ENVIRONMENTAL ASSESSMENT

United States Department of the Interior
Bureau of Land Management
Salem District Office
Marys Peak Resource Area

Fiscal Year 2001-2002 Road-Related Watershed Restoration Projects

Environmental Assessment Number: **OR-080-01-10**

Prepared by : Richard Bergen
Salem District, Bureau of Land Management

SUMMARY: The proposed projects would improve and/or decommission six roads in the Marys Peak Resource Area. Culverts would be replaced or removed and road drainage improved. The six projects would be located in Lincoln and Benton Counties, Oregon. This assessment focuses on the following issues:

Effects of the project on: Aquatic Resources
Threatened and Endangered (T&E) wildlife
Wildlife Habitat
Survey and Manage Species
Water Quality / Soils
Riparian Resources

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Comments regarding this Environment Assessment and the Finding of No Significant Impact should be received by the BLM, Marys Peak Resource Area by May 31, 2001.

FINDING OF NO SIGNIFICANT IMPACT

INTRODUCTION

The Bureau of Land Management (BLM) has analyzed the potential effects of road improvement and decommissioning, Marys Peak Resource Area, Oregon. The proposed action described in this environmental assessment (EA) involves: culvert removal and replacement, and road drainage improvement as directed by the Record of Decision for the Salem District Resource Management Plan (RMP). The EA is attached to and incorporated by reference in this Finding of No Significant Impact (FONSI) determination.

This FONSI and the EA are being made available for public review prior to making a decision on the action. The public notice of availability for review will be published in local newspapers of general circulation and through notification of interested individuals, organizations, and state and federal agencies. They will also be available for review on the internet at http://www.or.blm/salem under *planning*.

Finding Rationale

For the alternatives analyzed, significant impacts on the quality of the human environment would not occur based on the following criteria:

1) The alternatives are in conformance with the following documents which describe the objectives, land use allocations, and management actions/direction for BLM-administered lands in the Marys Peak Resource Area:

Record of Decision and Standards and Guidelines for Amendment to the Survey & Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines (S&M ROD, January 2001) and the *Final Supplemental Environmental Impact Statement For Amendment to the Survey & Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines* (S&M FSEIS, November 2000).

Salem District Record of Decision and Resource Management Plan (RMP, May 1995).

Salem District Proposed Resource Management Plan/Final Environmental Impact Statement (PRMP/FEIS, September 1994).

Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl (ROD, April 1994) 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* (SEIS, February 1994).

South Fork Alsea Watershed Analysis (1995);
North Fork Alsea Watershed Analysis (1996);
Lower Alsea Watershed Analysis (1999)

2) Conformance of the alternatives with the Aquatic Conservation Strategy (ACS) Components and Objectives listed in the ROD/RMP (pp. 5 and 6) are displayed below.

Conformance of Alternatives with Aquatic Conservation Strategy Components

Component of the ACS	**Relationship of This Action**
Riparian Reserves	Actions/directions for the management of roads in Riparian Reserves, as directed on P.11 of the ROD: Reconstruct roads and associated drainage features that pose substantial risk; Close and stabilize roads based on the ongoing and potential effects to ACS objectives and considering short-term and long-term transportation needs.
Key Watershed	There are no projects being analyzed in this environmental assessment within a key watershed.
Watershed Analysis	Watershed analysis has been completed for all of the fifth field watersheds containing roads proposed for removal or upgrading in the environmental assessment.
Watershed Restoration	Complies with Watershed Restoration management actions/ direction as directed in Standards and Guidelines for the RMP p. 7: "Watershed restoration should focus on removing and upgrading roads."

3) The alternatives are consistent with other federal agency and state of Oregon land use plans and with the Lane, Benton, and Polk County land use plans and zoning ordinances. Any permits associated with the implementation of this project would be obtained and all requirements would be met.

4) No wild and scenic rivers, prime or unique farmlands occur within the proposed project area.

5) No hazardous materials or solid waste were observed in the project area nor would they be created by the proposed action. Any chemicals or fuel used on the site would be handled using best management practices.

6) The project area does not qualify for potential wilderness nor has it been nominated as an area of critical environmental concern.

7) Project design features would assure that potential impacts to water quality from this project would be in compliance with the state of Oregon In-stream Water Quality Standards and thus the Clean Water Act.

8) The proposed action is within the coastal zone as defined by the Oregon Coastal Management Program. This proposal is consistent with the objectives of the program and the state planning goals which form the foundation for compliance with the requirements of the Coastal Zone Act. Management actions/direction found in the ROD/RMP were determined to be consistent with the Oregon Coastal Management Program.

9) Cultural and paleontological resources were not found in the proposed project area.

10) The proposed action and alternatives are in conformance with Alternative 9, as modified (*Northwest Forest Plan* and ROD/ RMP). The biological opinion of the United States Fish and Wildlife Service (UFWS) is that the adoption of Alternative 9, as amended, is not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of any designated critical habitat for those listed species.

Consultation with the USFWS regarding **noise disturbance** created by all FY2001 projects in the Marys Peak resource area has been initiated as part of the *Programmatic Biological Assessment of Fiscal Year 2001 projects in the North Coast Province which might disturb bald eagles, northern spotted owls or marbled murrelets* (Dec 15, 2000). The Biological Opinion has not yet been released by the Service at this time (April 2001). It is expected that the BO will determine that the level of any anticipated incidental take is not likely to result in jeopardy to the owl or murrelet. ***No activities will take place until the BO is issued.*** All applicable Terms and Conditions listed in the BO will be incorporated as design features into these actions.

Consultation with the USFWS regarding **habitat modification** as a result of FY2001 projects in the Marys Peak resource area, including the Klickitat Road Repair, has been completed as part of the *Programmatic Biological Assessment in the North Coast Province for Fiscal Year 2001 projects which would modify the habitats of bald eagles, northern spotted owls or marbled murrelets* (August 8, 2000). A Biological Opinion was completed by the Service and issued on October 4, 2000 (reference number USFWS 1-7-00-F-649). The BO determined that the level of any anticipated incidental take is not likely to result in jeopardy to the owl or murrelet. All applicable Terms and Conditions listed in the BO will be incorporated as design features into this action. Every effort will be made to minimize the impacts to owls, murrelets and the red tree vole.

11) The proposed projects incorporate the project design criteria included in the *Biological Opinion* for the *Programmatic Biological Assessment for On-going USDA Forest Service and USDI Bureau of Land Management Activities Affecting Oregon Coast Coho Salmon within the Oregon Coast Range Province, Oregon (*National Marine Fisheries Service, November, 1998).

The proposed action is local in nature, and potential adverse impacts would be short-term. Impacts were determined based on observation, professional training and experience of the interdisciplinary team of BLM natural resource specialists. Determining such environmental effects reduces the uncertainties to a level which does not involve unique risks. The design features identified in the EA would assure that no significant site-specific or cumulative impacts would occur to the human environment other than those already addressed in the EIS.

Finding of No Significant Impact Determination

Based on the analysis of information in the attached EA, my determination is that a new EIS or supplement to the existing EIS are unnecessary and will not be prepared. The proposed action would not result in significant environmental impacts affecting the quality of the human environment greater than those addressed in the existing EIS.

Acting Marys Peak Resource Area Manager

04/23/01
Date

Comments regarding this environmental assessment should be received by the Bureau of Land Management, Marys Peak Resource Area, by May 31, 2001

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I. PURPOSE AND NEED

A. Introduction

The Marys Peak Resource Area of the Bureau of Land Management (BLM) is proposing to decommission and/or repair selected roads using Fiscal Year 2001-2002 Jobs-in-the-Woods and Emergency Repair of Federally Owned Roads (ERFO) funding or by utilizing district road maintenance crews. The major objectives of the proposed work are to control and minimize road-related runoff and sediment production and to improve fish passage.

This EA is organized in the following fashion. The descriptive information in the main text of this environmental assessment (EA) is applicable to all of the proposed projects. Detailed descriptions and analyses of individual projects are found in Appendix A. Locations are shown on the maps at the end of each project section. Additional information about the projects is available in Marys Peak Resource Area NEPA file and the project files. Throughout the analysis, quantitative measures, such as feet and miles, are approximate.

This environmental assessment (EA) is tiered to the *Record of Decision and Standards and Guidelines for Amendment to the Survey & Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines* (S&M ROD, January 2001) *Final Supplemental Environmental Impact Statement For Amendment to the Survey & Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines* (S&M FSEIS, November 2000). The S&M ROD amends a portion of the Northwest Forest Plan by adopting new standards and guidelines for Survey and Manage, Protection Buffers and other mitigating measures.

This environmental assessment (EA) is also tiered to the *Salem District Record of Decision and Re-source Management Plan* (RMP May, 1995) and the *Salem District Proposed Resource Management Plan/Final Environmental Impact Statement* (PRMP/FEIS, September 1994). The FEIS analyzed broad scope issues and impacts within the Northwest Forest Plan's direction to meet the need for forest habitat and forest products (p. 1). The RMP provides a comprehensive ecosystem management strategy for BLM-managed lands in the Salem District in strict conformance with the Northwest Forest Plan and the *Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl* (April 1994).

The actions described in this EA are proposed as a means of implementing the Aquatic Conservation Strategy Objectives (ACSO) as spelled out on pages 5 to 7 of the RMP.

Under **Management/Direction** (RMP, p. 7) the BLM is directed to:

- Prepare watershed analyses and plans prior to restoration activities and;
- Focus watershed restoration on removing some roads and where needed, upgrading those that remain in the system.

On page 62 of the RMP it states the following:

"Determine the influence of each road on the Aquatic Conservation Strategy objectives through watershed analysis. Meet ACSO's by

- reconstructing roads and associated drainage features (culverts, etc) that pose a substantial risk;
- prioritizing reconstruction based on current and potential impact to riparian resources and the ecological value of the riparian resources affected; and
- closing and stabilizing, or obliterating and stabilizing roads based on the ongoing and potential effects to ACSO's and considering short-term and long-term transportation needs."

Watershed Analyses were completed for the South Fork Alsea Watershed (1995), the North Fork Alsea Watershed (1996), and the Lower Alsea Watershed (1999) and resulted in recommended road-related restoration activities in those watersheds. Specific recommendations triggering this proposal are contained in project specific purpose and need sections in Appendix A.

The primary goals of the proposed projects are to assist in restoring and improving ecological health of watersheds and aquatic systems, while honoring existing road right-of-way agreements. None of the projects would retard or prevent attainment of ACS objectives (see table on following page) and all of the projects were evaluated to ensure they meet transportation management objectives (*Salem District Record of Decision and Resource Management Plan*, (RMP, p. 63).

Beneficial uses associated with the water in the project areas include a public water supply, private domestic water supply, irrigation, fisheries, wildlife, recreation, and aesthetic quality (see section E below). Issues common to the 3 watersheds include that they are Oregon Department of Environmental Quality (DEQ) 303d listed streams that are listed for water temperature, sedimentation, water quality and rural interface areas. See Appendix A for a project-by-project review summary of beneficial uses and common issues.

B. Scoping

Part of scoping was accomplished by announcing the proposed projects in the *Salem District Project Update* (Winter 2001 issue) and asking for feedback from individuals and groups. Additional scoping was accomplished by the BLM interdisciplinary team, which identified issues at the beginning of the project.

C. Table 1: Aquatic Conservation Strategy Objectives Review Summary

ACS Objective	Do the projects meet ACS objectives?	Remarks/References
Maintain and restore distribution, diversity, and complexity of watershed and landscape features to ensure protection of aquatic systems.	Yes X No __	These projects are designed to reduce erosion and minimize the risk of potential erosion. The maintenance and/or closure of roads will maintain and restore functions such as flow and sediment routing at the watershed or landscape scale.
Maintain and restore spatial connectivity within and between watersheds.	Yes X No __	These projects will maintain or restore the spatial and temporal connectivity within and between watersheds. The replacement or addition of relief and channel culverts to meet NFP standards may improve or restore the connectivity of stream channels through the correction of barriers created when road construction occurred. Maintaining roads in good operating condition reduces the potential for catastrophic erosion and road failure which can degrade downstream habitats and channels as a result of excessive sediments and channel scouring events (debris torrents, slides, etc.)
Maintain and restore physical integrity of the aquatic system, including shorelines, banks, and bottom configurations.	Yes X No __	Maintaining roads in good operating condition reduces the potential for chronic and catastrophic erosion, and road failure which can degrade downstream habitats and channels as a result of excessive sediments and channel scouring events (debris torrents, slides, etc.). Maintaining adequately spaced and functioning drainage displaces water from road surfaces and ditches to minimize extensions to natural drainage network patterns, thereby reducing the potential for increases of peak flows due to roads.
Maintain and restore water quality necessary to support healthy riparian, aquatic and wetland ecosystems.	Yes X No __	Maintaining roads in good operating condition reduces existing sediment sources and the potential for chronic and catastrophic erosion, and road failure which can result in excessive sediment delivery to channels. Activities such as road closure and/or restoration may result in pulses of sediment delivery and turbidity if rain events occur during or shortly after work is done. These pulses are generally small, short-term (hours to 1-2 days), and temporally and spatially distributed. Due to the spatial and temporal distribution, short-term sediment pulses from these activities have negligible negative impacts when assessed at the 5th-field watershed scale. In some cases, these projects will reduce the overall sediment delivery. Generally, road maintenance and closure does not affect water temperature or chemical contamination.

ACS Objective	Do the projects meet ACS objectives?	Remarks/References
Maintain and restore the sediment regime under which system evolved.	Yes X No __	Maintaining roads in good operating condition reduces existing sediment sources and the potential for chronic and catastrophic erosion, and road failure which can degrade downstream habitats and channels as a result of excessive sediments and channel scouring events (debris torrents, slides, etc.). Activities such as culvert removal and replacement, and construction of drainage dips may result in pulses of sediment delivery and turbidity if rain events occur during or shortly after work is done. These pulses are generally small, short-term (hours to 1-2 days), and temporally and spatially distributed so that overall sediment regimes are maintained. Due to the spatial and temporal distribution, short-term sediment pulses from these activities have negligible negative impacts when assessed at the 5th-field watershed scale.
Maintain and restore instream flows.	Yes X No __	Maintaining adequately spaced and functioning drainage displaces water from road surfaces and ditches to minimize extensions to natural drainage network patterns, therefore reducing the potential increased peak flows due to roads. Road maintenance and closure activities have no effect on base flows. They may maintain or restore patterns of sediment, nutrient and wood routing.
Maintain and restore the timing, variability and duration of floodplain inundation and water table elevation in meadows and wetlands.	Yes X No __	These projects will have no effect on the timing, variability, and duration of floodplain inundation and water table elevation in meadows and wetlands because there are no wetlands or meadows in the project area.
Maintain and restore the species composition and structural diversity of plant communities in riparian zones and wetlands to provide thermal regulation, nutrient filtering, and appropriate rates of bank erosion, channel migration and CWD accumulations.	Yes X No __	Vegetation management along roads in riparian zones may result in disturbance to riparian vegetation. Brushing and limbing of vegetation encroaching on or over roads is done to maintain adequate sight distances for driving safety. Vegetation management activities affect a small portion of the riparian reserves, and species composition and structural diversity of plant communities along stream channels will be maintained.
Maintain and restore habitat to support well distributed populations of native plant, invertebrate, and vertebrate riparian-dependent species	Yes X No __	Road maintenance and road removal activities occur within the road prism (non-suitable habitat for most riparian-dependent species). These activities are critical to keep roads in good condition and to identify and correct problems promptly, therefore reducing the potential for adverse impacts of roads. Properly maintained roads will help maintain well-distributed populations of riparian-dependent species.

