Study Area Roadway Inventory Analysis
and
Project Roadway Management Plan

Klamath Hydroelectric Project
(FERC Project No. 2082)

Submitted to:

PacifiCorp
Portland, OR

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EXECUTIVE SUMMARY

PacifiCorp, a U.S. Division of Scottish Power (PacifiCorp), is the operator of the Klamath Hydroelectric Project, Federal Energy Regulatory Commission (FERC) No. 2082 (Project), licensed by the FERC in 1954. This report consists of two components – a Study Area Roadway Inventory Analysis (Inventory Analysis) and a Project Roadway Management Plan (Management Plan) – that were developed to respond to stakeholder requests that emerged during the relicensing process. The Inventory Analysis provides an overall inventory and graphic summary of study area roads and associated transportation-related structures (Appendix A). The Management Plan presents a proposed program that would be implemented by PacifiCorp during the term of the new license for the management of Project-related transportation facilities within the proposed FERC Project boundary.

The Inventory Analysis is intended to describe all Project transportation-related activities associated with the existing FERC Project boundary including Link River, Lake Ewauna, and Keno Reservoir (Appendix A), while the Management Plan portion of this document is specific to roads and transportation-related activities within the proposed FERC Project boundary.

The Inventory Analysis and Management Plan were completed in two phases. Phase I includes a GIS-based inventory of roads and other transportation-related structures in the study area and an Inventory Analysis map set (Appendix A). Phase II consists of a management framework to guide transportation-related decisions throughout the anticipated term of the new license and includes management activities, such as road and bridge management, monitoring and resource protection measures, and cost sharing opportunities.

In total, there are approximately 323 miles of roads in the broader study area, of which about 16 percent are within the existing FERC Project boundary and approximately 13 percent are within the proposed FERC Project boundary. Within the existing FERC Project boundary, PacifiCorp is solely responsible for 38 percent of roads and jointly responsible for approximately 13 percent of roads. Within the proposed FERC Project area, PacifiCorp is solely responsible for approximately 54 percent of roads and jointly responsible for an additional 18 percent of roads.

PacifiCorp is the primary entity responsible for the continued management and maintenance of Project-related roads and other transportation-related facilities within the proposed FERC Project boundary. Additionally, PacifiCorp shares management and maintenance responsibilities of jointly-maintained Project-related roads and other transportation related facilities both within and directly adjacent to the proposed FERC Project boundary. In total, PacifiCorp is either solely or jointly responsible for approximately 25.5 miles of road within the existing FERC Project boundary and nearly 30.1 miles of road within the proposed FERC Project boundary.

To help facilitate long-term coordination and budgeting between PacifiCorp and other transportation-related management entities (i.e., those individuals and agencies jointly

responsible for maintenance of Project-area roads) as well as internally within the PacifiCorp organization, a rolling 5-Year Transportation Action Plan (TAP) will be prepared annually. The annual TAP preparation will help to guide anticipated activities for normal or recurrent general maintenance, as well as major maintenance.

The TAP will summarize all Project-related road, bridge, and major culvert maintenance or capital improvements performed during the previous calendar year and will address work planned during both the current calendar year and the subsequent 3 years. The TAP will also provide a thorough accounting of all costs incurred during the previous calendar year for each action, as documented through a Project Work Plan (PWP), including joint costs when applicable. Variances will be applied or deducted from the upcoming work and associated costs to each management entity (e.g., PacifiCorp, BLM, etc.) in the next calendar year as appropriate.

CONTENTS

TABLES

APPENDICES

ACRONYMS AND ABBREVITATIONS

BLM	USDI Bureau of Land Management
BMR	BLM-Maintained Recreation Road
CDFG	California Department of Fish and Game
DCM	Road Recommended for Decommissioning
EIS	Environmental Impact Statement
ESA	Endangered Species Act
FERC	Federal Energy Regulatory Commission
FLA	final license application
GIS	geographic information system
GPS	global positioning system
G/ROW	Grant of Right-of-Way
HPMP	Historic Properties Management Plan
Inventory Analysis	Study Area Roadway Inventory Analysis
JMH	Jointly-Maintained Hydro Road
JMR	Jointly-Maintained Recreation Road
Management Plan	Project Roadway Management Plan
NBIS	National Bridge Inspection Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NPT	Non-Project Transmission Line Road
ODFW	Oregon Department of Fish and Wildlife
ODOT	Oregon Department of Transportation
OHV	off highway vehicle
O&M	operations and maintenance
PMH	Project-Maintained Hydro Road
PMR	Project-Maintained Recreation Road
PR	Private Road
Project	Klamath Hydroelectric Project
PTL	Project-Maintained Transmission Line Road
PUB	Public Road
PWP	Project Work Plan
RMP	Resource Management Plan
RRMP	Recreation Resource Management Plan
TAP	Transportation Action Plan
TRL	Non-Motorized Trail
UNM	Unnamed, Unidentified, or Non-Determined Road
WOTMP	Western Oregon Transportation Management Plan

1.0 INTRODUCTION

PacifiCorp, a U.S. Division of Scottish Power (PacifiCorp), is the operator of the Klamath Hydroelectric Project, Federal Energy Regulatory Commission (FERC) No. 2082 (Project), licensed by the FERC in 1954. This report was prepared to address the transportation network that is related to the Project, including the long-term management of roads over the term of the new license.

This report consists of two components—a Study Area Roadway Inventory Analysis (Inventory Analysis) and a Project Roadway Management Plan (Management Plan)—that were developed to respond to stakeholder requests that emerged during the relicensing process. The Inventory Analysis component (Section 2.0) provides an overall inventory and graphic summary of study area roads and associated transportation-related structures within the existing FERC Project boundary (Appendix A), as well as a summary of geographic information system (GIS) data in narrative and tabular forms. The Management Plan component (Sections 3.0 and 4.0) presents a proposed program that would be implemented by PacifiCorp during the term of the new license for the management of Project-related transportation facilities within the proposed FERC Project boundary.

1.1 PURPOSE AND INTENT

The purpose and intent of the Inventory Analysis portion of this document is intended to provide an inventory and overview of roads and other transportation-related structures both within and in the vicinity of the existing Project area. The Management Plan portion of this document is intended to address Project transportation-related activities on lands within the proposed FERC Project boundary only. While the Inventory Analysis study area included all roads and other transportation-related structures within a broader area, which includes Link River, Lake Ewauna, and Keno Reservoir, the smaller Management Plan area is limited to only those roads and transportation-related activities within the proposed FERC Project boundary (Appendix A), where the licensee has authority. The two separate Inventory Analysis and Management Plan areas are further described in more detail in Section 1.2—Study Area.

The purpose and intent of the Inventory Analysis is to:

- Identify and map the roads, bridges, major and minor culverts, and other transportation-related structures within the broader overall study area, as well as those roads and other transportation-related structures within the existing FERC Project boundary; and

- Provide a comparison of roads and other transportation-related structures within the existing and proposed FERC Project boundaries.

The purpose and intent of the Management Plan is to:

- Identify roads and bridges necessary for the continued operation of the Project through the term of the new FERC license (assumed to be 30 to 50 years for planning purposes);

- Identify transportation-related operation and maintenance (O&M) activities required for the continued operation of the Project that occur within the proposed FERC Project boundary;

- Identify use and cost sharing agreements for Project and Project-related road and bridge O&M by PacifiCorp and other agencies/stakeholders responsible for roads and bridges within the proposed FERC Project boundary;

- Provide for continued protection of natural and cultural resources along Project roadway corridors;

- Identify appropriate standards for the maintenance of Project-related roads and bridges; and

- Identify relevant policies and prescriptions identified in county, state, and federal transportation management plans, if any.

This Inventory Analysis and Management Plan is a culmination of a process that began with an inventory of all roads and bridges within the Project vicinity, a review of their condition, an assignment of party use and needs related to the Project, and a classification of road levels (1-5). Some of these tasks were performed by PacifiCorp beginning in 2001. Roads, bridges, major culverts (i.e., culverts with an opening 35 square feet or larger), and barriers were mapped and summarized by PacifiCorp using geographic information system (GIS)-based technology. This information was summarized in the Land Use, Visual, and Aesthetic Resources Technical Report, a component of PacifiCorp's Final License Application (FLA) (PacifiCorp 2004a). Following the filing of the 2004 FLA, a more in-depth roads inventory analysis and validation process was initiated. Subsequently, this Inventory Analysis and Management Plan was prepared by PacifiCorp and EDAW, Inc. Upon completion, this Inventory Analysis and Management Plan will be filed with the FERC.

1.2 STUDY AREA

Two different areas were used to prepare the Inventory Analysis and Management Plan: (1) a broader overall study area, and (2) a smaller proposed Project-specific Management Plan area. The broader overall study area included all roads and transportation-related structures within a slightly modified version of the Project terrestrial resources relicensing study area boundary (Appendix A), as described in the FLA (Exhibit E, Section 5.2, PacifiCorp 2004a) which includes: a 0.25-mile buffer around all Project reservoirs, facilities, the Spring Creek Canal and access road, the southern access road to

Copco 1 dam, and the access road to the Copco 2 water supply; the Klamath River from Link River Dam to 0.5 miles downstream of Iron Gate Fish Hatchery; the area between the canyon rims from J.C. Boyle Dam to the eastern end of Copco Reservoir; and all PacifiCorp-owned land adjacent to the Project. Information regarding the broader overall study area was collected and graphically displayed in Appendix A to provide transportation-related context, including Project facility access and connectivity. The Management Plan has a more limited area and only includes those roads and transportation-related structures within the proposed FERC Project boundary, as described in the FLA (Exhibit A, Section A2.2), where FERC and the licensee would have jurisdiction. This area also includes a ¼ mile buffer around the Spring Creek Canal and access road, the southern access road to Copco 1 dam, and the access road to the Copco 2 water supply. Each of these areas, as well as the existing FERC Project boundary, is depicted on the Roads Inventory Analysis GIS map set (Appendix A).

While a preliminary 2001 GIS roads data set included roads that are over 5 miles from the current FERC Project boundary, only roads and transportation-related structures located within the study area were included in this analysis and plan and are graphically displayed in Appendix A. In the Inventory Analysis portion of this document, only those roads and transportation-related structures located within either the existing or proposed FERC Project boundary were generally described in more detail. Additionally, only roads and transportation-related structures located within the proposed FERC Project boundary were included in the Management Plan portion of this document. For purposes of this analysis, Management Plan area and proposed FERC Project boundary are used synonymously.

1.3 METHODS

The Inventory Analysis and Management Plan was completed in two phases. Phase I included a GIS-based inventory of roads and other transportation-related structures in the study area. Phase II consisted of the development of a management framework to guide transportation-related decisions throughout the anticipated term of the new license in the Management Plan area. Each of these phases is described in more detail below.

1.3.1 Phase I—Develop Inventory Analysis

The Inventory Analysis consisted of three primary tasks: (1) review and enhance existing roads GIS data; (2) assign road classifications and U.S. Bureau of Land Management (BLM) road maintenance levels; and (3) conduct roadway dynamic segmentation. These tasks are further defined below.

Review and Enhance GIS Data for Existing Roads

During 2001 and 2002, PacifiCorp's Real Estate Management Department completed an initial GIS roads inventory. Several preliminary road GIS datasets, including data such as roads, bridges, culverts, signs, and gates, were provided to EDAW for use in the Inventory Analysis. These preliminary GIS datasets were reviewed, combined, and enhanced where needed. Specific improvements and enhancements that were made to

the preliminary datasets include correcting data errors (overshoots, undershoot, global positioning system [GPS] errors, and quality-checking data on imagery), Ortho-digitizing missing features, labeling roads and other landscape features (Project facilities, recreation areas, cities, etc.), and updating tabular data fields. Additionally, missing data needs were also identified during this process.

