

PROJECT CHECKLIST
POWERS—AGNESS HIGHWAY
COUNTY SECTION
OR PFH 60(2)

OREGON FOREST HIGHWAY ROUTE 60
COOS COUNTY ROAD 90
MILE POST 0.0 TO 4.0



U.S. Department of Transportation
Federal Highway Administration
Western Federal Lands Highway Division

FEBRUARY 2007

LIST OF ABBREVIATIONS AND ACRONYMS

3R	resurfacing, rehabilitation, and restoration
AASHTO	American Association of State Highway and Transportation Officials
ADA	Americans with Disabilities Act
ADT	average daily traffic
AINW	Archaeological Investigations Northwest, Inc.
CE	Categorical Exclusion
DEA	David Evans and Associates, Inc.
DLCD	Oregon Department of Land Conservation and Development
EA	Environmental Assessment
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
ESA	Endangered Species Act
ESU	Evolutionarily Significant Unit
FHWA	Federal Highway Administration
FS	USDA Forest Service
HPA	high probability area
MP	Mile Post
mph	miles per hour
MSA	Magnuson-Stevens Act
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
OAR	Oregon Administrative Rule
OCMP	Oregon Coastal Management Program
ODFW	Oregon Department of Fish and Wildlife
ODOT	Oregon Department of Transportation
ORNHIC	Oregon Natural Heritage Information Center
ORS	Oregon Revised Statute
SEE	Social, Economic, and Environmental
SHPO	State Historic Preservation Officer
SOC	Species of Concern
US	United States
USDA	US Department of Agriculture
USDOT	US Department of Transportation
USGS	US Geological Survey
USFWS	US Department of the Interior, Fish and Wildlife Service
WFLHD	Western Federal Lands Highway Division

TABLE OF CONTENTS

	Page
1.0 INTRODUCTION	1
1.1 Project Name.....	1
1.2 Lead Agency	1
1.3 Partner Agencies	1
1.4 Purpose of Project Checklist	1
1.5 Background Information.....	2
2.0 DESCRIPTION OF THE PROPOSED ACTION	3
2.1 Location of the Proposed Action.....	3
2.2 Scope and Nature of the Proposed Work	3
2.3 Funding	3
3.0 PURPOSE AND NEED	7
3.1 Purpose of and Need for the Proposed Action.....	7
3.2 Road Uses	7
3.3 Existing Roadway Conditions	8
3.4 Traffic Volumes.....	13
3.5 Safety Concerns and Accidents	14
4.0 ALTERNATIVES CONSIDERED.....	16
4.1 Introduction.....	16
4.2 Alternative A, No Action	16
4.3 Alternative B, Repave Roadway and Replace Drainage Structures.....	16
4.4 Alternatives Considered but Not Developed Further.....	22
5.0 AFFECTED ENVIRONMENT.....	25
5.1 Geology, Soils, and Subsurface Conditions.....	25
5.2 Climate.....	25
5.3 Vegetation	26
5.3.1 Mixed Conifer Forest Plant Community	26
5.3.2 Riparian Forest Plant Community	26
5.3.3 Agricultural Pasture Plant Community.....	26
5.4 Wildlife	26
5.4.1 Threatened, Endangered, Proposed and Candidate Species, and Wildlife Species of Concern	27
5.5 Fish.....	29
5.5.1 Threatened, Endangered, Proposed and Candidate Species.....	30
5.5.2 Magnuson-Stevens Fishery Conservation and Management Act	30
5.5.3 Species of Concern.....	31
5.6 Wetlands	32
5.7 Socioeconomics	33
5.8 Land Use	34
5.9 Recreation	34
5.10 Traffic Circulation/Transportation	35

5.11	Historic and Cultural.....	35
5.12	Visual	36
5.13	Air and Noise	36
5.14	Public Utilities and Services.....	37
5.14.1	Utilities	37
5.14.2	Schools.....	37
5.14.3	Emergency Services	37
5.14.4	Other Services.....	38
6.0	INTERRELATIONSHIP WITH OTHER USES AND JURISDICTIONS	39
6.1	Land Ownership.....	39
6.2	Planning by Others.....	39
6.2.1	Coastal Zone Management Act.....	39
6.2.2	National Forest Scenic Byways Program.....	39
6.2.3	Oregon Statewide Planning Goals	39
6.2.4	Coos County.....	40
6.3	Environmental Legislation and Requirements	41
7.0	ENVIRONMENTAL IMPACTS	44
8.0	COORDINATION AND CONSULTATION	51
8.1	Engineering and Environmental Studies	51
8.2	Coordinating Agencies and Interested Parties.....	51
8.3	Public Involvement	51
9.0	LIST OF PREPARERS.....	53
10.0	REFERENCES	54

APPENDICES

- A. Public Notice
- B. ODFW Letter Regarding Culverts, Coos County Road 90
- C. Federally Listed and Proposed Species, Coos County

LIST OF TABLES

	Page
Table 1. Major Creek Crossings in the Project Area.....	12
Table 2. Project Area Crash Rate, 2002 through 2006.....	14
Table 3. Wildlife—Federal Listed Species and Species of Concern, and Their Habitat, that Could Occur within Coos County and/or the Project Area.....	27
Table 4. Federal Species of Concern (Fish) that Could Occur within Coos County.....	32
Table 5. Wetland and Waterway Road Log.....	32
Table 6. Racial Composition by Area, 2000	34
Table 7. Income and Poverty Status by Area, 1999	34
Table 8. Potential Cultural Resources within the Area of Potential Effect.....	36

LIST OF FIGURES

	Page
Figure 1. Project Area	5
Figure 2. Project Location.....	9
Figure 3. Alternative B.....	17
Figure 4. Typical Sections.....	19
Figure 5. Realignment	23

1.0 INTRODUCTION

1.1 Project Name

The project is identified as the Powers-Agness Highway County Section Project, OR PFH 60(2).

1.2 Lead Agency

Western Federal Lands Highway Division
Federal Highway Administration
US Department of Transportation
610 East Fifth Street
Vancouver, Washington 98661-3893

Contact: George Fekaris, Project Manager, (360) 619-7766

1.3 Partner Agencies

US Department of Agriculture, Forest Service
Rogue River-Siskiyou National Forest
Powers Ranger District
42861 Highway 242
Powers, OR 97466

Coos County Highway Department
1281 West Central
Coos County Courthouse
Coquille, OR 97423

Contact: Robin McAlpin (541) 439-6200

Contact: Paul Slater (541) 369-3121

1.4 Purpose of Project Checklist

A Project Checklist is used by the Western Federal Lands Highway Division (WFLHD) of the Federal Highway Administration (FHWA), US Department of Transportation (USDOT), as part of its data gathering process and early coordination for a proposed action. It provides an opportunity for public and governmental agencies that may be affected by the proposed action, or that may have regulatory or administrative interest, to become involved in the project development process at an early stage.

This document describes the project purpose and need, overall scope of the project, and alternatives being considered. The checklist also describes environmental resources in the area and includes a preliminary assessment of potential impacts. This aids in identifying issues that are important and/or have potentially negative or beneficial environmental consequences.

The checklist provides information to help determine the scope of the project and the type of the environmental document, e.g., Environmental Impact Statement (EIS), Environmental Assessment (EA), or Categorical Exclusion (CE), required for compliance with the National Environmental Policy Act (NEPA).

This checklist contains the results of the engineering investigations and environmental studies completed to date that are relevant to the proposed project. They include:

- Project Identification Report (WFLHD, 2002)
- Draft Cultural Resource Survey for the Powers to Agness Highway County Section, Coos County, Oregon. Report #1705 (Archaeological Investigations Northwest [AINW], 2006)
- Type, Size and Location Report (DEA 2006a)
- Geotechnical Investigation draft technical memorandum (GRI, 2006)
- Geotechnical Repair Alternatives draft technical memorandum (GRI, 2007)
- Utilities Report (DEA 2005)
- Property Ownership Report (DEA 2006b)
- Hydraulic Reconnaissance Report (DEA, 2006c)

1.5 Background Information

In 2001, the Coos County Highway Department and project partners, the Oregon Department of Transportation (ODOT) and the USDA Forest Service (FS), submitted a project proposal to FHWA for funding of two construction projects on the Powers-Agness Highway. The agencies were requesting federal funding assistance to repair portions of the highway that have numerous landslides, inadequate drainage structures, and increasing maintenance needs.

One of the projects would occur north of the city of Powers, where the highway is under the jurisdiction of ODOT and is also known as Oregon Highway 242. That project would affect approximately 6.4 miles of the highway, including a large landslide area known as the Burma Slide. In February 2006, FHWA issued a project checklist for that project—the Powers-Agness/Burma Slide project. According to the preliminary schedule included in the project checklist (FHWA, 2006), the project would be constructed in 2010 and 2011.

The second proposed project on the Powers-Agness Highway would occur south of the city of Powers, where the highway is under the jurisdiction of Coos County. The Coos County section is also known as County Road 90. The second project, which would affect approximately 4 miles of the highway between the city limits and the boundary of the Rogue River-Siskiyou National Forest, is the subject of this project checklist.

2.0 DESCRIPTION OF THE PROPOSED ACTION

2.1 Location of the Proposed Action

The project area for the proposed action lies entirely within Coos County, Oregon (Township 31 South, Range 11 West Sections 19, 30, 31, and 32; and Township 32 South, Range 12 West, Sections 13 and 24, Willamette Meridian). The proposed project would occur along Coos County Road 90 (Oregon Forest Highway 60).

The project area lies between the city of Powers and the Rogue River-Siskiyou National Forest boundary (Figure 1). The beginning point of the project is at the southern city limits of Powers; its end point is four miles south of the city, where the highway enters the National Forest. Coos County Road 90 is on the east side of the South Fork Coquille River throughout the project area and is adjacent to the river in several locations.

2.2 Scope and Nature of the Proposed Work

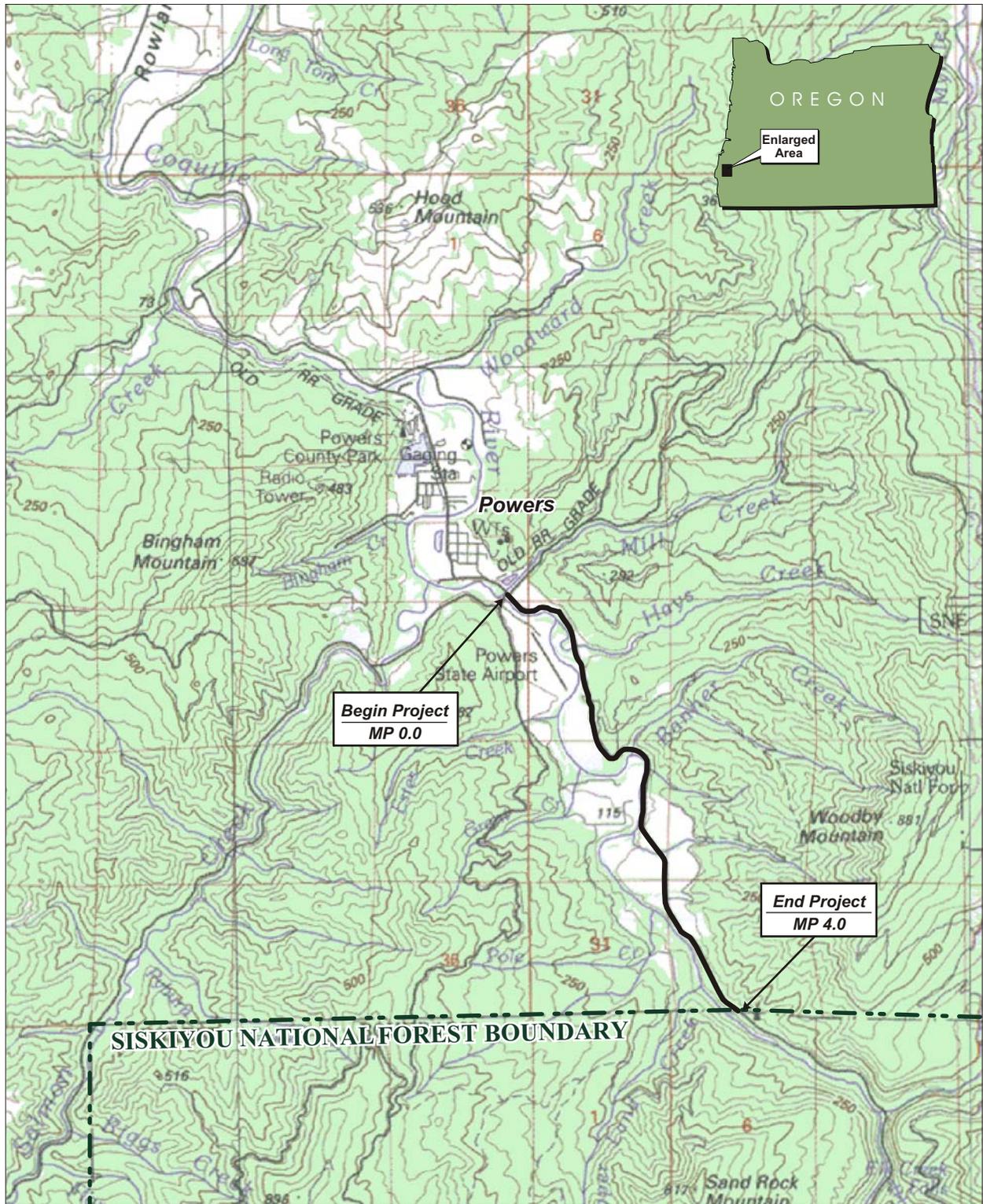
The proposed work would involve improving the roadway surface, stabilizing and/or realigning portions of the roadway to reduce the hazards and maintenance associated with eroding hillslopes and landslide areas, improving drainage, and replacing roadway crossing structures (i.e., culverts and a bridge).

Construction is scheduled to occur in 2009 and 2010.

2.3 Funding

The proposed project is identified for funding under the Forest Highways section of the Public Lands Highway Program, which is financed through the Federal Highway Trust Fund. A Forest Highway is a selected public road wholly or partly within or adjacent to, and serving, forest lands. The road is necessary for the protection, administration, and utilization of the forest land and the use of its resources. In Oregon, the Forest Highway Program is administered by the FHWA, FS, and ODOT. At this time, approximately \$3.7 million of federal funding has been programmed for this project. Coos County would coordinate and finance any needed right-of-way acquisition.

This page left blank intentionally.



USGS 30x60 Minute Quadrangles: Canyonville, Oregon 1989 and Port Orford, Oregon 1993

Figure 1
Project Area



Scale - 1 : 75,000 (Original Scale - 1 : 100,000)

3.0 PURPOSE AND NEED

3.1 Purpose of and Need for the Proposed Action

The purposes of the project are to maintain access to National Forest lands, as well as recreation, commercial, and residential uses in the project vicinity, by extending the life of the pavement and repairing or avoiding unstable slopes, to improve safety, to improve drainage, and to reduce maintenance needs. The project is needed because: (1) the road surfacing is deteriorating, (2) unstable, eroding slopes are causing cracks and uneven pavement in several areas, (3) several culverts are damaged and/or are undersized to provide adequate drainage, and (4) the Mill Creek Bridge is deteriorating.