D. RMP/ROD Road Management Actions/Direction; MA/D)

1. **Riparian Reserves** - for each existing road, meet ACS objectives as follows **(**RMP, p.62):

   a. *MA/D:* determine the influence of each road on ACS objectives through watershed analysis.
   Conformance: all projects are in watersheds with a completed analysis.

   b. *MA/D:* reconstruct roads and associated drainage features that pose a substantial risk.
   Conformance: each reconstruction project poses a substantial risk if not undertaken.

   c. *MA/D:* close and stabilize, or obliterate and stabilize roads based on the ongoing and potential effects to ACS objectives, considering short-term and long-term transportation needs.
   Conformance: each decommissioning project has been evaluated based on long-term transportation needs.

   d. *MA/D:* design improvements to accommodate at least the 100-year flood, including associated bedload and debris
   Conformance: each culvert replacement would be designed to meet the 100-year flood.

   e. *MA/D:* minimize sediment delivery to streams from roads
   Conformance: sediment delivery would be reduced in all project areas and sediment control devices would be used as appropriate during construction activities.

   f. *MA/D:* provide and maintain fish passage at all road crossings of existing and potential fish-bearing streams.
   Conformance: fish passage would be provided as appropriate in all projects.

   g. *MA/D:* establish the purpose of each road by developing a road management objective.
   Conformance: preliminary objectives have been developed for project roads and will be incorporated in a transportation management plan.

2. **Late-Successional Reserves**

   a. *MA/D:* plan and implement non-silvicultural activities inside LSR's that are neutral or beneficial to the creation and maintenance of late-successional habitat (RMP, p. 16).
   Conformance: a few trees in project areas would be removed to accommodate construction activities. Compared to vegetation damage which might occur if roads and structures fail, this tree removal associated with road and structure improvement is considered neutral to attaining LSR objectives.

   b. *MA/D:* Consider access to non-federal lands through Late Successional Reserves.

Existing right-of-way agreements, contracted rights, easements and special/temporary use permits are valid uses in Late-Successional Reserves (RMP, p. 18).
Conformance: existing right-of way agreements are considered valid uses and essential for continuing land management.

E. Table 2: Beneficial uses associated with each project

Stream (Watershed)	Project Action	Beneficial Use	Distance from Project Action	Information Source
Parker Creek (North Fork Alsea)	Road re-alignment Decommissioning / Culvert removal / replacement Drainage dips Surface grading and bank restoration	Anadromous fish	> 6 miles	BLM
		Resident fish	0.25 mile	BLM
		Domestic use	> 10 miles	WRIS*
		Irrigation/live-stock watering	> 8 miles	WRIS*
Bear Creek (Lower Alsea)	Culvert removal/ replacement Drainage dips Surface grading	Anadromous fish	Immediate	BLM
		Resident fish	Immediate	BLM
		Domestic use	8 miles	WRIS*
		Irrigation/live-stock watering	8 miles	WRIS*
Fall Creek (Lower Alsea)	Culvert removal/ replacement Surface placement and grading	Anadromous fish	Immediate	BLM
		Resident fish	Immediate	BLM
		Domestic use	8 miles	WRIS*
		Irrigation/live-stock watering	8 miles	WRIS*
Mill Creek (Lower Alsea)	Culvert removal/ replacement Drainage dips Surface placement and grading	Anadromous fish	Immediate	BLM
		Resident fish	Immediate	BLM
		Domestic use	3 miles	WRIS*
		Irrigation/live-stock watering	3 miles	WRIS*

Stream (Watershed)	Project Action	Beneficial Use	Distance from Project Action	Information Source
Racks Creek (North Fork Alsea)	Culvert removal Channel restoration	Anadromous fish	5 miles	BLM
		Resident fish	Immediate	BLM
		Domestic use	> 10 miles	WRIS*
		Irrigation/ Livestock watering	> 10 miles	WRIS*
Swamp Creek (Lower Alsea)	Culvert removal/ replacement Surface placement	Anadromous fish	Immediate	BLM
		Resident fish	Immediate	BLM
		Domestic use	Immediate	WRIS*
		Irrigation/live-stock watering	Immediate	WRIS*

* WRIS = Oregon Department of Water Resources

II. ALTERNATIVES, INCLUDING THE PROPOSED ACTION

A. Introduction/Organization of This Document

This section of the EA is a general description of alternatives for the project package. The full analysis of alternatives for specific projects are described in Appendix A.

B. Alternative I - Proposed Action

1. Alternatives for specific projects are described in Appendix A.

2. Issues - Proposed Action

The following issues concerning the proposed projects were identified by the *BLM* interdisciplinary team. No issues were identified by the public in response to *Project Update.*

a. Soils: effects on soil conditions?
b. Vegetation: effects on existing vegetation? Access for silvicultural treatment?
a. Water: effects on water quality, streambank and channel conditions?
d. Fisheries: effects on fish habitat and populations?
e. Wildlife: effects on wildlife habitat and populations?
f. Cultural Resources: effects on prehistoric and historic sites?
g. Rural Interface Areas: effects on people living near project area?

3. Design Features Common to all Projects- Proposed Action. (For additional design features see individual project descriptions in Appendix A).

Special Status and SEIS Special Attention Species (RMP, p. 28)

As discussed on pages 21 and 22 of the *Record of Decision and Standards and Guidelines for Amendment to the Survey & Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines* (S&M ROD, January 2001), pre-disturbance surveys are required for some species only when the proposed activity can be described as "habitat disturbing" (S&G, p. 22). It goes on to state that. .."Routine maintenance of improvements and existing structures is not considered a habitat-disturbing activity. Examples of routine maintenance include pulling ditches, clearing encroaching vegetation, managing existing seed orchards, and falling hazard trees."

The activities proposed in this assessment are considered to not be habitat-disturbing activities and hence no pre-disturbance surveys are required.

C. Other Alternatives. See individual project descriptions in Appendix A.

D. Deferred Action

This alternative would defer any action at this time. Continued deterioration of the roads and structures would require corrective action sometime in the future.

E. Alternatives Considered but Eliminated: No Action

No Action. This alternative would not be recommended for any of the proposed projects for two basic reasons:
(1) unacceptable impacts would occur to streams and fish habitat; and (2) some roads under right-of-way agreements could be heavily damaged, thereby blocking access to federal and private lands. This would be contrary to the intent of these agreements.

III. AFFECTED ENVIRONMENT/ENVIRONMENTAL CONSEQUENCES

A. Affected Environment

All of the proposed project areas are in Riparian Reserves. In addition, individual projects are in one or more of the following land use allocations: Late-Successional Reserve, and General Forest Management Area (matrix). Watershed analysis has been completed for all project areas.

The general physical features of BLM-administered land in the northern Coast Range are described in the *Final Salem District Resource Management Plan/Environmental Impact Statement* (BLM, 1994). Additional details regarding physical features of each project area are described in Appendix A.

Special Status and SEIS Special Attention Species (RMP, p. 28)

Since the planning of these projects preceded the S&M ROD, inventory of the project areas was accomplished in accordance with *Plan Maintenance Documentation: Decision to Delay the*

*Effective date for Surveying 7 "Survey and Manage" and Protection Buffer Species (*March 8, 2000) for some fungi and in accordance with established survey protocols for other species. There were no species that warranted special protection as a result of those inventories.

There are no known sites of Special Status or SEIS Special Attention species within the proposed project treatment areas. These projects are in compliance with the *Record of Decision and Standards and Guidelines for Amendment to the Survey & Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines* (S&M ROD, January 2001).

Noxious Weeds

Botanical surveys were completed in 2000. No noxious weeds were found as a result. If any Category 1 or 2 noxious weed species are located within the project treatment areas, appropriate mitigation measures would be implemented as directed in the Salem District RMP on page 64.

Marbled Murrelets and Spotted Owls

Issues concerning potential impacts to Marbled Murrelets and Spotted Owls have been addressed in two programmatic consultations with the U.S. Fish and Wildlife Service (USFWS) for fiscal year 2001 projects that might alter habitat or disturb listed species. All of these actions are designed to standards of a Biological Assessment and are in compliance with Biological Opinions received to date.

Coho Salmon

All of the proposed project areas falls within the Alsea watershed which contains Coho Salmon (*Oncorhynchus kisutch).* Coastal Coho Salmon are listed as threatened under the Endangered Species Act. Consultation with National Marine Fisheries Service was completed. The six coastal drainage projects as proposed incorporate the project design criteria included in the *Biological Opinion* for the *Programmatic Biological Assessment for On-going USDA Forest Service and USDI Bureau of Land Management Activities Affecting Oregon Coast Coho Salmon within the Oregon Coast Range Province, Oregon (*National Marine Fisheries Service, November, 1998).

B. Environmental Consequences

The environmental consequences of each proposed project are described in Appendix A. Generally, benefits to water quality and fish habitat conditions and minor, short-term adverse impacts to soils, vegetation, water, fish and wildlife would occur due to the road improvement and decommissioning activities. None of these activities are expected to result in environmental impacts exceeding those described in the Final Environmental Impact Statement (BLM, 1994).

Table 3. Summary of Project Effects to Special Status Species and Habitats.

Road Project Name	Special Habitats	S&M Mollusks	T&E Species Effect	Seasonal Restriction	Daily Timing Restriction
Klickitat Road Repairs	NA	NA	MA, LAA	July 1-Aug 31	Apr 1-Sept 15
Bear Creek Restoration	NA	NA	MA, LAA	July 1-Aug 31	Apr 1-Sept 15
Fall Creek Culvert	NA	NA	MA, LAA	July 1- Oct 15	Apr 1-Sept 15
W. Fork Mill Creek Culvert	NA	NA	MA, LAA	July 1-Aug 31	Apr 1-Sept 15
Racks Creek Decommissioning	NA	NA	MA, LAA	July 1- Oct 15	Apr 1-Sept 15
Lower Swamp Creek Culvert	NA	NA	MA, LAA	July 1-Aug 31	Apr 1-Sept 15

Special Habitats: NA = no effect to special habitat features, if present. **S&M Mollusks**: NA = no habitat will be affected by action. **T&E Species Effect**: No Effect = no effect to spotted owls, marbled murrelets, bald eagles; MA, LAA = may affect, likely to adversely affect owls or murrelets if action is conducted between March 1 and August 5. **Seasonal Restriction**: Operations restricted to this period for mitigation of fisheries impacts. **Daily Timing Restriction**: April 1 - Sept. 15 = dates during which the use of power equipment should be restricted to two hours after sunrise and end two hours before sunset. This is a mandatory stipulation for compliance with all applicable Biological Opinions.

IV. MONITORING

Monitoring would be accomplished through contract administration and in accordance with Appendix J of the RMP.

V. CONTACTS WITH OTHER AGENCIES AND INDIVIDUALS

U.S. Fish and Wildlife Service (USFWS) Consultation

Programmatic consultations have been addressed in two consultations with the USFWS for fiscal year 2001 projects that might alter habitat or disturb listed species. All of these actions, as designed, are in compliance with standards set forth in the Biological Assessment and reiterated in the Biiological Opinions received to date.

National Marine Fisheries Service Conferencing

The six coastal drainage projects as proposed are consistent with the terms and conditions of the *Programmatic Biological Assessment for On-going USDA Forest Service and USDI Bureau of Land Management Activities Affecting Oregon Coast Coho Salmon within the Oregon Coast Range Province, Oregon*, September, 1998.

Other Contacts

Gary Blanchard, Starker Forests, Inc.
Willie Bronson, Willamette Industries
Forest Practices Forester, Oregon Department of Forestry (Philomath)
Kim Johansen, Geotechnical Engineer with Siuslaw National Forest

VI. Table 4: Interdisciplinary Team

NAME	TITLE	RESOURCE	INITIALS	DATE
Patrick Hawe	Hydrologist	Water	PH	3/30/01
Ron Exeter	Botanist	Special Status & Special Attention Plants	RE	April 3, 2001
Gary Licata	Biologist	Wildlife	GL	040901
Hugh Snook	Ecologist	Survey & Manage	HWS	4/3/01
Dave Roberts	Biologist	Fisheries	DAR	4/10/01
Dick Bergen	Area Engineer	Roads/Engineering	RPB	4/11/01
Russ Buswell	Civil Engineering Technician	Roads/Engineering	RPB	4/10/01
Steve Cyrus	Civil Engineering Technician	Roads/Engineering	S.B.C.	4/10/01
Amy Haynes	Riparian Ecologist	General Riparian Vegetation	AH	3/29/01
Tom Vanderhoof	Forester/Para-Archeologist	Cultural Resources	TMV	4-10-01
Tom Tomczyk	Soil Scientist	Soils	TST	3/29/01
Belle ~~Verbics~~ Smith	NEPA Coord.	NEPA Compliance	RG for B.S.	04/23/01

LOCATION MAP

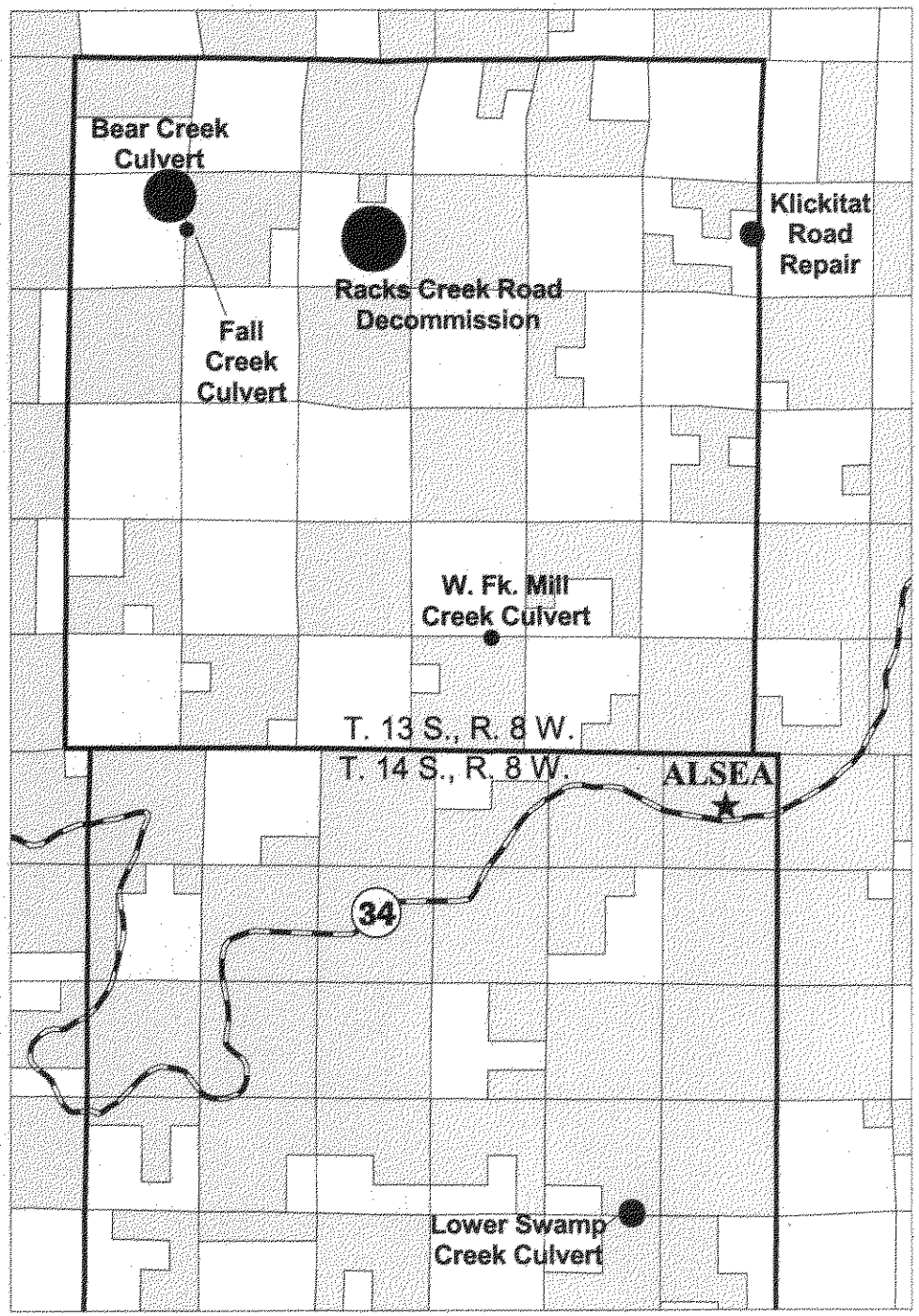
BLM Lands

Other Lands

N

1 0 1 2 Miles

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. Original data was compiled from multiple source data and may not meet U.S. National Mapping Accuracy Standard of the Office of Management and Budget. 4-19-2001



Appendix A - Project Descriptions

Klickitat Road Repairs

I. Purpose and Need

The proposed action for this project is to replace two deteriorated drainage structures, and re-align 400 feet of roadway to avoid a failed section of road 13-7-10 in the SE¼NE¼ Section 12, Township 13 South, Range 8 West. The proposed project area is located approximately 13 miles southwest of Philomath, Benton County, Oregon (see map section at end of EA). Land allocations are Riparian Reserve and Late-Successional Reserve.

