ENVIRONMENTAL ASSESSMENT
EA : OR-128-99-21

A proposal to construct a Reroute of a Section of Baker Creek Road Through Emergency Repair of Federally Owned (ERFO) Funding In The Lower South Fork Coquille Subwatershed

Proposed this 15th Day of July, 1999

This action is subject to and in conformance with the *Coos Bay District Resource Management Plan,* with its *Record of Decision* (BLM 1995), and 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* with its *Record of Decision* and *Standards and Guidelines* (Interagency, 1994).

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Section I - Purpose of and Need for Action

Purpose and Need

The Baker Creek Road (no. 31-12-3.0) between MP 5.0 and 6.0 is located on highly unstable ground which has caused repeated road failures that are expensive to repair and pose a serious safety risk. Thus, the Myrtlewood Resource Area proposes to decommission and stabilize this section of the -3.0 road, and create a reroute of this closed portion approximately ½ mi. to the south in section 20 & 21, T31S R12W. The reroute would improve approximately 2100 ft. of existing single lane road, and construct approximately 900 ft. of new single lane road. This project is proposed for construction in fiscal year 2000.

The objectives of the proposed action are to:

- decommission unstable and failing portions of the 3.0 rd. (described above), and stabilize to reduce potential erosion,
- reduce open road density in a Key Watershed,
- provide continued administrative access to BLM and private lands, currently provided by the portion of the 3.0 to be closed, and
- provide continued but limited public access through trail use to BLM lands affected by the portion of the 3.0 to be closed.

The site location is several miles west of the town of Powers, Ore. in the Baker and Salmon Cr. drainages of the Lower South Fork Coquille subwatershed. Legal description is: Township 31 South, Range 12 West, Sections 16, 20 & 21. The site location is shown on maps in Appendix 1.

Direction for management actions regarding BLM roads comes from the *Coos Bay District Final Proposed Resource Management Plan and Environmental Impact Statement* (BLM, September 1994) (RMP), the accompanying *Record of Decision* (BLM, May 1995) (ROD), and from 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* (Interagency, February 1994) (FSEIS; Northwest Forest Plan), its *Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl*, and accompanying *Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl* (Interagency, April 1994). This Environmental Assessment (EA) is tiered to both documents. These documents are available for review at the Coos Bay and North Bend Public Libraries and the Coos Bay District Office of BLM.

Watershed Analysis (WA) has been completed in the Lower South Fork Coquille Key Watershed (BLM April 1996) where the proposed project is to occur, and the objectives of this EA are in compliance with the recommendations listed in the WA (pp 95-105). The proposed action is in conformance with the Aquatic Conservation Strategy (ACS) objectives as described in the Standards and Guidelines (S&G's, pp. B-9 through B-34) of the Northwest Forest Plan. The watershed analysis is hereby incorporated by reference, and is available at the Coos Bay District Office of BLM.

The decision to be made in regard to this EA is to:

- not implement the project (No Action), or
- implement either the Proposed Action or Alternative I, as described in this document.

Issues and Concerns

The primary scoping process consisted of an interdisciplinary team (IDT) who defined the issues and alternatives to be examined in the EA. Additional specialists reports and analysis documents are contained in the analysis file and are hereby incorporated by reference.

Issue 1: Safe access to lands provided by Baker Cr. Rd. beyond the 5.0 MP

Baker Cr. Rd. between 5.0 & 6.0 MP is located on highly unstable terrain which has resulted in repeated road failures that are expensive to repair. A permanent "fix" seems unlikely due to scattered formations of bedrock 50 ft. or more below the soil surface; the subsoil is a heavy clay which is slow, to very slow to permeate water. The reroute as described in Section 2, will be on a near ridgetop location and on more stable permeable soils. The unstable and failing section of the 3.0 road will be decommissioned and provide limited access, through trail use only, to BLM lands.

Issue 2: Conformance with the Aquatic Conservation Objectives in a Key Watershed

The section on Baker Cr. Rd. to be closed is located midslope on terrain that is currently, and has historically, experienced extensive slope failures. The road prism has created an unnatural compacted bench that has interrupted the natural hydrologic flow, which has likely contributed to slope pressures, that exceed those expected for a "natural" disturbance regime.

Section II - Alternatives Including the Proposed Action

This section describes the alternatives, and summarizes the environmental consequences of each.

No Action Alternative

There would be no reroute around the road failures between MP 5.0 & 6.0 on the Baker Cr. Road(31-12-3.0). This highly unstable section of the 3.0 rd. would not be closed. Although it is expected that road maintenance would continue at the current level, repeated failures are likely to occur in the future that will be expensive to repair to keep the road open and safe to drive. Since the described portion of the 3.0 road is located midslope on highly unstable ground, the consequence of keeping it open with continual maintenance, is likely to further destabilize the existing slope above and below the road. This could increase sediment delivery to stream channels above the current condition.

Proposed Action

For reroute location
There will be a reroute around the 3.0 rd.(between the 5.0 & 6.0 MP) consisting of:

- approx. 1700 ft. of road improvement on an unnamed Georgia Pacific (G.P.) spur rd. in Sec. 20, T31S R12W.
- approx. 900 ft of new road construction connecting G.P. spur and BLM Road 31-12-21.0. About 550 ft will be on G.P. and 350 ft on BLM land.
- approx. 500 ft. of road improvement of the existing 31-12-21.0 rd.

The above work includes: slope staking, clearing, grubbing, excavation, embankment, end haul, culvert installation, geotextile installation, surface rock application, outsloping and soil stabilization.

For road decommissioning
The 3.0 rd. will be fully decommissioned between MP 5.0 & 6.0. Stream crossing culverts will be pulled and channels reconstructed to original width and slope. Guard rail barriers will be placed at the west end of the decommissioned road, but installed as to allow trail access. In addition, all stream channel backslopes would be recontoured at 2:1, to facilitate use of decommissioned portion as a trail for public access.

