

ENVIRONMENTAL ASSESSMENT
FOR THE
REPLACEMENT OF EAST FORK ELK VALLEY PIPE #2
EA # 110-01-06

U.S. DEPARTMENT OF INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT
GLENDALE RESOURCE AREA

Responsible Official:

Lynda L. Boody
Glendale Field Manager
BLM District Office

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I. INTRODUCTION

East Fork Elk Valley Creek is approximately 20 miles west of Glendale, Oregon, and within the West Fork Cow Creek watershed. This is a key watershed and was described and analyzed under the West Fork of Cow Creek Ecosystem Analysis (1997), which is an update of the West Fork Cow Creek Watershed Analysis (1994). The West Fork Cow Creek Watershed Analysis supports projects that restore aquatic connectivity. The proposal is tiered to and conforms with the Medford District Record of Decision and Resource Management Plan (RMP, 1995), and Northwest Forest Plan (NFP, 1994). Watershed restoration is a key component of the Aquatic Conservation Strategy of the Northwest Forest Plan.

1) Purpose and Need for the Proposal

The Glendale Resource Area proposes to improve fish passage at an existing culvert on East Fork Elk Valley Creek, located in T. 31 S., R.8 W., Sec. 30. The existing multi-plate steel culvert is 14.5 ft. diameter and 80 ft. long. It is currently a partial velocity barrier to adult coho salmon and steelhead trout and a complete barrier to upstream movement of juvenile anadromous fish, cutthroat trout and other aquatic species.

2) Decisions to be made on this Analysis

The Glendale Resource Area Field Manager will:

- 1) Select the Proposed Action or an alternative.
- 2) Determine whether the selected alternative would have significant effects or not, and whether or not to prepare an environmental impact statement. If the impacts are determined to be insignificant, then a Finding of No Significant Impact (FONSI) can be issued and a decision can be implemented.
- 3) Determine whether the selected alternative is consistent with the Resource Management Plan.

II. DESCRIPTION OF THE ALTERNATIVES

1) Alternatives considered but eliminated from analysis

(a) Remove the existing structure without replacing it at this time.

(b) Add large rock to raise streambed elevation a maximum of 4 feet (maximum at culvert outlet), tapering to existing elevation approximately 150 feet downstream of the culvert. Two feet of rock would be hand-placed inside the culvert for its entire length. This would make it easier for fish to enter the culvert outlet and it would reduce excessive water velocity in the pipe by increasing stream width.

(c) Construct a series of rock weirs at selected intervals for about 150 feet downstream of the culvert to raise the water level and make it easier for fish to enter the culvert.

Option (a) was dropped because: (1) Removing the existing structure would prevent access to nine miles of road and 1,400 acres of public and private lands. Eliminating access is not feasible since the roads are covered under Reciprocal Road Use Agreements with the local land owners. The roads are needed to access BLM and private lands for forest management (2) Use of a temporary structure would only allow vehicular access between July 1 and September 15 in accordance with ODFW in-stream work guidelines, (3) Removal of the structure would present bare soil where the culvert was once located and would be susceptible to erosion during periods of high stream flow, and (4) Repeated placement and removal of a temporary culvert would be a chronic sediment source to the stream.

Option (b) and (c) were rejected because of the potential for stream flows to go subsurface from late spring through fall for several years following construction while spaces between rocks fill with gravel and organic debris. A dry streambed during late spring would prevent out-migration of salmon and steelhead smolts. Weirs would also require periodic maintenance to maintain proper elevation differences between adjacent structures.

2). Proposed Action

The existing multi-plate culvert would be removed and a bottomless structure would be installed within the existing road Right-of-Way. The selected stream crossing structure would be installed so as to maintain the natural streambed and gradient. It would be designed to pass a 100 year flood event.

Project design features for the Proposed Action

If changes to the PDFs are needed during project implementation, they would be analyzed by the interdisciplinary team and the Field Manager and an amended EA would be prepared before the change is implemented.

In-stream work would be between July 1 and September 15 of the same year in accordance with Oregon Department of Fish and Wildlife regulations. Provide surface drainage prior to fall rains.