The roadway is covered under existing Reciprocal Road Right-of-Way Agreements S-805 between the BLM and Willamette Industries and S-754 between BLM and Starker Forests. The Transportation Management Objective for this road is to keep it open for timber management activities, and dispersed recreational use.

Findings of a recent road inventory and subsequent specialist's recommendations in the *North Fork Alsea Watershed Analysis* identified the two drainage structures on this road segment as a moderate priority for replacement (Appendix 6, p. 210). The structures and roadway partially failed during a major storm in November 1999, the failures are contributing to fill slope and stream bank erosion. Eventual failure of the structures and roadway would result in road failure, blockage of the road segments, and increased sediment downstream into Parker Creek.

Replacement of the structures and re-alignment of the roadway would meet Aquatic Conservation Strategy objectives by minimizing disruption of natural hydrologic flow paths, improving existing stream crossing structures to accommodate 100-year floods, and moving the roadway further away from the stream channel.

II. Alternatives

The two alternatives for the project are the proposed action and deferred action. No action is not feasible due to the right-of-way agreements associated with this road and the potential for future road failures.

A. Alternative I - Proposed Action

1. Proposed Action

Replace two deteriorating drainage structures with culverts designed to accommodate 100- year floods. Re-align roadway 50-100 feet up slope for 400 feet in length to avoid failed section of road. Decommission old roadway.

2. Summary of Design Features, Mitigation Measures and Best Management Practices:

a. Structure Removal and Replacement

Temporarily divert streams around work areas to minimize sedimentation during construction.

Remove fill material above existing structures; stockpile material needed for back filling excavations; place unsuitable and excess material in a pre-approved waste area located above the 100-year flood plain; minimize compaction of waste material.

Remove log structures and place them in the stream below the crossing.

Install 100-year flood design culverts that will accommodate associated bedload and debris.

Place fill material over new culverts; use material from pre-approved borrow sites; construct dip in road surface at culvert to prevent stream diversion.

Place three inch minus rock on the road above culverts to harden the surface; obtain rock from either BLM sources or a commercial source.

b. Water/Fish

Conduct in-stream work between July 1 and August 31, the period recommended by the Oregon Department of Fish and Wildlife for in-water work.

Conduct out-of-stream work during periods of low soil moisture, usually between May 15 and September 15.

As needed during construction activity, use sediment traps and erosion control measures to reduce sediment delivery into streams.

Surface roadway and ditch with crushed rock to reduce sediment delivery from surface into ditch and nearby streams.

c. Wildlife

Discontinue operations if a T&E species is found occupying the project area. Analyze the possible impacts of the project on species. Identify and implement a course of action.

Minimize noise disturbance to owls for actions within 0.25 mile of unsurveyed suitable habitat and initiate as many projects as possible after June 30.

Minimize noise disturbance to murrelets for actions within 0.25 mile of unsurveyed suitable habitat and initiate as many projects as possible after August 5. Impose a daily time restriction by allowing work to be done only from two hours after sunrise until two hours before sunset April 1 to September 15.

Minimize impacts from the Klickitat Road Repair project do not begin work until after August 5, impose daily murrelet time restrictions, and place the new road segment so that as few potential nest trees as possible will have to be cut.

d. Vegetation

Re-vegetate disturbed soil and waste areas; possible methods include grass seeding, fertilizing, hydro mulching, netting, mulching, and/or planting native trees or shrubs. Use 100% mixture of Oregon Certified (blue tagged) *Fesuca rubra*, (red fescue) at a rate equal to 40 pounds per acre. Administer to ensure that proper revegetation and mixtures are used.

Discontinue operations if a T&E species is found in the project area. Analyze the possible impacts of the project on species. Identify and implement a course of action if needed.

When trees must be cut to facilitate construction, consider keeping them on site; where possible, fall trees into the stream and leave them in place.

Additional details regarding the project are available in Marys Peak Resource Area files.

B. Alternative 2 - Deferred Action

Action to replace the deteriorating structures and re-align the road would be deferred to another fiscal year.

C. Alternatives Considered but Eliminated

An alternative suggested for this project area was to construct a short retaining wall instead of re-aligning the roadway. The alternative was eliminated for two reasons: (1) the volume of traffic in this isolated area of the Coast Range does not justify the expense of constructing a retaining wall; and (2) moving the roadway away from the stream channel would reduce potential sedimentation delivery into the stream.

IV. Affected Environment/Environmental Consequences

A. Alternative 1 - Proposed Action

1. Soils

a. Affected Environment

The soils affected by this project at the location of the new construction, consist of Klickitat gravelly clay loams. The fill material in the road bed to be obliterated is derived from this same soil series but consists of the subsurface material only.

The waste disposal sites for excess fill material will be on the existing roadbed to be obliterated in the project area.

b. Environmental Consequences

Replacement of the drainage structures under the Klickitat Road would greatly reduce the possibility of future road fill damage and major soil movement into the adjacent streams during high rainfall events.

Relocating approximately 400 feet of road will require converting approximately ¼ acre of forest land into a non-forest road condition by removing topsoil, grading and compacting the subsoil and rocking the running surface. An equivalent area of existing road bed will be returned to a young forest soil condition when the old road bed is closed by pulling up the fill slopes and depositing the material on the ripped up road surface. Material will be placed to conform with the adjoining contours at a stable slope angle. Woody debris and grass seed will be scattered across the new surface to help stabilize it and reduce the short-term erosional effects from construction activities. Tree seedlings may be planted on the site as well in an effort to reforest the site. However, it is expected that red alder trees will rapidly invade this newly exposed site and will be the dominant vegetative cover for several decades. Litter fall from these trees and the surrounding mature forest will begin the replacement of the organic soil horizon. This will further stabilize the surface soil. After several seasons the rate of surface soil erosion should approach the low back round levels now present in the surrounding forested area. To what extent it is practical, organic surface soil and material removed during construction of the new road should be stock piled and later spread over the surface of the obliterated section of road. This would greatly speed up recovery of the reclaimed site and reduce surface erosion potential.

2. Vegetation

a. Affected Environment

The road relocation area is located on the edge of two stand ages. One is listed as 1800 and the other as 1910. Both stands are dominated by Douglas-fir and western hemlock overstories. Small western hemlock (less than 12 inches DBH) are a common component of the understory as are vine maple thickets in the openings in the canopy. A few scattered red alders and big leaf maples also occur in the area. The shrub and forb layer is dominated by salal, sword fern and thimbleberry.

The adjacent sides of the culvert replacement locations on the existing road are dominated by hardwoods, thimbleberry and salmonberry.

Special Status Species: There are no "known sites" of any special status or vascular plant, bryophyte, fungi or lichen species within the project area.

SEIS Special Attention Species (RMP, p. 28): There are no known sites of any Special Attention vascular plant, bryophyte, fungi or lichen species within the project area.

Noxious Weeds: The following noxious weeds are known from within or adjacent to the project area, Tansy ragwort (*Senecio jacobaea*), bull and Canadian thistles (*Cirsium vulgare and C. arvense*), St. John's wort (*Hypericum perforatum*) and Scot's broom (*Cytisus scoparius*).

b. Environmental Consequences

Several alders and approximately four conifers (approximately 16-36" dbh) would be cut and left on site or adjacent to the project area. Impacts to Riparian Reserve vegetation would be minimal.

The proposed action would not affect any special status species or SEIS Special Attention Species (RMP, p. 28) since none were found in the project area. Noxious weed species that are commonly found in the area are priority III and are well established and widespread throughout the Mary's Peak Resource Area and the Salem District. Eradication is not practical using any proposed treatment methods. Grass seeding exposed soil areas tends to decrease the establishment of noxious weeds. Adverse effects from these weeds are not anticipated.

3. Water Quality, Hydrology, and Channel Function

a. Affected Environment

The project area includes two unnamed, intermittent tributaries to Parker Creek which flows into the North Fork Alsea River. Both channels are steep (>12%), boulder-cobble, Rosgen "A" channel types. Both channels appear stable and to be properly functioning.

b. Environmental Consequences

Direct - This action would prevent several hundred cubic yards of road fill material from eventually entering the stream. In the short term, while removing fill material and relocating the roadway higher up the slope (and until the new fill has stabilized and revegetated), small quantities of sediment are likely to enter the stream.

Indirect - None. Cumulative - Not measurable.

4. Fish

a. Affected Environment

The two 1st order streams which currently flow through log-fill structures are not fish-bearing. Parker Creek, approximately 0.25 mile downstream of the project area, currently provides habitat for steelhead and cutthroat trout. A trapping weir at the Alsea Fish Hatchery, approximately six miles downstream of the project area, is currently a barrier to upstream migration of chinook and coho salmon. The Oregon Department of Fish and Wildlife plans to remove the weir within 2-3 years, after which natural recolonization of the North Fork Alsea River by chinook and coho salmon is expected to occur.

b. Environmental Consequences

Re-routing of the road, removal of the log-fill structures and subsequent replacement with appropriately sized culverts is likely to result in a short-term increase in sediment input to the 1st order streams, as well as to Parker Creek. Sediment generated by the project may have short-term adverse impacts to habitat occupied by steelhead and cutthroat trout, although project design features are expected to minimize sediment input. The effects of sedimentation from the project are not expected to be detectable in the North Fork Alsea River, approximately three miles downstream. In the long-term implementation of the project eliminates the risk of catastrophic failure of the existing log-fill structure which could result in the deposition of

hundreds of cubic yards of sediment to Parker Creek with severe adverse impacts to fish habitat and populations.

5. Wildlife

a. Affected Environment

The affected late-seral conifer forest habitat falls within known owl and marbled murrelet occupied sites. The re-located road segment will require the felling of one and possibly two potential nest trees. Any activities initiated during the owl or murrelet breeding seasons would create a noise disturbance above ambient forest noise which may affect the nesting behavior of these birds. The area was surveyed for category 2 survey & manage mollusk species and none were found.

b. Environmental Consequences

The Klickitat Road Repair, as planned, would be a "may affect, likely to adversely affect" northern spotted owl and marbled murrelet for habitat modification. The Biological Opinion determined that the level of any anticipated incidental take is not likely to result in jeopardy to the owl or murrelet. Every effort will be made to minimize the impacts to owls, murrelets and the red tree vole.

One or two potential nest trees for owls, murrelets, and red tree vole will have to be cut. The short term impacts to all species are expected to be insignificant due to the project's location (wildlife using the area have become acclimated to the activities associated with a major 50+ year old logging road), the small size of the disturbance area, only one or two potential nest trees to be cut, and the large number of potential nest trees available in the immediate area. The long-term and cumulative impacts are also expected to be insignificant since there will be no net loss of wildlife habitat as the unsafe road segment will be put to bed and over time will be restored to native riparian/forest habitat.

B. Alternative 2 - Deferred Action

Environmental Consequences of Deferred Action

The roadway and structures will continue to deteriorate. If the inlets become completely blocked, upwards of 800 cubic yards of road fill material could be deposited in streams. Water quality and fish habitat may be damaged by this deposition. The road could become impassable, thereby blocking access to federal and private lands. Trees would not be cut, but may eventually fall into the streams as banks fail.

IV. Review Summaries

The following table summarizes environmental features which the Bureau of Land Management is required by law or policy to consider in all Environmental Documentation (BLM HandbookH-1790-1, Appendix 5: Critical Elements of the Human Environment). Information in the table applies only to the proposed action.