Design Features for the Decommissioning of Baker Creek Road

- the project would comply with the joint Department of State Lands/Corps of Engineers Removal Fill Law permitting process, and other associated permits before operating within the ordinary high water line of all streams.
- Complete stream crossing culvert removal when the flows are minimal, that is after August 5 and before fall rains begin, generally before October 1.
- When removing stream culverts excavate down to the original stream grade. Channel bottom finished width should be equal to the width of the natural stream on a similar slope above the culvert. The channel backslopes should be 2:1.
- Use sediment control methods during stream culvert removal to ensure that a noticeable turbidity plume in the stream does not travel more than 100 feet below the activity. Control methods may include: A) flow bypass or B) installing a temporary sedimat or similar sediment catching fabric immediately downstream during removal.
- Armor all stream channels with one layer of 6-10" screened rock.
- Armor the entire stream channel to the bankfull elevation. This depth is approximated as the average depth of the active natural channel (or bankfull) above the culvert.
- Emplace armor rock from about 10 ft. above the stream culvert inlet, through the road prism and to a point about 10 ft. below the fill. Tie into the existing stream channel.
- If the old stream substrate can be found under the culvert, leave in place and use less armor rock.
- Excavate fillslope side of road and drift material across to fill in-board ditch and create an outsloped road prism.
- Placement of hay bales on both banks, along the stream channel at culvert removal sites, to aid in bank stabilization and deter sediment transport to the stream channel, may be necessary at some locations, and is at the discretion of the project inspector.
- Road outsloping shall exceed road grade by 2%, and shall be a minimum of 3%.
- Leave the ditch relief culverts in place, pinch inlets closed, and fill catch basins with impervious material.
- Seed and fertilize all disturbed areas with a district approved erosion control/wildlife mix. Mulch to a depth of two inches with weed free straw.
- Guard rails of standard height will be placed at the west end of the decommissioned road at a location designated by the project inspector. Two lengths of rail should be placed end to end across the road prism, one set back from the other to allow an entrance of approximately six feet.
- The east end of the decommissioned road shall be blocked by excavating the road prism from the in-board ditch to the rip rap located below the fillslope. The excavated material shall be placed on the road.

General Design Features and Conservation Practices

- all construction activities would be in conformance with the Best Management Practices for Maintaining Water Quality and Soil Productivity described in the Coos Bay District ROD and RMP, Appendix D.
- all part of the reroute on Georgia Pacific land will have ditch relief culverts no more than 300 ft. apart. This section of the road will also be outsloped where possible.
- any in/near stream work involving heavy equipment is subject to State and Federal Law governing petroleum spill prevention and cleanup. These include Oregon Administrative Rules (OAR) 340, Division 108, Oil and Hazardous Materials Spills and Releases (DEQ), and OAR 629-57-3600, Petroleum Product Precautions, and Oregon Forest Practices Act,
- contractors or operators should be made aware of the BLM Coos Bay District Spill Plan in effect for riparian operations, and it will be followed in the event of any release of petroleum or hazardous materials,
- Seed and fertilize all disturbed areas with a district approved erosion control/wildlife mix. Mulch

the disturbed area to a depth of 2" with weed free straw.

- The proposed project area falls into the category of an Extensive Recreation Management Area (ERMA) under BLM Manual 8300 - Recreation Management. Thus, when it is appropriate, provide information to the public through signs or maps regarding public access in the proposed project area.
- Road construction, reconstruction, and decommissioning activities generating noises above ambient along the -21.0 road, the eastern-most 1000 feet of construction/reconstruction on private land, and decommissioning activities on the -3.0 road should not occur 1 March - 5 August. Additionally, activities from 6 August-15 September should be scheduled no earlier than 2 hours after sunrise and no later than 2 hours before sunset. Blasting would not occur from 1 March - 30 September. The blasting restriction could be lifted 15 September if protocol surveys indicate owls are not present, that they are not nesting, or that young have dispersed.

Monitoring of Proposed Action

Most compliance monitoring would be performed by the BLM's Project Inspector for the ensuing contract. Contract administrators will monitor the site as the work is performed to ensure that all contract stipulations are met. If a problem arises due to adverse environmental impacts that were not anticipated by the IDT, the problem would be brought to the attention of the contracting officer's representative and the appropriate resource specialist.

During the contract, the project site may also be periodically reviewed on the ground by resource specialists, and any necessary changes may be applied to correct resource problems.

Pre- and post-implementation monitoring will be carried out in accordance with the Northwest Forest Plan and the Coos Bay District RMP (BLM 1995). Future monitoring of the site will be conducted as part of the district implementation monitoring plan under the ROD.

Alternative I

This alternative would have the same reroute location and associated general design features as described for the Proposed Action. The affected section of the 3.0 rd. would be allowed to close itself over time with all drainage structures left in place, and thus there would be no design features for culvert removal. Foot, horse and trail traffic would continue through minor trail maintenance. Signs would be posted warning of potential hazards and road failure risk.

Monitoring of Alternative I

Most compliance monitoring would be performed by the BLM's Project Inspector for the ensuing contract. Contract administrators will monitor the site as the work is performed, to ensure that all contract stipulations are met. If a problem arises due to adverse environmental impacts that were not anticipated by the IDT, the problem would be brought to the attention of the contracting officer's representative and the resource specialist.

During the contract, the project site may also be periodically reviewed on the ground by resource specialists, and any necessary changes may be applied to correct resource problems.

Pre- and post-implementation monitoring will be carried out in accordance with the Northwest Forest Plan and the Coos Bay District RMP (BLM 1995). Future monitoring of the site will be conducted as part of the district implementation monitoring plan under the ROD.

Section III -Affected Environment

This section describes the existing condition of the environmental components that could be affected by the alternatives, and that could affect the alternatives if they were implemented. This section does not address environmental consequences, but rather acts as the baseline for comparison in Section IV - Environmental Consequences.

BOTANY

Botanical maps showed that *Iliamna latibracteata* , California globe mallow, grows within 1.5 air miles of this proposed project. The California globe mallow is a Bureau of Land Management Assessment species which requires that occurrences be recorded during field surveys and that impacts and recommendations for the species occur on a case-by-case basis. The site location actually contains potential habitat for this species.

Based on aerial photographs, potential habitat exists for a Survey and Manage protection buffer moss, *Ulota megalospora* (moss); Marginal habitat may exist for *Allotropa virgata* and *Cypripedium fasiculatum*, Survey and Manage component 2 vascular plants.