Stream flows would be diverted around existing culvert replacement so that the construction site remains de-watered. Water would not be returned through the project area until all instream work has been completed to minimize stream sedimentation.

A concrete headwall would be installed around the inlet of structure to protect the culvert inlet collar and prevent erosion of inlet embankment slopes.

Wet or green cement would not be placed in the live stream, and water used to clean tools and equipment would not be allowed to re-enter stream flows.

Heavy equipment would be washed, before moving it onto federal lands, to remove oil and grease. Also, soil and plant parts would be removed to prevent the spread of noxious weeds into the project area.

Hydraulic fluid and fuel lines would be in proper working condition in order to minimize leakage into streams.

Equipment refueling would be done where there is a minimal chance that toxic materials could enter a stream. Equipment would not be stored in a stream overnight.

Contaminated soils as a result of equipment failure or human error would be removed from the site and disposed of in an approved site.

Cutting vegetation on road fill slopes would be minimized in order to maintain slope stability.

Culvert placement would be aligned with the stream reach to minimize erosion at both ends of the culvert. Rip-rap would be placed on adjacent stream slopes where scouring might occur.

Work would be temporarily suspended if monitoring indicates that rainstorms have saturated soils to the extent that there is potential for road damage and for excessive stream sedimentation.

Waste areas for deposition of excess excavated material would be located and utilized away from stream courses.

Side casting of excavated material would be avoided where it would adversely affect water quality or weaken stabilized slopes.

Bare soil areas would be mulched with material that is free of noxious weeds after construction has been completed.

The re-established roadway over the structure would be resurfaced with crushed rock material to maintain a stable subgrade in the vicinity of the stream area.

Use of power equipment within 1/4 mile of any northern spotted owl nest would be limited to the period between June 16 and February 28 of the following year or until a Glendale Resource Area biologist determines that young have sufficiently dispersed. This same seasonal restriction applies to blasting within one mile of an active nest.

All required Survey and Manage surveys required by the Survey and Manage, and Protection Buffer FSEIS would be conducted before habitat disturbing activities are implemented. Species would be protected according to the Management Recommendations for species under the FSEIS.

Surveys for Special status plants would occur during the bloom period prior to ground disturbing activity.

3). No Action Alternative

Under this alternative, the existing structure would not be replaced at this time. The culvert would continue to block or restrict upstream movement of fish and other aquatic species. The short-term addition of sediment to the stream as a result of culvert replacement would not occur. On the other hand, the beneficial long-term effects of restoring aquatic connectivity would also not occur.

III. AFFECTED ENVIRONMENT

1) Location

Analytic watershed (5th field): West Fork Cow Creek
Project Area (7th field): East Fork Elk Valley Creek

Legal Description: beginning of road # 31-8-30 in the NW 1/4 of Sec. 30, T. 31 S., R. 8 W., Willamette Meridian, Douglas County. See attached (project area map).

The following special status fish and wildlife inhabit the West Fork Cow Creek watershed within the project area and are listed under the Endangered Species Act:

Oregon Coast coho salmon - Threatened
Oregon Coast steelhead trout - Candidate
Northern spotted owl - Threatened

There are no known aquatic Survey and Manage mollusks within this 5th field watershed or

adjacent watersheds. Surveys for Survey and Manage plant and animal species in riparian areas would be completed before habitat disturbing activities are initiated. If any Survey and Manage species are found, they would be protected according to established Management Recommendations.

2) Quarries

Rock material for the project would come from private sources or from:

Slotted Pen Quarry, SE1/4 of the NE1/4 of Sec. 5; T. 32 S., R. 8 W.

Dutchmen’s Elk Quarry, SW1/4 of the SE1/4 of Sec. 19; T. 31 S., R. 8 W.

IV. ENVIRONMENTAL CONSEQUENCES

1) Proposed Action

The Proposed Action has been screened for compliance with The Endangered Species Act, The American Indian Religious Freedom Act, Historic Preservation Act, Bureau of Land Management policies related to the ecosystem objectives and concepts in the Medford District Resource Management Plan (RMP) and with the Aquatic Conservation Strategy of the Northwest Forest Plan. Furthermore, this action has been screened from a landscape perspective and there are no effects anticipated from this action that would foreclose future management options in relation to the watershed management objectives identified through the Ecosystem Analysis.

