. The BA concluded the proposed action would result in a "no effect, not likely to adversely affect" for the spotted owl, murrelet, or bald eagle, and would not be likely to adversely modify spotted owl or murrelet critical habitat. A Biological Opinion is expected in March 2001.

b. The Roseburg District's BA for T&E fish species consultation was submitted to the **National Marine Fisheries Service (NMFS)** on February 22, 2001. The BA made the determination that this project would result in a "may affect, likely to adversely affect" for the Oregon Coast coho salmon and the Oregon Coast steelhead trout. A BO is expected in May.

2. **Cultural Resources Section 106 Consultation** - Consultation as required under Section 106 of the National Historic Preservation Act with the **State Historical Preservation Office (SHPO)** has been initiated. A "No Effect" determination is anticipated.

B. Public Notification

1. Notification was provided to affected **Tribal Governments** (Confederated Tribes of the Coos, Lower Umpqua and Siuslaw; Grande Ronde; Siletz; and the Cow Creek Band of Umpqua Indians). No comments were received.

2. Letters were sent to five **adjacent landowners**. No comments were received (see Appendix G - Public Contact).

3. The **general public** was notified via the *Roseburg District Planning Update* (Winter 2000) going to approximately 150 addressees. These addressees consists of members of the public that have expressed an interest in Roseburg District BLM projects. No comments were received.

4. Notification will also be provided to certain **State, County and local government** offices (see Appendix G - Public Contact).

5. A 30-day **public comment period** will be established for review of this EA. A Notice Of Availability will be published in the *News Review*. 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*.

C. List of Preparers

Lyle Andrews	Management Representative
Karel Broda	Geotechnical Specialist
Isaac Barner	Cultural Resources
Dan Couch	Watershed Analysis
Dan Cressy	Soils
Dave Erickson	Recreation / VRM
Roger Ferriell	Botany
Aimee Hoefs	Fisheries
Steve Kropp	Hydrology
Fred Larew	Lands
Randy Lopez	Project Lead / Engineering
Jim Luse	EA Coordinator / EA Preparer
Melanie Roan	Wildlife
Rick Shockey	District Engineer

CRITICAL ELEMENTS OF THE HUMAN ENVIRONMENT

The following elements of the human environment are subject to requirements specified in statute, regulation, or executive order. These resources or values are either not present or would not be affected by the proposed actions or alternatives, unless otherwise described in this EA. This negative declaration is documented below by individuals who assisted in the preparation of this analysis.

Element	Responsible Position	Not Present	Not Affected	In Text	Initials	Date
Air Quality	Fuels Management Specialist		U		KC	2/27/01
Areas of Critical Environmental Concern	Environmental Specialist	U			JSL	2/27/01
Cultural Resources	Archeologist					
Environmental Justice	Environmental Specialist		U		JSL	2/27/01
Farm Lands (prime or unique)	Soil Scientist	U			DCC	2/27/01
Flood Plains	Hydrologist		U		SJK	2/27/01
Invasive, Nonnative Species	Botanist			U	RJ	2/27/01
Native American Religious Concerns	Environmental Specialist		U		JSL	2/27/01
Threatened or Endangered Species (fish)	Fisheries Biologist			U	GRR	2/27/01
Threatened or Endangered Species (plants)	Botanist	U			RF	2/27/01
Threatened or Endangered Species (wildlife)	Wildlife Biologist			U	MRR	2/27/01
Hazardous/Solid Wastes	District Hazardous Materials Coordinator	U			LB acting	3/01/01
Water Quality Drinking/Ground Water	Hydrologist			U	SJK	2/27/01
Wetlands/Riparian Zones	Hydrologist			U	SJK	2/27/01
Wild and Scenic Rivers	Recreation Planner		U		DE	2/27/01
Wilderness	Recreation Planner		U		DE	2/27/01

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- U.S. Department of the Interior, Bureau of Land Management. 1985. Northwest area noxious weed control program environmental impact statement; and Supplement, 1987.
- U.S. Department of the Interior, Bureau of Land Management. March 1999. Oregon State Office: Environmental justice screening in NEPA analysis for Oregon, Washington, and northern California
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- U.S. Department of the Interior, Fish and Wildlife Service. 1992b. Endangered and threatened wildlife and plants; determination of critical habitat for the northern spotted owl. Washington, D.C.: *Federal Register* 57:1796-1838.

Other references as cited in the individual Specialist's Reports (Appendix F - Analysis File)