No Survey and Manage component 1 and 2 species (vascular plants, lichens, liverworts, and mosses) were found while surveying on June 25, 1999. No Special Status vascular plants, specifically, *Iliamna latibracteata*, was found. A checklist of all species found along with a map of the survey route is in the Botanical Clearance Report located in the analysis file.

The exotic tansy ragwort, *Senecio jacobaea*, was found scattered between the boundary with Georgia Pacific and BLM road 21-12-21.0 and along other portions of 21-12-21.0. Scotchbroom, *Cytisus scoparius*, occurs along portions of the 21-12-21.0 and 21-12-3.0 roads. Ox-eye daisy, *Chrysanthemum leucanthemum*, also grows along the more open portions of 21-12-21.0.

NOXIOUS WEEDS

The Baker Creek area has a high to moderate noxious weed potential. The area experiences frequent soil movement events and is likely to expose bare soil and consequently opportunity to begin noxious weed populations. The quarry in the immediate area of the proposed new road construction has a small population of Scotch Broom. Moderate to heavy populations of Broom (Scotch and French) are located away from the site along area access roads. Populations of Tansy Ragwort are historical, however, biological control is likely to keep the species limited in density.

Limited activity in the area has resulted in little or no spread in the resident noxious weed species.

WILDLIFE, INCLUDING T & E AND S & M SPECIES

The reconstruction and construction on BLM land goes through a 21 acre, 31 year old Douglas-fir plantation (1968 birth date). The reconstruction and construction on private goes through a similar age plantation, meadow, and a new clearcut. The Two By Four Creek murrelet site and the Upper Two By Four Creek spotted owl site are both near the reconstruction/construction on BLM land. The BLM portion (section 21) is within a Late Successional Reserve (LSR), and is murrelet critical habitat. Road density on BLM land in the Lower South Fork (LSF) Coquille watershed is approximately 2.62 mi/mi^2 with open road density about 1.77 mi/mi^2.

Two potential habitat patches for Del Norte salamanders exist in the vicinity of the project area. One was created by the construction of the -21.0 road. It is quite small (1050 $ft^{2)}$ and of poor quality for Del Norte salamanders.

The second is a small talus knob approximately 4550 ft^2. The northern most Del Norte salamander site lies approximately 2½ miles to the northwest on BLM land in Rowland Creek. The closest known occupied Del Norte salamander site (on BLM lands) lies approximately 1¼ miles to the north. Protocol surveys in other areas in the LSF Coquille found that approximately 39% of suitable habitat was occupied by Del Norte salamanders.

A total of ten *Prophysaon coeruleum*, a S&M mollusk species, were found in the vicinity of the project area on BLM land.

No additional surveys for S&M wildlife species will be conducted because of the low probability that the project area is occupied by *Prophysaon dubium* (another S & M Species) and the low probability of appreciable negative impacts to Del Norte salamanders and *P. coeruleum*
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RECREATION RESOURCES - ISSUE 1

The existing BLM road system and public lands in the Baker Creek area are currently and traditionally have been available to the public for recreational use. Hunting, fishing, camping, hounding, hiking, walking, and wildlife/nature viewing are identified as some of the recreational use activities associated with the existing roads in the proposed project area.

During the on-site investigation of the proposed project site and surrounding area, one hiker was observed actively recreating (along the 31-12-3.0 road) and one defunct campfire setting was observed (on the 31-12-21.0 road) providing evidence of current and past or repeated recreational use.

Recreational and tourist information is locally distributed at the Powers Chamber of Commerce/Visitor Center. Some of the existing information advertises the Glendale - Powers Bicycle Recreation Area and opportunities for fishing, hunting, and enjoying nature in the public area surrounding Powers. Information on camping and day use opportunities at the Powers County Park and USFS recreation sites are also available.

HAZARDOUS MATERIAL

A Hazardous Material Level I Site Survey was completed for the project area in June, 1999. There are no known hazardous materials within the project area.

CULTURAL RESOURCES

Class I Inventory (review of project documentation and records check) showed cultural resources were not reported within the immediate vicinity of the project area. A reconnaissance survey was completed of the project area on July 1, 1999. Significant cultural resources were not located.

PORT-ORFORD-CEDAR ROOT ROT

Port-Orford-cedar (POC) root rot (*Phytophthora lateralis*) was unintentionally introduced in the northwest as early as 1923. Historically, Port-Orford-cedar (*Chamaecyparis lawsoniana*) has been a component of the forests within portions of the Coos Bay District, mostly in the Myrtlewood Resource Area. In many watersheds, POC is susceptible to the disease, which is fatal to the host tree. *Phytophthora lateralis* (PL) occurs throughout the Lower South Fork Coquille Watershed, primarily along roads and state highways. The spread of the disease (via PL spores in soil) is influenced by human activities (especially by vehicles, tractor logging and bough cutting) and natural events. The natural events include rainfall, saturated water flow, movement of animals and movement of soils by natural erosion. Spores of PL move primarily downhill from one live POC to another in flowing water and, to a lesser extent, in all directions by root contact or animals. Therefore, the POC most likely to be infected and in turn transmit the disease occur along roads and in riparian areas where they come in contact with flowing water. It may require up to 5 years for PL to kill large trees and may require a few weeks to kill seedlings. After infection, resting spores may survive at least 7 years in the root system and soil after the host has died.

There is little chance of POC becoming extinct due to the disease. Even in areas of heavy disease occurrence, such as roadsides and private land, POC exists. Being a prolific seeder, POC produces seeds early, at between 5 and 9 years of age. Seed is produced every year with heavy seed crops every 4 or 5 years. Some POC exhibits a degree of resistance to the disease.

All issuing of bough cutting permits has stopped on the resource area as of October, 1993. This was one of the primary methods of dispersal of PL infections.

Myrtlewood Resource Area is using the direction provided by the BLM Port Orford Cedar Coordinator that the BLM POC Management Guidelines can be modified as deemed necessary by the interdisciplinary team for the specific project analysis.