Table 5a: Environmental Elements Review Summary (Klickitat Road Repairs)

Environmental Feature	Affected/May Be Affected/Not Affected	Remarks
Air Quality	Not Affected	
Areas of Critical Environmental Concern	Not Affected	
Cultural, Historic, Paleontological	Not Affected	Literature and field survey revealed nothing of cultural resource significance in the construction area.
Prime or Unique Farm Lands	Not Affected	
Flood Plains	Affected	Project is in a small flood plain that has been affected by past road construction.
Native American Religious Concerns	Not Affected	
Threatened, Endangered, or Special Status Plant Species or Habitat	Not Affected	No known sites. See Botany Report dated August 15, 2000.
Threatened, Endangered, or Special Status Animal Species or Habitat	Wildlife: May Be Affected Fish: May Be Affected	See Wildlife section. See Fish section.
Hazardous/Solid Wastes	Not Affected	
Drinking/Groundwater Quality	Affected	See Water section.
Wetlands/Riparian Reserves	Affected	See Vegetation section.
Wild and Scenic Rivers	Not Affected	
Wilderness	Not Affected	

Table 5b: Common Issues (Klickitat Road Repairs)

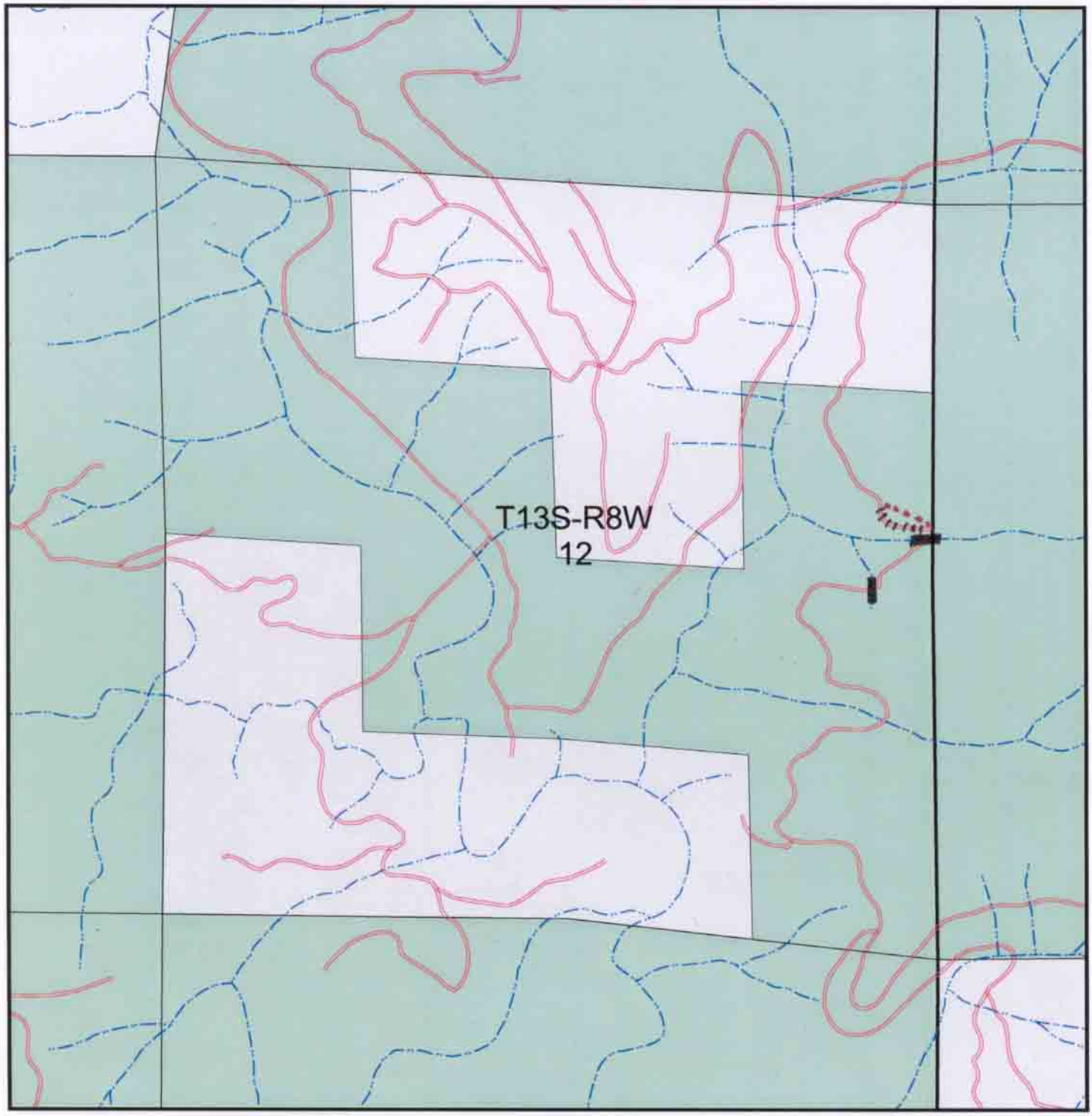
Issue / Concern	Applicable / Not Applicable	Remarks
VRM	Not Applicable	All Class IV
Minerals	Not Applicable	None identified
Land Uses	Not Applicable	None identified
Soils/Sedimentation	Applicable	See Soils section.
Water DEQ 303d listed streams Water Temperature Water Quality Water Quantity	 Not Applicable Not Applicable Applicable Not Applicable	See Water section.
Rural Interface Areas	Not Applicable	None identified

Table 5c: Beneficial Use Review Summary (Klickitat Road Repairs)

Downstream Beneficial Uses	Applicable/Not Applicable	Remarks/References
Public water supply	Not Applicable	None
Private domestic water supply	Applicable	Diversions a considerable distance downstream; unlikely to be affected.
Irrigation	Applicable	Same as above
Fisheries	Applicable	See Fish section
Wildlife	Applicable	See Wildlife section
Recreation	Not applicable	No known recreation activity near project area.
Aesthetic quality	Applicable	Slight effect on water color

Klickitat Road Repair

T13S-R8W, Sec. 12



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LAND USE ALLOCATION

- AMA
- AMR
- GFMA
- LSR
- CGRR

OTHER FEATURES

- Non-BLM Lands
- Decomissioned Road
- New Construction
- Culvert Replacement

N

No warranty is made by the Bureau of Land Management for use of the data for purposes not intended by the Bureau of Land Management.

May 02, 2001

Bear Creek Restoration

I. Purpose and Need

The proposed action for this project is to remove one large drainage structure, and stabilize road 13-8-8.1 using rock hardened drain dips, waterbars, and erosion control. The proposed project area is located approximately 17 miles southwest of Philomath, Benton County, Oregon (see map section at end of EA) on BLM and private lands. Land allocations are Riparian Reserve and Late-Successional Reserve.

A portion of the roadway is covered under existing Reciprocal Road Right-of-Way Agreement S-805 between the BLM and Willamette Industries. The Transportation Management Objective for this road is to close it, but allow for possible future entry. Willamette Industries has agreed to this action.

Findings of a recent road/culvert inventory and subsequent specialist's recommendations in the *Lower Alsea River Watershed Analysis* (p. 91) identified mid-slope and valley bottom roads like this one as a priority for removal to provide upstream habitat for anadromous fish. The roadway partially failed during major storms in 1996 and 1999, the failures contributed to fill slope and stream bank erosion, and increased sediment in Bear Creek.

Removal of the structure and stabilizing of the roadway would meet Aquatic Conservation Strategy objectives by minimizing disruption of natural hydrologic flow paths, and improving existing stream channel hydrology to allow increased fish passage.

II. Alternatives

The two alternatives for the project are the proposed action and deferred action. No action is not feasible due to the impacts related to fish passage from continued increases in sediment delivery.

A. Alternative I - Proposed Action
1. Proposed Action

Remove one large drainage structure and associated fill to improve fish passage. Stabilize roadway to avoid failures and subsequent erosion and sediment delivery into Bear Creek.

2. Summary of Design Features, Mitigation Measures and Best Management Practices:

a. Structure Removal

Remove fill material above existing structures; end haul material removed from the fill; place unsuitable and excess material in a pre-approved waste area located above the 100-year flood plain; minimize compaction of waste material.

Place three inch minus rock on the road at drain dip and waterbar locations as needed, to harden the surface and reduce erosion; obtain rock from either BLM sources or a commercial source.

Minimize compaction of waste material, contour the piles to a 1:1 or flatter angle and seed with approved grass mixture.

b. Water/Fish

Conduct in-stream work between July 1 and August 31, the period recommended by the Oregon Department of Fish and Wildlife for in-water work.

Conduct out-of-stream work during periods of low soil moisture, usually between May 15 and September 15.

As needed during construction activity, use sediment traps and erosion control measures to reduce sediment delivery into streams.

c. Wildlife

Discontinue operations if a T&E species is found occupying the project area. Analyze the possible impacts of the project on species. Identify and implement a course of action.

To minimize noise disturbance to owls for actions within 0.25 mile of unsurveyed suitable habitat initiate as many projects as possible after June 30.

To minimize noise disturbance to murrelets for actions within 0.25 mile of unsurveyed suitable habitat initiate as many projects as possible after August 5. Impose a daily time restriction by allowing work to be done only from two hours after sunrise until two hours before sunset from April 1 to September 15.

d. Vegetation

Revegetate disturbed soil and waste areas; possible methods include grass seeding, fertilizing, hydro mulching, netting, mulching, and/or planting native trees or shrubs. Use 100% mixture of Oregon Certified (blue tagged) *Fesuca rubra*, (red fescue) at a rate equal to 40 pounds per acre. Administer to ensure that proper revegetation and mixtures are used.

Discontinue operations if a T&E species is found in the project area. Analyze the possible impacts of the project on species. Identify and implement a course of action if needed.

Additional details regarding the project are available in Marys Peak Resource Area files.

B. Alternative 2 - Deferred Action

Action to replace the deteriorating structures would be deferred to another fiscal year.

C. Alternatives Considered but Eliminated

An alternative suggested for this project area was replace the existing structure with a structure that would provide better fish passage, and keep the road open for management activities and dispersed recreational use. The alternative was eliminated for two reasons: (1) the low volume of traffic in this isolated area of the Coast Range does not justify the expense of installing a very large fish passage structure; and (2) the LSR land use allocation indicates that future use is not likely.

III. Affected Environment/Environmental Consequences

A. Alternative 1 - Proposed Action

1. Soils

a. Affected Environment

The soils affected by this project consist of fill material in the road bed. The waste disposal sites are on existing roadbeds near the project area.

b. Environmental Consequences

Short-term erosional effects of construction activities would be minimal. Removal of the structure would greatly improve fish passage and remove the possibility of any future fill failure at the location. Stabilizing the roadbed with frequent hardened water bars has worked well in other locations to reduce the rate of soil erosion into adjacent streams. The risk of blocked cross drains resulting in fill failures will be greatly reduced by installing frequent water bars.

2. Vegetation

a. Affected Environment

Primary vegetation adjacent to the project area is a 50-year-old Douglas-fir/red alder stand in a Riparian Reserve. This project is considered as a routine maintenance activity within the road right-of-way. Page 22 of the Survey and Manage Record of Decision (Final Environmental Impact Statement For Amendment to the Survey and Manage, Protection Buffer, and other Mitigating Measures Standards and Guidelines) states, "Routine maintenance of improvements and existing structures is not considered a habitat disturbing activity". Thus, any clearance surveys for fungi, vascular plants, lichens and bryophytes are not required. However, the project area was surveyed in the summer/fall of 2000 and no known sites of Survey and Manage species were found.

b. Environmental Consequences

No trees would be cut in the project area. Impacts to Riparian Reserve vegetation would be minimal. The proposed action would not affect any special status species or SEIS Special Attention Species (RMP, p. 28) since none were found in the project area. Noxious weed species that are commonly found in the area are priority III and are well established and widespread throughout the Mary's Peak Resource Area and the Salem District. Eradication is not practical using any proposed treatment methods. Grass seeding exposed soil areas tends to decrease the establishment of noxious weeds. Adverse effects from these weeds are not anticipated.

3. Water Quality, Hydrology, and Channel Function

a Affected Environment

The project area involves Bear Creek, a third order stream that drains to Fall Creek and hence, to the Alsea River. The channel in the project area is typical of low gradient channels with large sediment loads which are blocked by road fills: it has deposited large quantities of material upstream of the culvert and degraded downstream from the fill and culvert. Continued erosion downstream of the crossing threatens to undermine the fill.

This channel reach is currently "functional at risk" due to the impediment by the culvert and fill of the normal passage of material (substrate and debris) to the main Fall Creek channel downstream. In addition, due to the large particle sizes of the stream's sediment load and the large drainage area affected, the blockage appears to have contributed to a significant reduction in the supply of debris and sediment downstream to the main channel on Fall Creek. This may have contributed to increased bank erosion, down-cutting and a reduction in the quantity and quality of aquatic habitat in the main channel.

b. Environmental Consequences

Direct - This action would prevent several hundred cubic yards of road fill material from eventually entering the stream. In the short term, while removing fill material (and until the new fill has stabilized and revegetated), small quantities of sediment are likely to enter the stream.

Indirect - None. Cumulative - Not measurable.

4. Fish

a. Affected Environment

Bear Creek currently supports populations of steelhead and cutthroat trout and coho salmon in the vicinity of the project area. Chinook salmon are found downstream in Fall Creek, although the upstream limit of chinook distribution is unknown. The existing structure where road 13-8-8.1 crosses Bear Creek does not provide adequate fish passage due to an excessive drop at the outlet end.

b. Environmental Consequences

Removal of the existing structure will allow unimpeded upstream and downstream passage for steelhead and cutthroat trout and coho salmon. The project has the potential to reopen approximately one-half mile of historic fish habitat that is currently inaccessible. Decommissioning of the road will contribute to restoration of natural drainage patterns and hydrologic function. The project is likely to result in a short-term increase in sediment input to Bear Creek, and subsequently to Fall Creek, and may result in short-term adverse impacts to habitat occupied by steelhead and cutthroat trout and coho salmon, although project design features are expected to minimize sediment input.

5. Wildlife

a. Affected Environment

All of the proposed road work will occur within the existing road prism which is considered to be non-habitat. The project is located within 0.25 mile of unsurveyed suitable northern spotted owl or marbled murrelet habitat.

b. Environmental Consequences

Any activity on this project that is initiated during the owl or murrelet breeding seasons would create a noise disturbance above ambient forest noise which may affect the nesting behavior of these birds.

B. Alternative 2 - Deferred Action

Environmental Consequences of Deferred Action

The structure will continue to deter fish passage. The road may fail and deposit sediment into Bear Creek. Water quality and fish habitat could be damaged by this deposition.

V. Review Summaries

Environmental Elements Review Summary

The following table summarizes environmental features which the Bureau of Land Management is required by law or policy to consider in all Environmental Documentation (BLM Handbook H-1790-1, Appendix 5; Critical Elements of the Human Environment). Information in the table applies only to the proposed action.

Table 6a: Environmental Elements Review Summary (Bear Creek Restoration)

Environmental Feature	Affected/May Be Affected/Not Affected	Remarks
Air Quality	Not Affected	
Areas of Critical Environmental Concern	Not Affected	
Cultural, Historic, Paleontological	Not Affected	Literature and field survey revealed nothing of cultural resource significance in the construction area.
Prime or Unique Farm Lands	Not Affected	
Flood Plains	Affected	Project is in a small flood plain that has been affected by past road construction.
Native American Religious Concerns	Not Affected	
Threatened, Endangered, or Special Status Plant Species or Habitat	Not Affected	No known sites. See Botany Reports dated August 15, 2000 & March 13, 2001.
Threatened, Endangered, or Special Status Animal Species or Habitat	Wildlife: Not affected. Fish: May Be Affected	See Wildlife section. See Fish section.
Hazardous/Solid Wastes	Not Affected	
Drinking/Groundwater Quality	Affected	See Water section.
Wetlands/Riparian Reserves	Affected	See Vegetation section.
Wild and Scenic Rivers	Not Affected	
Wilderness	Not Affected	

Table 6b: Common Issues (Bear Creek Restoration)