A field assessment of roads and other transportation-related structures in the study area was conducted as part of the Inventory Analysis. The field assessment collected missing data, including road segments, bridges, culverts, gates, and other transportation-related structures, to enhance the GIS datasets. Road classifications and BLM road maintenance levels were also assigned to all roads during the field investigation (see description below). Additionally, PacifiCorp employees responsible for routine transportation management were also consulted during this phase of the development of the Inventory Analysis and Management Plan.

The completed Inventory Analysis map atlas is presented graphically in Appendix A. A more detailed description of map atlas development process, as well as guidance for reading the map atlas annotation, is also provided in Appendix A.

Road Classifications and Road Maintenance Levels

In order to graphically represent existing road and other transportation-related structure management responsibilities, a road classification was assigned to all roads within the broader study area. These same road classifications are used to describe on-going and future management responsibilities for roads within the proposed FERC Project boundary in the Management Plan. The road classifications used in the Inventory Analysis and Management Plan are described in Table 1.3-1 and displayed on the Roads Inventory Analysis map set (Appendix A).

Table 1.3-1. Inventory Analysis and Management Plan Road Classifications.

Road Classification	Description
Project Maintenance	
PMH	Project-Maintained Hydro Road
PMR	Project-Maintained Recreation Road
PTL	Project-Maintained Transmission Line Road
Joint Maintenance	
JMH	Jointly-Maintained Hydro Road
JMR	Jointly-Maintained Recreation Road
Other	
PR	Private Road
PUB	Public Road
BMR	BLM-Maintained Recreation Road
OHV	Off-Highway Vehicle Trail/Road
TRL	Non-Motorized Trail
NPT	Non-Project Transmission Line Road
DCM	Road Recommended for Decommissioning
UNM	Unnamed, Unidentified, or Non-Determined Road/Trail

Source: EDAW, Inc.

Additionally, during the field investigation, all roads within the Management Plan area (i.e., within the proposed FERC Project boundary in the FLA) were also assigned a road maintenance level using a BLM road maintenance system since PacifiCorp does not have such a system. Per BLM Manual 9113, road maintenance levels are categorized on a scale of 1 to 5, with one being the least maintenance intensive and 5 being the most maintenance intensive (BLM 1985). These progressive maintenance levels also provide varying levels of resource protection and vehicle access. Furthermore, these road maintenance levels provide a good model for other entities responsible for ongoing road management and maintenance in the study area. These road maintenance levels are described in Table 1.3-2 and are an indication of existing conditions, as well as on-going future road management levels. Each road segment within the proposed FERC Project boundary was categorized according to these five maintenance levels.

Table 1.3-2. Road Maintenance Levels.

Road Maintenance Level	Description	Minimum Maintenance Standards
1	Roads were minimum maintenance is required to protect adjacent lands and resource values. These roads are no longer needed and are closed to traffic; the objective is to remove these roads from the transportation system. Level 1 roads may be of any width, surface type, or construction standard, but are closed to vehicular traffic.	Emphasis is given to maintaining drainage and runoff patterns as needed to protect adjacent lands. Grading, brushing, or slide removal is not performed unless roadbed drainage is being adversely affected, causing erosion. Closure and traffic restrictive devices are maintained.
2	Roads where the management objectives require the road to be opened for limited administrative traffic. Typically, these roads are single lane and passable by high clearance vehicles.	Drainage structures are to be maintained as needed. Grading is conducted as necessary to correct drainage problems. Brushing is conducted as needed to allow administrative access. Slides may be left in place provided they do not adversely affect drainage.
3	Roads where management objectives require the road to be open seasonally or year-round for commercial, recreation, or high volume administrative access. Typically, these roads are single or double lane and natural or aggregate surfaced, but may include low use bituminous surfaced roads. These roads have a defined cross section with drainage structures. These roads may be negotiated by passenger cars traveling at prudent speeds. User comfort and convenience are not considered a high priority.	Drainage structures are to be maintained as needed. Grading is conducted to provide a reasonable level of riding comfort at prudent speeds for the road conditions. Brushing is conducted as needed to improve sight distance. Slides adversely affecting drainage receive high priority for removal, otherwise they will be removed on a scheduled basis.
4	Roads where management objectives require the road to be open all year and to connect major features to County, State, or Federal roads. Typically, these roads are single or double lane, aggregate, bituminous surface, and/or receive dust	The entire roadway is maintained at least annually, although a preventative maintenance program may be established. Problems are repaired as discovered. These roads may be closed or have limited access due to snow conditions.

Table 1.3-2. Road Maintenance Levels.

Road Maintenance Level	Description	Minimum Maintenance Standards
	abatement treatments, with a higher volume of commercial and recreational traffic than administrative traffic.	
5	Roads where management objectives require the road to be open all year and are the highest traffic volume roads of the transportation system. Typically, these roads are double lane and paved.	The entire roadway is maintained at least annually, although a preventative maintenance program may be established. Problems are repaired as discovered. These roads may be closed or have limited access due to snow conditions.

Source: BLM 1985

Roadway Dynamic Segmentation

When all roadway inventory data was collected, the GIS roadway dataset was further enhanced by dynamically segmenting Project roads into equal lengths to provide for unique identification of roadway segments and to help guide future roads-related management actions. All roads within the proposed FERC Project boundary were divided into tenths of a mile to facilitate the identification of smaller sections of a road (through the use of a vehicle's odometer) that may require maintenance or other roadway servicing. The road classification and BLM road maintenance level associated with each road segment was also coded into the GIS dataset as tabular data. A more detailed description of this process, as well as guidance for reading the map atlas annotation is provided in Appendix A.

1.3.2 Phase II—Develop Management Plan

The overall objective of the Management Plan phase is to provide PacifiCorp with a program framework that can be used to manage transportation facilities in the proposed FERC Project boundary. This plan includes items such as road and bridge management activities, monitoring and resource protection activities, and cost sharing, as well as providing informational tables summarizing data from the Inventory Analysis.

1.4 ADOPTED AGENCY ROADWAY PLANS, POLICIES, AND REQUIREMENTS

The Management Plan provides direction and guidance for managing roads and other transportation-related structures in the Management Plan area (i.e., within the proposed FERC Project boundary). However, other county, state, and/or federal transportation management plans may also be applicable to roads within the proposed FERC Project boundary or to other non-Project-related roads within the study area. References are made to these plans for specific management direction, as appropriate. Each identified transportation management plan that may influence road maintenance within the proposed FERC Project boundary is described below in more detail. Furthermore, in addition to the plans described below, all PacifiCorp-managed roads within the proposed FERC Project boundary that are available for public use should meet all applicable

county, state, or federal road and other transportation-related structure standards, such as bridge inspections.

Oregon Department of Transportation Routine Road Maintenance Water Quality and Habitat Guide Best Management Practices

The Oregon Department of Transportation (ODOT) Routine Road Maintenance Water Quality and Habitat Guide Best Management Practices (ODOT 1999) describes stream and fish impact minimization and avoidance measures for routine road maintenance activities. The management and maintenance activities detailed in the guide are specific for roads managed by ODOT; however, other transportation management authorities or road owners are encouraged to also implement these activities. In the case of other transportation management authorities, it is the landowner's responsibility to install and maintain required water quality and fish passage structures, though the Oregon Department of Fish and Wildlife (ODFW) is available to provide assistance (by reviewing designs for potential fish passage structures). While PacifiCorp is not specifically required to abide by the road maintenance practices described in the Water Quality and Habitat Guide, and does not plan to adopt such standards, these "best maintenance practices" are good guidelines for minimizing environmental impacts potentially resulting from road maintenance activities. Specific practices that may be considered for routine maintenance of PacifiCorp-managed roads in the proposed FERC Project boundary are included in Appendix B.

BLM Western Oregon Transportation Management Plan

The BLM's Western Oregon Transportation Management Plan (WOTMP) provides "vision, goals, objectives, and guidelines for managing the BLM's road and trail transportation system throughout its Western Oregon Districts," including the Klamath Falls Resource Area (BLM 2002). The WOTMP provides a framework for the consistent management of BLM roads in order to meet the needs of users, while ensuring the protection of sensitive environmental resources. While most provisions of the WOTMP are specific to BLM-managed roads and trails, it does build on BLM Manual 9113 maintenance levels described in Section 1.3.1. Table 1.4-1 describes the Western Oregon guidance for each maintenance level.

Table 1.4-1. Western Oregon Guidance for BLM Road Maintenance Levels.

Road Maintenance Level	Western Oregon Guidance
1	The objective of this maintenance level should also include road segments which are closed to vehicles on a long-term basis, but that may be used again in the future. This will facilitate assigning decommissioned roads at this level.
2	Traffic is generally administrative with some minor specialized use, or moderate seasonal use. These are typically low standard, low volume, single lane, natural and aggregate surfaced, and are functionally classified as a resource road.
3	These road segments serve as an artery to other road networks and are functionally classified as a local road.
4	These roads serve as arteries that intersect County, State and Federal roads and connect with major recreation and administrative facilities. These roads are functionally classified as collector roads.
5	Road segments assigned this maintenance level are double lane, paved roads that are open year-round. These roads intersect County, State and Federal roads and are functionally classified as a collector or arterial road.

Source: BLM 2002

BLM Draft Upper Klamath River Management Plan Environmental Impact Statement and Resource Management Plan Amendments

As of October 2004, the BLM is in the process of revising the resource management plan for their lands along the Upper Klamath River in Oregon and California. The Draft Upper Klamath River Management Plan Environmental Impact Statement (EIS) and Resource Management Plan (RMP) Amendments "outlines management options and environmental consequences for managing lands administered" by the BLM and "also proposes classification and rules affecting all non-federal lands within the designated Oregon State Scenic Waterway" (BLM 2003). The BLM's EIS/RMP will amend the existing resource management plans for the Redding Field Office, California, and the Klamath Falls Resource Area, Oregon.

There are numerous roads on BLM-managed lands within the Upper Klamath River canyon that are currently available for public use, some of which are user-defined. However, off highway vehicle (OHV)-use on several of these roads has resulted in erosion and sedimentation, as well as damage to sensitive terrestrial and cultural resources. While the BLM has already attempted to close heavily impacted roads, the Draft Upper Klamath River Management Plan EIS and RMP evaluates and addresses on-going OHV-related concerns and proposes management alternatives related to the continued provision of OHV opportunities and the protection of sensitive resources.

The Draft Upper Klamath River EIS and RMP identifies all roads within the BLM's planning area (J.C. Boyle Dam downstream to Copco Reservoir) and proposes potential road management actions for each road segment within the planning area regardless of road ownership. While the majority of roads within the BLM's planning area are BLM-managed roads, PacifiCorp is currently responsible for nearly 29 miles of road in this planning area. The mileage of roads PacifiCorp would be responsible for under each alternative in the BLM's EIS/RMP ranges from 24.5 miles in Alternative 1 to 29.8 miles

in Alternative 4 (BLM 2003). PacifiCorp would be responsible for a range of road management responsibilities, according to the BLM's Draft EIS/RMP, including decommissioning to continuous roadway improvements depending on alternative. However, not all PacifiCorp-owned roads within the BLM's planning area are within the proposed FERC Project boundary in the FLA. PacifiCorp's responsibilities on PacifiCorp-owned roads within the proposed FERC Project boundary will require further resolution when the EIS/RMP is finalized. Appendix C describes PacifiCorp's road management responsibilities by the BLM's RMP alternatives.