The objectives of the project are to:

- Provide transportation access to and from National Forest lands and other resource areas in the project vicinity for recreation, resource use (e.g., forest products), and other Forest-related uses;
- Improve movement of people, goods, and services between the towns of Powers and Agness, and to businesses located along the Rogue River;
- Provide a transportation facility that can withstand the unstable nature of the soils in the project corridor;
- Improve safety by addressing road features that contribute to accidents;
- Reduce future costs associated with maintaining the road; and
- Improve drainage, particularly at stream crossings.

3.2 Road Uses

The Powers-Agness Highway, including Coos County Road 90, is a major collector road linking the community of Powers to the communities of Glendale and Agness. County Road 90 begins at the city limits of Powers, at milepost (MP) 0.0, and extends 4 miles to the Rogue River-Siskiyou National Forest Boundary. Beyond the forest boundary, the road becomes Forest Route 33.

The Powers-Agness Highway provides the most direct link between the town of Powers in the South Fork Coquille valley and the town of Gold Beach on the Oregon coast. (See Figure 2.) The road also passes through the small community of Agness near the Rogue River. The road provides an important link between the communities as well as access to National Forest lands, private forest lands, the Rogue and South Fork Coquille rivers, businesses along the Rogue River, and recreational areas. It is also part of an alternative north-south route in western Coos and Curry counties should Highway 101 along the coast be closed. The Powers-Agness Highway is occasionally closed in the winter because of snow.

Coos County Road 90 is part of the FS-designated Rogue-Coquille Scenic Byway and the locally designated Coastal Rivers Scenic Route. The project corridor is part of the Glendale to Powers designated bike route, although there are no bike lanes and shoulders are narrow (0 to 4 feet wide).

The South Fork Coquille River is popular with fishermen. Orchard Park near Banner Creek provides an access point for fishing within the project area. County Road 90 provides direct access to the Rogue River-Siskiyou National Forest and other recreation areas. The Forest Service Powers Ranger District office is in Powers.

Commercial trucks travel through the project area. Some transport goods to businesses, but most are related to timber harvest. An estimated 26 million board feet of timber is transported through the project area during about eight months of each year. Timber hauling occurs throughout the year but may be reduced during the winter, depending on weather conditions. Timber harvest is expected to decline somewhat over the next several years, resulting in less log truck traffic on the highway.

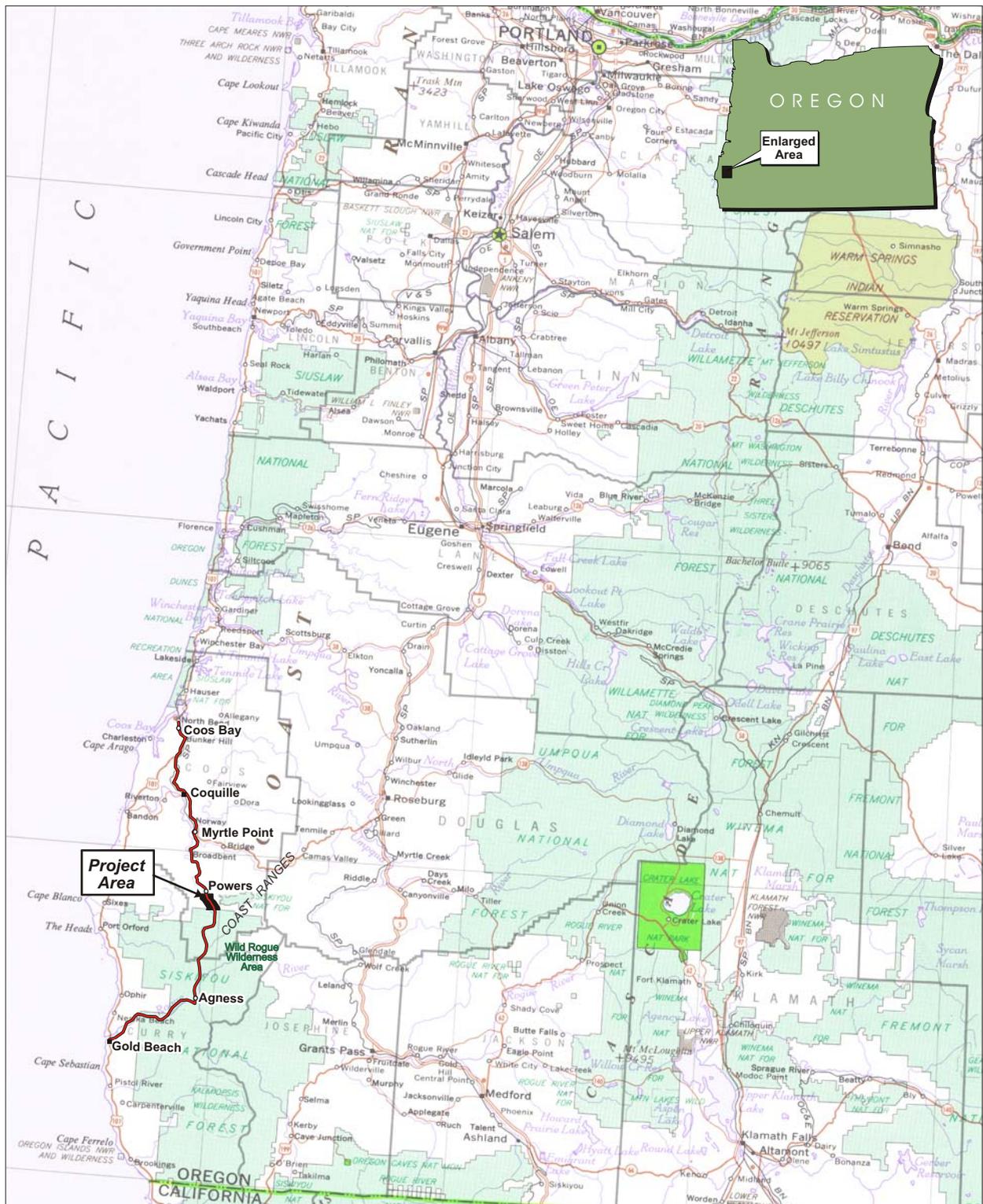
3.3 Existing Roadway Conditions

The highway has short straight sections and intermittent curves, many of which are sharp, have limited sight distance, and require motorists to slow to 40 miles per hour (mph) or less. The highway grade is generally flat to rolling. There is no posted speed limit; under the Oregon Basic Rule, the speed limit is 55 mph.

The highway surface is asphalt concrete pavement, which is generally in good condition. However, in certain areas where the ground is unstable (described more below), the pavement often cracks as a result of slope failure. At times, the road grade sinks or falls away. Despite a Coos County pavement overlay within the last five years, pavement cracking and damage is clearly visible in those areas.



Pavement condition near MP 0.55



USGS National Atlas, Northwestern States. Compiled 1967 (Revised 1973)

Figure 2
Project Location

Through most of the project area, the highway is roughly adjacent to the South Fork Coquille River. At MP 0.42, MP 2.3, and MP 2.31, the river is at the toe of the hillside, is eroding into the slope, and is undercutting the roadway. At those locations, there are sharp drop-offs toward the river and essentially no roadside shoulders. At MP 2.3 and MP 2.31, runoff from a spring upslope of the road is contributing to hillside instability.

At MP 0.55, a landslide is present on the south (river) side of the road. It has caused the pavement to crack in the southbound lane over a distance of about 50 feet. The landslide has been occurring over many years (GRI, 2006).



Drop-offs at MP 0.42 and MP 2.31



Pavement condition near MP 2.3

The Mill Creek Bridge at MP 0.21 is a concrete slab bridge on timber pilings. It is approximately 28 feet wide and 30 feet long. The bridge surface has been overlaid several times—the asphalt surface is up to 10 inches deep—and the bridge shows some settling. Exposed rebar can be seen in the bridge girders, and the timber piling has visible signs of rotting. The exterior girders have been exposed because of erosion, and scour is also occurring at the bridge abutments. The bridge sufficiency rating is 84.9 (DEA, 2006a). Fiber optic telephone cable and a water line are attached to the bridge structure.

In addition to the Mill Creek Bridge, there are five major¹ creek crossings (all culverts) in the project area: Hayes Creek, Banner Creek, Bedrock Creek, Unnamed Creek #1, and Unnamed Creek #2. Table 1 summarizes the existing conditions at the major creek crossings in the project area.

Table 1. Major Creek Crossings in the Project Area

Crossing	Structure Size and Type	Issues
Mill Creek MP 0.21	Concrete slab bridge on timber pilings 28 feet wide, 30 feet long	Some degradation of stream channel observed; lack of riprap around abutments; deterioration of structure apparent; hydraulic clearance probably insufficient.
Hayes Creek MP 1.06	Reinforced concrete box culvert 6 feet wide, 8 feet high	Culvert undersized; large outlet scour hole; culvert impedes fish passage and probably restricts sediment transport.
Banner Creek MP 2.02	Reinforced concrete box culvert 6 feet wide, 6 feet high	Culvert undersized; approximate 3-foot drop from downstream end of culvert to creek; culvert impedes fish passage and probably restricts sediment transport.
Bedrock Creek MP 2.20	Corrugated metal pipe 36-inch diameter	Culvert undersized; approximate 10-foot drop down roadway embankment from downstream end of culvert to South Fork Coquille River.
Unnamed Creek #1 MP 2.77	Corrugated metal pipe 66-inch diameter	Culvert undersized; approximate 10-foot drop and scour hole at downstream end of culvert.
Unnamed Creek #2 MP 3.06	Corrugated metal pipe 48-inch diameter	Culvert undersized; approximate 4-foot drop at downstream end of culvert.

Source: DEA, 2006a; DEA, 2006c

At least six other culverts, all less than 36 inches in diameter, pass under the highway in the project area. Many are smaller than 24 inches, which is the current minimum standard for culvert replacements according to the Coos County Highway Department.

¹ Major = 36 inches wide or larger.



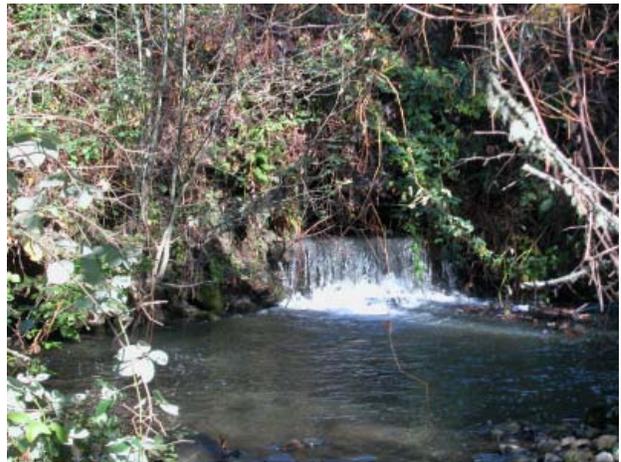
Downstream, Hayes Creek culvert



Downstream, Bedrock Creek culvert



Upstream, Banner Creek culvert



Downstream, Banner Creek culvert

3.4 Traffic Volumes

According to the Coos County Highway Department, average daily traffic (ADT) in the project area was approximately 500 in 2002. In general, traffic volumes have increased less than 2 percent per year over the past 10 years. Projected ADT for 2028 is 680.

Commercial truck traffic, primarily related to timber harvest, comprises approximately 8 percent of trips through the project area. Truck traffic may be lower during the winter, depending on weather conditions. Log truck traffic is expected to decline over the next several years.

3.5 Safety Concerns and Accidents

Coos County and ODOT provided crash information for the years 2002 through 2006. The crash data revealed an average of two crashes per year over the 5-year period. During that time, four accidents occurred near MP 0.5. Otherwise accidents were not concentrated at any one specific milepost; they were distributed over the entire 4-mile segment of roadway. Most of the crashes involved a single vehicle either coming to rest in a ditch, going over an embankment, or otherwise going off the road. One crash involved a motorcycle. The reasons given for most crashes were driver inattention or driving too fast for roadway conditions. Between 1999 and 2001, one fatal accident was recorded in the project area. It occurred at MP 0.42, where there is a sharp curve with a steep drop-off to the river.

A segment crash rate was calculated based on the number of crashes between 2002 and 2006, and the ADT provided by Coos County and ODOT. Only reported crashes were included, because there are no data on unreported crashes. With the ODOT data, legally reportable crashes are those involving death, bodily injury or damage to any one person's property in excess of \$1,000 (August 31, 1997, through December 31, 2003) or \$1,500 (after January 1, 2004). The crash rates were calculated using the following equation:

$$rate_{segment} = \frac{(Crashes \cdot 1,000,000)}{(365 \cdot Years \cdot Length \cdot ADT)}, \text{ where}$$

Rate_{segment} = Crash rate per million vehicle miles traveled

Crashes = Number of crashes during the time segment

Years = Number of years being studied

ADT = Average Daily Traffic volumes

Length = Length of roadway segment being studied (for segment rates).

Table 2 shows the calculated segment crash rate for each year, the 5-year average crash rate, and the statewide crash rates for similar facilities (two-lane rural collectors) taken from the ODOT 2005 Crash Rate Tables.

Table 2. Project Area Crash Rate, 2002 through 2006

	2002	2003	2004	2005	2006	5-Year Crash Rate
<i>Beginning MP</i>	1.0	1.0	1.0	1.0	1.0	
<i>Ending MP</i>	4.0	4.0	4.0	4.0	4.0	
<i>Road Segment Length (miles)</i>	4.0	4.0	4.0	4.0	4.0	
<i>ADT</i>	500	500	500	500	500	
<i>Number of Crashes</i>	1	2	2	4	1	
<i>Project Area Crash Rate*</i>	1.36	2.74	2.74	5.48	1.36	2.74
<i>Statewide Crash Rate*</i>	3.65	1.40	0.35	1.40	--**	1.70

* crash rate per million vehicle miles traveled

**data unavailable

There is substantial variability in crash rates on two-lane rural roads, as indicated by the annual and 5-year calculated crash rates for both County Road 90 and roads throughout the state . The crash rate of 2.74 crashes per million vehicle miles traveled is considered acceptable for this type of roadway (DEA, 2007). Also, as previously mentioned, the majority of the crashes involved only one vehicle, rather than collisions involving two or more vehicles.

4.0 ALTERNATIVES CONSIDERED

4.1 Introduction

Two alternatives are under consideration, a no action alternative and an action alternative. Project alternatives were developed by an interagency Social, Economic, and Environmental (SEE) Study Team, which was established during the scoping phase of the project. The SEE Team includes representatives of the WFLHD, Coos County Highway Department, and FS (Powers Ranger District of the Rogue River-Siskiyou National Forest). Section 8.1 provides more information about the SEE Team and its members.

4.2 Alternative A, No Action

Under Alternative A, the No Action Alternative, County Road 90 would continue to receive maintenance, including pavement patching and overlays, as needed; however, no alignment shifts or other safety improvements would be made. Culverts would likely be replaced only after they have failed. There are no other plans for replacing the Mill Creek Bridge.