A road system survey of POC and PL symptoms on roads was begun in March, 1997 and completed by June, 1997 for the Lower South Fork Coquille Analysis Area. The unnamed GP spur road in T31S.,R12W.,Section 20 was also surveyed for POC and PL in June, 1999.

In 1996, roads 31-12-3.0 and 31-12-22.0 were sanitized (all POC cut within 50 ft. on both sides of road).

AQUATIC HABITAT/FISHERIES

Baker Creek is a third order stream within a key watershed and is a tributary to the south fork of the Coquille River. The Baker Creek drainage supports populations of resident and anadromous fish, namely cutthroat trout, steelhead and coho salmon. Fish distribution, habitat quality and relevant history of Baker Creek are presented in the Lower South Fork Coquille Watershed Analysis (pp 67-77).

BLM spawning survey data indicate that there is a highly productive area (which is used by both coho and steelhead) on Baker Creek extending upstream 0.25 miles from the large culvert near the confluence with the South Fork Coquille River . Coho and steelhead extend approximately 1.6 miles up Baker Creek, and cutthroat are found at the top half of the stream. Anecdotal accounts (BLM 1995a & BLM 1984) indicate that some fall chinook spawning also occurs at the mouth of Baker Creek (LSFC Watershed Anal. 1996 pp. 44,45).

According to a 1992 stream habitat survey conducted by ODFW there are an insufficient number of pools per mile in Baker Creek . This shortcoming is largely due to the scarcity of large woody material (which facilitates scour and channel simplification), but heavy sediment loads are also causing pool filling to occur in some areas. Aerial photos from flight years 1955, 1970, 1992 and 1997 were studied to observe channel changes over time.

The headwaters of Baker Creek is approximately 400 feet north of an existing Georgia-Pacific road in T31S R12W Section 20. The proposed road improvement connects to the existing GP road and is south of first order tributaries to Baker Creek, the nearest tributary being approximately 300 feet. The 31-12-3.0 road that is proposed for decommissioning (T31SR12WSec21/16) has four first order Baker Creek tributaries intersecting it that are currently flowing water. These first order tributaries are degraded A5 channel types. The mainstem of Baker Creek is 0.33 miles from the closest proposed decommissioned point of the 3.0 road (the west section line of section 21, T31S R12W).

WATERSHED RESOURCES/HYDROLOGY

Currently, the Baker Creek Road (BLM Rd. 31-12-3.0) from MP 5.0-6.0 is located on highly unstable terrain causing repeated road and cut slope failures during saturated soil conditions.

Baker Creek Watershed:
Source channels (first-second order small stream channels) are supplying high amounts of fine sediments, during winter flows, to downstream reaches in various locations by head cutting and gullying in Baker Creek. These channels comprise 81% of the stream network in the drainage. Many more discontinuous channels (gullying not yet part of the stream network) have formed because of past harvest techniques (including legacy roads, failing culverts on non-system roads, and improper drainage clean-out) and concentrated flow from existing roads. The surface soils in the drainage over most of the area, are very erodible.

Table 1. Miles of Stream by Stream Order and Stream Density for Baker Creek.

Drainages	Miles of Stream by Stream Order [1]							
	1	2	3	4	5	6	7	Total
Baker Creek	19.5	11.4	2.8	3.2	1.2	0.0	0.0	38.1
Stream Density mi./sq. mi^2.	3.31	1.93	0.47	0.54	0.20	0.00	0.00	6.46

[1] Relative positions of streams, where all exterior links are order 1, and proceeding downstream, the confluence of two like orders result in existing stream order +1. The junction of two different orders retain the higher order and the main stream always has the highest order (Strahler, 1952).

The watershed is part of the Salmon-Baker-Rowland Key Watershed. Key watersheds are a system of refugia that were identified to supply key habitat and high quality water to at risk fish stocks (FSEIS ROD pg. B-12). Resident and anadromous fishes including the state sensitive coho salmon inhabit the watershed. Without erosion proofing existing roads or taking care of concentrated flow from road surfaces, gullying from source channels will continue at accelerated rates, contributing sediment to downstream reaches.

SOILS AND GEOLOGY

There are two distinct physical settings for this project: 1. location of an unstable portion of Baker Cr. Rd. proposed to be closed, as described earlier. 2. area of new construction and improvement for the reroute road approximately ½ mi. to the south of the road section to be decommissioned.

Setting 1. Geology is primarily of the Otter Point Formation which consists of a diverse assemblage of highly sheared sedimentary rock with isolated pods of harder more resistant bedrock of volcanics, chert and blueschist. Permeability of bedrock is slow owing to recementation of fractures by clay and calcite.

Soils are of the Whobrey - Etelka silt loam association. Soils are deep, but drain poorly due to very clayey subsoils which have very slow permeability. Water seeps are common, and road fill failures are frequent due to low bearing strength. Hazards associated with geology and soils are moderate to severe for: landsliding, and both slope and streambank erosion.

Special road drainage structures (extra culverts, perforated pipes, rock blankets etc.) are required to minimize sedimention and damage to the watershed. Road cuts and fills require heavy seeding, mulching and compaction to reduce erosion potential.

Setting 2. Geology is primarily of the Lookingglass Formation characterized by rhythmically bedded hard sandstone and siltstone with siltstone dominant high in the formation; has low ground-water potential, and bedrock is generally impermeable but has moderate infiltration along joints and faults.

Soils are of the Digger-Preacher-Umpcoos association. Soils are shallow to deep, gravelly loams and clay loams that are well drained with moderate permeability. All soils have a high erosion hazard, while shallow soils are subject to

severe landsliding, and gravelly soils are subject to severe subsurface piping.
Road cuts and fills require seeding, mulching and compaction to reduce erosion potential.

For detailed information on soil types see Coos Bay District Soils Inventory, BLM, 1977.

Section IV - Environmental Consequence

This section describes the scientific and analytical basis for comparison of the alternatives. The potential impacts of each alternative are discussed here as they relate to the affected resources.

Environmental Impacts to Critical Elements of the Human Environment

Examination has shown the following critical elements of the human environment to be *unaffected* by any of the projects.