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2.0 STUDY AREA ROADWAY INVENTORY ANALYSIS

In total, there are approximately 323 miles of roads in the study area; about 16 percent are within the existing FERC Project boundary including the Link River, Lake Ewauna, and Keno Reservoir, and approximately 13 percent are within the proposed FERC Project boundary. Table 2.0-1 displays the mileage and associated percentage of roads for each road classification in the broader study area, as well as the Inventory Analysis and Management Plan study areas. Within the existing FERC Project boundary, PacifiCorp is solely responsible for approximately 38 percent (PMH, PMR, and PTL road classifications combined) of the roads, and jointly responsible for approximately 13 percent (JMH and JMR road classifications combined) of the roads. The remaining 50 percent of roads within the existing FERC Project boundary fall into other non-Project road classifications. Within the Management Plan area, PacifiCorp is solely responsible for approximately 54 percent (PMH, PMR, and PTL road classifications combined) of the roads, and jointly responsible for an additional 18 percent (JMH and JMR road classifications combined) of the roads. The remaining 27 percent of Management Plan area roads fall into other non-Project road classifications. In total, PacifiCorp is either solely or jointly responsible for approximately 25.5 miles of road within the existing FERC Project boundary, and nearly 30.1 miles of road within the Management Plan area.

Table 2.0-2 displays the number of other transportation-related facilities in both the existing and proposed FERC Project boundaries. Several entities, including PacifiCorp, are responsible for the management and maintenance for these other transportation-related facilities. Management and maintenance of these transportation-related facilities that are located within the existing FERC Project boundary are discussed in Sections 2.1 through 2.8.

Additional detail regarding Management Plan study roads, including management responsibilities and cost-sharing, is presented in tabular summaries in Appendices D and E, while additional detail regarding bridges and culverts in the Management Plan area is presented in tabular form in Appendix I. Roads, bridges, culverts, and other features within the existing and proposed FERC Project boundaries are described in more detail below, by resource area, with special emphasis placed on those roads and other transportation-related structures that PacifiCorp is responsible for managing.

For purposes of this analysis, the study area was divided into eight resource areas: (1) Link River area; (2) Lake Ewauna/Keno Reservoir/Keno Reach area; (3) J.C. Boyle Reservoir area; (4) J.C. Boyle Reservoir to Stateline area; (5) Stateline to Copco Reservoir area; (6) Copco Reservoir area; (7) Fall Creek/Spring Creek area; and (8) Iron Gate Reservoir area (Appendix A). A summary of information regarding roads and other transportation-related structures within the existing FERC Project boundary in each of these resource areas is provided in this section. Appendix A displays this information graphically.

Table 2.0-1. Road Mileage by Road Classification within the Study Area, Existing FERC Project Boundary, and Management Plan Area.

	Study Area		Existing FERC Project Boundary		Management Plan Area[1]	
Road Classification[2]	**Mileage**	**Precent[3]**	**Mileage**	**Precent[3]**	**Mileage**	**Precent[3]**
Project Maintenance						
PMH	23.99	7%	14.21	28%	17.90	43%
PMR	6.31	2%	4.09	8%	3.85	9%
PTL	2.76	1%	0.72	1%	0.67	2%
Subtotal	**33.06**	**10%**	**19.02**	**38%**	**22.42**	**54%**
Joint Maintenance						
JMH	9.67	3%	5.88	12%	7.12	17%
JMR	1.36	<1%	0.56	1%	0.56	1%
Subtotal	**11.03**	**4%**	**6.44**	**13%**	**7.68**	**18%**
Other						
PR	137.79	43%	4.96	10%	5.97	14%
PUB	85.47	26%	10.25	20%	3.07	7%
OHV	35.10	11%	6.26	12%	0.76	2%
NPT	13.43	4%	0.21	<1%	0.73	2%
BMR	4.35	1%	3.08	6%	0.08	<1%
TRL	1.26	<1%	0.14	<1%	0.33	1%
DCM	1.10	<1%	0.32	1%	0.24	1%
UNM	0.40	<1%	-	-	-	-
Subtotal	**278.90**	**86%**	**25.22**	**50%**	**11.18**	**27%**
Total	**322.99**	**-**	**50.68**	**-**	**41.27**	**-**

[1] *The Management Plan Area corresponds to the proposed FERC Project boundary.*
[2] *Road classification definitions are provided in Table 1.3-1.*
[3] *Percentages may not total to 100 percent due to rounding.*
Source: EDAW, Inc.

Table 2.0-2. Number of Other Transportation-Related Facilities in the Study Area, Existing FERC Project Boundary, and Management Plan Area.

Transportation-Related Feature	Study Area	Existing FERC Project Boundary	Management Plan Area
Bridges	22	13	11
Culverts[1]	321	98	62
Gates	107	24	33
Closed Roads	37	11	4
Road Signs	53	22	26
Fords	26	2	5

[1] *There are no major culverts (35 sq. ft. or larger) in the study area.*
Source: EDAW, Inc.

2.1 LINK RIVER AREA

The Link River area includes all roads and other transportation-related structures within the study area upstream of Lake Ewauna to the northern end of the existing FERC Project boundary (Appendix A, Tile 33). Only roads and other transportation-related structures located within either the existing or proposed FERC Project boundary are discussed below.

2.1.1 Roads and Classifications

Within the Link River area, there is a total of 2.23 miles of road within the existing FERC Project boundary. Currently, PacifiCorp is solely responsible for the management and maintenance of approximately 82 percent of these roads (PMH road classification). The remaining 18 percent of roads within this resource area are classified as PR and PUB. Table 2.1-1 displays the mileage (and associated percentage) of roads for each classification in this area. The Link River area is not within the proposed FERC Project boundary in the FLA.

Table 2.1-1. Road Mileage by Road Classification within the Link River Area.

	Existing FERC Project Boundary		Management Plan Area[1]	
Road Classification[2]	**Mileage**	**Percentage[3]**	**Mileage**	**Percentage[3]**
Project Maintenance				
PMH	1.83	82%	-	-
Subtotal	**1.83**	**82%**	**-**	**-**
Other				
PR	0.32	14%	-	-
PUB	0.08	4%	-	-
Subtotal	**0.40**		**-**	**-**
Total	**2.23**	**-**	**-**	**-**

[1] *The Management Plan Area corresponds to the proposed FERC Project boundary.*
[2] *Road classification definitions are provided in Table 1.3-1.*
[3] *Percentages may not total to 100 percent due to rounding.*
Source: EDAW, Inc.

2.1.2 Bridges and Major Culverts

Within the existing FERC Project boundary, there are three bridges in the Link River area (Table 2.1-2). All three of these bridges are located on roads classified as PMH and are currently maintained by PacifiCorp. There are no major culverts in this resource area. The Link River area is not within the proposed FERC Project boundary (Management Plan area).

Table 2.1-2. Other Transportation-Related Facilities in the Link River Area.

	Existing FERC Project Boundary		Management Plan Area[1]	
Road Feature	**Number**	**Project[2]**	**Number**	**Project[2]**
Bridges	3	3	-	-
Culverts	9	9	-	-
Gates	3	3	-	-
Closed Roads	0	0	-	-
Fords	0	0	-	-
Signs	1	1	-	-

[1] *The Management Plan Area corresponds to the proposed FERC Project boundary.*
[2] *Indicates the number of transportation-related facilities under with Project responsibilities (i.e., on roads classified as PMH, PMR, PTL, JMH, and JMR).*
Source: EDAW, Inc.

2.1.3 Minor Culverts

There are currently nine minor culverts in the Link River area within the existing FERC Project boundary (Table 2.1-2). All nine culverts are located on roads classified as PMH and are currently maintained by PacifiCorp. The Link River area is not within the proposed FERC Project boundary.

2.1.4 Roadway Barriers and Gates

There are three gates located within the existing FERC Project boundary in the Link River area (Table 2.1-2). The three gates in this area are located on roads classified as PMH and PacifiCorp is currently responsible for their maintenance. This resource area is not included in the proposed FERC Project boundary.

2.1.5 Other Roadway Features

There is one road sign and no fords in this resource area within the existing FERC Project boundary (Table 2.1-2). The sign in this area is currently maintained by PacifiCorp. The Link River area is not within the proposed FERC Project boundary.

2.1.6 Roads to be Decommissioned, Abandoned, or Converted

There are no roads within either the existing or proposed FERC Project boundary in the Link River area that are recommended for decommissioning (Table 2.1-1).

2.2 LAKE EWAUNA/KENO RESERVOIR/KENO REACH AREA

The Lake Ewauna/Keno Reservoir/Keno Reach area includes all roads and other transportation-related structures within the broader study area downstream of Link River to the eastern end of J.C. Boyle Reservoir (Appendix A, Tiles 22-33). Only roads and other transportation-related structures located within either the existing or proposed FERC Project boundary are discussed below.

2.2.1 Roads and Classifications

Within the Lake Ewauna/Keno Reservoir/Keno Reach area, there is a total of 6.88 miles of road within the existing FERC Project boundary. Currently, PacifiCorp is solely responsible for the management and maintenance of approximately 35 percent of these roads (PMR and PMH road classifications combined). The remaining approximately 66 percent of roads within this resource area are classified as OHV, PUB, PR, TRL, and NPT. Table 2.2-1 displays the mileage (and associated percentage) of roads for each classification in this area. The Lake Ewauna/Keno Reservoir/Keno Reach area is not within the proposed FERC Project boundary.

Table 2.2-1. Road Mileage by Road Classification within the Lake Ewauna/Keno Reservoir/Keno Reach Area.

Road Classification[2]	Existing FERC Project Boundary		Management Plan Area[1]	
	Mileage	Percentage[3]	Mileage	Percentage[3]
Project Maintenance				
PMR	2.15	32%	-	-
PMH	0.19	3%	-	-
Subtotal	**2.34**	**35%**		
Other				
OHV	2.62	38%	-	-
PUB	1.04	15%	-	-
PR	0.68	10%	-	-
TRL	0.14	2%	-	-
NPT	0.06	<1%	-	-
Subtotal	**4.54**	**66%**	**-**	**-**
Total	**6.88**	**-**	**-**	**-**

[1] *The Management Plan Area corresponds to the proposed FERC Project boundary.*
[2] *Road classification definitions are provided in Table 1.3-1.*
[3] *Percentages may not total to 100 percent due to rounding.*
Source: EDAW, Inc.

2.2.2 Bridges and Major Culverts

Within the existing FERC Project boundary, there are three bridges in the Lake Ewauna/Keno Reservoir/Keno Reach area (Table 2.2-2). All three bridges in this area, however, are located on public roads (SR 140, SR 97, and SR 66) and PacifiCorp is not responsible for their maintenance. There are no major culverts in this resource area. The Lake Ewauna/Keno Reservoir/Keno Reach area is not within the proposed FERC Project boundary (Management Plan area).

Table 2.2-2. Other Transportation-Related Facilities in the Lake Ewauna/Keno Reservoir/Keno Reach Area.

Road Feature	Existing FERC Project Boundary		Management Plan Study Area[1]	
	Number	Project[2]	Number	Project[2]
Bridges	3	0	-	-
Culverts	22	3	-	-
Gates	0	0	-	-
Closed Roads	3	1	-	-
Fords	0	0	-	-
Signs	2	2	-	-

[1] *The Management Plan Area corresponds to the proposed FERC Project boundary.*
[2] *Indicates the number of transportation-related facilities with Project responsibilities (i.e., on roads classified as PMH, PMR, PTL, JMH, and JMR).*
Source: EDAW, Inc.