The No Action Alternative would not meet the project purpose or objectives related to providing a stable roadway, improving safety, and reducing maintenance needs.

4.3 Alternative B, Repave Roadway and Replace Drainage Structures

Alternative B, the Action Alternative, would include rehabilitating and repaving the existing roadway; realigning the roadway to avoid unstable, eroding slopes; stabilizing slide areas; and replacing crossing structures at some streams. The design speed would be 55 mph. Total project cost is estimated at \$4 million. Figure 3 provides an overview of the Action Alternative.

The project would be built to meet ODOT 3R (resurfacing, rehabilitation, and restoration) standards. Roadway rehabilitation would include resurfacing the roadway with asphalt overlay throughout the 4-mile project corridor; repairing subgrade if needed; placing shoulder rock; installing guardrail where appropriate; and replacing signing, delineators, and striping. The 3R standards for a major collector road with less than 10 percent truck traffic (such as County Road 90) include 10-foot-wide travel lanes and 2-foot-wide shoulders. In proposed new (i.e., realigned) roadway sections, the road would be 24 feet wide to meet those standards. Similarly, in sections where guardrail would be added, shoulders would be 2 feet wide. However, most of the roadway would remain on its existing alignment, would be overlaid with asphalt, and would not be widened, so shoulders would be the same width as they are now (less than 2 feet wide in many areas). The surface overlay would consist of 4 inches of asphalt; new roadway sections would have 4 to 6 inches of asphalt over an aggregate base. Figure 4 shows the proposed typical roadway sections.

STATE	PROJECT	SHEET NUMBER
OR	PFH 60(2)	A.3



BEGIN PROJECT
MP 0.18

END PROJECT
MP 4.0

Bedrock Creek culvert replacement MP 2.20

Realignment MP 2.31 to 2.51

Unnamed Creek #2 culvert replacement MP 3.06

County road 90

Unnamed Creek #1 culvert replacement MP 2.77

Banner Creek culvert replacement MP 2.02

Hayes Creek culvert replacement MP 1.06

COQUILLE

FORK

FOREST BOUNDARY

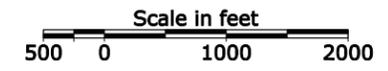
SOUTH

Roadway stabilization area MP 0.55

Realignment MP 0.18 to 0.57

Mill Creek culvert replacement MP 0.21

CITY OF POWERS



**FIGURE 3
ALTERNATIVE B**

2/16/2007 2:16:2007 Checked by: Designed by: \\vdoris1\project\PFHAX00000156\0400CAD\EC\Sheets\Vic_Map_design.dgn

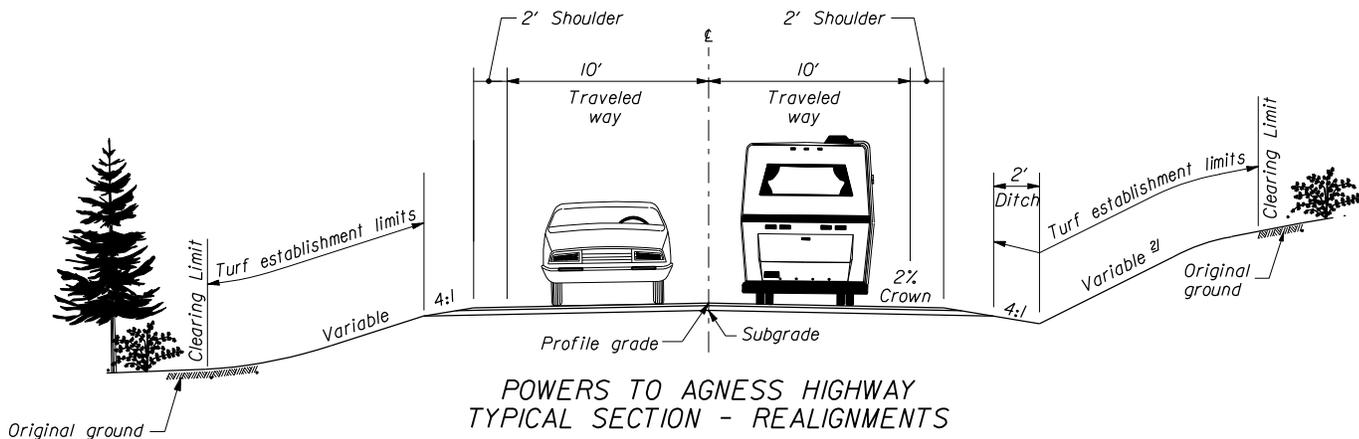
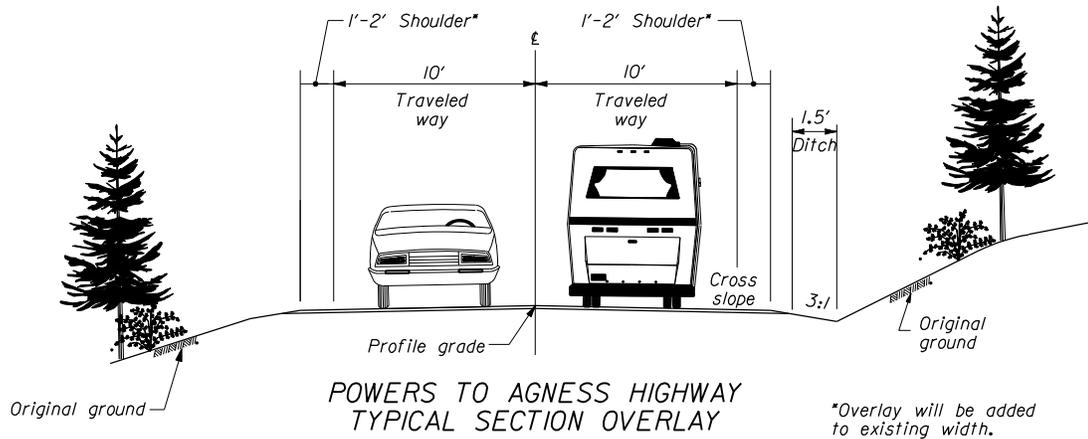
STATE	PROJECT	SHEET NUMBER
OR	PFH 60(2)	TYP

Checked by:

Designed by:

2/15/2007

\\pdxfs1\project\PFHAX0000156\0400CAD\EC\EXHIBITS\ORPFH602_TYP_SECS.dgn



**FIGURE 4
POWERS TO AGNESS
HIGHWAY
TYPICAL SECTIONS**

To avoid the eroding slope and sharp curve at MP 0.42, the roadway would be realigned between MP 0.18 and MP 0.57 (see Figure 4). The landslide area at MP 0.55 would be stabilized. The method for stabilization would be determined after additional geotechnical studies have been completed. Methods being considered include: (1) constructing a 100- to 150-foot-long retaining wall and (2) excavating existing fill and replacing it with lightweight fill (GRI, 2006).

Additional geotechnical studies will also be done for the areas of instability near MP 2.3. Based on studies done to date, two methods for stabilization are being considered: (1) constructing retaining walls, one 100 feet long and one between 100 and 130 feet long and (2) realigning the roadway slightly to the east (see Figure 5) and supporting the cutslope with soil nails and shotcrete (GRI, 2007).

The Mill Creek bridge at MP 0.21 would be replaced with a culvert that would meet the hydraulic requirements and would provide fish passage. The culvert would be embedded to allow for potential degradation of the channel (DEA, 2006c). See Section 5.5 for more information on fish presence in local streams.

The box culverts at Hayes Creek (MP 1.06) and Banner Creek (MP 2.02) would be replaced with bridges. Both bridges would clear span the creeks and would be 30 feet wide, with 10-foot travel lanes and 3-foot shoulders. Both crossings would provide fish passage.

The 36-inch culvert at Bedrock Creek (MP 2.20), would be replaced with a larger culvert to meet the hydraulic requirements for the crossing. Because fish are not present in the stream and there is not much fish habitat above the road (Oregon Department of Fish and Wildlife [ODFW], 2006), Coos County intends to apply for a fish passage waiver or exemption from ODFW for the Bedrock Creek crossing.

The 66-inch culvert at Unnamed Creek #1 (MP 2.77) would be replaced with a larger culvert. The 48-inch culvert at Unnamed Creek #2 (MP 3.06) also would be replaced with a larger culvert. Both crossings are upstream of waterfalls that block fish from swimming upstream (ODFW, 2006), so neither culvert would provide fish passage.

Minor (less than 36-inch) culverts may be replaced during project construction, if warranted (i.e., if they do not function correctly because of damage or inadequate size).

Project construction is planned to occur over two seasons, 2009 and 2010, primarily because of the number of creek crossings being replaced and seasonal restrictions on in-water work (see Section 5.5). Throughout the construction period, temporary traffic delays would occur. Construction likely would require temporary (e.g., 15- to 30-minute) road closures with traffic control (e.g., flaggers). Longer road closures may be necessary; if so, advance notification would be provided. At the bridge crossings, the road would remain open, although it may be reduced to one-lane traffic during construction.

Most project activities would occur within County right-of-way. Additional right-of-way would be needed in a few locations, such as areas proposed for road realignment or retaining walls. Coos County would acquire the additional right-of-way in those areas prior to project construction.

The Action Alternative would meet project purpose and objectives by providing a new paved surface, repairing or avoiding unstable areas that cause pavement cracking and settling, and improving drainage by replacing crossing structures. The improvements would reduce maintenance needs on County Road 90. The improvements also would improve safety by providing a smoother, more stable road surface.

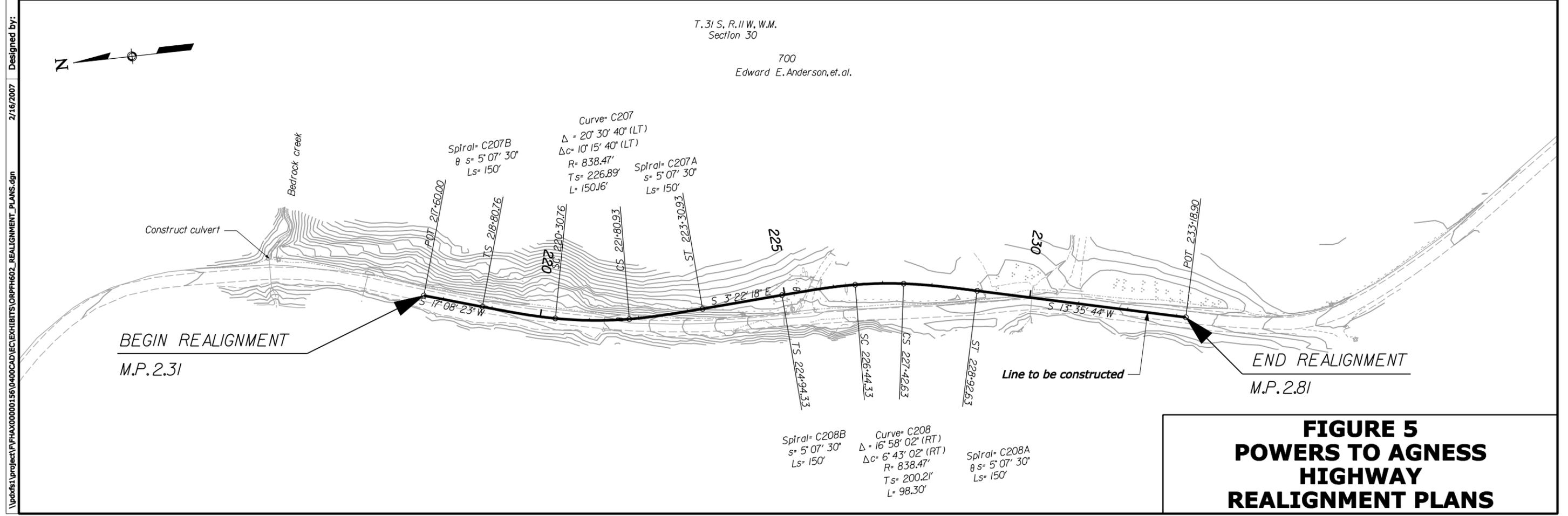
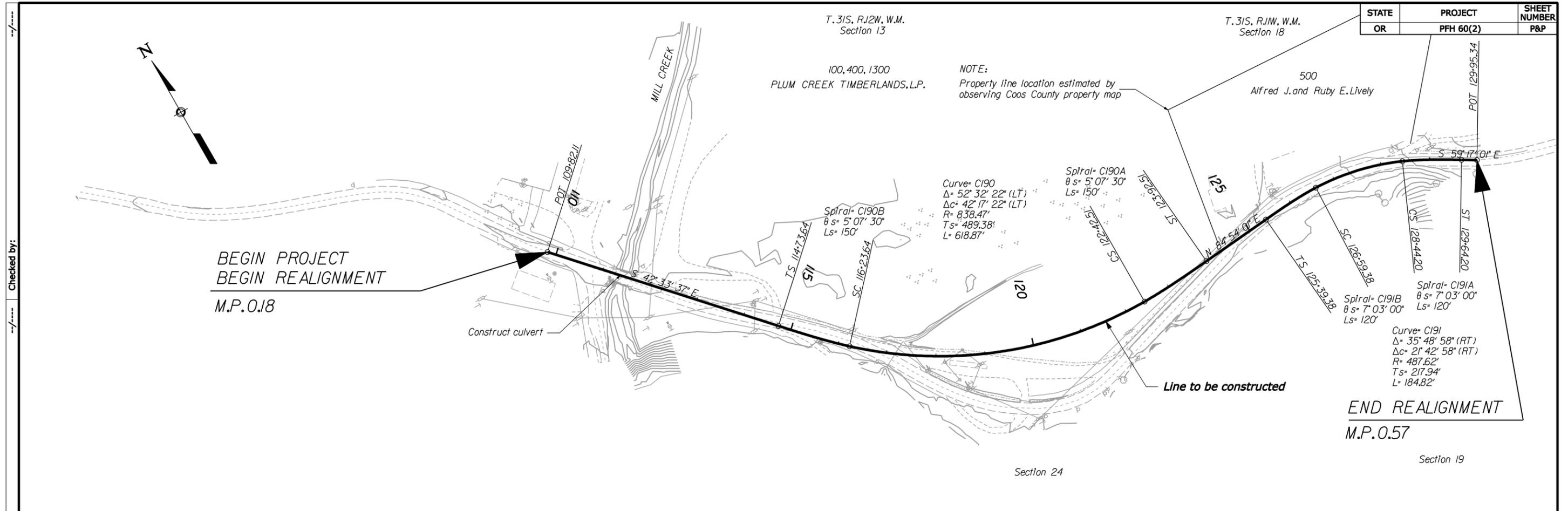
4.4 Alternatives Considered but Not Developed Further

An alternative to bring the highway up to full AASHTO (American Association of State Highway and Transportation Officials) standards was considered. Full AASHTO standards would include a full reconstruction of the road—widening to 30 or 32 feet (11-foot travel lanes and 4- or 5-foot shoulders, which would accommodate bicycles), flattening curves, and replacing subgrade and pavement. The SEE Team determined that such improvements were not warranted given the existing conditions and traffic in the project area. The project area has adequate capacity for existing and projected traffic volumes. The pavement condition in most of the project area can be adequately improved with an overlay, and with additional improvements in short segments where slope instability is a problem. In addition, bringing the road up to full AASHTO standards would require right-of-way acquisition throughout the project area, would have substantial environmental impacts, would be more disruptive during construction, and would have a much higher cost than the alternatives considered in this checklist.