The Proposed Action has been analyzed by an interdisciplinary team. Effects on cultural resources and terrestrial special status and Survey and Manage species would be minimal since the actions would occur along existing roads and areas which have already been disturbed. The following list of critical elements (BLM Handbook) were analyzed under this EA and are not present or effects are mitigated by the proposed action to meet applicable statute, regulation or executive order.

<u>Critical Element</u>	Affected		<u>Critical Element</u>	Affected	
	Yes	No		Yes	No
Air Quality	___	✓	T & E Species	___	✓
ACEC	___	✓	Wastes, Hazardous/Solid	___	✓
Cultural Resources	___	✓	Water Quality	___	✓
Farmlands, Prime/Unique	___	✓	Wetlands/Riparian Zones	___	✓

Flood plains	___	✓	Wild & Scenic Rivers	___	✓
Nat.Amer.Rel. Concerns	___	✓	Wilderness	___	✓
Invasive Species	___	✓	Environmental Justice	___	✓

Implementation of the Proposed Action would result in the following environmental consequences.

A). Fish and Aquatic Habitat

Replacing this culvert would restore aquatic connectivity, allowing anadromous and resident fish and other aquatic species to use all stream habitats up and downstream of the current man-made barrier. However, the Proposed Action would have a short term adverse effect on federally listed fish species.

Feeding success of juvenile coho and steelhead and some other aquatic species could be impaired for several hours at a time over several days while the culvert is being replaced due to stream turbidity. Some organisms would likely be killed by construction equipment. There would be adverse effects of sedimentation on aquatic insect and algal production for an undetermined distance downstream of the construction site until peak flows flush sediment from the substrate; adverse effects would diminish with increasing distance downstream. The amount of stream sediment generated by rock quarry operations would be minimal because measures would be implemented to trap sediment before it moves off site.

The Oregon Department of Environmental Quality has identified Elk Valley Creek as being water quality limited for temperature. The proposed action would not increase water temperature since the project would not remove enough shading to affect water temperatures.

B) Special Status and Survey and Manage Species

The Proposed Action would produce short-term noise disturbance but not during the critical breeding and nesting seasons. Currently, there is one northern spotted owl site in the project area.

Surveys for marbled murrelets were completed in 1998; no birds were found. This project would not affect this species since it is highly unlikely they would occur within the project area.

There is no habitat for *Fritillaria gentneri*, therefore there is no effect. There is no habitat for Survey and Manage lichen, bryophytes or vascular plants.

2) Effects of No Action Alternative

If no action is taken, the culvert would continue to block or restrict upstream movement of fish and other aquatic species. The short-term addition of sediment to the stream as a result of culvert replacement would not occur. On the other hand, the beneficial long-term effects of restoring aquatic connectivity would also not occur.

3) Cumulative Effects

Many of the cumulative effects associated with this watershed have been addressed in the West Fork Cow Creek Ecosystem Analysis located in the Medford BLM office. More site specific effects for this project area are discussed here.

Past and foreseeable future projects in the fifth-field watershed include:

- The Key Elk timber sale - sold but un-awarded
- Replacement of Twin Culverts (at the confluence of East and West Forks Elk Valley Creek) to promote fish passage in 1997 and 1998.
- Improve drainage and reduce erosion on approximately 11 miles of road (1995-2000)
- Future federal timber sales are being planned for this area.
- Regeneration timber harvest and some road use on private lands

Recent stream surveys in West Fork Cow Creek indicate fish habitat has been adversely affected by the loss of large wood in streams, an increase in sediment levels and an increase in water temperature from the loss of stream shading. Aquatic habitat quality is not expected to improve substantially in the West Fork Cow Creek watershed in the near future. Forest practices (e.g. road construction and maintenance, tractor logging and less riparian protection than on federal lands) on private lands would continue to counter the beneficial effects generated by Best Management Practices (BMPs), PDFs and maturing Riparian Reserves on federally-managed lands.