- Air Quality
- Areas of Critical Environmental Concern
- Cultural Resource Values *
- Prime or Unique Farmlands
- Native American Religious Concerns
- Hazardous Materials & Solid Wastes *
- Wild & Scenic Rivers
- Wilderness Values
- Environmental Justice *

* These require specialist review; reports are located in the Analysis File

BOTANY

No Action

Direct and Indirect Effects
There would be no negative impacts to Special Status or Survey and Manage botanical species as a result of leaving the 31-12-3.0 road in its present condition and preparing basic road maintenance. The 31-12-3.0 road would continue to provide habitat for exotic plants and continual slumping of the road would sporadically create disturbed soil which are likely to be colonized by scotch broom, tansy ragwort, and other exotic plant species.

Proposed Action

Direct and Indirect Effects
There would be no negative impacts to Special Status or Survey and Manage species due to 350 feet of road construction, 500 feet of road improvement, and approximately one mile of road decommissioning. Botanical diversity and abundance would decrease where the 350 feet of road construction and 500 feet of road improvement occur. These actions would disturb the soil and create habitat for exotic plants, especially ragwort tansy which grows scattered at the site. Decommissioning the 31-12-3.0 road would also create disturbance, but in areas of already disturbed ground. Decommissioning the road by pulling culverts, etc. would prevent vehicular traffic; thus, slowing down the rate of exotic invasions in this mile of road. Planting native plants along 31-12-3.0 would enhance botanical diversity and abundance and provide more competition against exotic plants.

Alternative I

Direct and Indirect Effects
There would be no negative impacts to Special Status or Survey and Manage species from this action. Botanical diversity and abundance would decrease where the 350 feet of road construction and 500 feet of road improvement occur. These actions would disturb the soil and create habitat for exotic plants, especially ragwort tansy which grows scattered at the site. Along the 31-12-3.0 road, habitat for exotic plants (and natives) would remain and most likely be colonized by a higher percentage of exotic plants; this would decrease future botanical diversity in this mile.

CUMULATIVE EFFECTS

No Action: No negative cumulative impacts to Special Status or Survey and Manage species would occur in the long-term if no action took place. However, the 31-12-3.0 road would continue to provide hazards to all who travel the road.

Proposed Action: No negative cumulative impacts to Special Status or Survey and Manage species would occur in the long-term. Habitat for plants would be removed from the 350 feet of new road construction. If native vegetation is planted then botanical diversity and abundance could increasefor the mile section of road decommissioning and provide future competition against the establishment of exotic plants.

Alternative 1: No negative cumulative impacts to Special Status or Survey and Manage species would occur in the long-term. Disturbed ground which is good habitat for exotic plants would remain available on the unused road and where sporadic slumping occurs. Establishment of exotic plants would continually occur and most likely occur at a faster rate than for native plants.

MITIGATION MEASURES

Proposed Action: Plant native species along with pulling and re-constructing the channels to their original width and slope on the 39-12-3.0 road. A botanist can help with determining which species to plant.

For Both Action Alternatives: The new road construction should be monitored for an increased abundance in exotic plants, specifically tansy ragwort and scotchbroom. Pulling and/or herbiciding should be conducted to prevent the spread of these plants.

NOXIOUS WEEDS

No Action

Direct and Indirect Effects
Current populations of Scotch Broom will continue to increase in density and frequency. However, this will be limited on the amount of activity in the area. Tansy populations will adjust with the biological control affecting the species. Natural disturbance will randomly influence current populations with additional opportunity for spread. Current populations trapped behind no access areas would be undetected in growth and density and consequently would be more costly to control at a later period of time.

Proposed Action

Direct and Indirect Effects
Any activities increasing the amount of bare soil will also increase the probability of additional population spread and density. Road construction involving traffic, heavy equipment, and source materials outside the area will amplify any potential introductions of noxious weeds and other exotic species of the gross area. Current populations are likely to increase with their closeness to the project area.

Alternative I

Direct and Indirect Effects
This alternative has the same environmental consequences as the Proposed Action.

CUMULATIVE EFFECTS (all alternatives)

Existing populations of noxious weeds will potentially double under the No Action alternative, and with either of the action alternatives will potentially quadruple based on exposure (roads) and disturbance (construction).

MITIGATION MEASURES

For Both Action Alternatives:
- Remove all noxious weeds along all primary access routes within one mile from the project area prior to construction.
- Document all noxious weed locations along all access roads for a distance of five miles.
- Monitor project area for a period of three years for new noxious weed populations. If new populations do occur, document their presence and remove them.
- Inspect and record noxious weed locations associated with rock sources used. Remove all weeds within 1/4 mile of rock stockpile location along primary access roads to the project area.

Surveys and removal of weeds as described for the mitigation above, will be supported by the district noxious weed control budget under the direction of the district weed control coordinator.

WILDLIFE, INCLUDING T & E and S & M SPECIES

No Action

Direct Effects
There would be no direct effects to survey and manage, T&E, or other wildlife species known or suspected to occur in the area.

Indirect Effects
Road density would remain at the current level, approximately 1.77 mi/mi^2, which is below the maximum (2.9 miles/mile^2) but above the target density (1.1 miles/mile^2) stated in the RMP.

Proposed action

Direct Effects
T&E Species - Construction activities could disturb nesting activities of spotted owls and murrelets which occur within 0.25 mile of the reconstruction/construction. The Two By Four Cr murrelet site is one of the most active murrelet sites on the District. Disturbance impacts could be easily avoided by implementing seasonal restrictions and avoiding disturbances during the nesting season.

Del Norte Salamander - The proposed construction and reconstruction on BLM land would disrupt the smaller habitat patch and would remove some canopy cover from the site. The small size, marginal quality, and artificial origin of this patch suggest the site is unlikely to support a self-sustaining population. The larger habitat patch contains higher quality, natural habitat and is conceivably large enough that it could support a self-sustaining population. The proposed action skirts around the base of the talus knob and avoids disrupting the surface talus and canopy cover at the larger patch. The site now cuts around the base of this knob, but avoids cutting into the slope break and disrupting the surface talus; it also avoids cutting the key trees providing shade to this south-facing site. By avoiding disrupting the surface talus, maintaining > 60% canopy cover on the talus habitat, and retaining the key trees along the edge of the habitat which provide important shading to the site, most direct impacts to the potential Del Norte salamander habitat would be avoided. Appreciable adverse impacts to Del Norte salamanders are not expected.