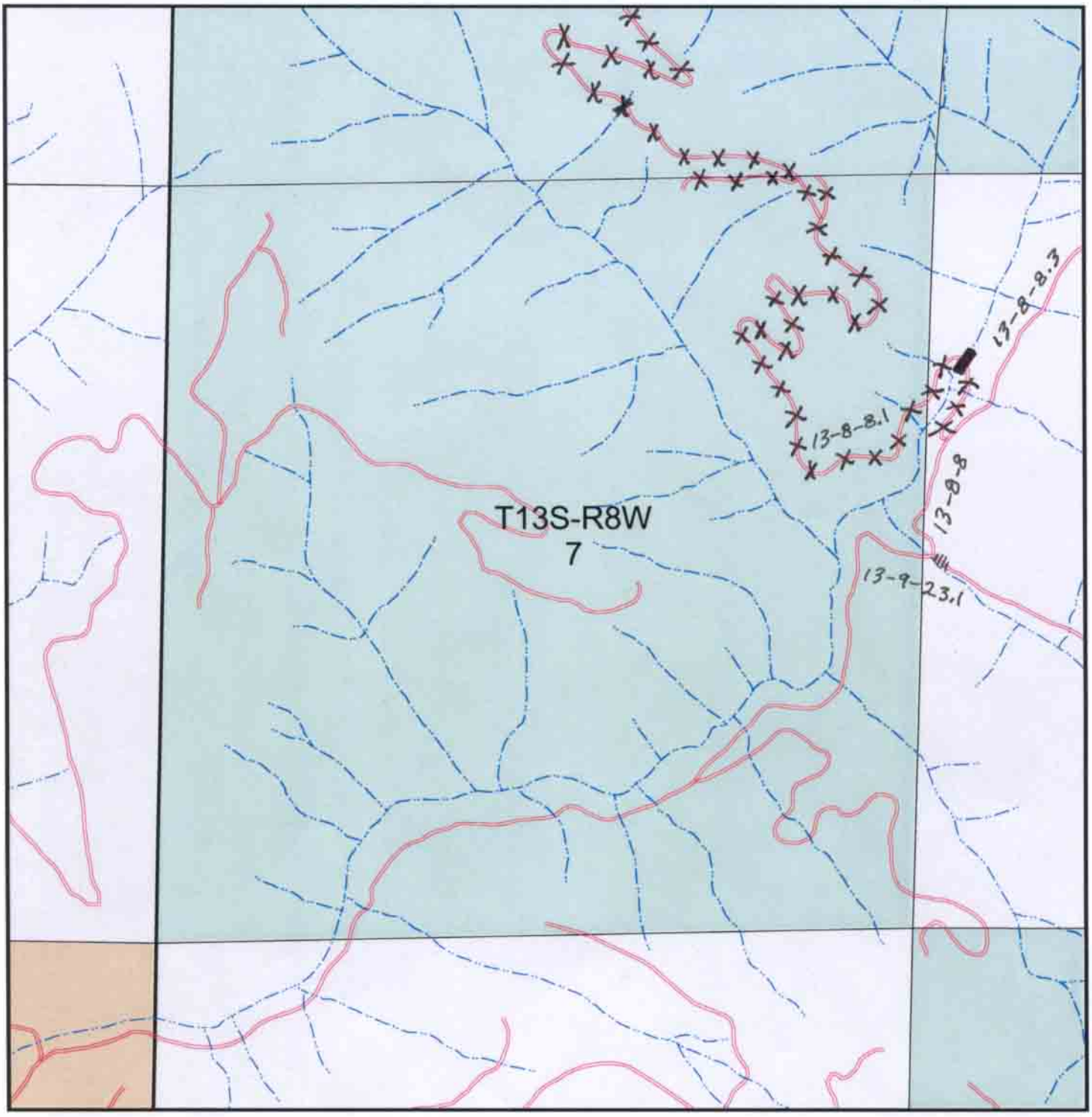
Issue / Concern	Applicable / Not Applicable	Remarks
VRM	Not Applicable	All Class IV
Minerals	Not Applicable	None identified
Land Uses	Not Applicable	None identified
Soils Sedimentation	Applicable	See Soils section.
Water DEQ 303d listed streams Water Temperature Water Quality Water Quantity	 Not Applicable Not Applicable Applicable Not Applicable	See Water section.
Rural Interface Areas	Not Applicable	None identified

Table 6c: Beneficial Use Review Summary (Bear Creek Restoration)

Downstream Beneficial Uses	Applicable/Not Applicable	Remarks/References
Public water supply	Not Applicable	None
Private domestic water supply	Applicable	Diversions a considerable distance downstream; unlikely to be affected.
Irrigation	Applicable	Same as above
Fisheries	Applicable	See Fish section
Wildlife	Applicable	See Wildlife section
Recreation	Not applicable	No known recreation activity near project area.
Aesthetic quality	Applicable	Slight effect on water color

Bear Creek Culvert

T13S-R8W, Sec. 7



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LAND USE ALLOCATION

- AMA
- AMR
- GFMA
- LSR
- CGRR

OTHER FEATURES

- Non-BLM Lands
- Federal Riparian Reserves
- Culvert Removal
- XXX Road Stabilization

N

No warranty is made by the Bureau of Land Management for use of the data for purposes not intended by the Bureau of Land Management.

April 19, 2001

Fall Creek Culvert

I. Purpose and Need

The proposed action for this project is to replace one large drainage structure on road 13-8-23.1 at Fall Creek to provide fish passage upstream of the crossing. The proposed project area is located approximately 17 miles southwest of Philomath, Benton County, Oregon (see map section at end of EA) on BLM and private land. Land allocations are Riparian Reserve and Late-Successional Reserve.

The existing road is covered under existing Reciprocal Road Right-of-Way Agreement S-805 between the BLM and Willamette Industries. The Transportation Management Objective for this road is to keep it open for timber management activities and dispersed recreational use.

Findings of a recent culvert inventory and subsequent specialist's recommendations identified this structure as a priority to replace and provide upstream anadromous fish habitat. Several stream crossings providing fish passage to upstream habitat need to be improved.

Replacing the structure would meet Aquatic Conservation Strategy objectives by minimizing disruption of natural hydrologic flow paths, and improving existing stream channel hydrology to allow increased fish passage to upstream habitat.

II. Alternatives

The two alternatives for the project are the proposed action and deferred action. No action is not feasible due to the impacts related to fish passage.

A. Alternative I - Proposed Action

1. Proposed Action

Replace one large drainage structure, riprap head wall, and associated fill to provide fish passage to upstream habitat.

2. Summary of Design Features, Mitigation Measures and Best Management Practices:

a. Structure Removal and Replacement

Temporarily divert stream around work area to minimize sedimentation during construction.

When removing or installing culverts, the excavated material not used in the embankment will be placed in a pre-approved disposal site located on stable ground outside the 100-year flood plain.

The material will be sloped and consolidated enough to establish vegetation growth.
Install 100-year flood design culverts to accommodate associated bedload and debris, with outlets that minimize erosion.

Where needed, place riprap on the fill slopes at creek crossings with rock obtained from approved sources outside the project area.

Fill material used at culvert installation sites will be acquired from onsite or from pre-approved borrow sources.

Place three inch minus rock on the road to harden the surface and reduce erosion; obtain rock from either BLM or commercial sources.

b. Water/Fish

Conduct in-stream work between July 1 and August 31, the period recommended by the Oregon Department of Fish and Wildlife for in-water work.

Conduct out-of-stream work during periods of low soil moisture, usually between May 15 and September 15.

As needed during construction activity, use sediment traps and erosion control measures to reduce sediment delivery into streams.

c. Wildlife

Discontinue operations if a T&E species is found occupying the project area. Analyze the possible impacts of the project on species. Identify and implement a course of action.

To minimize noise disturbance to owls for actions within 0.25 mile of unsurveyed suitable habitat initiate as many projects as possible after June 30.

To minimize noise disturbance to murrelets for actions within 0.25 mile of unsurveyed suitable habitat initiate as many projects as possible after August 5. Impose a daily time restriction by allowing work to be done only from two hours after sunrise until two hours before sunset from April 1 to September 15.

d. Vegetation

Revegetate disturbed soil and waste areas; possible methods include grass seeding, fertilizing, hydro mulching, netting, mulching, and/or planting native trees or shrubs. Use 100% mixture of Oregon Certified (blue tagged) *Fesuca rubra*, (red fescue) at a rate equal to 40 pounds per acre. Administer to ensure that proper revegetation and mixtures are used.

Discontinue operations if a T&E species is found in the project area. Analyze the possible impacts of the project on species. Identify and implement a course of action if needed.

Additional details regarding the project are available in Marys Peak Resource Area files.

B. Alternative 2 - Deferred Action

Action to replace the structure would be deferred to another fiscal year.

III. Affected Environment/Environmental Consequences

A. Alternative 1 - Proposed Action

1. Soils

a. Affected Environment

The soils affected by this project consist of fill material in the road bed. The waste disposal sites are on existing roadbeds near the project area.

b. Environmental Consequences

Short-term erosional effects of construction activities would be minimal. Removal of the structure would greatly improve fish passage and stabilizing the roadbed will reduce the possibility of future soil movement into the adjacent streams.

2. Vegetation

a. Affected Environment

Primary vegetation adjacent to the project area is a 50-year-old Douglas-fir/red alder stand in a Riparian Reserve. This project is considered as a routine maintenance activity within the road right-of-way. Page 22 of the Survey and Manage Record of Decision (Final Environmental Impact Statement For Amendment to the Survey and Manage, Protection Buffer, and other Mitigating Measures Standards and Guidelines) states, "Routine maintenance of improvements and existing structures is not considered a habitat disturbing activity". Thus, any clearance surveys for fungi, vascular plants, lichens and bryophytes are not required. However, the project area was surveyed in the summer/fall of 2000 and no known sites of Survey and Manage species were found.

b. Environmental Consequences

No trees would be cut in the project area. Impacts to Riparian Reserve vegetation would be minimal. The proposed action would not affect any special status species or SEIS Special Attention Species (RMP, p. 28) since none were found in the project area. Noxious weed species that are commonly found in the area are priority III and are well established and widespread throughout the Mary's Peak Resource Area and the Salem District. Eradication is not practical using any proposed treatment methods. Grass seeding exposed soil areas tends to decrease the establishment of noxious weeds. Adverse effects from these weeds are not anticipated.

3. Water Quality, Hydrology, and Channel Function

a. Affected Environment

The project area involves a steep third order stream that drains to Fall Creek and hence, to the Alsea River. The channel in the project area is typical of channels with large sediment loads which are blocked by road fills: it has deposited large quantities of material upstream of the culvert and degraded downstream from the fill and culvert. Continued erosion downstream of the crossing threatens to undermine the fill and has prevented anadromous fish passage. There is high potential for fill failure in this location.

This channel reach is currently "functional at risk" due to the blockage by the culvert and fill of the normal passage of material (substrate and debris) to the main Fall Creek channel downstream. In addition, due to the large particle sizes of the stream's sediment load and the large drainage area affected, the blockage appears to have contributed to a significant reduction in the supply of debris and sediment downstream to the main channel on Fall Creek. This may have contributed to increased bank erosion, down-cutting and a reduction in the quantity and quality of aquatic habitat in the main channel.

b. Environmental Consequences

Direct - This action would prevent several hundred cubic yards of road fill material from eventually entering the stream. In the short term, while removing fill material (and until the new fill has stabilized and revegetated), small quantities of sediment are likely to enter the stream.

Indirect - None. Cumulative - Not measurable.

4. Fish

a. Affected Environment

Fall Creek currently supports populations of steelhead and cutthroat trout and coho salmon in the vicinity of the project area. Chinook salmon are found downstream in Fall Creek, although the upstream limit of chinook distribution is unknown. The existing structure where road 13-8-8 crosses Fall Creek does not provide adequate fish passage.

b. Environmental Consequences

Removal of the existing structure will allow unimpeded upstream and downstream passage for steelhead and cutthroat trout. The project has the potential to reopen approximately one-half mile of historic fish habitat that is currently inaccessible. The project is likely to result in a short-term increase in sediment input to Fall Creek, and may have short-term adverse impacts to habitat occupied by steelhead and cutthroat trout and coho salmon, although project design features are expected to minimize sediment input.

5. Wildlife

a. Affected Environment

All of the proposed road work will occur within the existing road prism which is considered to be non-habitat. The project is located within 0.25 mile of unsurveyed suitable northern spotted owl or marbled murrelet habitat.

b. Environmental Consequences

Any activity on this project that is initiated during the owl or murrelet breeding seasons would create a noise disturbance above ambient forest noise which may affect the nesting behavior of these birds.

B. Alternative 2 - Deferred Action

Environmental Consequences of Deferred Action

The structure will continue to deter fish passage. The road may fail during major storm events and deposit sediment into Fall Creek. Water quality and fish habitat could be damaged by this deposition.

V. Review Summaries

Environmental Elements Review Summary

The following table summarizes environmental features which the Bureau of Land Management is required by law or policy to consider in all Environmental Documentation (BLM Handbook H-1790-1, Appendix 5; Critical Elements of the Human Environment). Information in the table applies only to the proposed action.

Table 7a: Environmental Elements Review Summary (Fall Creek Culvert)

Environmental Feature	Affected/May Be Affected/Not Affected	Remarks
Air Quality	Not Affected	
Areas of Critical Environmental Concern	Not Affected	
Cultural, Historic, Paleontological	Not Affected	Literature and field survey revealed nothing of cultural resource significance in the construction area.
Prime or Unique Farm Lands	Not Affected	
Flood Plains	Affected	Project is in a small flood plain that has been affected by past road construction.
Native American Religious Concerns	Not Affected	
Threatened, Endangered, or Special Status Plant Species or Habitat	Not Affected	No known sites. See Botany Reports dated August 15, 2000 & March 13, 2001.
Threatened, Endangered, or Special Status Animal Species or Habitat	Wildlife: Not Affected Fish: May Be Affected	See Wildlife section. See Fish section.
Hazardous/Solid Wastes	Not Affected	
Drinking/Groundwater Quality	Affected	See Water section.
Wetlands/Riparian Reserves	Affected	See Vegetation section.
Wild and Scenic Rivers	Not Affected	
Wilderness	Not Affected	

Table 7b: Common Issues (Fall Creek Culvert)

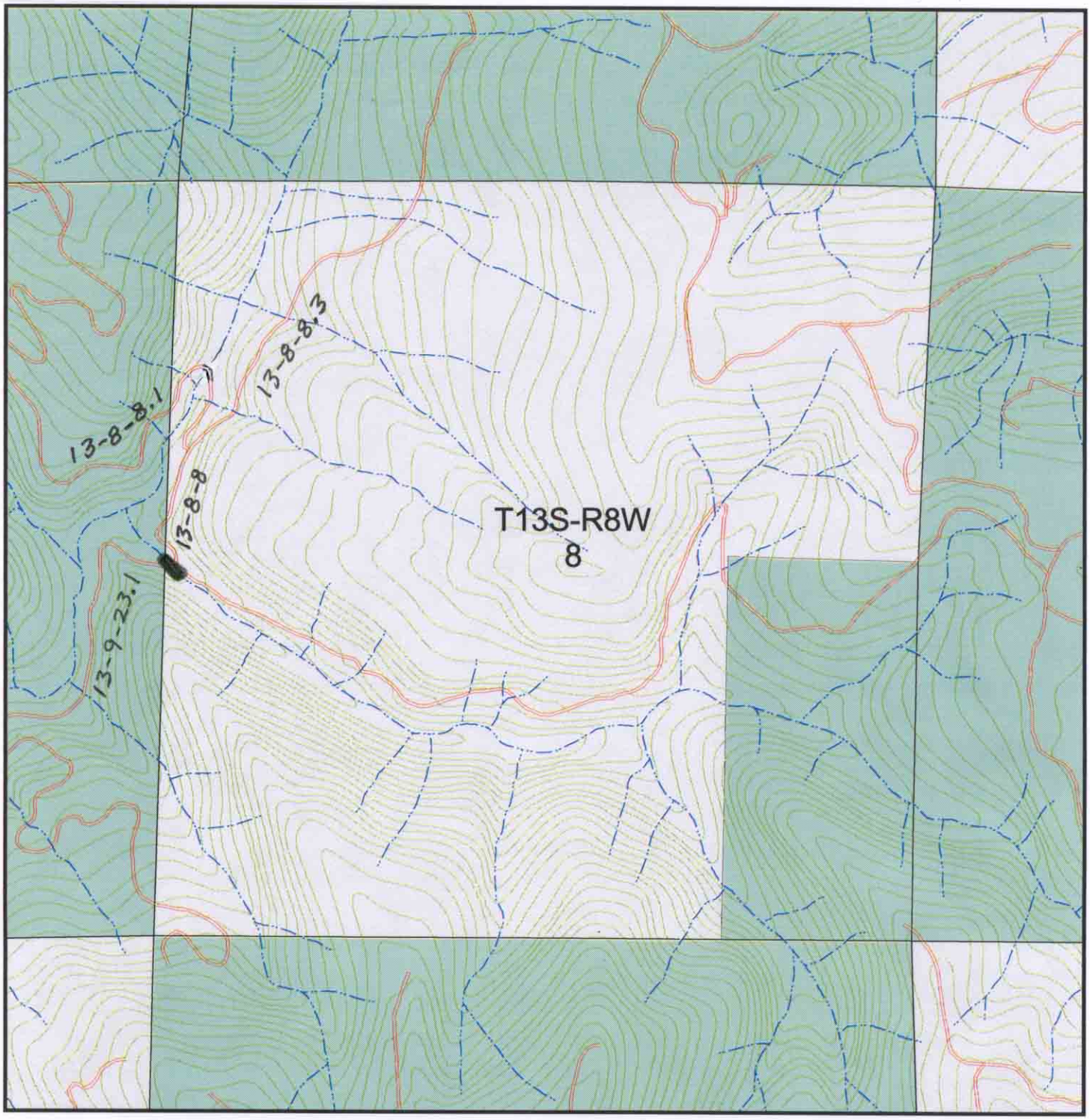
Issue / Concern	Applicable / Not Applicable	Remarks
VRM	Not Applicable	All Class IV
Minerals	Not Applicable	None identified
Land Uses	Not Applicable	None identified
Soils Sedimentation	Applicable	See Soils section.
Water: DEQ 303d listed streams Water Temperature Water Quality Water Quantity	 Not Applicable Not Applicable Applicable Not Applicable	See Water section
Rural Interface Areas	Not Applicable	None Identified