2.2.3 Minor Culverts

Currently, there are 22 culverts located in the Lake Ewauna/Keno Reservoir/Keno Reach area within the existing FERC Project boundary, and PacifiCorp is currently responsible

for maintenance on three of these culverts (Table 2.2-2). This resource area is not included in the proposed FERC Project boundary.

2.2.4 Roadway Barriers and Gates

Within the Lake Ewauna/Keno Reservoir/Keno Reach area, there are three closed roads, though no gates, in the existing FERC Project boundary (Table 2.2-2). Only one of these closed roads is currently maintained by PacifiCorp and is located within the Keno Recreation Area, prohibiting vehicular access below the Keno dam. The proposed FERC Project boundary does not include this resource area.

2.2.5 Other Roadway Features

Other roadway features in this resource area include 2 road signs within the existing FERC Project boundary (Table 2.2-2). Both of these signs are located within the Keno Recreation Area and are currently maintained by PacifiCorp. The Lake Ewauna/Keno Reservoir/Keno Reach area is not within the proposed FERC Project boundary.

2.2.6 Roads to be Decommissioned, Abandoned, or Converted

There are no roads within either the existing or proposed FERC Project boundary in the Lake Ewauna/Keno Reservoir/Keno Reach area that are recommended for decommissioning (Table 2.2-1).

2.3 J.C. BOYLE RESERVOIR AREA

The J.C. Boyle Reservoir area includes all roads and other transportation-related structures downstream of the mouth of the Keno Reach on the eastern end of J.C. Boyle Reservoir to the J.C. Boyle dam (Appendix A, Tiles 21 and 22). Only roads and other transportation-related structures located within either the existing or proposed FERC Project boundary are discussed below.

2.3.1 Project Roads and Classifications

Within the J.C. Boyle Reservoir area, there is a total of 5.92 miles of road within the existing FERC Project boundary. There are a total of 5.1 miles of road within the proposed FERC Project boundary in this resource area. Within the Management Plan area (i.e., proposed FERC Project boundary), PacifiCorp is solely responsible for the management and ongoing maintenance of approximately 35 percent of roads (PMH and PMR road classifications combined). Additionally, PacifiCorp shares management and maintenance responsibilities on about 11 percent of roads within the J.C. Boyle Reservoir area. The remaining 54 percent of roads within the proposed FERC Project boundary in this resource area are classified as PR, OHV, PUB, BMR, DCM, and NPT. Table 2.3-1 displays the mileage (and associated percentage) of roads for each road classification in both the existing and proposed FERC Project boundary. Road maintenance levels for each segment of roadway within the proposed FERC Project boundary in this resource

area that is either solely or jointly maintained by PacifiCorp are presented in Appendices D and E.

Table 2.3-1. Road Mileage by Road Classification within the J.C. Boyle Reservoir Area.

Road Classification[2]	Existing FERC Project Boundary		Management Plan Area[1]	
	Mileage	**Percentage[3]**		**Mileage**
Project Maintenance				
PMH	1.48	25%	1.52	30%
PMR	0.27	5%	0.27	5%
Subtotal	**1.75**	**30%**	**1.79**	**35%**
Joint Maintenance				
JMH	0.86	15%	0.55	11%
Subtotal	**0.86**	**15%**	**0.55**	**11%**
Other				
PR	2.02	34%	2.02	40%
OHV	0.49	8%	0.30	6%
PUB	0.32	5%	0.21	4%
BMR	0.24	4%	-	-
DCM	0.23	4%	0.22	4%
NPT	0.01	<1%	0.01	<1%
Subtotal	**3.31**	**56%**	**2.76**	**54%**
Total	**5.92**	**-**	**5.10**	**-**

[1] The Management Plan Area corresponds to the proposed FERC Project boundary.
[2] Road classification definitions are provided in Table 1.3-1.
[3] Percentages may not total to 100 percent due to rounding.
Source: EDAW, Inc.

2.3.2 Project Bridges and Major Culverts

Currently, there is one ODOT bridge located within the J.C Boyle Reservoir area within the existing FERC Project boundary (Table 2.3-2). This same bridge is also located within the proposed FERC Project boundary in this area; however, PacifiCorp is not responsible for its management and maintenance. There are no major culverts in this area.

Table 2.3-2. Other Transportation-Related Facilities in the J.C. Boyle Reservoir Area.

Road Feature	Existing FERC Project Boundary		Management Plan Study Area[1]	
	Number	**Project[2]**		**Number**
Bridges	1	0	1	0
Culverts	2	2	2	2
Gates	2	1	2	1
Closed Roads	0	0	0	0
Fords	0	0	0	0
Signs	1	1	1	1

[1] The Management Plan Area corresponds to the proposed FERC Project boundary.
[2] Indicates the number of transportation-related facilities with Project responsibilities (i.e., on roads classified as PMH, PMR, PTL, JMH, and JMR).
Source: EDAW, Inc.

The one bridge located in the J.C. Boyle Reservoir area is the SR 66 Bridge. As of October 2004, ODOT has initiated the replacement and realignment of this bridge and is working with PacifiCorp to help mitigate the loss of the existing boat launch at Pioneer Park (East).

2.3.3 Project Minor Culverts

There are two identified minor culverts within the both the existing and proposed FERC Project boundaries in the J.C. Boyle Reservoir area (Table 2.3-2). Both culverts are located on roads classified as PMH and PacifiCorp is responsible for their continued maintenance.

2.3.4 Project Roadway Barriers and Gates

Currently, there are two gates in the J.C. Boyle Reservoir area within the existing FERC Project boundary (Table 2.3-2). These same gates are also located within proposed FERC Project boundary. One gate is located adjacent to the existing Pioneer Park (East) and provides gated access to Sportsman's Park. The Klamath Sportsman's Park Association is responsible for maintenance of this gate. The other gate is located to the north of the J.C. Boyle dam and limits public access to the dam. PacifiCorp is responsible for maintaining this gate.

2.3.5 Other Project Roadway Features

One road sign is the only other identified roadway feature within both the existing and proposed FERC Project boundary in the J.C. Boyle Reservoir area. The sign is located on a segment of Topsy Grade Road classified as JMH and is located adjacent to the southeastern shoreline of the reservoir.

2.3.6 Project Roads to be Decommissioned, Abandoned, or Converted

There are approximately 0.23 miles of road located within the existing FERC Project boundary in the J.C. Boyle Reservoir area that are recommended for decommissioning (DCM road classification) to reduce resource damage (Table 2.3-1; Appendix A, Tile 22). Slightly fewer miles of road (0.22) are recommended for decommissioning in this area within the proposed FERC Project boundary. These roads are located along the southern shoreline of the reservoir to the north of Sportsman's Park and are not needed for access to Project hydroelectric or recreation facilities within either the existing or the proposed FERC Project boundary.

2.4 J.C. BOYLE RESERVOIR TO STATELINE AREA

The J.C. Boyle Reservoir to Stateline area includes all roads and other transportation-related structures downstream of J.C. Boyle dam to the Oregon-California State Line (Appendix A, Tiles 15 through 21). Only roads and other transportation-related structures located within either the existing or proposed FERC Project boundary are discussed below.

2.4.1 Project Roads and Classifications

There are approximately 15.6 miles of road within the existing FERC Project boundary in the J.C. Boyle Reservoir to Stateline area. Within this resource area, there is a total of about 9.4 miles of road within the proposed FERC Project boundary. PacifiCorp is solely responsible for the management and ongoing maintenance of approximately 52 percent of these roads (PMH road classification) within proposed FERC Project boundary. Additionally, PacifiCorp shares management and maintenance responsibilities on about 48 percent of roads within this area (JMH and JMR road classifications combined). Combined, the remaining roads in this area (BMR, PR, NPT, and PUB road classifications) account for less than 1 percent of the roads within the proposed FERC Project boundary. Table 2.4-1 displays the mileage (and associated percentage) of roads for each road classification in the J.C. Boyle Reservoir to Stateline area in both the existing and proposed FERC Project boundary. Road maintenance levels for each segment of roadway in the Management Plan area that is either solely or jointly maintained by PacifiCorp are presented in Appendices D and E.

Table 2.4-1. Road Mileage by Road Classification within the J.C. Boyle Reservoir to Stateline Area.

	Existing FERC Project Boundary		Management Plan Area[1]	
Road Classification[2]	**Mileage**	**Percentage[3]**		**Mileage**
Project Maintenance				
PMH	4.73	30%	4.86	52%
Subtotal	**4.73**	**30%**	**4.86**	**52%**
Joint Maintenance				
JMH	4.13	27%	3.93	42%
JMR	0.56	3%	0.56	6%
Subtotal	**4.69**	**30%**	**4.49**	**48%**
Other				
BMR	2.79	18%	0.02	<1%
OHV	2.41	15%	-	-
PR	0.76	5%	0.01	<1%
NPT	0.13	<1%	0.03	<1%
PUB	0.04	<1%	0.01	<1%
Subtotal	**6.13**	**39%**	**0.07**	<1%
Total	**15.55**	**-**	**9.42**	**-**

[1] *The Management Plan Area corresponds to the proposed FERC Project boundary.*
[2] *Road classification definitions are provided in Table 1.3-1.*
[3] *Percentages may not total to 100 percent due to rounding.*
Source: EDAW, Inc.

2.4.2 Project Bridges and Major Culverts

There is one bridge within the existing FERC Project boundary in the J.C. Boyle Reservoir to Stateline area (Table 2.4-2). This same bridge is also included in the proposed FERC Project boundary in this area. The bridge, located downstream from the J.C. Boyle dam, is on a road classified as PMH and PacifiCorp is responsible for its continued maintenance. This bridge was recently replaced in 2003 by PacifiCorp. There

are no major culverts in the J.C. Boyle Reservoir to Stateline area within either the existing or proposed FERC Project boundary.

Table 2.4-2. Other Transportation-Related Facilities in the J.C. Boyle Reservoir to Stateline Area.

	Existing FERC Project Boundary		Management Plan Study Area[1]	
Road Feature	**Number**	**Project[2]**		**Number**
Bridges	1	1	1	1
Culverts	3	3	3	3
Gates	1	1	1	1
Closed Roads	0	0	0	0
Fords	0	0	0	0
Signs	0	0	0	0

[1] *The Management Plan Area corresponds to the proposed FERC Project boundary.*
[2] *Indicates the number of transportation-related facilities with Project responsibilities (i.e., on roads classified as PMH, PMR, PTL, JMH, and JMR).*
Source: EDAW, Inc.

2.4.3 Project Minor Culverts

There are three identified minor culverts within both the existing and proposed FERC Project boundary in the J.C. Boyle Reservoir to Stateline area (Table 2.4-2). All three culverts are located on roads classified as PMH and PacifiCorp is thus responsible for their continued maintenance.

2.4.4 Project Roadway Barriers and Gates

There is only one identified gate within the existing FERC Project boundary in the J.C. Boyle Reservoir to Stateline area (Table 2.4-2). This same gate is also within the proposed FERC Project boundary. The gate is located to the northwest of the J.C. Boyle dam and limits public access to the dam. PacifiCorp is responsible for maintaining this gate.

2.4.5 Other Project Roadway Features

There are no other identified roadway features within either the existing or proposed FERC Project boundary in the J.C. Boyle Reservoir to Stateline area (Table 2.4-2).