Other alternatives were considered for the stream crossings. They included replacing the Mill Creek bridge with a new bridge, and replacing the Hayes Creek and Banner Creek culverts with new culverts. At Mill Creek, analysis showed that a culvert would provide the hydraulic function needed for less cost than a bridge. In addition, because anadromous fish do not migrate up Mill Creek, ODFW agreed that a culvert providing fish passage would be the preferred option. At Hayes and Banner creeks, it was determined that, while bridges would cost more than culverts, bridges would function better than culverts at those specific locations. Culverts would not function hydraulically as well as bridges, especially during flood events. ODFW considers both creeks to provide valuable fish habitat, and bridges were preferred for fish passage at the creeks. In addition, project engineers were concerned about the challenge of getting water safely through the sites should heavy rains occur while culverts were being replaced.

Stabilizing the roadway on its existing alignment (i.e. not realigning any portion of the roadway) was also considered. This option is not feasible at MP 0.42 because the slopes down to the river are too steep; the eroding slopes have already undercut the road surface and no shoulder remains on the river side of the road. In addition, realigning the road would allow for flattening the sharp curve at MP 0.42.

STATE	PROJECT	SHEET NUMBER
OR	PFH 60(2)	P&P



**FIGURE 5
POWERS TO AGNESS
HIGHWAY
REALIGNMENT PLANS**

Checked by: _____
 Designed by: _____
 2/16/2007
 \projects\PFHAX000001\56\0400\CAD\EXHIBITS\ORPFH602_REALIGNMENT_PLANS.dgn

5.0 AFFECTED ENVIRONMENT

5.1 Geology, Soils, and Subsurface Conditions

According to a technical memorandum prepared for the project (GRI, 2006), available geologic information for the area indicates the majority of the roadway alignment is underlain by stream terrace deposits that are typically composed of sand and gravel. Stream channels and exposed slopes downhill of the roadway show that cobbles and boulders are present within the terrace deposits. The terrace deposits are covered with soil and underlain by the Lookingglass Formation (GRI, 2006). This formation typically consists of siltstone inter-bedded with fine-grained sandstone. The rock dips to the east at about 18 degrees near the Banner Creek site. The rock is exposed on hillsides east of the road and is present along the stream banks of Banner Creek and at the confluence of Mill Creek and South Fork of the Coquille River. The depth to the sedimentary rock likely varies widely along the project alignment (GRI, 2006).

Soils in the modern-day alluvium deposits are complex, as they are the result of weathering, floodplain deposition, and plant growth. They include silty loams, silty clay loams, and silts with varying organic content. Gravelly sands and/or sandy gravels were also observed during the field reconnaissance. The deposits are easily excavated but may be prone to caving, especially in areas saturated with water.

According to the Soil Survey of Coos County, Oregon (Natural Resources Conservation Service [NRCS], 1989), soils in the project area consist primarily of intermingled varieties of silt loam. Soils on stream terraces in the northern portion of the project area belong to the Chismore silt loam or Eilertson silt loam mapping units, which are both characterized by deep, well-drained soil that formed in alluvium on stream terraces (NRCS, 1989). Much of the soil on the side slopes comprising the central portion of the project area belongs to the Remote-Digger-Preacher complex, characterized by intermingled Remote loam, Digger gravelly loam, and Preacher loam found on 30 to 50 percent slopes. Soils belonging to the Digger-Umpcoos-Rock outcrop association are found on 50 to 90 percent slopes and consist of intermingled Digger gravelly loam, Umpcoos very gravelly sandy loam, and rock outcroppings. Terraces in the southern portion the project area contain Pyburn silty clay, characterized by deep, poorly-drained soil that formed in mixed alluvium on high terraces (NRCS, 1989).

The soils are used for hay and pasture and homesite development. They do not comprise prime or unique farm land.

5.2 Climate

The climate in the project vicinity is marine temperate, with cool, wet winters and mild, dry summers. The wet season typically occurs between October and April, and the driest period is during July and August. Annually, rainfall can vary from 60 inches along the coast to 100 inches in the interior uplands. The January mean temperature from nearby Coos Bay/North Bend is about 45 degrees F, and the August mean is approximately 60 degrees.

5.3 Vegetation

The project consultant identified three plant communities within the project corridor: Mixed Conifer Forest, Riparian Forest, Rocky Shrub, and Agricultural Pasture (DEA, 2006a).

5.3.1 Mixed Conifer Forest Plant Community

Western hemlock is considered the climax species throughout most of the area, though Western hemlock, Douglas-fir, grand fir, red alder, western red cedar, Port Orford cedar, incense cedar, and Sitka spruce may occur in mixed or pure stands. Due to fires, land clearing and logging, Douglas-fir dominates much of the area. Logging and silvicultural practices have favored this species as a result of its relatively high economic value.

Within the project area, forest stands exhibit a tendency to be located on east slopes while westerly slopes drop to the river as part of the riparian area or support agricultural on the upland area between the river and road. Intensively managed, industrial forest lands dominate the east side of the project corridor from MP 3.0 to MP 4.0. Much of the forest cover has been removed by clearcutting. Intact, mid- to late-seral forest lands are found just past the National Forest boundary at MP 4.0.

5.3.2 Riparian Forest Plant Community

Riparian forests are common along the South Fork Coquille River and its tributaries. The stands may be as wide as 200 yards on the floodplain but are frequently much narrower. Riparian woods contrast sharply with surrounding forests, being composed largely of broad-leaved deciduous and evergreen species. Willow and alder form thickets adjacent to the water while big-leaf maple, Oregon ash, tanoak, madrone, California laurel (myrtle), cedar, and Douglas-fir are on the slightly drier sites (usually from the high water banks to about 20 feet uphill). Because these groves contain a large percentage of deciduous trees, the shrub layer is often well developed. Such species as vine maple, salal, huckleberry, chinquapin, bayberry, and rhododendron, as well as small madrone, tanoak, cedar saplings and poison-oak are common. On the floodplain itself, particularly along the railroad embankment, an additional type of shrub zone exists, which is dominated by Himalayan blackberry and poison-oak.

In some riparian stands, the proportion of California laurel (myrtle) is high. Throughout the diverse riparian area, herb species are highly variable, but often include species such as Dewey sedge, bedstraw, and coltsfoot.

5.3.3 Agricultural Pasture Plant Community

Much of the alignment is adjacent to agricultural pastures. These habitats have been highly impacted by past disturbance and grazing, and contain few remaining native species.

5.4 Wildlife

The project area is in the temperate Humid Division of the Transition Zone (Franklin and Dyrness, 1973). This particular environmental zone supports a variety of wildlife. Large mammals, such as

deer, elk, black bear, cougar, bobcat, and fox, can be found in the vicinity of the project area. Other animals characteristic to this zone are beaver, muskrat, river otter, ground squirrel, rabbit, porcupine, badger, skunk, and other mammals.

5.4.1 Threatened, Endangered, Proposed and Candidate Species, and Wildlife Species of Concern

In May 2006, the project consultant obtained the US Fish and Wildlife Service (USFWS) list, for Coos County, of species listed or proposed or candidates for listing under the federal Endangered Species Act (ESA), as well as federal species of concern (USFWS, no date). The consultant also received a list from the Oregon Natural Heritage Information Center (ORNHIC) of the records of federally listed species within a two-mile radius of the project vicinity (ORNHIC, 2006). Wildlife species from the USFWS and ORNHIC lists are presented in Table 3.

The project consultant conducted site visits (November 7 and 9, 2005, and May 9 and 10, 2006) to review and document potential wildlife habitat within the project corridor for the species listed by USFWS and ORNHIC. The project corridor is defined as one-quarter mile on each side of the existing highway centerline. The results are shown in Table 3. No wildlife species that are listed, proposed, or candidates for listing under the ESA were seen during the site visits.

Table 3. Wildlife—Federal Listed Species and Species of Concern, and Their Habitat, that Could Occur within Coos County and/or the Project Area

Common Name	Scientific Name	Federal Status	Habitat Type	Suitable Habitat within Corridor?
BIRDS				
marbled murrelet	<i>Brachyramphus marmoratus</i>	LT, CH	Mature and old-growth coastal forests	No adjacent habitat or nest sites are within 2 miles of the corridor; no habitat occurs within the corridor. Species has been seen flying over the project area.
western snowy plover	<i>Charadrius alexandrinus nivosus</i>	LT, CH	Beaches, dry mud or salt flats, sandy shores of rivers, lakes, and ponds where vegetation is sparse	No.
bald eagle	<i>Haliaeetus leucocephalus</i>	LT	Mature forests adjacent to large, fish-bearing waterbodies	No bald eagle nest or wintering sites occur within the project corridor. ORNHIC had no record of any occurrence within 2 miles of the project area.
Brown pelican	<i>Pelecanus occidentalis</i>	LE	Sandy coastal beaches and lagoons, waterfronts and pilings, and rocky cliffs	No; area too distant from ocean.
Northern spotted owl	<i>Strix occidentalis</i>	LT, CH	Old-growth forests	Suitable habitat is within the project corridor within the National Forest at MP 4.0. Surveys were not conducted to determine presence but the habitat is assumed occupied. Documented nest sites occur

Common Name	Scientific Name	Federal Status	Habitat Type	Suitable Habitat within Corridor?
Northern goshawk	<i>Accipiter gentiles</i>	SOC	Closed canopy/ open understory; Typically nests in mature or old-growth forests	with 3 miles of MP 4.0. No forage or nesting habitat near project.
band-tailed pigeon	<i>Columba fasciata</i>	SOC	Coniferous or mixed deciduous oak and conifer. Generally breeds below 4,000 feet and uses dense forest in western Cascades	Yes.
olive-sided flycatcher	<i>Contopus cooperi borealis</i>	SOC	Burned-over areas with standing dead trees	Yes.
yellow-breasted chat	<i>Icteria virens</i>	SOC	Second growth, shrubby old pastures, thickets, bushy areas, scrub, and fence rows. Commonly in sites close to human habitation. Nests in dense vegetation	Yes; habitat common throughout area, and species identified within the project corridor.
acorn woodpecker	<i>Melanerpes formicivorus</i>	SOC	Oaks, either in unmixed open woodland or mixed with conifers with standing snags	Potential, but few substantial standing snags observed; may exist in forest near corridor.
Lewis' woodpecker	<i>Melanerpes lewis</i>	SOC	Open forest canopy, dense understory shrub cover, and large snags for nesting	Potential, but few substantial standing snags observed; may exist in forest near corridor.
mountain quail	<i>Oreortyx pictus</i>	SOC	High, open forests and woodlands with ample brushy vegetation, riparian woodlands, meadow edges in forests, and bushy regrowth	Yes.
Oregon vesper sparrow	<i>Pooecetes gramineus affinis</i>	SOC	Open habitats such as grasslands, pastures, agricultural areas, meadows; not found in forests.	Yes.
purple martin	<i>Progne subis</i>	SOC	Large-diameter snags adjacent to large forest openings caused by disturbances	No natural cavities or nest boxes noted.
MAMMALS				
Steller sea lion	<i>Eumetopias jubatus</i>	LT	Marine habitats. Haul-out locations include exposed rocks, reefs, beaches, jetties, etc.	No; area too distant from ocean.
Pacific fisher	<i>Martes pennanti</i>	C	Mature, closed canopy, dense coniferous and mixed coniferous/deciduous forests, along riparian corridors.	No; area lacks mature forest that provides cover for this species.
white-footed vole	<i>Arborimus albipes</i>	SOC	Alder patches along riparian systems within mature forest stands	No.
red tree vole	<i>Arborimus longicaudus</i>	SOC	Mixed evergreen forests; optimum habitat wet and mesic old- growth Douglas-fir forest	No.
pallid bat	<i>Antrozous pallidus pacificus</i>	SOC	Roosts in buildings, bridges, crevices in rock cliffs, fissures in the ground, snags, and under large pieces of tree bark	Suitable habitat may exist adjacent to project corridor.
Pacific western	<i>Corynochinus</i>	SOC	Roosts in caves, mines, or large	Suitable habitat may exist

Common Name	Scientific Name	Federal Status	Habitat Type	Suitable Habitat within Corridor?
big-eared bat	<i>townsendii townsendii</i>		snags	adjacent to project corridor.
silver-haired bat	<i>Lasionycteris noctivagans</i>	SOC	Most abundant in older Douglas fir/western hemlock forest. Roosts under loose bark.	Suitable habitat may exist adjacent to project corridor.
long-eared myotis	<i>Myotis evotis</i>	SOC	Roosts in buildings, caves and mines; individuals roost under bark and in rock crevices and snags	Suitable habitat may exist adjacent to project corridor.
fringed myotis	<i>Myotis thysanodes</i>	SOC	Forest, woodlands, grasslands, and deserts. Roosts are found in caves, mines and buildings	Suitable habitat may exist adjacent to project corridor.
long-legged myotis	<i>Myotis volans</i>	SOC	Roosts in buildings, bridges, crevices in rock cliffs, fissures in the ground, snags, and under large pieces of tree bark	Suitable habitat may exist adjacent to project corridor.
Yuma myotis	<i>Myotis yumanensis</i>	SOC	Roosts in buildings, under bridges, caves and mines; individuals roost in buildings or under bridges	Suitable habitat may exist adjacent to project corridor.
REPTILES AND AMPHIBIANS				
tailed frog	<i>Ascaphus truei</i>	SOC	Cold, fast-flowing permanent streams in forested areas.	Maybe; potential habitat in smaller, shaded streams that retain low temperatures.
northwestern pond turtle	<i>Emmys marmorata marmorata</i>	SOC	Marshes, sloughs, moderately deep ponds, and slow-moving portions of creeks and rivers	No.
Del Norte salamander	<i>Plethodon elongatus</i>	SOC	Rock talus in coniferous forests, including riparian zones	Yes.
red-legged frog	<i>Rana aurora aurora</i>	SOC	Quiet streams and shallow ponds, moist forests.	Maybe.
foothill yellow-legged frog	<i>Rana boylei</i>	SOC	Partially shaded, rocky streams at low to moderate elevations, in areas of chaparral, open woodland, and forest.	Yes.
southern torrent salamander	<i>Rhyacotriton variegatus</i>	SOC	In or very near cold, clear streams, seepages, or waterfalls, usually within the splash zone.	Maybe, but few if any seeps or waterfalls near corridor.

C = candidate; CH=Critical Habitat ; LT = listed threatened; LE = listed endangered; SOC = species of concern;
Source for habitat type descriptions: Csuti, et al., 1997.

5.5 Fish

The project area is adjacent to the South Fork Coquille River, a popular recreational fishery and major migration corridor for anadromous fish. Resident fish in the South Fork Coquille include rainbow and cutthroat trout, as well as cottids, red-sided shiners, sticklebacks, and suckers.