Table 7c: Beneficial Use Review Summary (Fall Creek Culvert)

Downstream Beneficial Uses	Applicable/Not Applicable	Remarks/References
Public water supply	Not Applicable	None
Private domestic water supply	Applicable	Diversions a considerable distance downstream; unlikely to be affected.
Irrigation	Applicable	Same as above
Fisheries	Applicable	See Fish section
Wildlife	Applicable	See Wildlife section
Recreation	Not Applicable	No known recreation activity near project area.
Aesthetic quality	Applicable	Slight effect on water color

Fall Creek Culvert

T13S-R8W, Sec. 8



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LAND USE ALLOCATION

- AMA
- AMR
- GFMA
- LSR

OTHER FEATURES

- Non-BLM Lands
- Federal Riparian Reserves
- 40' Contours (from 10m DEMs)
- Culvert Replacement

N

No warranty is made by the Bureau of Land Management for use of the data for purposes not intended by the Bureau of Land Management.

October 18, 2000

W. Fork Mill Creek Culvert

I. Purpose and Need

The proposed action for this project is to Replace one large deteriorated drainage structure, and remove a trash rack to provide for fish passage upstream. Debris from winter storms have accumulated behind the trash rack over the past 10 years. The proposed project area is located approximately 16 miles southwest of Philomath, Benton County, Oregon (see map section at end of EA) on private land. Land allocation is Riparian Reserve.

The roadway is covered under existing Reciprocal Road Right-of-Way Agreement S-805 between the BLM and Willamette Industries. The Transportation Management Objective for this road is to provide access for timber management activities and dispersed recreational use.

Findings of a recent culvert inventory and subsequent specialist's recommendations identified this deteriorating structure as needing replaced and to improve in-stream culverts for fish enhancement. Several streams in this watershed experienced debris flows during the 1996 winter storms.

Replacement of the structure and removal of the trash rack would meet Aquatic Conservation Strategy objectives by reducing disruption of natural hydrologic flow paths, improving existing stream channel hydrology to allow increased fish passage.

II. Alternatives

The two alternatives for the project are the proposed action and deferred action. No action is not feasible due to the impacts related to fish passage and continued increases in sediment delivery.

A. Alternative I - Proposed Action

1. Proposed Action

Replace one large deteriorated drainage structure and associated fill to improve fish passage. Remove the upstream trash rack to eliminate channel debris deposition and allow fish to migrate upstream.

2. Summary of Design Features, Mitigation Measures and Best Management Practices:

a. Structure Removal

Temporarily divert stream around work area to minimize sedimentation during construction.

When removing or installing culverts, the excavated material not used in the embankment will be placed in a pre-approved disposal site located on stable ground outside the 100-year flood plain. The material will be sloped and consolidated enough to establish vegetation growth.

Install 100-year flood design culverts to accommodate associated bedload and debris, with outlets that minimize erosion.

Where needed, place riprap on the fill slopes at creek crossings with rock obtained from approved sources outside the project area.

Fill material used at culvert installation sites will be acquired from onsite or from pre-approved borrow sources.

Place three inch minus rock on the road to harden the surface and reduce erosion; obtain rock from either BLM or commercial sources.

b. Water/Fish

Conduct in-stream work between July 1 and August 31, the period recommended by the Oregon Department of Fish and Wildlife for in-water work.

Conduct out-of-stream work during periods of low soil moisture, usually between May 15 and September 15.

As needed during construction activity, use sediment traps and erosion control measures to reduce sediment delivery into streams.

c. Wildlife

Discontinue operations if a T&E species is found occupying the project area. Analyze the possible impacts of the project on species. Identify and implement a course of action.

Minimize noise disturbance to owls for actions within 0.25 mile of unsurveyed suitable habitat initiate as many projects as possible after June 30.

Minimize noise disturbance to murrelets for actions within 0.25 mile of unsurveyed suitable habitat initiate as many projects as possible after August 5. Impose a daily time restriction by allowing work to be done only from two hours after sunrise until two hours before sunset from April 1 to September 15.

d. Vegetation

Revegetate disturbed soil and waste areas; possible methods include grass seeding, fertilizing, hydro mulching, netting, mulching, and/or planting native trees or shrubs. Use 100% mixture of Oregon Certified (blue tagged) *Fesuca rubra*, (red fescue) at a rate equal to 40 pounds per acre. dminister to ensure that proper revegetation and mixtures are used.

Discontinue operations if a T&E species is found in the project area. Analyze the possible impacts of the project on species. Identify and implement a course of action if needed.

Additional details regarding the project are available in Marys Peak Resource Area files.

B. Alternative 2 - Deferred Action

Action to replace the structure and remove the trash rack would be deferred to another fiscal year.

III. Affected Environment/Environmental Consequences

A. Alternative 1 - Proposed Action

1. Soils

a. Affected Environment

The soils affected by this project consist of fill material in the road bed. The waste disposal sites are on existing roadbeds near the project area.

b. Environmental Consequences

Short-term erosional effects of construction activities would be minimal. Removal of the structure would greatly improve fish passage and stabilizing the roadbed will reduce the possibility of future soil movement into the adjacent streams.

2. Vegetation

a. Affected Environment

Primary vegetation adjacent to the project area is a 50-year-old Douglas-fir/red alder stand in a Riparian Reserve. This project is considered as a routine maintenance activity within the road right-of-way. Page 22 of the Survey and Manage Record of Decision (Final Environmental Impact Statement For Amendment to the Survey and Manage, Protection Buffer, and other Mitigating Measures Standards and Guidelines) states, "Routine maintenance of improvements and existing structures is not considered a habitat disturbing activity". Thus, any clearance surveys for fungi, vascular plants, lichens and bryophytes are not required.

b. Environmental Consequences

No trees would be cut in the project area. Impacts to Riparian Reserve vegetation would be minimal. The proposed action would not affect any special status species or SEIS Special Attention Species (RMP, p. 28) since none were found in the project area. Noxious weed species that are commonly found in the area are priority III and are well established and widespread throughout the Mary's Peak Resource Area and the Salem District. Eradication is not practical using any proposed treatment methods. Grass seeding exposed soil areas tends to decrease the establishment of noxious weeds. Adverse effects from these weeds are not anticipated.

3. Water Quality, Hydrology, and Channel function

a. Affected Environment

The project area involves the West Fork of Mill Creek, a third order stream just 50 feet above the confluence of Mill Creek. The West Fork is a typical Rosgen "Aa+" channel type: high gradient (>12%), cobble-gravel substrate, entrenched and subject to debris torrents during large winter storm events.

This channel reach is currently "functional at risk" due to the reduction in the normal passage of

material (substrate and debris) to the main Mill Creek channel downstream. However, due to the small particle sizes of the stream's sediment load and the small drainage area affected, the partial blockage appears to have little consequence for channel function downstream of the fills: the main Mill Creek channel currently has a large supply of sediment and debris and is properly functioning. There is moderate potential for fill failure in this location.

b. Environmental Consequences

Direct - This action would prevent several hundred cubic yards of road fill material from eventually entering the stream. In the short term, while removing fill material (and until the new fill has stabilized and revegetated), small quantities of sediment are likely to enter the stream.

Indirect - None. Cumulative - Not measurable.

4. Fish

a. Affected Environment

West Fork Mill Creek currently supports a population of cutthroat trout. Steelhead trout and coho salmon are not thought to inhabit West Fork Mill Creek, however, they are found approximately 50 feet downstream in Mill Creek. Chinook salmon inhabit Mill Creek approximately one mile downstream of the project area. The existing deteriorated pipe-arch structure where road 13-8-3.1 crosses West Fork Mill Creek does not provide adequate passage for cutthroat trout. The trash rack that currently exists upstream of the pipe-arch does not allow downstream movement of woody debris.

b. Environmental Consequences

Removal of the existing structure will allow unimpeded upstream and downstream passage for cutthroat trout, and may allow for colonization of West Fork Mill Creek by steelhead trout and coho salmon. The project has the potential to reopen approximately one-half mile of habitat that may have historically been utilized by steelhead trout and coho salmon. Removal of the trash rack upstream of the structure will allow for unobstructed downstream movement of woody debris. The project is likely to result in a short-term increase in sediment input to Mill Creek, although project design features are expected to minimize sediment input. The effects of sedimentation from the project may have short-term adverse impacts to habitat occupied by steelhead and cutthroat trout and coho and chinook salmon. In the long-term implementation of the project eliminates the risk of catastrophic failure of the existing deteriorated pipe-arch structure which could result in the deposition of hundreds of cubic yards of sediment to Mill Creek and the Alsea River, with severe adverse impacts to fish habitat and populations.

5. Wildlife

a. Affected Environment

All of the proposed road work will occur within the existing road prism which is considered to be non-habitat. The project is located within 0.25 mile of unsurveyed suitable northern spotted owl or marbled murrelet habitat.

b. Environmental Consequences

Any activity on this project that is initiated during the owl or murrelet breeding seasons would create a noise disturbance above ambient forest noise which may affect the nesting behavior of these birds.

B. Alternative 2 - Deferred Action

Environmental Consequences of Deferred Action

The structure will continue to deteriorate and deter fish passage. The road may fail depositing sediment into Mill Creek which may impact fish habitat.

IV. Review Summaries

Environmental Elements Review Summary

The following table summarizes environmental features which the Bureau of Land Management is required by law or policy to consider in all Environmental Documentation (BLM Handbook H-1790-1, Appendix 5; Critical Elements of the Human Environment). Information in the table applies only to the proposed action.

Table 8a: Environmental Elements Review Summary (W. Fork Mill Creek Culvert)

Environmental Feature	Affected/May Be Affected/Not Affected	Remarks
Air Quality	Not Affected	
Areas of Critical Environmental Concern	Not Affected	
Cultural, Historic, Paleontological	Not Affected	Literature and field survey revealed nothing of cultural resource significance in the construction area.
Prime or Unique Farm Lands	Not Affected	
Flood Plains	Affected	Project is in a small flood plain that has been affected by past road construction.
Native American Religious Concerns	Not Affected	
Threatened, Endangered, or Special Status Plant Species or Habitat	Not Affected	No known sites. See Botany Reports dated August 15, 2000 & March 13, 2001.
Threatened, Endangered, or Special Status Animal Species or Habitat	Wildlife: May Be Affected Fish: May Be Affected	See Wildlife section. See Fish section.
Hazardous/Solid Wastes	Not Affected	
Drinking/Groundwater Quality	Affected	See Water section.
Wetlands/Riparian Reserves	Affected	See Vegetation section.
Wild and Scenic Rivers	Not Affected	
Wilderness	Not Affected	

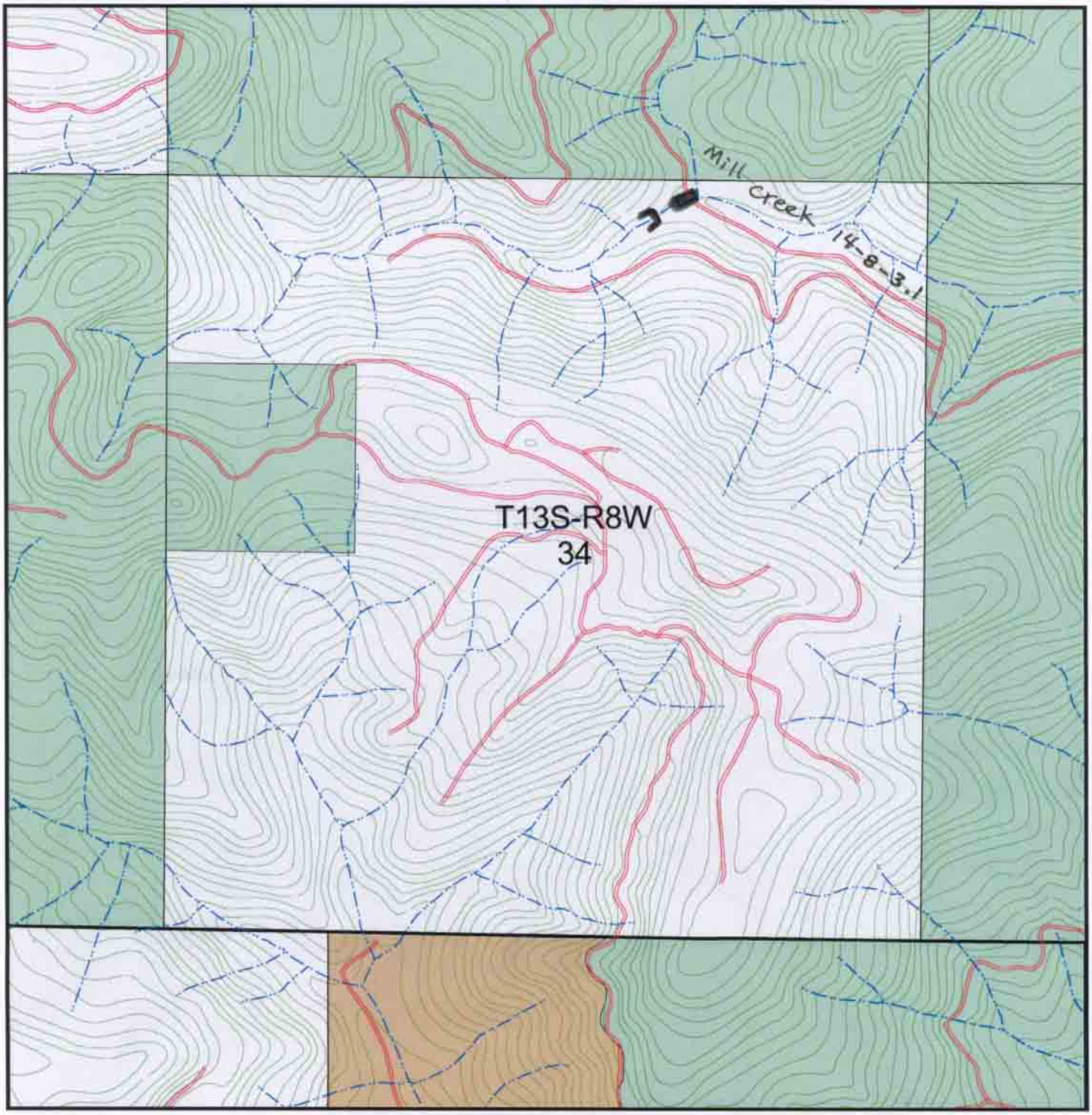
Table 8b: Common Issues (W. Fork Mill Creek Culvert)