Although aquatic habitat connectivity would be restored in the 7th field sub-watershed, the level of activity would be insufficient to measurably improve current conditions at the fifth-field watershed scale.

All watershed and habitat indicators in the National Marine Fisheries Service Matrix of Pathway Indicators Checklist would be maintained in the long term at the fifth-field watershed scale (West Fork Cow Creek). This project is consistent with ACS objectives # 2,3,4,5,8 and 9; and with standards and guidelines of the LRMP/RMP Biological Opinion (March 18, 1997).

When the effects of the Proposed Action are added to the environmental baseline and cumulative effects elsewhere in the 5th field watershed, it is concluded that there would be no substantial adverse effects on OC coho salmon and its Critical Habitat or to OC steelhead. The

proposed project is located within an area that has been designated Essential Fish Habitat for coho salmon (Magnuson - Stevens Act). It is concluded, as a result of this environmental analysis, that the project is unlikely to adversely affect Essential Fish Habitat for coho salmon,

V. Monitoring

Spawning surveys for anadromous fish would be conducted for at least the first winter following project completion. Success or failure of the project to restore fish passage under most flow conditions would be documented. The site would be monitored for three years for the introduction of Noxious Weeds.

VI. Persons and Agencies Consulted

A legal advertisement will be placed in local newspapers to announce to the public that the Glendale Resource Area is requesting public comments on the proposed management action, In addition, notification of this proposal will be sent to the Oregon Department of Fish and Wildlife, the Oregon Dept. of Forestry county commissioners for the affected county, several environmental groups, and representatives of the timber industry to request their comments, These announcements will be made following completion of this environmental assessment and before a decision is made.

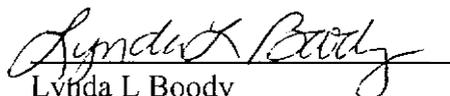
Changes in the preliminary plan as well as the proposed project design features may be based, in part, on information received from the public. The Field Manager will also consider all input before making a final decision concerning this proposal.

List of Preparers

<u>Name</u>	<u>Title</u>	<u>Primary Responsibility</u>
Loren Wittenberg	Hydrologist	Soils/Watershed
Marlin Pose	Wildlife Biologist	Wildlife
Bob Bessey	Fish Biologist	Streams/Riparian/Fish
Diane Parry	Geologist	Quarries
Deston Russell	Engineer	Team leader & Design

For 
 Martin Lew
 Natural Resource Specialist
 Reviewed for format and consistency

3-3-01
 Date


 Lynda L Boody
 Field Manager
 Glendale Resource Area

3/5/01
 Date

References

USDI-BLM. 1995. Record of Decision and Resource Management Plan. Medford, Oregon

USDA-FS, USDI-BLM. 1994. Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl. Pacific Northwest

USDA-FS, USDI-BLM. 2001. Final Supplemental Environmental Impact Statement to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines. Portland, Oregon

Appendix A.

Summary of seasonal operating restrictions - East Fork Elk Valley Creek Culvert Replacement. **Shaded blocks** are the time periods when activities are **allowed**. For details, see the appropriate Project Design Feature.