2.4.6 Project Roads to be Decommissioned, Abandoned, or Converted

There are no roads within either the existing or proposed FERC Project boundary in the J.C. Boyle Reservoir to Stateline area that are recommended for decommissioning (Table 2.4-1).

Within the J.C. Boyle Reservoir to Stateline area, the BLM has recommended several roads for potential decommissioning. The alternatives described in the BLM's Draft Upper Klamath River Management Plan EIS and RMP (BLM 2003) call for varying amounts of road closure and potential decommissioning (Section 1.4). Several of the

alternatives also recommend closure and decommissioning of Project-maintained roads. PacifiCorp's responsibilities on Project- and jointly-maintained roads in this area will require future resolution pending issuance of the new FERC Project license and finalization of the BLM's EIS/RMP. When the EIS/RMP is finalized, PacifiCorp will continue to work cooperatively with the BLM on management actions and measures on roads identified for potential closure and decommissioning.

2.5 STATELINE TO COPCO RESERVOIR AREA

The Stateline to Copco Reservoir area includes all roads and other transportation-related structures downstream of the Oregon-California State Line to Copco Reservoir (Appendix A, Tiles 11 through 15). Only roads and other transportation-related structures located within either the existing or proposed FERC Project boundary are discussed below.

2.5.1 Project Roads and Classifications

Currently, within the Stateline to Copco Reservoir area, there are only about 0.01 miles of road within the existing FERC Project boundary. Within the proposed FERC Project boundary, the total road mileage increases to approximately 2.5 miles of road in this resource area. This is because PacifiCorp has proposed expanding its Project boundary upstream to the Stateline Takeout Recreation Area. PacifiCorp is solely responsible for the management and ongoing maintenance of approximately 12 percent of the roads (PMH and PMR road classifications combined) in the proposed FERC Project boundary. The remaining 88 percent of roads in this area are classified as PR, TRL, and BMR. Table 2.5-1 displays the mileage (and associated percentage) of roads for each road classification in this area in both the existing and proposed FERC Project boundary. Road maintenance levels for each segment of roadway in this area within the proposed FERC Project boundary that is either solely or jointly maintained by PacifiCorp are presented in Appendices D and E.

Table 2.5-1. Road Mileage by Road Classification within the Stateline to Copco Reservoir Area.

	Existing FERC Project Boundary		**Management Plan Area[1]**	
Road Classification[2]	**Mileage**	**Percentage[3]**		**Mileage**
Project Maintenance				
PMR	-	-	0.23	9%
PMH	-	-	0.07	3%
Subtotal	**-**	**-**	**0.30**	**12%**
Other				
PUB	0.01	-	-	-
PR	-	-	1.85	74%
TRL	-	-	0.30	12%
BMR	-	-	0.06	2%
Subtotal	**0.01**	**100%**	**2.21**	**88%**
Total	**0.01**	**-**	**2.51**	**-**

[1] The Management Plan Area corresponds to the proposed FERC Project boundary.
[2] Road classification definitions are provided in Table 1.3-1.
[3] Percentages may not total to 100 percent due to rounding. *Source: EDAW, Inc.*

2.5.2 Project Bridges and Major Culverts

Currently, there are no bridges in the Stateline to Copco Reservoir area within the existing FERC Project boundary. There are three bridges within the proposed FERC Project boundary in this area (Table 2.5-2). Two of these bridges are on private roads and are not PacifiCorp's responsibility. The third bridge is on Ager-Beswick Road at Shovel Creek and Siskiyou County is responsible for its maintenance. There are no major culverts in this area.

Table 2.5-2. Other Transportation-Related Facilities in the Stateline to Copco Reservoir Area.

	Existing FERC Project Boundary		Management Plan Study Area[1]	
Road Feature	**Number**	**Project[2]**		**Number**
Bridges	0	0	3	0
Culverts	0	0	1	0
Gates	0	0	2	1
Closed Roads	0	0	0	0
Fords	0	0	2	2
Signs	0	0	0	0

[1] The Management Plan Area corresponds to the proposed FERC Project boundary.
[2] Indicates the number of transportation-related facilities with Project responsibilities (i.e., on roads classified as PMH, PMR, PTL, JMH, and JMR).
Source: EDAW, Inc.

2.5.3 Project Minor Culverts

Within this area, there are currently no minor culverts located within the existing FERC Project boundary. There is only one identified minor culvert within the proposed FERC Project boundary in the Stateline to Copco Reservoir area (Table 2.5-2). The culvert is located on a road classified as BMR and maintaining it is not PacifiCorp's responsibility.

2.5.4 Project Roadway Barriers and Gates

There are no gates within the existing FERC Project boundary in this area; however, there are two identified gates within the proposed FERC Project boundary in the Stateline to Copco Reservoir area (Table 2.5-2). The first gate is located at Fishing Access Site 6 and prohibits vehicular access to the whitewater boater take-out at this site. Only permitted whitewater outfitters are allowed vehicular access to this take-out. PacifiCorp is responsible for the maintenance of this gate. The second gate is located at Fishing Access Site 5 and limits access on a private bridge across the Klamath River. Public vehicular access through the gate and across the bridge is prohibited, though pedestrian access is allowed. PacifiCorp is also not responsible for the maintenance of this second gate.

2.5.5 Other Project Roadway Features

Within the existing FERC Project boundary, there are no other Project roadway features located in this area. There are two fords located within the proposed FERC Project

boundary in the Stateline to Copco Reservoir area (Table 2.5-2). Each of these fords is located on Shovel Creek. Aside from these fords, there are no other identified roadway features in this area.

2.5.6 Project Roads to be Decommissioned, Abandoned, or Converted

There are no roads within either the existing or proposed FERC Project boundary in the Stateline to Copco Reservoir area that are recommended for decommissioning (Table 2.5-1).

Within the Stateline to Copco Reservoir area, the BLM has recommended several roads for potential decommissioning. The alternatives described in the BLM's Draft Upper Klamath River Management Plan EIS and RMP (BLM 2003) call for varying amounts of road closure and potential decommissioning (Section 1.4). Several of the alternatives also recommend closure and decommissioning of Project-maintained roads. PacifiCorp's responsibilities on Project- and jointly-maintained roads in this area will require future resolution pending issuance of the new FERC Project license and finalization of the BLM's EIS/RMP. When the EIS/RMP is finalized, PacifiCorp will continue to work cooperatively with the BLM on management actions and measures on roads identified for potential closure and decommissioning.

2.6 COPCO RESERVOIR AREA

The Copco Reservoir area includes all roads and other transportation-related structures from the Copco Road bridge located near the confluence of the Upper Klamath River and Copco Reservoir to the Copco 2 dam (Appendix A, Tiles 6, 9, 10, and 11). Only roads and other transportation-related structures located within either the existing or proposed FERC Project boundary are discussed below.

2.6.1 Project Roads and Classifications

In the Copco Reservoir area, there are currently 2.08 miles of road located within the existing FERC Project boundary. The mileage of roads located in this resource area within the proposed FERC Project boundary is approximately 3.6 miles. PacifiCorp is solely responsible for the management and ongoing maintenance of approximately 77 percent of these roads (PMH, PMR, and PTL road classifications combined) within the proposed FERC Project boundary. PacifiCorp shares management and maintenance responsibilities on less than 1 percent of roads within this area (JMH road classification). The remaining 23 percent of roads in this area within the proposed FERC Project boundary are classified as NPT, PUB, and PR. Table 2.6-1 displays the mileage (and associated percentage) of roads for each road classification in this area in both the existing and proposed FERC Project boundary. Road maintenance levels for each segment of roadway in this area within the Management Plan area that is either solely or jointly maintained by PacifiCorp are presented in Appendices D and E.

Table 2.6-1. Road Mileage by Road Classification within the Copco Reservoir Area.

Road Classification[2]	Existing FERC Project Boundary		Management Plan Area[1]	
	Mileage	Percentage[3]		Mileage
Project Maintenance				
PMH	1.29	62%	2.12	59%
PTL	0.43	21%	0.35	10%
PMR	0.11	5%	0.29	8%
Subtotal	**1.83**	**88%**	**2.76**	**77%**
Joint Maintenance				
JMH	0.02	1%	0.02	<1%
Subtotal	**0.02**	**1%**	**0.02**	**<1%**
Other				
PUB	0.22	11%	0.27	8%
NPT	0.01	<1%	0.55	15%
Subtotal	**0.23**	**11%**	**0.82**	**23%**
Total	**2.08**	**-**	**3.60**	**-**

[1] *The Management Plan Area corresponds to the proposed FERC Project boundary.*
[2] *Road classification definitions are provided in Table 1.3-1.*
[3] *Percentages may not total to 100 percent due to rounding.*
Source: EDAW, Inc.

2.6.2 Project Bridges and Major Culverts

There is one County bridge within the proposed FERC Project boundary in the Copco Reservoir area. PacifiCorp is not responsible for its management or maintenance. This bridge, the Copco Road Bridge, crosses the Upper Klamath River where it reaches Copco Reservoir and is maintained by Siskiyou County. There are no major culverts in this area.

Table 2.6-2. Other Transportation-Related Facilities in the Copco Reservoir Area.

Road Feature	Existing FERC Project Boundary		Management Plan Study Area[1]	
	Number	Project[2]		Number
Bridges	1	0	1	0
Culverts	0	0	3	0
Gates	2	2	3	3
Closed Roads	1	1	0	0
Fords	0	0	0	0
Signs	6	4	10	8

[1] *The Management Plan Area corresponds to the proposed FERC Project boundary.*
[2] *Indicates the number of transportation-related facilities with Project responsibilities (i.e., on roads classified as PMH, PMR, PTL, JMH, and JMR).*
Source: EDAW, Inc.

2.6.3 Project Minor Culverts

Currently, there are no culverts located in the Copco Reservoir area within the existing FERC Project boundary (Table 2.6-2). However, there are three identified minor culverts within the proposed FERC Project boundary in the Copco Reservoir area. However, none of these culverts are located on a road that PacifiCorp is responsible for maintaining.

2.6.4 Project Roadway Barriers and Gates

Within the existing FERC Project boundary are two gates (Table 2.6-2). These gates are located on roads classified as PMH and are currently maintained by PacifiCorp. There are three identified gates within the proposed FERC Project boundary in the Copco Reservoir area. The first gate limits public access to Copco Village at the western end of the reservoir, near the Copco dam. The second gate limits public access to Project hydroelectric facilities located near the Copco No. 1 dam. The third gate is located off of Copco Road and prohibits public vehicular access to an old PacifiCorp quarry. PacifiCorp is responsible for maintaining all three identified gates in this area.

In addition to these gates, there is also one closed road located in this area within the existing FERC Project boundary (Table 2.6-2). The closed road is classified as PMH and is currently maintained by PacifiCorp. This closed road is not included in the proposed FERC Project boundary.

2.6.5 Other Project Roadway Features

Currently, there are six road signs in the Copco Reservoir area within the existing FERC Project boundary (Table 2.6-2). Four of these road signs are located on roads classified as either PMH or PMR and are currently maintained by PacifiCorp. There are ten identified road signs located within the proposed FERC Project boundary in this area. Eight of these signs are located at the western end of the reservoir and are on PMH or PMR roads. PacifiCorp is responsible for their continued maintenance. There are no other identified roadway features in this area in either the existing or proposed FERC Project boundary.

2.6.6 Project Roads to be Decommissioned, Abandoned, or Converted

There are no roads within either the existing or proposed FERC Project boundary in the Copco Reservoir area that are recommended for decommissioning (Table 2.6-1).