County Road 90 crosses six streams: Mill Creek, Hayes Creek, Banner Creek, Bedrock Creek, and two unnamed tributaries to the South Fork Coquille River (Unnamed Creek #1 and Unnamed Creek #2). A waterfall downstream of the Mill Creek Bridge blocks anadromous fish from migrating

upstream. According to ODFW, resident fish are present in the creek upstream of the falls. Both Hayes Creek and Banner Creek are used by anadromous fish. Coho have been confirmed upstream of the Hayes and Banner creek culverts, and juvenile salmonids were observed immediately downstream of the Banner Creek culvert on July 5, 2006 (ODFW, 2006). At Bedrock Creek, a steep drop at the culvert outlet blocks fish passage. The steep drop may have been created when the road was built. ODFW considers the creek to have provided fish habitat in the past, but there is likely less than one-quarter mile of fish habitat upstream of the culvert (ODFW, 2006). Unnamed Creek #1 has a 6-foot waterfall near its confluence with the South Fork Coquille River and another smaller barrier upstream. Unnamed Creek #2 has a large waterfall just above the confluence. Both unnamed creeks do not provide fish habitat.

A fish biologist from ODFW reviewed the project area with staff from DEA and FHWA on June 1, 2006. Criteria were reviewed in the field for providing for fish passage at the stream crossings. In a letter dated July 7, 2006, ODFW requested that passage be provided at Mill, Hayes, and Banner creeks. The crossings at Unnamed Creek #1 and #2 do not require fish passage structures because the creeks do not provide fish habitat. Bedrock Creek has provided historical, but not current, fish habitat, and the creek may now be too steep for fish passage. ODFW has indicated that it may be willing to grant a fish passage waiver for the Bedrock Creek crossing because there is little upstream fish habitat. Coos County would apply to ODFW for the fish passage waiver.

ODFW would require that in-water work at the stream crossings be limited to the stipulated in-water work period, which is from July 1 through September 15 of each year. Employing strict erosion control methods during construction and planting native vegetation in the riparian areas following construction likely would be conditions of any state or federal permits rendered for the project.

5.5.1 Threatened, Endangered, Proposed and Candidate Species

The project area is within the Oregon Coast Evolutionarily Significant Unit (ESU) as defined by the National Marine Fisheries Service (NMFS). No federal threatened, endangered, proposed, or candidate fish species listed under the ESA occur within the South Fork Coquille River or its tributaries in the project vicinity. Oregon Coast ESU chinook and coho salmon are both present in the river and were recently proposed for federal listing, but NMFS determined that listing for both species is not warranted at this time.

5.5.2 Magnuson-Stevens Fishery Conservation and Management Act

Although there are no ESA-listed fish species in or adjacent to the project area, FHWA is required to consult with NMFS under Public Law 104-267, the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act or MSA). The MSA established new requirements for “Essential Fish Habitat” (EFH) descriptions in Federal fishery management plans and to require Federal agencies to consult with NMFS on activities that may adversely affect EFH. “Essential Fish Habitat” means those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.” The Pacific Fisheries Management Council has recommended an EFH designation for the Pacific salmon fishery that would include those waters and substrate necessary to ensure the production needed to support a long-term sustainable fishery (i.e., properly functioning habitat conditions necessary for the long-term survival of the species through the full range of environmental variation).

The MSA requires consultation for all actions that may adversely affect EFH, and it does not distinguish between actions in EFH and actions outside EFH. Any reasonable attempt to encourage the conservation of EFH must take into account actions that occur outside EFH, such as upstream and upslope activities that may have an adverse effect on EFH. Therefore, EFH consultation with NMFS is required by Federal agencies undertaking, permitting or funding activities that may adversely affect EFH, regardless of its location.

The consultation requirements of Section 305(b) of the Magnuson-Stevens Act (16 U.S.C. 1855(b)) provide that:

- Federal agencies must consult with NMFS on all actions, or proposed actions, authorized, funded, or undertaken by the agency, that may adversely affect EFH.
- NMFS shall provide conservation recommendations for any Federal or State activity that may adversely affect EFH.
- Federal agencies shall, within 30 days after receiving conservation recommendations from NMFS, provide a detailed response in writing to NMFS regarding the conservation recommendations. The response shall include a description of measures proposed by the agency for avoiding, mitigating, or offsetting the impact of the activity on EFH. In the case of a response that is inconsistent with the conservation recommendations of NMFS, the Federal agency shall explain its reasons for not following the recommendations.

5.5.3 Species of Concern

The USFWS identifies six federal fish species of concern as having the potential to occur within Coos County (USFWS, no date). Table 4 lists those species of concern and habitat requirements and species presence within the project area.

Table 4. Federal Species of Concern (Fish) that Could Occur within Coos County

Species	Habitat Requirements	Species Present in Project Area?
coastal cutthroat trout (<i>Oncorhynchus clarki clarki</i>)	Requires small, low gradient coastal streams and estuarine habitats; well-shaded streams with water temperatures below 18 C are optimal.	Yes
Pacific lamprey (<i>Lampetra tridentata</i>)	Inhabit shallow backwater and eddy areas along edges of streams in mud, silt and sand. Adults spawn in runs and riffles in rock-, sand-, or gravel-bottomed clear streams, in shallow depressions, or crude nests.	Yes
green sturgeon (<i>Acipenser medirostris</i>)	Inhabit all open Oregon estuaries but reproduce in only the Rogue River.	No
Millicoma dace (<i>Rhinichthys cataractae</i> ssp.)	A subspecies endemic to the Coos River system. Prefers swift current with cobble and boulders.	No
steelhead (winter run) (<i>Oncorhynchus mykiss</i>)	Spawn in higher gradient reaches of larger streams and tributaries.	Yes
river lamprey (<i>Lampetra ayresi</i>)	Burrow in mud in silty backwaters of streams. Adults are anadromous, feeding in estuaries and at sea and spawning over gravel riffles in clear freshwater streams.	No

Source: USFWS, no date; ODFW, 2006

5.6 Wetlands

The project consultant conducted a field wetland reconnaissance of the project area on February 9, 2006. Additional field visits were made on May 9 and 10, 2006. The results of the field reconnaissance are summarized in Table 5.

Preliminary wetland data were gathered by reviewing United States Geological Survey (USGS) 7.5-minute quadrangle maps, soil survey maps from the Soil Survey of Coos County, Oregon (NRCS, 1989), and National Wetland Inventory (NWI) maps. The USGS maps were reviewed to determine water features and topography of the project corridor and adjacent properties that might influence on-site conditions. Soil survey maps were used to determine whether any hydric soils are mapped within the project corridor. The NWI maps were reviewed to see whether any wetlands are mapped within the corridor.

Table 5. Wetland and Waterway Road Log

Wetland or Waterway?	Approx Milepost	Notes
Waterway	0.21	Mill Creek, approximately 15 feet across at the bridge. The dominant vegetation on both sides of the bridge is blackberry, alder, willow and Scotch broom.
Waterway	0.43	Small unnamed Creek south of Mill Creek, 36-inch culvert, creek approximately 3.5 feet wide. The dominant vegetation is cedar, blackberry, madrone, ivy, sword fern and myrtle.
Waterway	1.06	Hayes Creek, approximately 25 feet wide, water flowing 15 feet at time of site visit. The culvert is a 6-by-8-foot concrete box culvert. The dominant vegetation is alder, blackberry, myrtle, and dogwood.
Waterway	2.02	Banner Creek, approximately 18 feet wide. The culvert is a 6-by-6-foot concrete box

Wetland or Waterway?	Approx Milepost	Notes
		culvert. The dominant vegetation is maple, alder, sword fern, blackberry and myrtle.
Waterway	2.20	Bedrock Creek. Flows through a 36-inch culvert. The stream is 5.5 feet wide. The dominant vegetation is Douglas fir, alder, maple, and myrtle.
Wetland	2.30/2.40	Two wetlands associated with streams. Wetland #1 is north of a small, 2-foot-wide stream; it is about 40 feet wide and 50 feet long. Wetland #2 is connected to wetland #1 by a roadside ditch that is considered jurisdictional. The wetland is about 30 wide and 60 feet long. The dominant vegetation is willow, juncus, bluegrass, alder, and cattail.
Waterway	2.45	Unnamed stream flows through a 5-foot culvert. The stream is approximately 6 feet wide. The dominant vegetation is blackberry, willow, myrtle, alder and maple.
Waterway	2.77	Unnamed Creek #1 flows through a 5-foot culvert. Stream is approximately 7 feet wide. The dominant vegetation is apple trees, blackberry, fern, reed canary grass, maple and willow.
Waterway	3.06	Unnamed Creek #2 flows through a 3-foot culvert. The dominant vegetation is apple trees, blackberry, fern, reed canarygrass, maple and willow.
Waterway	3.30	Wetland, approximately 60 feet wide and 200 feet long, in agricultural field near roadway. The wetland drains into a roadside ditch that flows north and drains to a 12-inch culvert. The dominant vegetation is juncus, sedges, grasses, cedar and velvet grass.

5.7 Socioeconomics

The Powers-Agness Highway (which includes County Road 90) provides the only north-south access between the town of Agness, City of Powers and State Highway 42. It is vital to the local economy because it provides for the movement of goods and services within the local area, and it is the only connection to Highway 42. Highway 42 provides the link to Coos Bay/North Bend on the Oregon coast (Highway 101) and Roseburg on Interstate 5. In addition, County Road 90 provides access to private timber lands, the Rogue River-Siskiyou National Forest, and a number of recreation areas.

According to the 2000 US Census, the city of Powers has a population of 734. Tables 6 and 7, respectively, indicate race and poverty status of Powers as compared to Coos County and the state of Oregon as a whole. As shown in Table 6, Powers has a somewhat higher population reporting race other than White or in combination with White than Coos County or the state. As shown in Table 7, median and per capita incomes are about 30 percent lower than those in Coos County as a whole and more than 40 percent lower than those in the state as a whole. Over 23 percent of the city's population had an income below the poverty level in 1999.

Table 6. Racial Composition by Area, 2000

Geographic Area	White	% Black or African American	% Am. Indian and Alaska Native	% Asian	% Native Hawaiian and Other Pacific Islander	% Other Race	% Two or More Races	% All Minority Races ¹
City of Powers	84.1	0.0	6.5	0.5	0.1	0.1	17.1	24.3
Coos County	92.0	0.3	2.4	0.9	0.2	1.1	6.5	11.4
Oregon	86.6	1.6	1.3	3.0	0.2	4.2	6.3	16.6

Source: US Census Bureau, 2000a

¹ Sum of Black or African American; American Indian and Alaska Native; Asian; Native Hawaiian and Other Pacific Islander; other race; and two or more races. Total may be over 100% because individuals may report more than one race.

Table 7. Income and Poverty Status by Area, 1999

Geographic Area	Median Household Income	Median Family Income	Per Capita Income in 1999	% of Population w/ 1999 Income Below Poverty Level	% of Families w/ 1999 Income Below Poverty Level
City of Powers	\$21,615	\$23,750	\$12,544	23.5	16.3
Coos County	\$31,452	\$38,040	\$17,547	15.0	11.1
Oregon	\$40,916	\$48,680	\$20,940	11.6	7.9

Source: US Census Bureau, 2000b

5.8 Land Use

Land uses in the project vicinity are primarily agriculture, forestry, and rural residential, with a few industrial uses near the beginning of the project. Numerous residences are located along the highway within the project area. Orchard Park, a small, park with access to the South Fork Coquille River, is near MP 2.0, adjacent to Banner Creek.

The project lies entirely within Coos County. The County land use designation for nearly all of the land adjacent to County Road 90 is either Forest or Exclusive Farm Use (Coos County, 2007a). The beginning of the project, just outside the city limits of Powers, is designated for industrial use. Two parcels on the east side of the highway near MP 1.3 are designated for rural residential use. Orchard Park is designated Recreation.

Information about the proposed project's compliance with land use plans is presented in Section 6.2.

5.9 Recreation

County Road 90 provides year-round access to approximately 120,000 acres of National Forest System lands with approximately 30,000 recreation visitor days (FHWA, 2002). It also serves people recreating on and along the South Fork Coquille River, which is popular for fishing.

Other recreation areas and activities/events served by the highway include:

- Orchard Park, a city park adjacent to the project area and accessed by County Road 90
- Powers to Glendale bicycle route, south of Powers
- Rogue River, south of Powers
- Rogue River Wilderness Area, also south of Powers
- Rogue River-Siskiyou National Forest; County Road 90 serves as the main northern entrance
- driving/sightseeing along the Powers-Agness Highway

5.10 Traffic Circulation/Transportation

Coos County Road 90 is open throughout the year. The highway serves local residents, businesses and is the primary northern entrance to the Rogue River-Siskiyou National Forest. Bicycle and pedestrian traffic is light, presumably because of the narrow shoulders, lack of bike lanes, and other safety concerns.

Numerous residences, many with associated agricultural uses, are located along the highway within the project area. The highway provides the only access to those residences.

ADT in the project area was approximately 500 in 2002. In general, traffic volumes have increased less than 2 percent per year over the past 10 years. Trucks—primarily log trucks—comprise approximately 8 percent of traffic on the road. Considering the highway's geographic remoteness, relatively low traffic volumes, and static local populations, substantial changes in the makeup of highway users or large increases in traffic volumes are not expected.

Rail transportation is not available in the area. The Johnson International Airport is south of Powers on the west side of the South Fork Coquille River.

5.11 Historic and Cultural

To determine the potential for cultural resources in the project area and immediate vicinity, a consultant conducted background research and a field reconnaissance survey on April 3, 4, and 5, 2006. The results of the consultant's study (AINW, 2006) are summarized below.

The project area lies within the traditional homeland of the Upper Coquille (Native American) people. Their winter villages were often established on terraces along major rivers. Previous archaeological studies in the area suggest that archaeological sites are common on the primary terraces above the South Fork Coquille River.

Euroamerican settlement began in the project area in the 1850s, and many farms in the valley today are owned by descendants of families who homesteaded the land in the late 19th century. In 1912, the Smith-Powers Logging Company was established, and the town of Powers was constructed primarily in 1914 and 1915 as a company town.

Coos County Road 90 is in the location of a trail used by Euroamerican settlers in the 19th century and Native Americans prior to that. The route is shown as a wagon road on 1900 and 1903 USGS topographic maps.

The project area has two previously recorded prehistoric sites. The field reconnaissance survey, which encompassed the area within 60 feet each side of the existing or proposed centerline along the project corridor, identified four new sites and seven high probability areas (HPAs) for prehistoric archaeological resources. There are no historic-period buildings or structures (i.e., bridge or culverts) that meet the criteria for being eligible for listing on the National Register of Historic Places. Table 8 summarizes the results of the cultural resources reconnaissance survey.