Issue / Concern	Applicable / Not Applicable	Remarks
VRM	Not Applicable	All Class IV
Minerals	Not Applicable	None identified
Land Uses	Not Applicable	None identified
Soils Sedimentation	Applicable	See Soils section.
Water DEQ 303d listed streams Water Temperature Water Quality Water Quantity	 Not Applicable Not Applicable Applicable Not Applicable	See Water section.
Rural Interface Areas	Not Applicable	None identified

Table 8c: Beneficial Use Review Summary (W. Fork Mill Creek Culvert)

Downstream Beneficial Uses	Applicable/Not Applicable	Remarks/References
Public water supply	Not Applicable	None
Private domestic water supply	Applicable	Diversions a considerable distance downstream; unlikely to be affected.
Irrigation	Applicable	Same as above
Fisheries	Applicable	See Fish section
Wildlife	Applicable	See Wildlife section
Recreation	Not Applicable	No known recreation activity near project area.
Aesthetic quality	Applicable	Slight effect on water color

W. FORK MILL CREEK CULVERT T13S-R8W, Sec. 34



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LAND USE ALLOCATION

- AMA
- AMR
- GFMA
- LSR

OTHER FEATURES

- Non-BLM Lands
- Federal Riparian Reserves
- 40' Contours (from 10m DEMs)
- culvert Replacement
- Trash Rack

N

No warranty is made by the Bureau of Land Management for use of the data for purposes not intended by the Bureau of Land Management.

November 08, 2000

Racks Creek Decommissioning

I. Purpose and Need

The proposed action for this project is to remove five live stream drainage structures with associated embankments to improve fish habitat. The proposed project area is located approximately 17 miles southwest of Philomath, Benton County, Oregon (see map section at end of EA). Land allocations are Riparian Reserve and Late-Successional Reserve.

Findings of a recent stream study and specialist's recommendations identified this road as a moderate priority for removal.

Removal of the structures and associated fills would meet Aquatic Conservation Strategy objectives by minimizing disruption of natural hydrologic flow paths, and improving existing stream channel hydrology to improve fish habitat.

II. Alternatives

The two alternatives for the project are the proposed action and deferred action. No action is not feasible due to the impacts related to continued increases in sediment delivery from channel scour below drainage structures.

A. Alternative I - Proposed Action

1. Proposed Action

Remove five live stream drainage structures and associated fills to improve fish habitat downstream.

2. Summary of Design Features, Mitigation Measures and Best Management Practices:

a. Structure Removal

Remove fill material above and around existing structures; place unsuitable and excess material in a pre-approved waste area located above the 100-year flood plain; minimize compaction of waste material.

b. Water/Fish

Conduct in-stream work between July 1 and August 31, the period recommended by the Oregon Department of Fish and Wildlife for in-water work.

Conduct out-of-stream work during periods of low soil moisture, usually between May 15 and September 15.

As needed during construction activity, use sediment traps and erosion control measures to reduce sediment delivery into streams.

c. Wildlife

Discontinue operations if a T&E species is found occupying the project area. Analyze the possible impacts of the project on species. Identify and implement a course of action.

Minimize noise disturbance to owls for actions within 0.25 mile of unsurveyed suitable habitat initiate as many projects as possible after June 30.

Minimize noise disturbance to murrelets for actions within 0.25 mile of unsurveyed suitable habitat initiate as many projects as possible after August 5. Impose a daily time restriction by allowing work to be done only from two hours after sunrise until two hours before sunset from April 1 to September 15.

d. Vegetation

Revegetate disturbed soil and waste areas; possible methods include grass seeding, fertilizing, hydro mulching, netting, mulching, and/or planting native trees or shrubs. Use 100% mixture of Oregon Certified (blue tagged) *Fesuca rubra*, (red fescue) at a rate equal to 40 pounds per acre. Administer to ensure that proper revegetation and mixtures are used.

Discontinue operations if a T&E species is found in the project area. Analyze the possible impacts of the project on species. Identify and implement a course of action if needed.

When trees must be cut to facilitate construction, keep them on site; where possible, fall trees into the stream and leave them in place.

Remove & dispose of old culverts at an approved recycling site.

All machinery operating in the project area shall arrive on site clean of any dirt or vegetation (ie. steam cleaned).

Additional details regarding the project are available in Marys Peak Resource Area files.

B. Alternative 2 - Deferred Action

Action to remove the structures and re-close the road would be deferred to another fiscal year.

III. Affected Environment/Environmental Consequences

A. Alternative 1 - Proposed Action

1. Soils

a. Affected Environment

The soils affected by this project consist of fill material in the road bed. The waste disposal sites are on existing roadbeds near the project area.

b. Environmental Consequences

Short-term erosional effects of construction activities would be minimal. Removal of the structure would greatly improve fish passage and stabilizing the roadbed will reduce the possibility of future soil movement into the adjacent streams.

2. Vegetation

a. Affected Environment

The existing road, 13-8-9.4, weaves through a Douglas-fir stand of approximately 110 years of age. The road surface and cut banks are currently vegetated with a red alder overstory. The size of the red alders are mostly less than 8 inches DBH. The understory is salmonberry in areas and open in others. Conifer (w. hemlock, Douglas-fir and noble-fir) seedlings are common and scattered along the road and cut banks. The shrub/forb/grass layer is mostly dominated by sword-fern, Oregon oxalis and brome grass with lesser amounts of salal.

Major plant grouping as listed in the Salem District Proposed Resource Management Plan/Final Environmental Impact Statement (V.1, chapter 3, pp.29-32) is the Douglas-fir/Red Alder/Salmonberry grouping which occurs on the west slopes of the Oregon Coastal Mountains.

More specifically the area is comprised of the following plant associations.

The w. hemlock/salmonberry plant association occurs on middle and lower slopes on well watered sites. soils are moist much of the year, but are not as wet or poorly drained as in the devil's club association. Salmonberry occurs along watercourses and continues upslope until a slope break changes subsurface water abundance.

The w. hemlock/salal plant association is common on upper slopes and ridges. The soils are moderately deep and well drained.

The w. hemlock/sword-fern plant association is common throughout the forest. It occurs on steep and lower slopes or, less often, on benches and alluvial flats. Soils are well-drained but receive continuous subsurface moisture from up-slope. Soils are usually deep and rich in organic matter.

Special Status Species:
There are no "known sites" of any special status vascular plant, bryophyte, fungi or lichen species within the project area nor were any found during subsequent surveys.

SEIS Special Attention Species (RMP, p. 28):
Poa laxiflora a BLM tracking species was located at the west end of the existing road near the end of the road and just outside of a riparian area near a culvert proposed to be removed. No other survey and manage known sites are located within the proposed project area.

Noxious Weeds: No noxious weeds were found within the proposed project area.

b. Environmental Consequences

Impacts to Riparian Reserve vegetation would be minimal. The proposed action would not affect any special status species or SEIS Special Attention Species (RMP, p. 28) since none were found in the project area. Noxious weed species that are commonly found in the area are priority III and are well established and widespread throughout the Mary's Peak Resource Area and the Salem District. Eradication is not practical using any proposed treatment methods. Grass seeding exposed soil areas tends to decrease the establishment of noxious weeds. Adverse effects from these weeds are not anticipated.

3. Water Quality, Hydrology, and Channel function

a. Affected Environment

The project area involves Racks Creek, a fourth order stream which drains to the North Fork Alsea. The affected channel reaches are lower gradient, Rosgen "B" channel types: 2- 4% gradient, moderately entrenched with gravel substrates and fines (silts and sand size material). These channel reaches are currently "functional at risk" due to the impediment by the culverts and fill of the normal passage of material (substrate and debris) to the main Racks Creek channel downstream. However, due to the low gradients and small particle sizes of the stream's sediment load and the small drainage areas affected, the partial blockage likely has little consequence for channel function downstream of the fills: Racks Creek main appears to be properly functioning. In addition, the potential for fill failure in these locations is low.

b. Environmental Consequences

Direct - This action would prevent several hundred cubic yards of road fill material from eventually entering the stream. In the short term, while removing fill material (and until the new fill has stabilized and revegetated), small quantities of sediment are likely to enter the stream.

Indirect - None. Cumulative - Not measurable.

4. Fish

a. Affected Environment

Racks Creek is inhabited by cutthroat trout. Steelhead trout are found approximately five miles downstream of the project area in the North Fork Alsea River. Upstream migration of chinook and coho salmon currently is blocked by a trapping weir at the Alsea Fish Hatchery, approximately 11 miles downstream of the project area. The Oregon Department of Fish and Wildlife plans to remove the weir within 2-3 years, after which natural recolonization of the North Fork Alsea River by chinook and coho salmon is expected to occur. Two of the five live-stream culverts proposed for removal in conjunction with the decommissioning of road 8-13-9.4 do not provide adequate passage for cutthroat trout.

b. Environmental Consequences

Removal of the culverts will allow unimpeded upstream and downstream passage for cutthroat trout. Decommissioning of road 8-13-9.4 is expected to contribute to restoration of natural drainage network patterns and hydrologic function. The project is likely to result in a short-term increase in sediment input to Mill Creek, although project design features are expected to

minimize sediment input. The effects of sedimentation from the project may have short-term adverse impacts to habitat occupied by cutthroat trout, but is not expected to be detectable five miles downstream where steelhead are found.

5. Wildlife

a. Affected Environment

All of the proposed road work will occur within the existing road prism which is considered to be non-habitat. The project is located within 0.25 mile of unsurveyed suitable northern spotted owl or marbled murrelet habitat.

b. Environmental Consequences

Any activity on this project that is initiated during the owl or murrelet breeding seasons would create a noise disturbance above ambient forest noise which may affect the nesting behavior of these birds.

B. Alternative 2 - Deferred Action

Environmental Consequences of Deferred Action

The streams will continue to scour downstream from the crossings which could degrade fish habitat downstream.

IV. Review Summaries

Environmental Elements Review Summary

The following table summarizes environmental features which the Bureau of Land Management is required by law or policy to consider in all Environmental Documentation (BLM Handbook H-1790-1, Appendix 5; Critical Elements of the Human environment). Information in the table applies only to the proposed action.

Table 9a: Environmental Elements Review Summary (Racks Creek Decommissioning)

Environmental Feature	Affected/May Be Affected/Not Affected	Remarks
Air Quality	Not Affected	
Areas of Critical Environmental Concern	Not Affected	
Cultural, Historic, Paleontological	Not Affected	Literature and field survey revealed nothing of cultural resource significance in the construction area.
Prime or Unique Farm Lands	Not Affected	
Flood Plains	Affected	Project is in a small flood plain that has been affected by past road construction.
Native American Religious Concerns	Not Affected	
Threatened, Endangered, or Special Status Plant Species or Habitat	Not Affected	No known sites. See Botany Reports dated March 13, 2001 & April 3, 2001.
Threatened, Endangered, or Special Status Animal Species or Habitat	Wildlife: May Be Affected Fish: May Be Affected	See Wildlife section. See Fish section.
Hazardous/Solid Wastes	Not Affected	
Drinking/Groundwater Quality	Affected	See Water section.
Wetlands/Riparian Reserves	Affected	See Vegetation section.
Wild and Scenic Rivers	Not Affected	
Wilderness	Not Affected	

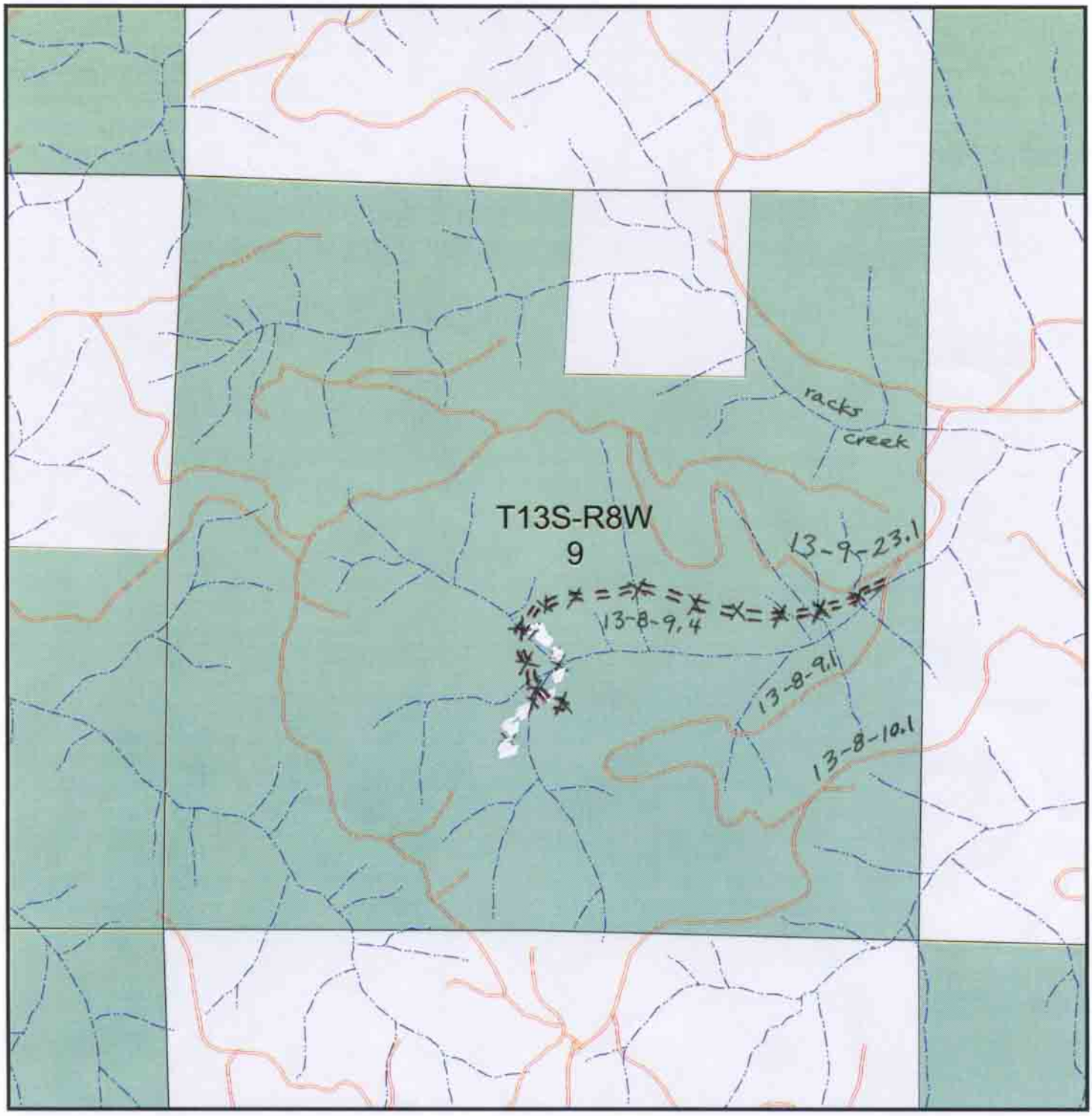
Table 9b: Common Issues (Racks Creek Decommissioning)

Issue / Concern	Applicable / Not Applicable	Remarks
VRM	Not Applicable	All Class IV
Minerals	Not Applicable	None Identified
Land Uses	Not Applicable	None Identified
Soils Sedimentation	Applicable	See Soils section.
Water DEQ 303d listed streams Water Temperature Water Quality Water Quantity	 Not Applicable Not Applicable Applicable Not Applicable	See Water section.
Rural Interface Areas	Not Applicable	None Identified

Table 9c: Beneficial Use Review Summary (Racks Creek Decommissioning)

Downstream Beneficial Uses	Applicable/Not Applicable	Remarks/References
Public water supply	Not Applicable	None
Private domestic water supply	Applicable	Diversions a considerable distance downstream; unlikely to be affected.
Irrigation	Applicable	Same as above
Fisheries	Applicable	See Fish section
Wildlife	Applicable	See Wildlife section
Recreation	Not Applicable	No known recreation activity near project area.
Aesthetic quality	Applicable	Slight effect on water color

Racks Creek Rd. Decommission T13S-R8W, Sec. 9



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LAND USE ALLOCATION

- AMA
- AMR
- GFMA
- LSR
- CGRR

OTHER FEATURES

- Non-BLM Lands
- Federal Riparian Reserves
- 40' Contours (from 10m DEMs)
- Road Decommission

N

No warranty is made by the Bureau of Land Management for use of the data for purposes not intended by the Bureau of Land Management.