2.7 FALL CREEK/SPRING CREEK AREA

The Fall Creek/Spring Creek area includes all roads and other transportation-related structures north of Copco Road between Iron Gate and Copco reservoirs (Appendix A, Tiles 6 - 8). Only roads and other transportation-related structures located within either the existing or proposed FERC Project boundary are discussed below.

2.7.1 Project Roads and Classifications

Currently, within the Fall Creek/Spring Creek area, there are only about 0.5 miles of road within the existing FERC Project boundary. Within the proposed FERC Project boundary, the total road mileage increases to approximately 3.7 miles of road in this resource area. PacifiCorp is solely responsible for the management and ongoing maintenance of approximately 54 percent of the roads within the proposed FERC Project boundary. Additionally, PacifiCorp shares management and maintenance responsibilities

on 36 percent of the roads within this area. The remaining 10 percent of the roads in this area within the proposed FERC Project boundary are classified as PUB, PR, and TRL. Table 2.7-1 displays the mileage (and associated percentage) of roads for each road classification in the Fall Creek/Spring Creek area in both the existing and proposed FERC Project boundary. Road maintenance levels for each segment of roadway in this area in the Management Plan area that is either solely or jointly maintained by PacifiCorp are presented in Appendices D and E.

In addition to the roads within the proposed FERC Project boundary in the Fall Creek/Spring Creek area, there are several roads adjacent to the proposed boundary that are jointly maintained by PacifiCorp for access to Project-related facilities in this area. More detail on these roads is provided in Section 3.4 and Appendix E.

Table 2.7-1. Road Mileage by Road Classification within the Fall Creek/Spring Creek Area.

	Existing FERC Project Boundary		Management Plan Area[1]	
Road Classification[2]	**Mileage**	**Percentage[3]**		**Mileage**
Project Maintenance				
PMH	0.49	96%	1.98	54%
Subtotal	**0.49**	**96%**	**1.98**	**54%**
Joint Maintenance				
JMH	0.01	2%	1.33	36%
Subtotal	**0.01**	**2%**	**1.33**	**36%**
Other				
PUB	0.01	2%	0.29	8%
PR	-	-	0.04	1%
TRL	-	-	0.03	1%
Subtotal	**0.01**	**2%**	**0.36**	**10%**
Total	**0.51**	**-**	**3.67**	**-**

[1] *The Management Plan Area corresponds to the proposed FERC Project boundary.*
[2] *Road classification definitions are provided in Table 1.3-1.*
[3] *Percentages may not total to 100 percent due to rounding.*
Source: EDAW, Inc.

2.7.2 Project Bridges and Major Culverts

Within the existing FERC Project boundary, there are no bridges in the Fall Creek/Spring Creek area (Table 2.7-2). There are two identified bridges within the proposed FERC Project boundary in this area; however, one of these bridges is a pedestrian-only bridge and is not required to meet National Bridge Inspection Standards (NBIS) (see Section 4.0 and Appendix F). This pedestrian bridge is located at the Fall Creek Fish Hatchery managed by the California Department of Fish and Game (CDFG) and provides access to the Fall Creek Trail. The other bridge is located on Copco Road and is maintained by Siskiyou County. There are no major culverts in this area.

Table 2.7-2. Other Transportation-Related Facilities in the Fall Creek/Spring Creek Area.

	Existing FERC Project Boundary		Management Plan Study Area[1]	
Road Feature	**Number**	**Project[2]**		**Number**
Bridges	0	0	2	0
Culverts	1	1	4	4
Gates	3	3	9	8
Closed Roads	0	0	0	0
Fords	1	1	2	2
Signs	0	0	4	4

[1] *The Management Plan Area corresponds to the proposed FERC Project boundary.*
[2] *Indicates the number of transportation-related facilities with Project responsibilities (i.e., on roads classified as PMH, PMR, PTL, JMH, and JMR).*
Source: EDAW, Inc.

2.7.3 Project Minor Culverts

Within the existing FERC Project boundary, there is only one minor culvert in this area (Table 2.7-2). This culvert is located on a road classified as PMH and PacifiCorp is responsible for its current maintenance. There are four identified minor culverts within the proposed FERC Project boundary in the Fall Creek/Spring Creek area. All four of these culverts are located on roads classified as PMH and PacifiCorp is responsible for their maintenance.

2.7.4 Project Roadway Barriers and Gates

Currently, there are three gates located within the existing FERC Project boundary in this area (Table 2.7-2). All three of these gates are located on roads classified as PMH and thus are currently maintained by PacifiCorp. There are a total of nine gates located within the proposed FERC Project boundary in the Fall Creek/Spring Creek area. These gates limit public vehicular access to Project hydroelectric facilities, as well as other private lands. PacifiCorp is solely responsible for maintaining four of these gates located in this area. Four additional gates are located on roads classified as JMH and PacifiCorp is in part responsible for their maintenance. The remaining gate prohibits public vehicular access to CDFG fish hatchery facilities at Fall Creek. PacifiCorp is not responsible for maintaining this gate.

2.7.5 Other Project Roadway Features

There are no road signs within the existing FERC Project boundary in the Fall Creek/Spring Creek area; however, there are four identified road signs within the proposed FERC Project boundary in this area (Table 2.7-2). All four signs are located on roads classified as PMH and PacifiCorp is thus responsible for their maintenance. There are also two fords in the Fall Creek/Spring Creek area, one located near the Fall Creek Powerhouse and one located near the Fall Creek Diversion. There are no other identified roadway features in this area.

2.7.6 Project Roads to be Decommissioned, Abandoned, or Converted

There are no roads within either the existing or proposed FERC Project boundary in the Fall Creek/Spring Creek area that are recommended for decommissioning (Table 2.7-1).

2.8 IRON GATE RESERVOIR AREA

The Iron Gate Reservoir area includes all roads and other transportation-related structures downstream of the Copco 2 dam to the proposed FERC Project boundary near the Iron Gate Fish Hatchery (Appendix A, Tiles 1 - 6). Only roads and other transportation-related structures located within either the existing or proposed FERC Project boundary are discussed below.

2.8.1 Project Roads and Classifications

Within the existing FERC Project boundary, there are about 17.5 miles of roads located in the Iron Gate Reservoir area. Within the proposed FERC Project boundary, the total road mileage is slightly less in this resource area, at approximately 17 miles. PacifiCorp is solely responsible for the management and ongoing maintenance of approximately 63 percent of the roads (PMH, PMR, and PTL road classifications combined) located within the proposed FERC Project boundary. Additionally, PacifiCorp shares management and maintenance responsibilities on about 8 percent of roads within the Iron Gate Reservoir area. The remaining 29 percent of roads in this area within the proposed FERC Project boundary are classified as PUB, PR, OHV, DCM, and NPT. Table 2.8-1 displays the mileage (and associated percentage) of roads for each road classification in this area within both the existing and proposed FERC Project boundary. Road maintenance levels for each segment of roadway in this area that is either solely or jointly maintained by PacifiCorp within the proposed FERC Project boundary are presented in Appendices D and E.

2.8.2 Project Bridges and Major Culverts

Within the existing FERC Project boundary, there are a total of 5 bridges in the Iron Gate Reservoir area (Table 2.8-2). Four of these bridges are also located within the proposed FERC Project boundary. The first bridge is located at the eastern end of the reservoir and provides access to the Copco 2 Village. This bridge is on a road classified as PMH and PacifiCorp is responsible for its maintenance. However, this bridge is not required to meet NBIS, as public access is prohibited (Appendix F). The second bridge in this area is located at Jenny Creek. This bridge is on a County public road (Copco Road) and is maintained by Siskiyou County. The third bridge is located adjacent to the Iron Gate Fish Hatchery and provides access across the Klamath River below the Iron Gate dam. PacifiCorp and Iron Gate Estates (private) are jointly responsible for the maintenance of this bridge (see Section 3.0). The fourth bridge in this area is also located adjacent to the Iron Gate Fish Hatchery and provides access across Bogus Creek. This bridge is on a road classified as PMH and PacifiCorp is responsible for its maintenance. Similar to the bridge at Copco 2 Village, this bridge is not required to meet NBIS, as public access is

prohibited (Appendix F). The fifth bridge within the existing FERC Project boundary only, is located on Copco Road below Iron Gate dam and is currently maintained by Siskiyou County.

Table 2.8-1. Road Mileage by Road Classification within the Iron Gate Reservoir Area.

	Existing FERC Project Boundary		Management Plan Area[1]	
Road Classification[2]	**Mileage**	**Percentage[3]**		**Mileage**
Project Maintenance				
PMH	4.20	24%	7.34	43%
PMR	1.56	9%	3.05	18%
PTL	0.29	2%	0.33	2%
Subtotal	**6.05**	**35%**	**10.72**	**63%**
Joint Maintenance				
JMH	0.87	5%	1.29	8%
Subtotal	**0.87**	**5%**	**1.29**	**8%**
Other				
PUB	8.52	49%	2.29	14%
PR	1.18	7%	2.05	12%
OHV	0.75	4%	0.45	3%
DCM	0.10	<1%	0.02	<1%
BMR	0.06	<1%	-	-
NPT	-	-	0.13	<1%
Subtotal	**10.61**	**60%**	**4.94**	**29%**
Total	**17.53**	**-**	**16.95**	**-**

[1] The Management Plan Area corresponds to the proposed FERC Project boundary.
[2] Road classification definitions are provided in Table 1.3-1.
[3] Percentages may not total to 100 percent due to rounding.
Source: EDAW, Inc.

Table 2.8-2. Other Transportation-Related Facilities in the Iron Gate Reservoir Area.

	Existing FERC Project Boundary		Management Plan Study Area[1]	
Road Feature	**Number**	**Project[2]**		**Number**
Bridges	5	3	4	3
Culverts	61	20	49	25
Gates	14	11	16	14
Closed Roads	6	0	3	0
Fords	1	1	1	1
Signs	12	6	11	5

[1] The Management Plan Area corresponds to the proposed FERC Project boundary.
[2] Indicates the number of transportation-related facilities with Project responsibilities (i.e., on roads classified as PMH, PMR, PTL, JMH, and JMR).
Source: EDAW, Inc.

2.8.3 Project Minor Culverts

Within the existing FERC Project boundary, there are approximately 61 identified minor culverts in the Iron Gate Reservoir area (Table 2.8-2). PacifiCorp is currently responsible for about 20 of these culverts that are located on Project- or jointly-maintained roads

within the existing FERC Project boundary. There are 49 identified minor culverts within the proposed FERC Project boundary in this area. Approximately 25 of these culverts are located on roads classified as Project- or jointly-maintained and PacifiCorp is fully or in-part responsible for their continued maintenance.

2.8.4 Project Roadway Barriers and Gates

In the Iron Gate Reservoir area, there are 14 identified gates located within the existing FERC Project boundary (Table 2.8-2). Nearly all of these gates (11) are located on roads that are either classified as Project- or jointly-maintained roads and PacifiCorp is currently responsible for their maintenance. There are 16 identified gates within the proposed FERC Project boundary in this area, 14 of which are located on roads classified as either Project- or jointly-maintained roads. PacifiCorp is responsible for maintaining all of these gates and barriers.

2.8.5 Other Project Roadway Features

There are 12 identified road signs and one ford in the Iron Gate Reservoir area within the existing FERC Project boundary (Table 2.8-2). Six of the signs are located on roads where PacifiCorp is either wholly or partly responsible for current road maintenance (PMH, PMR, PTL, JMH, and JMR road classifications). Within the proposed FERC Project boundary, there are 11 identified signs and one ford in this area. Of the 11 identified road signs, five are on roads where PacifiCorp is either wholly or partly responsible for continued road maintenance.