Mollusks - *Prophysaon coeruleum*, a S&M species, appear to be relatively common in the stand containing the BLM portion of the proposed construction/reconstruction; 5 of 6 survey searches turned up at least one individual. Habitat potential throughout the 21 acre stand appears relatively constant. Past surveys in the LSF Coquille have also indicated high numbers of *P. coeruleum*; approximately one third of survey sites were occupied by *P. coeruleum*. Road construction/reconstruction activities would directly impact approximately 4% of the habitat in the stand. The stand's young age (31 years) and lack of hardwoods suggest other S&M mollusk species are unlikely to be present. Appreciable adverse impacts to S&M mollusk species are not expected.

Indirect Effects
Numerous studies suggest that some wildlife species, particularly small mammals and invertebrates, seldom cross roads - even roads that are closed to vehicles (Noss and Cooperrider 1994). Baur and Baur (1990) concluded that an unpaved road may have acted as a dispersal barrier to a land snail. Vegetation and litter have begun to establish/accumulate on the -21.0 road surface which reduces the barrier effect of the road. Reconstructing the road segment would reestablish and maintain the barrier presented by a rocked, forest road surface. Other habitat patches, which may exist along the 1 mile section of the -3.0 road proposed for closure, may be reconnected as this stretch of road heals over with vegetation and litter.

There would be a net reduction of 4380 feet of road from the LSF Coquille (1 mile of closure less 900 feet of new construction). The reduction on BLM land would be 4930 feet (1 mile of closure less 350 feet of new construction). Road density on BLM land would decrease from 2.62 mi/mi^2 to 2.54 mi/mi^2. Since the proposed reroute would be gated, it would reduce open road density a total of 4.28 miles thereby decreasing open road density from 1.77 mi/mi^2 to 1.39 mi/mi^2 bringing it close to the RMP goal of 1.1 mi/mi^2. Road closures would eventually allow habitats, currently disconnected by a maintained road corridor, to reconnect as the road surface vegetates and canopy cover closes.

Alternative I

Direct Effects
Same as the Preferred Alternative

Indirect Effects
The effects to road density would be similar to the preferred alternative, except that the road density reductions would not be obtained until the old road segment eventually closed on its own through lack of maintenance. It could take many years for the entire road segment to close at both ends on its own.

CUMULATIVE EFFECTS (all alternatives)

BLM timber sales proposed for the LSF Coquille watershed would close some existing roads and reduce road densities down to 2.06 miles/mile^2. Final actions on the timber sales are pending management recommendations for S&M species.

RECREATIONAL RESOURCES -ISSUE 1

No Action

There are no direct, indirect or cumulative effects if this action is selected. The existing condition will continue.

Proposed Action

Direct Effects:

1. The road closure and re-route will eliminate the existing public access to motorized recreation users beyond MP 5.0 on the 31-12-3.0 road. The current level of motorized travel will decrease beyond MP 5.0.
2. Recreational opportunity will be decreased by restricting the existing access that is available to activities dependent upon road access.
3. The accessability level that currently exists will decrease. Closing the road and creating barriers that do not currently exist will make access more difficult to some disabled and elderly public.

Indirect Effects:

1. Foot traffic or trail visitation may increase due to the lack of motorized access.
2. Camping activities may increase due to the lack of traffic on the road system beyond MP 5.0.

CUMULATIVE EFFECTS

1. Law enforcement patrols, emergency access, and fire suppression associated with the changes in public/recreational use may be more difficult or time consuming with decreased motorized access between MP 5.0 and 6.0.
2. Existing recreational activities, that would be restricted by the proposed project, may be displaced onto other public or private lands in the area.

Alternative I

Direct, indirect and cumulative effects are the same as noted under the proposed action with the exception that the effects would not occur as rapidly. Allowing the road to close over time naturally instead of by creating barriers eliminates the immediate time frame of the effects.

HAZARDOUS MATERIALS

There are no environmental consequences for hazardous material or solid waste under No Action, the Proposed Action or Alternative I.

CULTURAL RESOURCES

No Action

There are no environmental resources for cultural resources under the No Action alternative.

Proposed Action

It is not expected that cultural resources will be affected by the Proposed Action. If any potential cultural resources are encountered during road construction, all work in the vicinity should stop, and the District Archeologist notified at once.

Alternative I

It is not expected that cultural resources will be affected by Alternative I. If any potential cultural resources are encountered during road construction, all work in the vicinity should stop, and the District Archeologist notified at once.

PORT-ORFORD-CEDAR ROOT ROT

No Action

Direct and Indirect Effects
The spread of PL has been minimized due to the roadside sanitation of the 31-12-3.0 and 31-12-22.0 roads in 1996. However, PL would continue to spread to healthy POC along unsanitized roads beyond these roads. Public use beyond these roads would also continue to occur, increasing the chances for PL to spread. A map of POC locations is in the specialist report on POC root rot located in the analysis file.

Proposed Action

Direct and Indirect Effects
This alternative would close 1 mile of BLM road and construct 550 ft. of road through a recently burned GP clearcut (POC eliminated in burned area). It would also construct 350 ft. of road on BLM lands that run through a 31 year old (1968) Douglas fir/Hemlock plantation, with a heavy understory of POC. Thus, there would be a net gain of 0.93 miles of closed road on BLM lands. This alternative would decrease the spread of PL, due to less public traffic along the closed portion of the 31-12-3.0 road and beyond. The BLM would continue to access these areas, to manage approximately 339 acres of BLM land in need of silvicultural treatments such as manual maintenance, precommercial thinning, fertilization and density management. The majority of these silvicultural treatments are expected to be completed by year 2008, thus resulting in even less traffic to the area. The exception would be density management, which would occur in about year 2015.