Table 8. Potential Cultural Resources within the Area of Potential Effect

HPA	Side of Hwy.	Length	Historic Resources Present?	Notes
1	East	2,500 feet	Yes	Grassy terrace includes portion of known site
2	West	200 feet	No	Grassy terrace across from highway
3	Both	1,000 feet	Yes	Grassy terrace and road cut
4	West	200 feet	No	Grassy terrace
5	West	2,800 feet	No	Large, grassy terrace adjacent to known site
6	East	600 feet	No	Grassy terrace
7	West	4,000 feet	Yes	Large, grassy terrace

Source: AINW, 2006

5.12 Visual

Coos County Road 90 is part of the FS-designated Rogue-Coquille Scenic Byway and the locally designated Coastal Rivers Scenic Route. However, it is not a national- or state-designated scenic route.

The highway passes through a rural area south of the city of Powers to the National Forest boundary. The project area is above the river and bounded by steep hillsides, which are forested and/or grassy and often dotted with rock outcroppings.

5.13 Air and Noise

The project area is located in an attainment area for air quality (i.e., air quality meets applicable standards).

The project area is rural in nature. Traffic on County Road 90 generates noise above ambient levels.

5.14 Public Utilities and Services

5.14.1 Utilities

One power company (PacifiCorp) and two communications companies (AT&T and Verizon) have facilities within the project area. A City of Powers water line is in the road right-of-way from the southern city limits to properties near MP 0.5.

PacifiCorp has aerial power lines along the highway approximately from MP 0.4 to MP 0.85, and from MP 1.25 to MP 1.6. Three service lines cross the highway, near MP 0.25, MP 2.4 and MP 2.7. PacifiCorp also has buried conduit along the west side of the highway through the project area. The conduit is empty and was abandoned in place.

AT&T has a buried fiber optic cable along the east side of the highway, with vaults (not pedestals) at the nodes. The road log includes notes of fiber optics on the left at MP 0.03, MP 1.00, and MP 1.20. A regeneration station is located on the east side of the highway at MP 2.77. The line continues into the Rogue River-Siskiyou National Forest. The fiber optic line is attached to the east side of Mill Creek Bridge (MP 0.21).

Verizon has two copper lines along the highway. The lines are buried except for a 700-foot aerial section at Coquille River Road near the beginning of the project. The road log shows two pedestals on the right at a road approach at MP 1.32, then pedestals on the left at MP 2.1 and 2.33. At MP 2.52 pedestals on both sides mark a crossing from the left to the right side of the highway. Pedestals are then recorded on the right at MP 3.07 and at MP 3.12. The line ends north of the Rogue River-Siskiyou National Forest boundary.

A small water line is attached to the west side of Mill Creek Bridge (MP 0.21), and a water meter is located near the northwest corner of the bridge. The line provides service to one business and residence near MP 0.5. No other public water service is provided in the project area. The project area is not served by a public sewer system. The City of Powers diverts water from the South Fork Coquille River for municipal use. The water intake is adjacent to the Mill Creek confluence.

5.14.2 Schools

The project area is within the Powers School District #31. District #31 does not provide bus service from students' homes to school. District school buses are used only for transportation for athletic events or other activities, such as field trips (Stallard, 2007). School buses do not travel through the project area; instead, they travel north from Powers to Myrtle Point and then on to other destinations (Stallard, 2007).

5.14.3 Emergency Services

Local emergency response agencies include the Coos County Sheriff's Office, the Oregon State Police, the Powers Fire Department (includes ambulance), Coos County Forest Protection, and Myrtle Point Ambulance. The Coos County Sheriff's Office and the Powers Fire Department are primary responders with support from Oregon State Police and Myrtle Point Ambulance, if needed (Summers, 2007).

5.14.4 Other Services

Babe's Garbage Service, a private hauler based in Powers, provides garbage service to customers in the project area. Babe's serves the city of Powers as well as the area along County Road 90. Trucks haul waste from Powers to the Beaver Hill county landfill and incinerator on Tuesdays and Fridays. To reach Beaver Hill, which is outside of Bandon, the trucks travel from Powers to Coquille on Highway 242, then over North Bank Road to the landfill (Cottom, 2005).

The US Postal Service does not deliver mail to properties along County Road 90 (Robinson, 2007).

6.0 INTERRELATIONSHIP WITH OTHER USES AND JURISDICTIONS

6.1 Land Ownership

County Road 90 is within Coos County right-of-way. Nearly all of the properties adjacent to the road are in private ownership. Two parcels, including one at the beginning of the project on the east side of the road and Orchard Park, are owned by the City of Powers (DEA, 2006b).

6.2 Planning by Others

6.2.1 Coastal Zone Management Act

The Coastal Zone Management Act of 1972, implemented in Oregon through the Oregon Coastal Management Program (OCMP), guides land use in the coastal zone. In Coos County, Oregon's coastal zone extends seaward to the extent of state jurisdiction as recognized in federal law and inland to the crest of the coastal mountain range (Oregon Department of Land Conservation and Development [DLCD], 1987). The project area is within the coastal zone.

Under Oregon Administrative Rules (OAR) 660-035-0000 through -0080, federal activities must be reviewed by DLCD for consistency with the OCMP. The OCMP is implemented through the Coos County comprehensive plan and zoning ordinance. DLCD receives notice of projects when applicants apply for local land use permits or state or federal permits (Perry, 2007). A Coastal Zone Certification Form is part of the application process for wetland removal/fill permits. There are no other specific coordination requirements with DLCD (Charland, 2007).

6.2.2 National Forest Scenic Byways Program

The FS established the National Forest Scenic Byways Program in 1988 after determining that scenic driving is the most popular form of recreation on national forests. The Rogue-Coquille Scenic Byway, which includes Coos County Road 90, was designated by the FS on October 21, 1992.

The FS has a Scenic Byways design guide, issued in July 2002. The design guide includes guidelines for roadside improvements, such as interpretive sites and overlooks (McAlpin, 2005). At this time, roadside improvements are not proposed as part of the project.

6.2.3 Oregon Statewide Planning Goals

The project would cross lands designated for exclusive farm and forest use and therefore were evaluated for consistency with Oregon Statewide Planning Goals 3 (Agricultural Lands) and 4 (Forest Lands). Under Oregon Revised Statutes (ORS) 215.213 and 215.283, reconstruction or modification of public roads may be permitted on forest and farm lands, as long as new travel lanes are not created, buildings are not removed or displaced, and new land parcels do not result. Therefore, the proposed project would be allowed. However, the proposed realignments are subject to the requirements of Oregon Administrative Rule (OAR) 660-12-0065.

According to OAR 660-12-0065, realignments may be allowed on agricultural or forest lands, subject to the requirements of that rule. In general, the rule requires the jurisdiction to identify reasonable build design alternatives, assess the effects of those alternatives on farm and forest practices (including whether they would force a significant change in or significantly increase the cost of accepted farm or forest practices on surrounding lands), and select the alternative with the least impacts on farm/forest lands in the immediate vicinity. "Realignment" is defined (OAR 660-12-0065(2)(f)) as "rebuilding an existing roadway on a new alignment where the new centerline shifts outside of the existing right-of-way, and where the existing road surface is either removed, maintained as an access road or maintained as a connection between the realigned roadway and a road that intersects the original alignment. The realignment shall maintain the function of the existing road segment being realigned as specified in the acknowledged comprehensive plan."

The proposed realignment near MP 0.42 would cross industrial land and is not subject to the requirements of OAR 660-12-0065. The proposed realignment near MP 2.31 would cross agricultural land, and the centerline would shift outside the existing right-of-way. A number of alternatives were evaluated during project design; the proposed alignment was determined to be the minimum necessary to achieve the desired roadway stability. Because the realignment would affect a relatively minor amount (less than 2 acres) of pastureland, it would not have a significant effect on farm practices for the property owner.

6.2.4 Coos County

The project is compatible with the Coos County Comprehensive Plan Transportation Goal in that it "promotes safety and convenience for citizens and travelers and ... strengthens the local and regional economy by facilitating the flow of goods and services."

The majority of land within the project corridor is zoned for forest or farm use. According to the Soil Survey of Coos County, Oregon (NRCS, 1989), soils in the project area do not comprise prime or unique farm land. Timber production and pasture are the main forest and farm uses in the project area.

Project development would need to comply with the OCMP, which is implemented in the project area by the Coos County comprehensive plan and zoning ordinance. Routine operation maintenance, and repair of existing transportation facilities is permitted outright in all zones when the work is done by a public agency, such as Coos County or FHWA (Coos County, 2007b). Realignment in industrial zones would be permitted outright as long as no buildings would be displaced or new land parcels created (see Section 3.2.500 of "Coos County Zoning and Land Development Ordinance," Coos County, 2007b). However, realignments in forest or agricultural zones would need conditional use approval by Coos County. An application for administrative conditional use review would need to be submitted to the Coos County Planning Department. The application would address the requirements of OAR 660-12-0065, described above in Section 6.2.3.

6.3 Environmental Legislation and Requirements

1. Will Any of the Following Environmental Legislation and Requirements Be Affected by the Proposal?

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>
a. Coastal Zone Management Act	X		
b. Executive Order 11988 (Floodplains)	X		
c. Executive Order 11990 (Wetlands)	X		
d. National Historic Preservation Act, Section 106	X		
e. Farmland Protection Policy Act (Prime and Unique Farmlands)			X
f. Land Use Requirements	X		
g. Section 4(f), US Department of Transportation Act	X		
h. Endangered Species Act	X		
i. Highway Improvements in the Vicinity of Airports			X
j. Clean Water Act/Safe Drinking Water Act	X		
k. Wild & Scenic Rivers Act			X
l. Clean Air Act			X
m. Hazardous Waste Act			X
n. Noise Requirements			X
o. National Forest Management Act			X
p. Northwest Forest Plan			X
q. Magnuson-Stevens Fisheries Conservation and Management Act (MSA)	X		

Comment:

- a. The project area is within the Coastal Zone. Coastal Zone consistency would be determined through local, state, and federal permitting processes. See Section 6.2.1.
- b, c. Project activities (the Action Alternative) would affect floodplains and wetlands.
- d, g. A cultural reconnaissance survey was conducted and indicated the presence of numerous historic and cultural resources within the project area that could be affected by the Action Alternative.
- e. While the project would occur within an agricultural area, no prime or unique farmlands are identified in the area.
- f. The Action Alternative would be subject to Coos County land use review.
- g. Section 4(f) resources in the project area include cultural resources and Orchard Park, owned by the City of Powers.
- h. Consultation with the National Marine Fisheries Service (NMFS) would be required for potential effects to MSA. Consultation with USFWS will also occur for potential disturbance impacts to the northern spotted owl.
- i. The Johnson International Airport is west of the highway and on the opposite site of the South Fork Coquille River. The proposed project is not adjacent to the airport. It would not affect visibility or exceed airport height restrictions. Therefore, the project would not affect airport property or operations. No coordination with the Federal Aviation Administration is necessary.

- j. Certification of compliance with water quality standards (Section 401 of the Clean Water Act) would be required.
- k. The project is not near a designated Wild and Scenic River.
- l. The project is within an attainment area.
- m. Studies for hazardous waste have not been conducted but no potential sources have been identified.
- n. The project area is rural with several residences along roadway. Construction should be limited to daylight hours. The project would not generate additional traffic.
- o, p. Project activities would not occur within a National Forest.
- q. The project area is within EFH for coho salmon; therefore, FHWA would be required to consult with NMFS for impacts to EFH under MSA.

2. Federal Permits Required?

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>
a. Section 404 Permit, Clean Water Act of 1977 (US Army Corps of Engineers)	X		
b. US Coast Guard Permit, Rivers & Harbors Act and the Surface Transportation Assistance Act			X
c. Special Use Permit (USDA Forest Service)			X
d. National Pollutant Discharge Elimination System (NPDES) Permit	X		
e. Other: Forest Service Road Use, Mineral Use, Staging/Camping, and Fire Permits/Waivers			X

Comment:

- a. A Section 404 permit would be needed for replacing the Mill Creek bridge and other culverts in the project area.
- b. The project would not affect any navigable waters.
- c. The project area is not within a National Forest.
- d. The project would disturb more than one acre of ground; therefore, a NPDES permit would be required.
- e. The project area is not within a National Forest.

3. State or County Permits Required?

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>
a. Removal/Fill Permit (Oregon Department of State Lands)	X		
b. Surface Mining Permit (Department of Geology and Mineral Industries)		X	
c. Oregon Shoreline Development Permit (Oregon Land Conservation and Development Commission)			X
d. Permit to Operate Power Equipment (Oregon Department of Forestry)			X
e. Air Containment Discharge Permit (Oregon Department of Environmental Quality)			X
f. Notification of Operations (Oregon Department of Forestry)			X
g. Burn Permit (Oregon Department of Forestry)			X
h. Other: State Scenic Waterways, NPDES, Section 401 Water Quality Certification	X		
i. Oregon Coastal Management Program Consistency (Land Conservation and Development Commission)	X		
j. Land Use Permit	X		
k. Oregon Department of Fish and Wildlife fish passage waiver	X		

Comment:

- a. A Removal/Fill Permit would be necessary for proposed realignments, and for replacement of the Mill Creek bridge and culverts.
- b. A permit would be required if construction materials are not acquired from a commercial source or from federal land.
- h. NPDES and Section 401 permits are described above under Federal Permits. Oregon Department of Environmental Quality and DSL are the permitting agencies.
- i. The project area is in the Coastal Zone. See Section 6.2.1.
- j. County conditional land use permit would be necessary for proposed realignments. See Section 6.2.4.
- k. An ODFW fish passage waiver would be required for installation of a culvert at Bedrock Creek that does not provide fish passage. ODFW has indicated to FHWA that it would be willing to grant such a waiver for Bedrock Creek because there is little upstream fish habitat. Coos County intends to apply to ODFW for a fish passage waiver or exemption.

7.0 ENVIRONMENTAL IMPACTS

For each question, the impact is shown as high, medium (Med), low, or none. If the question addresses a resource that is not present in or adjacent to the project area, it is shown as not applicable (N/A). If the impact is high or medium, the comment section contains a discussion of the impact, mitigation being considered, and differences that may exist among alternatives. In some cases, where needed for clarification, comments have also been provided for low impacts.

	<u>High</u>	<u>Med</u>	<u>Low</u>	<u>None</u>	<u>N/A</u>
A. Earth. Would this proposal cause:					
1. Unstable earth conditions or changes in geologic substructures?			X		
2. Disruptions, displacement, compaction, or overcovering of the soil?		X			
3. Change in topography or ground surface relief features?			X		
4. The destruction, covering, or modification of any unique geologic or physical features?				X	
5. Any increase in wind or water erosion of soils either on or off the site?			X		
6. Changes in deposition or erosion of beach sands which may modify the bed of the ocean, bay, or inlet?					X
7. Changes in siltation, deposition, or erosion which may modify the channel of a river or stream or the bed of a lake?			X		

Comment:

The Action Alternative would cause temporary disruptions, displacement, and compaction of soil and would change the topography and ground surface relief features at a few specific locations. The realignment near the beginning of the project would involve grading and compaction for the new roadway section, as well as hillside stabilization to minimize further erosion. The project may include realignment near MP 2.3, which would involve cutting into the uphill slope and stabilizing with soil nails and shotcrete—or the road may be stabilized on the existing alignment with retaining walls. Culvert and bridge replacements would involve a large amount of earthwork and may involve temporary detours around the sites. Stabilizing landslides at MP 0.55 and 2.3 would be a beneficial effect of the Action Alternative.