2.8.6 Project Roads to be Decommissioned, Abandoned, or Converted

In the existing FERC Project boundary, there are approximately 0.1 miles of road recommended for decommissioning (Table 2.8-1). Included in this total are about 0.08 mile of road (Route IDs: 30000010 and 30000011) on BLM-managed land near the old quarry site on the western shoreline of the reservoir (Appendix A, Tile 2). PacifiCorp has no management authority or responsibility to decommission these short spur roads. The remaining 0.02 mile of road recommended for decommissioning are located on a small spur road (Route ID: 30000012) also on the western shoreline of the reservoir. This spur road is currently on PacifiCorp-owned land; however, this road is not currently needed for access to Project hydroelectric or recreation facilities. This same small spur road is also located within the proposed FERC Project boundary in the Iron Gate Reservoir area. It is the only road recommended for decommissioning in the proposed FERC Project boundary in this area.

3.0 PROJECT ROADWAY MANAGEMENT ROLES, COORDINATION, AND AGREEMENTS

This section discusses roles and coordination of transportation-related activities within the proposed FERC Project boundary, with specific attention given to PacifiCorp's responsibilities. It also presents a rolling 5-year Transportation Action Plan (TAP) process to help guide annual and longer term management activities. Existing road and bridge maintenance cost sharing agreements are also identified (continuing new FERC license maintenance responsibilities and schedules are discussed in Section 4.0).

3.1 PACIFICORP ROLES AND RESPONSIBILITIES

PacifiCorp is the primary entity responsible for the continued management and maintenance of Project-related roads (PMH, PMR, and PTL road classifications) within the proposed FERC Project boundary. Additionally, PacifiCorp shares management and maintenance responsibilities of jointly-maintained Project-related roads (JMH and JMR road classifications) both within and directly adjacent to the proposed FERC Project boundary where there is a Project nexus.

PacifiCorp's specific responsibilities on licensee maintained Project-related roads are listed below.

- Implementation of transportation-related actions on PacifiCorp-controlled roads (Section 4.0) including:
    - Road maintenance
    - Bridge and major culvert maintenance
    - Road decommissioning
    - Culvert maintenance
    - Monitoring and inspection of transportation-related facilities
    - Road capital improvements (new or temporary)
    - Traffic control and travel management
- Coordination of transportation-related actions with other Project area management plans (e.g., Recreation Resource Management Plan [RRMP], Historic Properties Management Plan [HPMP], Vegetation Resource Management Plan, Wildlife Habitat Management Plan, etc.), as well as other pertinent county, state, or federal transportation management plans or policies;
- Updates to this plan and associated GIS datasets, including tracking any changes, over the term of the new license;
- Funding, conducting environmental compliance (including best management practices for avoiding impacts to sensitive species and habitats), and acquiring necessary county and state permits related to road and other transportation-related structure construction and maintenance; and
- Funding, conducting environmental compliance, and acquiring necessary federal permits including (depending on the project): National Environmental Policy Act

(NEPA) compliance, annual TAP preparation and BLM review, U.S. Army Corps of Engineers Section 404 Wetland Permitting, National Historic Preservation Act (NHPA) Section 106 compliance, Endangered Species Act (ESA) compliance and consultation, and other federal requirements, as needed.

For jointly-maintained roads and transportation facilities, responsibilities will be shared based upon agreements with the owner/operator of the road or facility. These other responsibilities include:

- Participating in annual transportation-related meetings pertinent to the ongoing management and maintenance of Project-related roads; and
- Cost sharing on jointly maintained Project-related roads, per existing and/or future agreements (Section 3.4).

3.2 ROLLING 5-YEAR TRANSPORTATION ACTION PLAN

To help facilitate long-term coordination and budgeting between PacifiCorp and other transportation-related management entities (i.e., those individuals and agencies jointly responsible for maintenance of Project-area roads) as well as internally within the PacifiCorp organization, a rolling 5-Year TAP will be prepared annually. The annual TAP preparation will help to guide anticipated activities for normal or recurrent general maintenance, as well as major maintenance.

To annually document past, current and proposed Project-specific transportation-related activities and associated costs, PacifiCorp will prepare a rolling 5-Year TAP (Appendix G), in coordination with the BLM. Other entities responsible for transportation-related management in the proposed FERC Project boundary may also be invited to assist as needed in the preparation of the TAP. This rolling action plan and each of its activities are described below.

The TAP will summarize all Project-related road, bridge, and major culvert maintenance or capital improvements performed during the previous calendar year and will address work planned during both the current calendar year and the subsequent 3 years. The TAP will also provide a thorough accounting of all costs incurred during the previous calendar year for each action, as documented through a Project Work Plan (PWP)(sample provided in Appendix G, but actual may vary), including joint costs when applicable. Variances will be applied or deducted from the upcoming work and associated costs to each management entity (e.g., PacifiCorp, BLM, etc.) in the next calendar year as appropriate.

The TAP will reference and append a number of individual PWPs (or its equivalent form) for each major project that requires PacifiCorp or joint funding, including maintenance and capital improvement. The PWPs will include various requirements, definitions, maintenance specifications, labor and material needs, equipment needs, and other information necessary to effectively maintain Project-related roads, bridges, and other transportation-related structures within the proposed FERC Project boundary.

The TAP and its appended PWPs (or its equivalent form) will include the following information (if applicable) to describe anticipated work effort for the upcoming calendar year and the subsequent 3 calendar years, including:

- Road, bridge, and major culvert number and/or name and road segment;
- Road length in miles;
- Planned inventory, maintenance, capital improvements, and inspection tasks;
- Estimated costs, including personnel (hours and staffing categories), equipment, supplies, materials, and contracts;
- Percentage work attributable to each entity on joint actions;
- Planned bridge ownership transfers and inspections;
- Actions related to Grants of Right-of-Way (G/ROW) and other management agreements;
- Planned road decommissioning;
- Planned Level 1 road barricading and mitigation;
- Planned road maintenance level changes;
- Performance responsibility; and
- Anticipated work that is needed for roads, bridges, and major culverts during the current and subsequent 3 calendar years.

3.3 ENVIRONMENTAL COMPLIANCE, APPROVALS, AND PERMITTING

PacifiCorp will be responsible for funding and/or conducting required environmental compliance and permitting for transportation-related capital improvements projects on Project-maintained roads (PMH, PMR, and PTL road classifications), subject to the jurisdiction, laws, regulations, and policies in force at the time of each individual action will be undertaken. Planned roadway-related construction and/or maintenance will also be reviewed for policy consistency with: (1) Project-related management plans (such as the RRMP or HPMP), and (2) non-Project-related plans (Section 1.4). PacifiCorp may rely upon applicable previous NEPA compliance documentation prepared by FERC, BLM, or other parties to the maximum extent possible to avoid unnecessary costs, duplication, and delay in preparing new NEPA or CEQA compliance documents. To the extent possible, further planned transportation-related projects may be grouped together to minimize environmental analyses and permitting needs.

3.4 AGREEMENTS, PERMITS, AND GRANTS OF RIGHT-OF-WAY

Within the proposed FERC Project boundary, approximately 9 miles of existing roads are classified as JMH or JMR (Table 2.0-1 and Appendix E). Continued management and maintenance of these roads is guided by both formal and informal agreements between PacifiCorp and other entities. Identified existing road management and maintenance agreements are presented in Table 3.4-1.

There are currently no other identified agreements on the remaining roads classified as JMH or JMR in the proposed FERC Project boundary. These roads are detailed in

Appendix E and are likely in need of management and/or cost-sharing agreements in the future.

BLM typically requires that private interests enter into a Grant of Right-of-Way for the use of roads within BLM-managed lands (see Appendix H for an example of a BLM G/ROW). A potential G/ROW may be issued to PacifiCorp for the term of the new license subject to review and approval by both parties. A G/ROW for a temporary road and/or new road construction, if needed, may be amended to meet PacifiCorp's needs over time. A short-term temporary use permit (issued for a term of 1-2 years to authorize construction of temporary Project-related roads needed for Project facility access) may be issued to meet temporary road access needs across BLM-managed lands, as needed, on a case-by-case basis.

Table 3.4-1. Existing Road Management and Maintenance Agreements in the Management Plan Study Area.

Road and/or Bridge	Management Entities	Agreement
Iron Gate Hatchery Bridge (Appendix A, Tile 1)	PacifiCorp Iron Gate Estates (private)	Currently, PacifiCorp has generally agreed to be responsible for funding 90 percent of operations and maintenance. Iron Gate Estates is responsible for the remaining 10 percent. There is no formal agreement for this arrangement. Specific actions are addressed on a case-by-case basis.
Iron Gate Estates Road to Long Gulch Boat Launch (Appendix A, Tile 1)	PacifiCorp Iron Gate Estates (private)	Currently, Iron Gate Estates is generally responsible for funding 90 percent of operations and maintenance. PacifiCorp is generally responsible for the remaining 10 percent. There is no formal agreement for this arrangement.
Copco Road to the Fall Creek Diversion (outside of FERC boundary but provides access to Project features, Appendix A, Tiles 6 and 7)	PacifiCorp Siskiyou County	Currently, Siskiyou County is generally responsible for funding 80 percent of operations and maintenance. PacifiCorp is generally responsible for the remaining 20 percent. There is no formal agreement for this arrangement.
Roads from Copco Road to gates that provide access to the Fall Creek Diversion (Appendix A, Tile 7)	PacifiCorp Divoli (private)	PacifiCorp has an easement for access across Divoli property.
Copco Road and access to Spring Creek Diversion across Jerry Berry Ranch (sections in and out of FERC boundary, Appendix A, Tile 8)	PacifiCorp Jerry Berry (private)	Under a current informal agreement, PacifiCorp provides 200 cubic yards of cinders per year to Mr. Jerry Berry in exchange for access through his ranch. In exchange, Mr. Jerry Berry is responsible for maintenance on this road.
Access road to Stateline Take-out (Appendix A, Tile 15)	PacifiCorp BLM	There is currently no management agreement on this road. BLM does periodically maintain the access road to PacifiCorp's property along the river.

Table 3.4-1. Existing Road Management and Maintenance Agreements in the Management Plan Study Area.

Road and/or Bridge	Management Entities	Agreement
J.C. Boyle Powerhouse to Spring Island Boater Access turnaround road (Appendix A, Tile 20)	PacifiCorp BLM	Currently, PacifiCorp is generally responsible for funding 90 percent of operations and maintenance. BLM is generally responsible for the remaining 10 percent. There is no formal agreement for this arrangement.
Road below J.C Boyle dam to J.C. Boyle Powerhouse (Appendix A, Tiles 20 and 21)	PacifiCorp BLM	Currently, PacifiCorp is generally responsible for funding 95 percent of operations and maintenance. BLM is generally responsible for the remaining 5 percent. There is no formal agreement for this arrangement.

Source: Pers. Comm. with Dan Bevan, PacifiCorp, 2004; EDAW, Inc. 2004

For other private lands within the proposed FERC Project boundary, specific agreements should be entered into on a case-by-case basis in the future, as needed. Ongoing management and maintenance, as well as emergency access needs, should be clearly defined.

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4.0 PROJECT ROADWAY MANAGEMENT ACTIVITIES

Project-related roadway, bridge, and major culvert maintenance activities, responsibilities, and schedules are addressed in this section.