Alternative I

Direct and Indirect Effects
The spread of PL has been minimized due to the sanitation of the 31-12-3.0 and 31-12-22.0 roads in 1996. However, PL would continue to spread to healthy POC along unsanitized roads beyond these roads. Public use beyond these roads would also continue to occur, increasing the chances for PL to spread. Once the 31-12-3.0 road becomes closed over time, public use would decrease, subsequently decreasing the chances for PL to spread.

CUMULATIVE EFFECTS (all alternatives)

As PL continues to spread along unsanitized roadsides, fewer POC would be expected to survive in High Risk Sites, except for individuals that are disease resistant (refer to Lower South Fork Coquille Analysis Area EA-Revised POC Evaluation/BLM, 1998). High Risk Sites are all areas within a 50 foot distance of roads and streams. There would also be the potential for PL to spread from High Risk Sites to Low Risk Sites. Low Risk Sites are all areas outside the 50 foot distance of roads and streams. There are approximately 12084 green POC trees in the Low Risk Sites of the Lower South Fork Coquille Watershed on BLM lands. Sanitized roads are not expected to have an increase of PL.

MITIGATION MEASURES (to limit the spread of PL)

For Both Action Alternatives: To lessen the spread of PL, all heavy equipment used for construction would be washed prior to entering the construction sites. In addition, the 350 ft. of new construction on BLM land and the entire 31-12-21.0 road (0.8 miles) would be sanitized (cut all POC within 30 ft. on both sides of road).

MONITORING

The Low Risk Sites will be surveyed by use of aerial photos or infrared imagery to detect potential spread of PL from High Risk Sites along sanitized roads. This survey would be conducted within approximately 5 years, when photography and imagery becomes available.

A spot sample of the roadsides would be done on the ground where previous infection centers were mapped and areas of green POC were cut. This should occur at 3 and 6 years after completion of the Baker Creek Reroute. This will be done to see if PL has spread into Low Risk Sites outside of the sanitized roadside area.

A sample based monitoring approach which actually determines presence or absence of the pathogen and provides a measure of quantity of inoculum present is being conducted by the Southwest Oregon Forest Insect and Disease Technical Center to assess the effectiveness of sanitation. Some sample transects for this study have been installed on the Myrtlewood R.A.

The roads that were sanitized in 1996 (31-12-3.0 and 31-12-22.0) were resurveyed in June, 1999. Sanitation was effective in eliminating the roadside POC, and no new PL infections were found inside or outside of the sanitized areas of these roads.

AQUATIC HABITAT/FISHERIES

No Action

Direct and Indirect Effects

Under this alternative it is expected that the unstable portion of the-3.0 road will continue to fail and be a potential source for sediment delivery to Baker Creek and its tributaries, and any condition that would increase sediment delivery to Baker Creek could be detrimental to fish health and productivity. Baker Creek has an insufficient number of pools/mile (stream survey, ODFW 1992) and a contributing factor is heavy sediment loads filling in pools. Juvenile cutthroat trout use low-velocity pools and side channels with complex cover created by large woody debris and therefore may be found in some of the first and second order tributaries to Baker Creek. These small streams would be most directly affected by sediment delivery from continued failures of the 3.0 road.

There are other direct effects to fisheries from increased fine sediment inputs. At persistent high levels sediment can abrade gill filaments causing fish to weaken and become vulnerable to disease and infection. Sediment can fill gravel pore spaces in spawning areas, thereby reducing water circulation necessary for egg survival and development. At high levels suspended sediment can cause a change in adult salmonid migration behavior, possibly delaying runs of fish, such that they do not arrive at spawning grounds at the correct time if at all. Increased sediment loads may affect the feeding ecology of salmonids, particularly at night during winter. Depending on the magnitude, timing, and other factors, the impact of the above effects on fisheries could range from negligible to catastrophic.

Indirectly the biological productivity of streams can be decreased by excessive sediments. The production of macroinvertebrates, used as food by fish, can be reduced. The filling in of pools reduces the rearing space for fish.

Proposed Action

Direct and Indirect Effects
The reroute would occur near a ridgetop on a stable flat area , and does not include any stream crossings. There would be minimal interception of subsurface flow, and there would be no diversion of stream flow. There are some defined channels within 250 feet of the improvement on Georgia-Pacific property but no indicators of a perennial stream were observed (protocol found in Big Creek EA, #OR128-98-11, Section O Attachment 1).

The decommissioning of the 31-12-3.0 road is expected to reduce the probability of sediment delivery from surface erosion, landslides and culvert/fill failures in the long-term, and future impacts to aquatic habitat would likely be reduced. When roads are renovated, constructed, or decommissioned, one can expect a subsequent short-term (1-5 years) increase in delivery of suspended fine sediments, especially where ditches intercept stream channels. This alternative would also reduce the road density on BLM land within the Lower South Fork Coquille watershed to approximately 2.54 mi/mi^2. Overall there would be an improvement to the long term condition of the watershed.

Alternative I

Direct and Indirect Effects
If the 3.0 road is allowed to close itself over time with no effort toward restoring its pre-road hydrologic function, it is likely the landslide prone and highly erodible soils will deliver excessive sediments to the stream network causing adverse effects to the aquatic communities. For example when functioning culverts become blocked this could result in road flooding, diversion of flows and gullying with consequent transport of excessive sediments. This would not meet the ACS objective to “maintain and restore the sediment regime under which aquatic ecosystems evolved.” Additionally, under this alternative stream culverts would not be removed and their channels restored. To not remove the stream culverts would not meet the ACS objective to “maintain and restore the physical integrity of the aquatic system, including bank and bottom configurations.”

CUMULATIVE EFFECTS

No Action & Alternative I: Chronic increases in sediment input would persevere over the life of the road, and may overload streams beyond their capacities to transport the sediment downstream. One of the most dramatic effects of this is pool filling and the subsequent loss of fish habitat.

Proposed Action: Cumulative effects of sediment delivery from surface runoff on local fish populations are unknown. Negative cumulative effects however, are expected to be diminished relative to the ‘No Action’ alternative and ‘Alternative I'.

WATER RESOURCES/HYDROLOGY

No Action

Direct and Indirect Effects
Effects as a result of this action being implemented include soil loss and water quality degradation from road failures at present rates. Sediment transport from stream crossings along this existing segment of the 3.0 road will have the continued potential to degrade downstream fish habitat reaches of the Baker Creek and South Fork Coquille watershed.