	<u>High</u>	<u>Med</u>	<u>Low</u>	<u>None</u>	<u>N/A</u>
B. Air. Would this proposal cause:					
1. Air emissions or deterioration of ambient air quality?			X		
2. The creation of objectionable odors?			X		
3. An inconsistency with regional air quality requirements?			X		

Comment:

The project area is within an attainment area for air quality standards. Implementation of the Action Alternative would result in a short-term increase in dust and equipment emissions during the

construction phase, but the emissions are would not affect air quality attainment standards. The project would not have a long-term negative effect on air quality.

	<u>High</u>	<u>Med</u>	<u>Low</u>	<u>None</u>	<u>N/A</u>
C. Water. Would this proposal cause:					
1. Changes in currents, or the course of direction of water movements, in either marine or fresh waters?			X		
2. Changes in absorption rates, drainage patterns, or the rate and amount of surface water runoff?			X		
3. Change in the amount of surface water in any water body?				X	
4. Discharge into surface waters or any alteration of surface water quality including but not limited to temperature, dissolved oxygen, or turbidity?			X		
5. Alteration of the direction or rate of flow of ground waters?				X	
6. Change in the quantity of ground waters either through direct additions or withdrawals or through interception of an aquifer by cuts or excavations?				X	
7. Deterioration in ground water quality either through direct injection or through the seepage of leachate, phosphates, detergents, waterborne virus or bacteria, or other substances into the ground waters?				X	
8. Alterations to the course or flow of flood waters?			X		
9. Fill placement below the ordinary high water mark of rivers and streams?			X		
10. Encroachment into a 100-year floodplain or regulated floodway?			X		

Comment:

Culvert and bridge construction would involve in-water work to remove existing structures and construct new ones. Culvert replacement would require fill placement below the ordinary high water mark to secure the footings of the culvert headwalls and wingwalls. Overall, drainage and fish passage would be improved with the culvert and bridge replacements.

	<u>High</u>	<u>Med</u>	<u>Low</u>	<u>None</u>	<u>N/A</u>
D. Wetlands. Would this proposal cause:					
1. Removal of hydrophytic vegetation?			X		
2. Covering or replacing of any hydric soil?			X		
3. Alteration of the hydrology?			X		
4. A change in function or value?					

Comment:

Culvert replacement would temporarily remove hydrophytic vegetation and disturb hydric soil. The potential realignment near MP 2.3 would impact a wetland on private property. The wetland would be filled, therefore changing its function and value. Stabilizing the roadway on the existing alignment

may be a feasible option, but additional geotechnical studies are needed. If wetland fill is proposed, FHWA would seek on-site mitigation for wetland impacts.

	<u>High</u>	<u>Med</u>	<u>Low</u>	<u>None</u>	<u>N/A</u>
E. Plants. Would this proposal cause:					
1. Change in the diversity of species or numbers of any species of flora (including trees, shrubs, grass, crops, microflora, and aquatic plants)?			X		
2. An effect on any unique, rare, or endangered species of flora?				X	
3. Introduction of new species of flora into an area or a barrier to the normal replenishment of existing species?			X		

Comment:

There are no federally or state listed plants in the project area.

	<u>High</u>	<u>Med</u>	<u>Low</u>	<u>None</u>	<u>N/A</u>
F. Fish and Wildlife. Would this proposal cause:					
1. Changes in the diversity of species or numbers of any species of fauna [birds, land animals including reptiles, fish and shellfish, benthic organisms, insects, or microfauna]?			X		
2. An effect on any threatened or endangered species of fauna?			X		
3. Introduction of new species of fauna into an area or result in a barrier to the migration or movement of fauna?			X		
4. Deterioration of, or interference with, fish or wildlife critical habitat?				X	

Comment:

There are no federal or state ESA-listed threatened or endangered fish or wildlife species in the project corridor (one-quarter mile on either side of the existing highway centerline). There is suitable habitat for the northern spotted owl within the National Forest adjacent to the end of the project at MP 4.0. This habitat is assumed to be occupied by spotted owls, so construction activity between MP 3.0 to 4.0 may have a seasonal restriction to avoid noise disturbance during the critical breeding season (January through July). There is no suitable habitat for marbled murrelets in the project corridor; however, ORNHIC reports that murrelets were observed flying over downtown Powers in the early 1990s. The murrelets were most likely foraging from habitat east of Powers and the project area to the ocean. No surveys have been conducted for either northern spotted owl or marbled murrelet. A biological assessment will be prepared for the project.

Replacing culverts with bridges at Hayes Creek and Banner Creek would improve fish passage for both resident and anadromous fish at those locations. Passage for resident fish would be provided at Mill Creek; anadromous fish are not present in that stream because of a waterfall at the confluence with the South Fork Coquille River.

The project area is within EFH for coho salmon; therefore, FHWA would be required to consult with NMFS for impacts to EFH under MSA for the Action Alternative.

	<u>High</u>	<u>Med</u>	<u>Low</u>	<u>None</u>	<u>N/A</u>
G. Land Use. Would this proposal cause:					
1. The alteration of the present or planned land use of an area?			X		
2. Reduction in acreage of any agricultural products?				X	
3. Reduction in acreage of any prime and unique farm land?				X	

Comment:

The Action Alternative would convert some vacant industrial land to a transportation use at the realignment near the beginning of the project area. Some land designated for agricultural and/or forest use (the land appears to be used as pasture) would also be converted to a roadway use if realignment occurs near MP 2.3. Realignments would require acquisition of right-of-way. Coos County will be responsible for right-of-way acquisition.

	<u>High</u>	<u>Med</u>	<u>Low</u>	<u>None</u>	<u>N/A</u>
H. Natural Resources. Would this proposal cause:					
1. Increase in the use of any natural resources?			X		
2. Reduction of any nonrenewable natural resources?			X		

Comment:

	<u>High</u>	<u>Med</u>	<u>Low</u>	<u>None</u>	<u>N/A</u>
I. Energy. Would this proposal cause:					
1. Use of substantial amounts of fuel or energy?			X		
2. Savings of substantial amounts of fuel or energy?			X		

Comment:

	<u>High</u>	<u>Med</u>	<u>Low</u>	<u>None</u>	<u>N/A</u>
J. Aesthetics. Would this proposal cause:					
1. A change in a scenic vista or view as seen from the road?			X		
2. A change in a scenic vista or view for viewers of the road?			X		
3. A conflict with the scenic management plans of other agencies?				X	
4. New light or glare?				X	

Comment:

	<u>High</u>	<u>Med</u>	<u>Low</u>	<u>None</u>	<u>N/A</u>
K. Recreation. Would this proposal cause an impact upon the quality or quantity of existing recreational opportunities?			X		

Comment:

Access to Orchard Park would be temporarily affected due to bridge construction at Banner Creek.

	<u>High</u>	<u>Med</u>	<u>Low</u>	<u>None</u>	<u>N/A</u>
L. Archaeological/Historical. Would this proposal result in an alteration of an important archaeological, historical, or traditional use site, structure, object, or building?		X			

Comment:

As part of the pedestrian survey, the project consultant identified four new prehistoric and seven HPAs for prehistoric archaeological resources. The HPAs are situated on river terraces, which are considered likely to contain buried archaeological sites. The HPAs also include areas within the project area (most large culvert and realignment locations) and are adjacent to previously-recorded and newly-identified archaeological resources. Shovel testing is recommended within each of the HPAs to determine if buried archaeological deposits are present within the project area. Measures should be taken to avoid the disturbance of any prehistoric artifacts or sites. If eligible resources cannot be avoided, then treatment plans should be developed to mitigate project-related adverse affects. Shovel testing and site evaluation work would require appropriate permits from the SHPO. Tribal coordination would also be required as part of the permitting process for the archaeological exploratory work and site evaluation work.

	<u>High</u>	<u>Med</u>	<u>Low</u>	<u>None</u>	<u>N/A</u>
M. Hazardous Waste. Would this proposal:					
1. Affect a known hazardous waste site on the US Environmental Protection Agencies (EPA’s) National Priority List (NPL) or a statewide inventory?					X
2. Affect a site with the potential for hazardous waste (e.g., sanitary landfills, gasoline stations, industrial sites)?			X		
3. Affect human health by creating a health hazard or a potentially unhealthy situation?				X	
4. Increase the likelihood of an explosion or release of hazardous substances [including but not limited to oil, pesticides, chemicals, or radiation] in the event of an accident?			X		

Comment:

	<u>High</u>	<u>Med</u>	<u>Low</u>	<u>None</u>	<u>N/A</u>
N. Socioeconomics. Would this proposal:					
1. Alter the location, distribution, density, or growth rate of the human population of an area?			X		
2. Affect racial, ethnic, religious, minority, elderly, or low income groups?			X		
3. Affect existing housing [including but not limited to rural or urban residences and business or commercial buildings]?				X	
4. Create a demand for additional housing?				X	
5. Affect local employment, taxes, property values, etc.?			X		

Comment:

	<u>High</u>	<u>Med</u>	<u>Low</u>	<u>None</u>	<u>N/A</u>
O. Public Services. Would this proposal have an effect upon or result in a need for new or altered services in any of the following areas:					
1. Fire protection/EMS?			X		
2. Police protection?			X		
3. Schools?				X	
4. Maintenance of public facilities including roads?		X			
5. Airports?				X	
6. Religious institutions or facilities?				X	
7. Health services?			X		
8. Mail delivery?			X		
9. Parks and recreational facilities?			X		
10. Other services? (e.g., garbage collection)			X		

Comment:

During construction, the proposed project would cause traffic delays, which would temporarily affect emergency response times for fire, police, and emergency services. In the long term, the Action Alternative would reduce maintenance needs in the project corridor.

	<u>High</u>	<u>Med</u>	<u>Low</u>	<u>None</u>	<u>N/A</u>
P. Transportation/Circulation. Would this proposal cause:					
1. An increase in motor vehicle movement?			X		
2. An increase in the movement of bicycles, pedestrians, or equestrians?			X		
3. Increased traffic hazards to cyclists, pedestrians, or equestrians?				X	
4. Existing parking facilities to be affected or create a demand for new parking?				X	
5. Changes in access?			X		
6. An impact upon existing transportation systems?			X		
7. An impact upon waterborne, rail, or air traffic?				X	
8. Impacts associated with construction activities (e.g., detours, temporary delays)?			X		

Comment:

Construction activities would result in temporary traffic delays and, potentially, temporary changes in access at certain properties. Access would be maintained throughout the project area during construction. Construction likely would require temporary (e.g., 15- to 30-minute) road closures with traffic control (e.g., flaggers). Longer road closures may be necessary; if so, advance notification would be provided. At the bridge crossings, the road would remain open, although it may be reduced to one-lane traffic during construction.

The Action Alternative would result in an improved roadway facility over the long term.

	<u>High</u>	<u>Med</u>	<u>Low</u>	<u>None</u>	<u>N/A</u>
Q. Utilities. Would this proposal cause a need for new systems or alterations of the following utilities:					
1. Power or natural gas?			X		
2. Communications systems?			X		
3. Water?			X		
4. Sanitary systems or septic tanks?			X		
5. Storm water drainage?			X		
6. Irrigation system?				X	
7. Solid waste disposal?				X	
8. Pipelines?				X	
9. Cable TV?				X	

Comment:

The project would not result in increased demand on existing sources of energy or affect public utilities or services. The underground water and telecommunication lines (fiber optic and copper) along the existing highway are within the right-of-way and may need to be relocated with implementation of the Action Alternative. The cost of relocating utilities on public right-of-way is generally borne by the utility provider and the cost for relocating those on private property would be borne by the project. There would be no long-term effect on utilities, and no new utilities would be required for project implementation.

8.0 COORDINATION AND CONSULTATION

8.1 Engineering and Environmental Studies

A project SEE Team was established during the scoping phase of the project to identify and assess the environmental effects of the proposal and recommend alternatives for evaluation. The SEE Team acts as a steering committee for project development activities during the conceptual and design phases, and is also charged with the formulation and implementation of a comprehensive public involvement process. Team members, including representatives from the principal land management agencies (FS, Coos County, and FHWA) can call on available disciplines within their agencies for technical assistance as needed.

The SEE Team members for this project are listed below:

George Fekaris, Project Manager
Federal Highway Administration
Western Federal Lands Highway Division
610 East Fifth Street
Vancouver, WA 98661
(360) 619-7766

Paul Slater, Environmental Planner
Coos County Highway Department
1281 West Central
Coos County Courthouse
Coquille, OR 97423
(541) 369-3121

Robin McAlpin, Operations Manager
USDA Forest Service
Rogue River-Siskiyou National Forest
Powers Ranger District
42861 Highway 242
Powers, OR 97466
(541) 439-6200

8.2 Coordinating Agencies and Interested Parties

FHWA has coordinated with federal and state regulatory agencies identify potential concerns about the proposed project. An ODFW fish biologist visited the project site to review the culvert and bridge replacement options on June 1, 2006, provided guidance on fish passage criteria, and confirmed historical and present fish presence. Coordination is continuing to occur with the City of Powers for impacts to Orchard Park during construction.

8.3 Public Involvement

The initial public scoping notice announcing the proposed project and inviting public input was mailed to local property owners, businesses, and organizations on January 13, 2004. The project was introduced at a public open house in Powers on March 2, 2006. Copies of this project checklist will be mailed to local property owners as well as other interested parties. Another open house will be held in

Powers in early March 2007 to present the proposed project, discuss study findings, and solicit public input on the proposal.

Personal interviews with property owners were conducted to obtain specific information about their properties, knowledge of the area, and potential concerns related to the proposed project.