November 30, 2000

Lower Swamp Creek Culvert

I. Purpose and Need

The proposed action for this project is to replace two large drainage structures. The proposed project area is located approximately 18 miles southwest of Philomath, Benton County, Oregon (see map section at end of EA) on private land. Land allocation is Riparian Reserve.

The roadway is covered under existing Reciprocal Road Right-of-Way Agreement S-805 between the BLM and Willamette Industries. The Transportation Management Objective for this road is to keep it open for residences, timber management activities and dispersed recreational use.

Findings of a recent major culvert inventory and subsequent specialist's recommendations identified this deteriorated structure as needing replaced.

Replacement of the structures would meet Aquatic Conservation Strategy objectives by minimizing disruption of natural hydrologic flow paths, and improving existing stream channel hydrology.

II. Alternatives

The two alternatives for the project are the proposed action and deferred action. No action is not feasible due to the impacts related to water quality with continued increases in sediment delivery.

A. Alternative I - Proposed Action

1. Proposed Action

Replace two large deteriorated drainage structures and associated fill to avoid road failure, and subsequent erosion and sediment delivery into Swamp Creek.

2. Summary of Design Features, Mitigation Measures and Best Management Practices:

a. Structure Removal

Temporarily divert stream around work area to minimize sedimentation during construction.

When removing or installing culverts, the excavated material not used in the embankment will be placed in a pre-approved disposal site located on stable ground outside the 100-year flood plain. The material will be sloped and consolidated enough to establish vegetation growth.

Install 100-year flood design culverts to accommodate associated bedload and debris, with outlets that minimize erosion.

Where needed, place riprap on the fill slopes at creek crossings with rock obtained from approved sources outside the project area.

Fill material used at culvert installation sites will be acquired from onsite or from pre-approved borrow sources.

Place three inch minus rock on the road shoulders to harden the surface and reduce erosion; obtain rock from either BLM or commercial sources.

b. Water/Fish

Conduct in-stream work between July 1 and August 31, the period recommended by the Oregon Department of Fish and Wildlife for in-water work.
Conduct out-of-stream work during periods of low soil moisture, usually between May 15 and September 15.
As needed during construction activity, use sediment traps and erosion control measures to reduce sediment delivery into streams.

c. Wildlife

Discontinue operations if a T&E species is found occupying the project area. Analyze the possible impacts of the project on species. Identify and implement a course of action.

d. Vegetation

Revegetate disturbed soil and waste areas; possible methods include grass seeding, fertilizing, hydro mulching, netting, mulching, and/or planting native trees or shrubs. Use 100% mixture of Oregon Certified (blue tagged) *Fesuca rubra*, (red fescue) at a rate equal to 40 pounds per acre. Administer to ensure that proper revegetation and mixtures are used.

Discontinue operations if a T&E species are found in the project area. Analyze the possible impacts of the project on species. Identify and implement a course of action if needed.

Additional details regarding the project are available in Marys Peak Resource Area files.

B. Alternative 2 - Deferred Action

Action to replace the structures would be deferred to another fiscal year.

III. Affected Environment/Environmental Consequences

A. Alternative 1 - Proposed Action

1. Soils

a. Affected Environment

The soils affected by this project consist of fill material in the road bed. The waste disposal sites are on existing roadbeds near the project area.

b. Environmental Consequences

Short-term erosional effects of construction activities would be minimal. Removal of the structure would greatly improve fish passage and stabilizing the roadbed will reduce the

possibility of future soil movement into the adjacent streams.

2. Vegetation

a. Affected Environment

Primary vegetation adjacent to the project area is a 50-year-old Douglas-fir/red alder stand in a Riparian Reserve. This project is considered as a routine maintenance activity within the road right-of-way. Page 22 of the Survey and Manage Record of Decision (Final Environmental Impact Statement For Amendment to the Survey and Manage, Protection Buffer, and other Mitigating Measures Standards and Guidelines) states, "Routine maintenance of improvements and existing structures is not considered a habitat disturbing activity". Thus, any clearance surveys for fungi, vascular plants, lichens and bryophytes are not required.

b. Environmental Consequences

No trees would be cut in the project area. Impacts to Riparian Reserve vegetation would be minimal. The proposed action would not affect any special status species or SEIS Special Attention Species (RMP, p. 28) since none were found in the project area. Noxious weed species that are commonly found in the area are priority III and are well established and widespread throughout the Mary's Peak Resource Area and the Salem District. Eradication is not practical using any proposed treatment methods. Grass seeding exposed soil areas tends to decrease the establishment of noxious weeds. Adverse effects from these weeds are not anticipated.

3. Water Quality, Hydrology, and Channel function

a. Affected Environment

The project area involves Swamp Creek, a fourth order stream which drains to the South Fork Alsea. The affected channel reach is a Rosgen "C" channel type:<2% gradient, moderately entrenched, low w/d ratio, meandering with gravel substrates and fines (silts and sand size material). This channel appears to be functioning within the range of conditions expected for this channel type in the Oregon coast range.

b. Environmental Consequences

Direct - This action would prevent several hundred cubic yards of road fill material from eventually entering the stream. In the short term, while removing fill material (and until the new fill has stabilized and revegetated), small quantities of sediment are likely to enter the stream.

Indirect - None. Cumulative - Not measurable.

4. Fish

a. Affected Environment

Swamp Creek, in the vicinity of the project area supports populations of steelhead and cutthroat trout and coho salmon. Chinook salmon are found approximately three miles downstream in the South Fork Alsea River.

b. Environmental Consequences

Replacement of the deteriorated double pipe arches with new structure(s) is likely to result in a short-term increase in sediment input to Swamp Creek, although project design features are expected to minimize sediment input. The effects of sedimentation from the project may have short-term adverse impacts to habitat occupied by steelhead and cutthroat trout and coho salmon but is not expected to be detectable three miles downstream in the South Fork Alsea River. In the long-term implementation of the project eliminates the risk of catastrophic failure of the existing deteriorated double pipe-arches which could result in the deposition of hundreds of cubic yards of sediment to Swamp Creek with severe adverse impacts to fish habitat and populations.

5. Wildlife

a. Affected Environment

All of the proposed road work will occur within the existing road prism which is considered to be non-habitat. The project is not located within 0.25 mile of unsurveyed suitable northern spotted owl or marbled murrelet habitat.

b. Environmental Consequences

This project is considered a no effect for both noise disturbance and habitat modification since it is beyond 0.25 mile from suitable habitat.

B. Alternative 2 - Deferred Action

Environmental Consequences of Deferred Action

The structures will continue to deteriorate and the road will eventually fail. The road failure will deposit sediment into Swamp Creek. Water quality and fish habitat could be damaged by this deposition.

IV. Review Summaries

Environmental Elements Review Summary

The following table summarizes environmental features which the Bureau of Land Management is required by law or policy to consider in all Environmental Documentation (BLM Handbook H-1790-1, Appendix 5; Critical Elements of the Human Environment). Information in the table applies only to the proposed action.

Table 10a: Environmental Elements Review Summary (Lower Swamp Creek Culvert)

Environmental Feature	Affected/May Be Affected/Not Affected	Remarks
Air Quality	Not Affected	
Areas of Critical Environmental Concern	Not Affected	
Cultural, Historic, Paleontological	Not Affected	Literature and field survey revealed nothing of cultural resource significance in the construction area.
Prime or Unique Farm Lands	Not Affected	
Flood Plains	Affected	Project is in a small flood plain that has been affected by past road construction.
Native American Religious Concerns	Not Affected	
Threatened, Endangered, or Special Status Plant Species or Habitat	Not Affected	No known sites. See Botany Reports dated August 15, 2000 & March 13, 2001.
Threatened, Endangered, or Special Status Animal Species or Habitat	Wildlife: Not Affected Fish: May Be Affected	See Wildlife section. See Fish section.
Hazardous/Solid Wastes	Not Affected	
Drinking/Groundwater Quality	Affected	See Water section.
Wetlands/Riparian Reserves	Affected	See Vegetation section.
Wild and Scenic Rivers	Not Affected	
Wilderness	Not Affected	

Table 10b: Common Issues (Lower Swamp Creek Culvert)

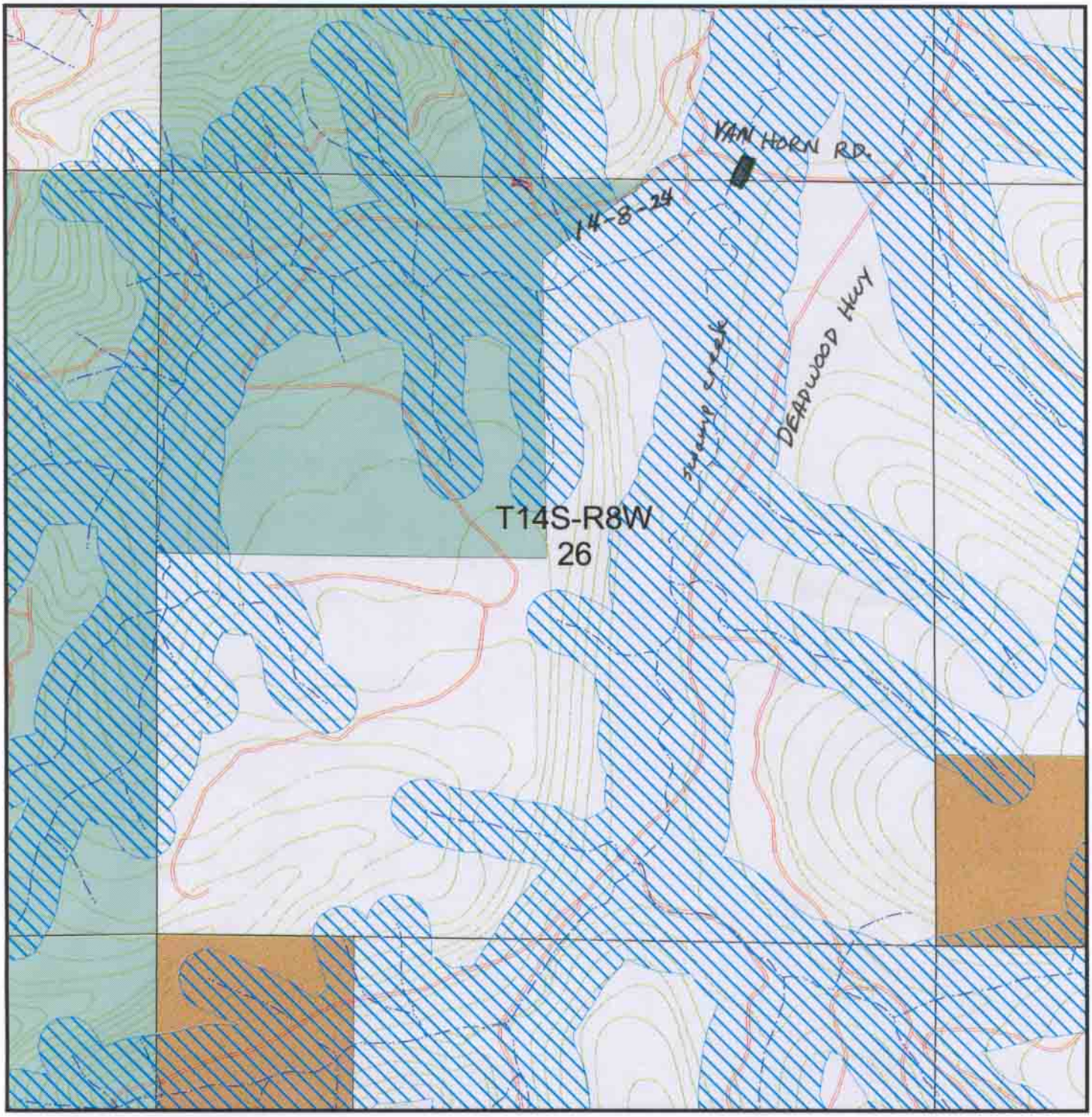
Issue / Concern	Applicable / Not Applicable	Remarks
VRM	Not Applicable	All Class IV
Minerals	Not Applicable	None identified
Land Uses	Not Applicable	None identified
Soils Sedimentation	Applicable	See Soils section.
Water DEQ 303d listed streams Water Temperature Water Quality Water Quantity	 Not Applicable Not Applicable Applicable Not Applicable	See Water section.
Rural Interface Areas	Not Applicable	None identified

Table 10c: Beneficial Use Review Summary (Lower Swamp Creek Culvert)

Downstream Beneficial Uses	Applicable/Not Applicable	Remarks/References
Public water supply	Not Applicable	None
Private domestic water supply	Applicable	Diversions a considerable distance downstream; unlikely to be affected.
Irrigation	Applicable	Same as above
Fisheries	Applicable	See Fish section
Wildlife	Applicable	See Wildlife section
Recreation	Not Applicable	No known recreation activity near project area.
Aesthetic quality	Applicable	Slight effect on water color.

Lower Swamp Creek Culvert

T14S-R8W, Sec. 26



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LAND USE ALLOCATION

- AMA
- AMR
- GFMA
- LSR

OTHER FEATURES

- Non-BLM Lands
- Federal Riparian Reserves
- 40' Contours (from 10m DEMs)
- Culvert Replacement.

N

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October 18, 2000