Proposed Action

Direct and Indirect Effects
Effects as a result of this action include increased development within the Baker Creek watershed. Initial impacts due to exposed cut banks, road construction, road closure re-contouring, and culvert removal and installation could

initially elevate sediment transport levels to the Baker Creek system. However, once re-vegetation of the closed road segment and new cut slopes has stabilized, combined with the Best Management Practices (BMP's) and design features outlined in this EA, overall sediment transport should decline below present rates.

Alternative I

Direct and Indirect Effects

Effects as a result of this alternative include those listed under the 'No Action' alternative due to leaving the3.0 road in it's existing condition. The continued sediment transport potential stems from the fact that this road segment will undoubtedly continue to slump and slide during the winter rainy season. Also, without continued maintenance, future slides run the risk of plugging existing culverts and drainage ditches, thereby, increasing the risk of diverting surface flows and increasing sediment transport to stream channels. Sediment transport from new road construction and improvement would also initially increase sediment levels as described under the 'Proposed Action', but these levels should decline once vegetation has established and the road bed and cut slopes have stabilized.

CUMULATIVE EFFECTS

No Action & Alternative I: Under these alternatives there are expected to be continued slope failures above and below the affected portion of the 3.0 road. Cumulative effects would be negative to the stream network for water quality and channel degradation.

Proposed Action: No negative cumulative effects are expected as a result of this alternative. As a result of stabilizing a one mile portion of road and using the BMP's and design features outlined in this EA, overall cumulative effects are expected to be positive for water quality and stream channel restoration.

SOILS AND GEOLOGY

No Action

Direct and Indirect Effects

Under this alternative Baker Cr. Road between 5.0 & 6.0 MP will likely continue to fail because of the inherent instability of the hill slopes above and below the road. Road fill failures would gradually narrow the road width, or possibly obliterate a whole section of road with a seasonal storm event. Cutbank and upslope failures would likely fill in ditchlines and cause slide debris or soil creep to fall onto the road.

Indirectly the continuing slope and cutbank failures would likely damage and reduce the effectiveness of existing drainage structures. Depending on the extent of damage, ditchlines and culverts could become blocked diverting flows over the road causing fill failures and increase sediment delivery to stream channels.

Proposed Action

Direct and Indirect Effects

The reroute location occurs close to a ridgetop where a road cut would create less slope stress, as compared to the midslope area where the 3.0 road occurs. The reroute generally occurs on soils that are more permeable and have greater bearing strength when wet, than the soils occurring downslope.   Because of a near ridgetop location interception of groundwater would be slight, thus reducing the potential for saturation of road fills and consequent failures. Greater soil compaction will occur as a result of construction activity and the rerouted road. Some of the adverse effects of compaction would be offset however, with greater soil bearing strength and reduced potential for saturated road fills.

Decommissioning a mile of the 3.0 road will not directly affect the instability of the slope and the road location. Using BMP's and the design features outlined in this EA however, will reduce the potential for concentrated flows both in channels and in runoff from the old road surface. This reduction will likely result in less channel and surface erosion.

Alternative I

Direct and Indirect Effects

Under this alternative effects resulting from the reroute road would be the same as described under the 'Proposed Action'. Allowing the section of the 3.0 road to close itself over time would have essentially the same effects as described under 'No Action' with the exception that adverse effects may be accelerated due to lack of road maintenance, and 350 ft. of new road will be built in a key watershed.

CUMULATIVE EFFECTS

No Action: The described section of the 3.0 road is located midslope on highly unstable terrain creating a compacted bench, which has in places, interrupted the natural hydrologic flow. A road cut on this midslope location makes unstable ground even more unstable. The concentration of flows created by inadequate drainage structures promotes gullying and sediment delivery to nearby streams on these highly erodible soils. To keep this road section open would, over time, contribute to slope failures and sediment deliveries that may exceed what is expected for a "natural" disturbance regime.

Proposed Action: As a result of decommissioning a mile of the 3.0 road, any landslide debris falling onto the old road may gradually "fill in" the road cut giving additional support to the slope above. This would restore the "natural" disturbance regime to the location. Cumulative effects in regards to sediment delivery and ground water interruption from creating the reroute road are expected to be minimal. Reduced traffic on public roads for recreational purposes will reduce sediment runoff from road surfaces during the rainy season. This may result in less delivery to stream channels.

Alternative I: Cumulative effects from the reroute road would be the same as mentioned under the 'Proposed Action'. By leaving the 3.0 in its existing condition effects would be the same as described under 'No Action'.

Section V - List of Agencies and Persons Consulted
List of Preparers and Contributors

Agencies and Persons Consulted

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Literature Cited

Baur, A., and B. Baur. 1990. Are roads barriers to dispersal in the land snail *Arianta arbustorum?* Can. J. Zool. 68:613-617.

Betlejewski, Frank. 1994. Port-Orford-Cedar Management Guidelines. U.S. Dept. Of Interior. BLM. 32 p.

BLM 1994b. Port Orford Cedar Guidelines.

BLM 1995. Coos Bay District Record of Decision and Resource Management Plan. USDI Bureau of Land Management, Coos Bay District Office, North Bend, OR. May 1995.

BLM 1996b. Watershed Analysis: Lower South Fork Coquille analytical watershed. Unpublished report on file at the Coos Bay District, Myrtlewood Resource Area, BLM. 113 pp.

BLM 1998. Lower South Fork Coquille Analysis Area EA–Revised Port Orford Cedar (POC) Evaluation.

Diller, L.V., and R.L. Wallace. 1994. Distribution and habitat of *Plethodon elongatus* on managed, young growth forests in north coastal California. J. Herpetol. 28:310-318.

Interagency, 1994. Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of Northern Spotted Owl, and Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl. April 1994.

Noss, R.F., and A.Y. Cooperrider. 1994. Savings nature's legacy. Island Press, Washington, D.C. 416 pp.

U.S. Department of Agriculture (USDA). 1989. Soil Survey of Coos County, OR.