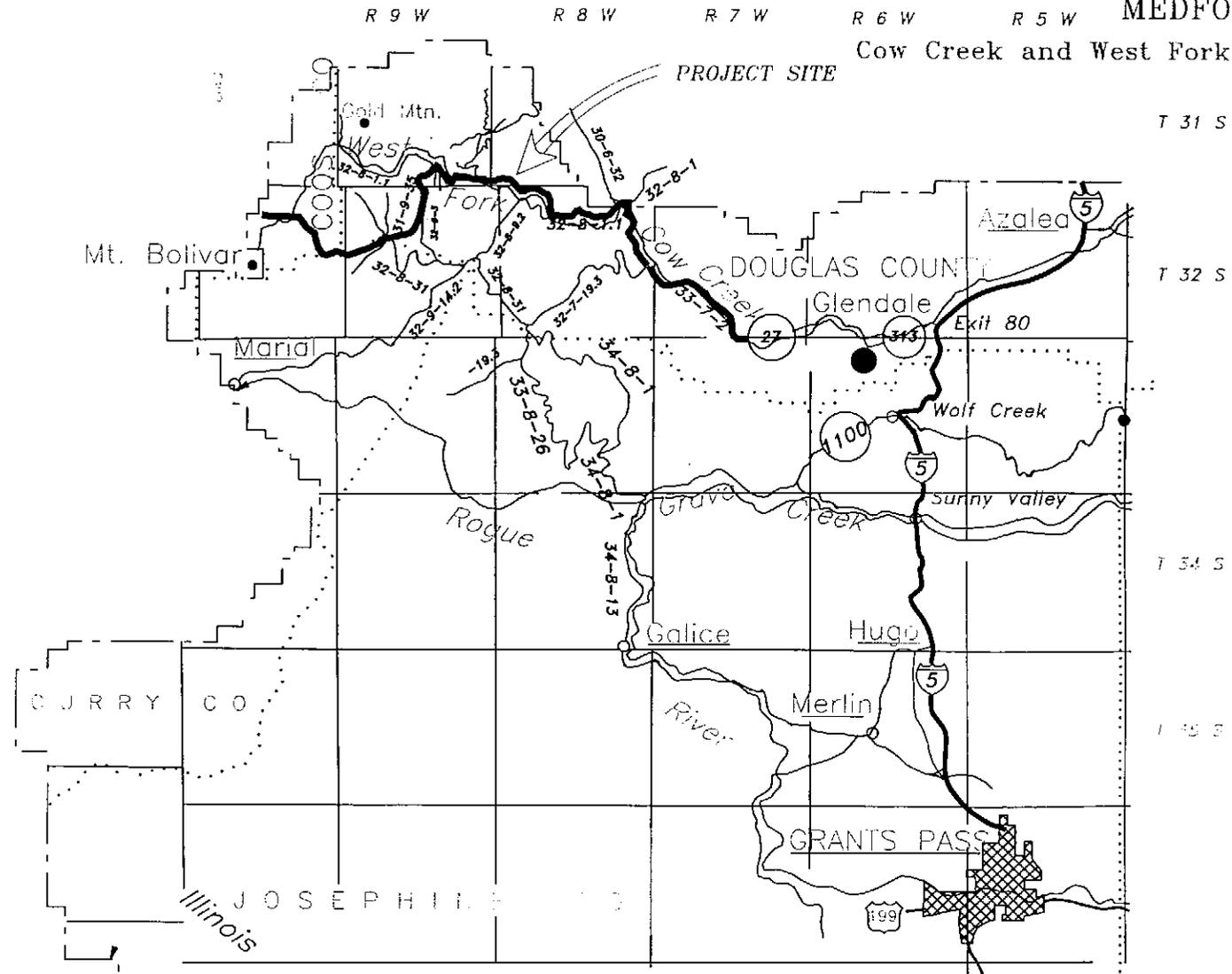
RESTRICTIONS	JA N	FE B	MA R	AP R	MA Y	JU N	JU L	AU G	SE P	OC T	NO V	DE C
Quarry activities in Riparian Reserves (Sedimentation concerns)												
Power equipment operation, including road work, within 1/4 mile of spotted owl sites. Blasting within 1 mile of nest												
Instream work period												
Road surfacing												
Power equipment operation, road work, within 1/4 mile of unsurveyed marbled murrelet habitat Restricted to 2 hours after sunrise and 2 hours before sunset 1 March - 15 September												
Blasting within 1 mile of unsurveyed marbled murrelet habitat												

This table is intended as an aid in summarizing seasonal restrictions. If there is a conflict between the table and the text, the text should be considered correct.

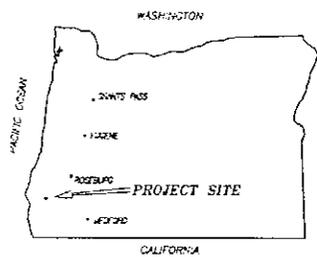
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MEDFORD DISTRICT

Cow Creek and West Fork Cow Creek Culvert Replacement



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LEGEND

- U.S. INTERSTATE HIGHWAY
- STATE HIGHWAY
- COUNTY ROAD