9.0 LIST OF PREPARERS

This project checklist was prepared for WFLHD by
David Evans and Associates, Inc.
2100 SW River Parkway
Portland, OR 97201

People who made significant contributions include:

Michael Odom, PE, Project Manager
Kristina L. Gifford, Environmental Planner
David K. Kennedy, Environmental Planner
Phil Rickus, Ecologist
Norm Trujillo, Project Designer
Justin DeMello, Drafting Technician
Dwight Hardin, Geologist, GRI (subconsultant to DEA)
Keith Martin, Geologist, GRI (subconsultant to DEA)
John L. Fagan, Senior Archaeologist, AINW (subconsultant to DEA)
Nicholas J. Smits, Supervising Archaeologist, AINW (subconsultant to DEA)
Jason M. Allen, Staff Archaeologist and Historian, AINW (subconsultant to DEA)

10.0 REFERENCES

- Archaeological Investigations Northwest (AINW). 2006 (June 16). "Draft Cultural Resource Survey for the Powers to Agness Highway Project, County Section, Coos County, Oregon." Report No. 1705.
- Charland, Jay, Ocean and Coastal Program, Oregon Department of Land Conservation and Development (DLCD). 2007 (January 24). Personal communication.
- Coos County, Planning Department. 2007a. Coos County Zone Maps for Township 31 South, Range 11 West; Township 31 South, Range 12 West. Accessed online on January 23, 2007, at http://www.co.coos.or.us/planning/zone_maps/.
- Coos County, Planning Department. 2007b. "Coos County Zoning and Land Development Ordinance." Accessed online on January 23, 2007, at <http://www.co.coos.or.us/planning/>.
- Cottom, Barbara, sole proprietor, Babe's Garbage Service. 2005 (October 24). Personal communication.
- Csuti, B., A.J. Kimerling, T.A. O'Neil, M.M. Shaughnessy, E.P. Gaines, and M.M.P. Huso. 1997. *Atlas of Oregon Wildlife*. Oregon State University Press. Corvallis, Oregon.
- David Evans and Associates, Inc. (DEA). 2005 (October). Powers to Agness Highway Utilities Report.
- David Evans and Associates, Inc. (DEA). 2006a (February). "Powers to Agness Highway County Section, OR PFH 60(2), Type, Size and Location Report - Draft."
- David Evans and Associates, Inc. (DEA). 2006b (March). "Property Ownership Report, OR PFH 60(2), Powers to Agness Highway, County Section."
- David Evans and Associates, Inc. (DEA). 2006c (November). "Hydraulic Reconnaissance Report with Preliminary Analysis and Major Stream Crossing Recommendations, Powers to Agness Highway (MP 0.0 to MP 4.0)" Prepared for the Federal Highway Administration.
- David Evans and Associates, Inc. (DEA). 2007 (January 19). Memorandum regarding accident analysis for the Powers-Agness County Section Project. Prepared for Michael Odom by Dan Johnson, EIT.
- GRI. 2006 (October 26). Draft technical memorandum regarding Geotechnical Investigation, OR PFH 60(2), Powers to Agness Highway, County Section (MP 0 to 4).
- GRI. 2007 (January 16). Draft technical memorandum regarding Geotechnical Services, Repair Alternatives, OR PFH 60(2) Powers to Agness Highway, County Section (MP 0 to 4).

McAlpin, Robin, Operations Manager, Rogue River-Siskiyou National Forest, Powers Ranger District. 2005 (December 19). Personal communication: electronic mail.

National Marine Fisheries Service (NMFS). 2005 (July 13 last update). "Endangered Species Act Status of West Coast Salmon & Steelhead." Accessed online on October 20, 2005, at: <http://www.nwr.noaa.gov/1salmon/salmesa/pubs/1pgr.pdf>

Oregon Department of Fish and Wildlife (ODFW). 2005. 1995 Biennial Report on the Status of Wild Fish in Oregon. Available online at: <http://www.dfw.state.or.us/ODFWhtml/Research&Reports>.

Oregon Department of Fish and Wildlife (ODFW). 2006 (July 7). Letter from Alan Ritchey, Assistant District Fish Biologist, to George N. Fekaris, US Department of Transportation, regarding Powers Highway culverts.

Oregon Natural Heritage Information Center (ORNHIC). 2006 (May 5). Results of database search for rare, threatened, and endangered plant and animal records within two miles of the project area.

Perry, David, South Coast Field Representative, Ocean and Coastal Program, Oregon Department of Land Conservation and Development. 2007 (January 23). Personal communication.

Robinson, FairyMae, US Post Office, Powers, Oregon. 2007 (January 24). Personal communication.

Stallard, Shirley, Business Manager, Powers School District #31. 2007 (January 5). Personal communication.

Summers, Sgt. Rod, Deputy, Coos County Sheriff's Office. 2007 (January 24). Personal communication.

US Census Bureau. 2000a. Census 2000 Summary File 1 (SF1) – 100 Percent Data, QT-P5. "Race Alone or in Combination: 2000." Website: <http://factfinder.census.gov>. Accessed September 13, 2005.

US Census Bureau. 2000b. Census 2000 Summary File 3 (SF 3) – Sample Data. GCT-P14. "Income and Poverty in 1999: 2000. Website: <http://factfinder.census.gov>. Accessed September 13, 2005.

US Department of Agriculture, Natural Resources Conservation Service (NRCS). 1989. *Soil Survey of Coos County, Oregon*. US Department of Agriculture, Soil Conservation Service.

US Department of the Interior, Fish and Wildlife Service (USFWS). No date. "Federally Listed and Proposed Species and Species of Concern that May Occur in Coos County." Accessed online on August 27, 2006, at: <http://www.fws.gov/oregonfwo/Species/Lists.asp>.

US Department of Transportation, Federal Highway Administration (FHWA), Western Federal Lands Highway Division. 2002 (December 6). "Project Identification Report for Powers to Agness Highway."

US Department of Transportation, Federal Highway Administration (FHWA), Western Federal Lands Highway Division. 2006 (February). "Project Checklist, Powers-Agness/Burma Slide, OR PFH 60(3), Oregon State Highway 242, Coos County, Mile Post 3.0 to 9.4."

P:\F\FHAX00000156\0600INFO\EP\EP1000 NEPA\EP1050 NEPA Deliverable\Powers_County checklist rev1.doc

Appendix A

Public Notice



Public Notice

Powers-Agness Highway County Section Public Open House

The Western Federal Lands Highway Division of the Federal Highway Administration (FHWA), in cooperation with the Coos County Highway Department and the US Forest Service, is evaluating alternatives for a proposed project on the Powers-Agness Highway (County Road 90). The project area lies between the city of Powers and the Siskiyou National Forest boundary. The beginning point of the project is at the southern city limits of Powers; its end point is four miles south of the city, where the highway enters the Siskiyou National Forest. Coos County Road 90 is on the east side of the South Fork Coquille River throughout the project area and is adjacent to the river in several locations. The purposes of the project are: to maintain access to National Forest lands, as well as recreation, commercial, and residential uses in the project vicinity, by extending the life of the pavement and repairing or avoiding unstable slopes; to improve safety; to improve drainage; and to reduce maintenance needs.

FHWA will be holding a public open house to present the project checklist document and the alternatives being considered. A project checklist is used by FHWA as part of its data gathering process and early coordination for a proposed action. It provides an opportunity for public and governmental agencies that may be affected by the proposed action, or that may have regulatory or administrative interest, to become involved in the project development process at an early stage. The checklist document describes the project purpose and need, overall scope of the project, and alternatives being considered. The checklist also describes environmental resources in the area and includes a preliminary assessment of potential impacts. This aids in identifying issues that are important and/or have potentially negative or beneficial environmental consequences.

The proposed work would likely involve stabilizing and/or realigning portions of the roadway to reduce the risk associated with landslides, minor realignment of unsafe curves, asphalt resurfacing, and replacement of culverts and the Mill Creek Bridge.

The public open house will be held on Thursday, March 1, from 3:00 p.m. to 7:00 p.m. at the Powers Senior Center, 120 Fir Street, in Powers. You are welcome to attend to learn more about the project and to provide comments on the project checklist.

The open house will be an informal setting for one-to-one exchanges between citizens and public officials. Representatives from FHWA, Coos County Highway Department, and US Forest Service will be available to discuss the proposed project and alternatives.

If you have questions or would like a copy of the project checklist please call George Fekaris, Project Manager, FHWA, at (360) 619-7766. You may also view the project checklist at our website: <http://www.wfl.fha.dot.gov/projects/oregon.htm>

Appendix B

ODFW Letter Regarding Culverts, Coos County Road 90



Oregon

Theodore R. Kulongoski, Governor

Department of Fish and Wildlife

Charleston District Office

63538 Boat Basin Drive

PO Box 5430

Charleston, OR 97420

(541) 888-5515

FAX (541) 888-6860

July 7, 2006



George N. Fekaris
U.S. Dept. of Transportation
610 East Fifth Street
Vancouver, WA 98661

Dear Mr. Fekaris

Re: Powers Highway Culverts

This letter is to confirm the status of fish passage at 6 culverts above the town of Powers Oregon that were inspected on June 1, 2006. I also conducted a follow up visit to 4 of the culverts on July 5, 2006. At all sites considered to be historical fish habitat, Coos County must meet one of the following conditions when a trigger occurs at one of their crossings:

1. Install a structure that meets ODFW fish passage criteria.
2. Obtain a fish passage waiver by providing a net benefit to native migratory fish.
3. Obtain an exemption from fish passage due to no appreciable benefit being provided by the project.

The status of historical fish use at the six sites is as follows.

Mill Creek: This stream has a fall near its confluence that is an anadromous barrier but resident fish are expected above. Discussion on site during the field trip indicated the preference for this site was to install a culvert that would meet fish passage criteria.

Hayes Creek: Coho have been confirmed above the highway culvert.

Banner Creek: This is another valuable fish stream with documented fish use, including coho upstream from the culvert. Juvenile salmonids were observed immediately below the culvert on July 5, 2006.

Bedrock Creek: This creek has a large drop at the outlet that appears to be created by road fill. Although there is likely less than a quarter mile of habitat above the road, Bedrock Creek should be considered historical fish habitat. This creek may be one that the county applies for a waiver on.

Unnamed Trib 1, approximate milepost 2.8: This stream has a 6 foot fall near its confluence and another smaller barrier upstream. Fish were not observed during a July 5, 2006 site visit and physical conditions did not appear suitable to be considered historical fish habitat. This site does not need to be replaced with a fish passage structure.

Unnamed Trib 2, approximate milepost 3.1: This stream has a large waterfall just above the confluence that prevents anadromous passage. The stream goes dry above this site to prevent resident fish from surviving. This site does not need to be replaced with a fish passage structure.

On our June 1 site visit we discussed the possibility of installing a bridge at the top priority sites. Of the streams in question, Hayes and Banner creeks are the most valuable fish streams and would benefit the most from a bridge installation. Culvert installations can also be designed that meet fish passage criteria, but in the long term bridges generally pass fish better with less maintenance required.

Thank you for the opportunity to review these projects. Feel free to contact me if you have any questions.

Sincerely,



Alan Ritchey
Assistant District Fish Biologist

Cc: M. Gray, ODFW
P. Slater, Coos County

Appendix C

Federally Listed and Proposed Species, Coos County

FEDERALLY LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES,
CANDIDATE SPECIES AND SPECIES OF CONCERN THAT MAY OCCUR
IN COOS COUNTY

LISTED SPECIES^{1/}Mammals

Steller northern sea lion	<i>Eumetopias jubatus</i>	**T
---------------------------	---------------------------	-----

Birds

Marbled murrelet ^{2/}	<i>Brachyramphus marmoratus</i>	CH T
Western snowy plover (coastal) ^{3/}	<i>Charadrius alexandrinus nivosus</i>	CH T
Bald eagle ^{4/}	<i>Haliaeetus leucocephalus</i>	T
Brown pelican	<i>Pelecanus occidentalis</i>	E
Northern spotted owl ^{5/}	<i>Strix occidentalis caurina</i>	CH T

Fish

Coho salmon (Oregon Coast) ^{6/}	<i>Oncorhynchus kisutch</i>	**T
--	-----------------------------	-----

Plants

Western lily	<i>Lilium occidentale</i>	E
--------------	---------------------------	---

PROPOSED SPECIES

None

CANDIDATE SPECIESMammals

Fisher ^{7/}	<i>Martes pennanti</i>	
----------------------	------------------------	--

Fish

Steelhead (Oregon Coast) ^{8/}	<i>Oncorhynchus mykiss</i>	**CF
--	----------------------------	------

SPECIES OF CONCERNMammals

Pallid bat	<i>Antrozous pallidus pacificus</i>
White-footed vole	<i>Arborimus albipes</i>
Red tree vole	<i>Arborimus longicaudus</i>
Pacific western big-eared bat	<i>Corynorhinus townsendii townsendii</i>
Silver-haired bat	<i>Lasionycteris noctivagans</i>
Long-eared myotis (bat)	<i>Myotis evotis</i>
Fringed myotis (bat)	<i>Myotis thysanodes</i>
Long-legged myotis (bat)	<i>Myotis volans</i>
Yuma myotis (bat)	<i>Myotis yumanensis</i>

Birds

Northern goshawk	<i>Accipiter gentilis</i>
Band-tailed pigeon	<i>Columba fasciata</i>
Olive-sided flycatcher	<i>Contopus cooperi borealis</i>
Yellow-breasted chat	<i>Icteria virens</i>
Acorn woodpecker	<i>Melanerpes formicivorus</i>

Lewis' woodpecker
Mountain quail
Oregon vesper sparrow
Purple martin

Melanerpes lewis
Oreortyx pictus
Pooecetes gramineus affinis
Progne subis

Amphibians and Reptiles

Tailed frog
Northwestern pond turtle
Del Norte salamander
Northern red-legged frog
Foothill yellow-legged frog
Southern torrent salamander

Ascaphus truei
Emys marmorata marmorata
Plethodon elongatus
Rana aurora aurora
Rana boylei
Rhyacotriton variegatus

Fish

Green sturgeon
River lamprey
Pacific lamprey
Coastal cutthroat trout (Oregon Coast)
Millicoma dace

Acipenser medirostris
Lampetra ayresi
Lampetra tridentata
Oncorhynchus clarki clarki
Rhinichthys cataractae ssp.

Invertebrates

California floater (mussel)

Anodonta californiensis

Plants

Pink sand verbena
Bensonia
Pt. Reyes bird's-beak
Moss
Silvery phacelia
Coast checker bloom
Leach's brodiaea

Abronia umbellata ssp. breviflora
Bensoniella oregana
Cordylanthus maritimus ssp. palustris
Limbella fryei
Phacelia argentea
Sidalcea malvaeflora ssp. patula
Triteleia hendersonii var. leachiae

(E) - Listed Endangered

(T) - Listed Threatened

(CH) - Critical Habitat has been designated for this species

(PE) - Proposed Endangered

(PT) - Proposed Threatened

(PCH) - Critical Habitat has been proposed for this species

(S) - Suspected

(D) - Documented

Species of Concern - Taxa whose conservation status is of concern to the Service (many previously known as Category 2 candidates), but for which further information is still needed.

(CF) - Candidate: National Marine Fisheries Service designation for any species being considered by the Secretary for listing for endangered or threatened species, but not yet the subject of a proposed rule.

** Consultation with National Marine Fisheries Service may be required.

^{1/} U. S. Department of Interior, Fish and Wildlife Service, October 31, 2000, Endangered and Threatened Wildlife and Plants, 50 CFR 17.11 and 17.12

^{2/} Federal Register Vol. 57, No. 45328, October 01, 1992, Final Rule - Marbled Murrelet

^{3/} Federal Register Vol. 64, No. 234, December 7, 1999, Final Rule-Critical Habitat for the Western Snowy Plover

^{4/} Federal Register Vol. 60, No. 133, July 12, 1995 - Final Rule - Bald Eagle

^{5/} Federal Register Vol. 57, No. 10, January 15, 1992, Final Rule-Critical Habitat for the Northern Spotted Owl

^{6/} Federal Register Vol. 63, No. 153, August 10, 1998, Final Rule-Oregon Coast Coho Salmon

^{7/} Federal Register Vol. 69, No.68, April 8, 2004, 12-Month Finding for a Petition to List the West Coast Distinct Population Segment of the Fisher

^{8/} Federal Register Vol. 63, No. 53, March 19, 1998, Final Rule-West Coast Steelhead