4.1 PROJECT ROAD MAINTENANCE

Continuing maintenance of Project-related roads provides for adequate long-term access to Project generation facilities, transmission lines, and recreation areas. Maintenance responsibilities and schedules are described below.

4.1.1 Road Maintenance Responsibilities

Adequate long-term Roadway maintenance is a cornerstone of this Management Plan. Existing roads within the proposed FERC Project boundary are categorized based on road maintenance levels described in Sections 1.3 and 1.4. The majority of roads within the proposed FERC Project boundary are categorized as Level 2 roads. Each road and its corresponding road maintenance level is presented in tabular format in Appendices D and E.

PacifiCorp will assume full maintenance responsibility for all roads within the proposed FERC Project boundary that are classified as Project-maintained roads (PMH, PMR, and PTL road classifications). PacifiCorp will assume a lesser role of joint or shared maintenance responsibility on jointly-maintained roads (JMH and JMR road classifications) upon issuance of the new FERC license. PacifiCorp will also be responsible for joint or shared maintenance responsibility on jointly-maintained roads that are adjacent to the proposed FERC Project boundary, but are used to access Project-related facilities. Maintenance activities will be consistent with applicable county, state, and/or federal requirements, as well as BLM Manual 9113 (Table 1.3-2) and WOTMP (Section 1.4) maintenance standards, depending on the road segment.

PacifiCorp's general road maintenance responsibilities include the following:

- PacifiCorp will be the prime maintainer of Project-maintained roads (PMH, PMR, and PTL road classifications) within the proposed FERC Project boundary as defined in Appendix D.

- PacifiCorp road use rights as a licensee will be secured where appropriate on BLM-managed lands through the use of BLM G/ROW as defined in Appendix H.

- Road maintenance responsibilities on Project- and jointly-maintained roads will be consistent with road maintenance levels 1 – 5 (Table 1.3-2), as appropriate, and as defined in Appendix E. The prime maintainer of jointly-maintained roads (JMH and JMR road classifications) will be defined through formal or informal agreements between PacifiCorp and other parties as appropriate.

- Road signs (warning, directional, and regulatory) are included as a part of road maintenance in this Management Plan. Guide signs at recreation sites are included as part of the RRMP (PacifiCorp 2004b).

More specifically, PacifiCorp will be responsible for two types of road maintenance activities on Project-maintained roads as a result of both traffic-generated and non-traffic-generated conditions, as defined in Appendices D and E. These two types of road maintenance requirements are defined below.

Traffic-Generated Road Maintenance Requirements – Roadway maintenance work, except repair of major damage, that is made necessary as a direct result of, or to minimize the effect of, use and wear by general traffic. The following are considered traffic-generated maintenance activities:

- Surface blading
- Dust abatement
- Gate repair
- Surface rock replacement
- Asphalt maintenance
- Asphalt patching
- Striping (pavement marking)
- Chip seals
- Snow removal
- Guardrail repair

Non-Traffic-Generated Road Maintenance Requirements – Roadway maintenance work that is made necessary as a direct result of general weathering processes or uncontrollable influences that cannot be attributed to traffic use. The following are considered non-traffic-generated maintenance activities:

- Restoration
- Minor structure replacement
- Brushing
- Ditch cleaning
- Sign, guardrail, and gate maintenance
- Slide removal
- Culvert cleaning
- Revegetation
- Hazard tree removal

During the term of the new license, emergency road maintenance may also be necessary due to unanticipated natural causes, occasional high levels of road use, or potential major damage. Emergency road maintenance may include repair of roads due to major damage caused by unusual natural events and situations that are not repairable by the periodic maintenance activities listed above.

4.1.2 Road Maintenance Schedule

In general, PacifiCorp will schedule required road maintenance on Project-maintained roads on an annual basis, as needed. The majority of road maintenance work would include activities that may be planned well in advance. PacifiCorp, as well as other entities responsible for road maintenance within the proposed FERC Project boundary, will perform normal maintenance activities on Level 1-5 roads in a consistent and timely manner. Normal maintenance activities will include both recurrent and deferred maintenance activities. Recurrent maintenance will include all work that is needed on a continuing basis with accomplishment annually or more frequently. Deferred maintenance includes work that is deferred one or more years until it can be economically or efficiently performed.

4.1.3 Road Maintenance Levels

Road maintenance levels are described in Sections 1.3 and 1.4. On BLM-managed lands, PacifiCorp will maintain Project-related roads per the BLM's maintenance standards (Table 1.3-2). PacifiCorp will utilize these same maintenance standards on Project-maintained roads since the road maintenance levels (1 – 5) and associated standards provide a good model for ongoing road management, maintenance, and resource protection within the proposed FERC Project boundary.

4.2 PROJECT BRIDGE AND MAJOR CULVERT MAINTENACE

The maintenance of Project-related bridges and major culverts (if any) also provides for long-term road access to Project generation facilities, transmission lines, and public recreation areas. Maintenance responsibilities and schedules are described below.

4.2.1 Bridge and Major Culvert Maintenance Responsibilities

PacifiCorp will routinely inspect Project-related bridges and major culverts (if any) that are used for public access using the standards of the federal Highway Safety Act of September 9, 1966 (23 United States Code [USC] §§ 401-411)(Appendix F). Project-related bridges and major culverts that are not used by the public are not required to meet these Highway Safety Act standards. Commencing upon the effective date of the new license, PacifiCorp will assume 100 percent maintenance responsibility for bridges and major culverts identified as being on Project-maintained roads (PMH, PMT, and PMR) within the proposed FERC Project boundary.

Bridges and major culvert structures on Project-maintained roads (PMH, PMT, and PMR) will be periodically inspected and maintained according to identified maintenance needs following routine bridge inspections per the National Bridge Inspection Specifications (NBIS) included in Appendix F.

PacifiCorp will cost-share bridge and major culvert maintenance on jointly-maintained roads (JMH and JMR). Cost sharing will occur on bridges and major culverts along roadways under the classification of jointly-maintained roads (JMH and JMR) in

accordance with the cost-share ratios set forth in Appendix I. The owner of each bridge or major culvert will bear the full cost of any identified deferred maintenance on such structures prior to the issuance of a new license for the Project.

4.2.2 Bridge and Major Culvert Maintenance Schedule

PacifiCorp will perform identified maintenance on Project-related bridges and major culverts as identified during periodic inspections. Cost sharing on bridge inspections and maintenance on jointly-maintained bridges will commence when the new license is issued by FERC.

4.3 PROJECT ROAD DECOMMISSIONING, ABANDONMENT, OR CONVERSION

A few Project-related roads or road segments were identified during the preparation of this Management Plan for decommissioning (Appendix J). In order to restore or enhance the natural environment surrounding the Project, several identified roads will be considered for decommissioning. This section describes the responsibilities and schedule for road decommissioning activities. Some roads may be decommissioned to a non-motorized pedestrian trail where appropriate.

4.3.1 Road Decommissioning, Abandonment, or Conversion Responsibilities

Existing roads that are no longer needed to access PacifiCorp lands and BLM-managed lands within or adjacent to the proposed FERC Project boundary are candidates for decommissioning. The objectives for decommissioning of a road are to re-establish natural vegetation and, as necessary, restore ecological processes interrupted or adversely impacted by the road and its use.

Project- and jointly-maintained roads may be decommissioned if the following conditions are met, including:

- The action is agreed upon by all parties;
- The road is no longer needed;
- The road causes significant resource damage that cannot be adequately or cost-effectively mitigated;
- Road use is no longer feasible or desirable; and
- The action is consistent with other study area management plans.

Decommissioning may include various levels of treatments. Treatments are site specific and may include one or more of the following activities:

- Blocking the entrance to the road;
- Removing culverts and re-establishing former drainage patterns;
- Installing waterbars on the road surface;
- Pulling back road shoulders and removing unstable road fills;
- Ripping of the roadbed to promote water infiltration;

- Stabilizing slopes;
- Scattering slash over the roadbed;
- Restoring vegetation in the road prism; and
- Other methods designed to meet specific conditions associated with the road.

In extreme instances, decommissioning may involve complete elimination of the roadbed by restoring natural contours and slopes. The specific treatments will be identified by an appropriate interdisciplinary team of resource specialists based on site-specific conditions along the candidate road, as well as the potential to provide significant environmental improvement/benefits.

4.3.2 Road Decommissioning, Abandonment, or Conversion Schedule

All potential road decommissioning by PacifiCorp will be completed during the first 10 years of the new FERC license.

4.4 PERIODIC MONITORING AND INSPECTIONS

Monitoring and inspection activities address the need for coordinated road, bridge, and major culvert monitoring and inspection activities over the term of the new license. These activities are necessary to properly maintain the road system servicing the Project for continuous access when needed.

4.4.1 Road, Bridge, and Major Culvert Monitoring Responsibilities

All Project-related (i.e., within the proposed FERC Project boundary) roads, bridges, and major culverts will be monitored on a periodic basis. These monitoring data will be used to identify existing and anticipated problems and to facilitate appropriate maintenance as identified in Appendices D, E, and H.

The identified primary maintainer of each road within the proposed FERC Project boundary will conduct appropriate road, bridge, and major culvert monitoring activities, as needed, to properly manage and maintain the identified roads and bridges. The following road monitoring activities will be conducted:

- Annually, monitor overall safety of Project-maintained roads.

- Annually, monitor resources adjacent to Project-maintained roads, including erosion and vegetation loss.

- Every two years, validate that Project-related road use and conditions are consistent with the assigned road classification (1 – 5) and that appropriate standards are being maintained.

- Every five years, conduct asphalt pavement management surveys on paved Project-maintained roads.

- Every five years, conduct road condition surveys on a rotating basis for all Project-related roads.

4.4.2 Road, Bridge, and Major Culvert Monitoring Inspection Schedule

All bridges and major culverts (if any) used by the public are subject to federal Highway Safety Act requirements and will be inspected at intervals not to exceed 2 years in accordance with NBIS (Appendix F). Other planned road, bridge, and culvert monitoring and inspection will occur according to the intervals described in Section 4.4.1.

4.4.3 Mapping Omissions and Updates

As new GIS roadway attributes, additional or modified road segments or road realignments, and transportation structures are identified over the term of the new license, PacifiCorp will periodically update the Inventory Analysis GIS database and associated appendices to this Management Plan as appropriate. These database and appendix updates over time will become part of the PacifiCorp GIS database and this Management Plan. Should PacifiCorp determine that existing roads or facilities are no longer needed for Project operations, PacifiCorp may decommission them as soon as practical according to the guidelines outlined in Section 4.3.1. Should PacifiCorp determine that new roads or facilities are needed for Project operations, PacifiCorp will be responsible for operating and maintaining these roads to appropriate maintenance standards, as described in Sections 4.1 and 4.2.

5.0 REFERENCES

BLM (Bureau of Land Management). 1985. Manual 9113. Washington, D.C.

BLM. 2002. Western Oregon Transportation Management Plan. Roseburg, OR.

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ODOT (Oregon Department of Transportation). 1999. Routine Road Maintenance Water Quality and Habitat Guide Best Management Practices. Salem, OR.

PacifiCorp. 2004a. Final License Application for the Klamath Hydroelectric Project. Portland, OR. February 2004.

PacifiCorp. 2004b. Draft Recreation Resource Management Plan. Portland, OR. September 2004.

PacifiCorp. 2004c. Draft Historic Properties Management Plan. Portland, OR. September 2004.

Pers. Comm., May 26, 2004. Dan Bevan, PacifiCorp, on-site meeting with Chuck Everett, EDAW, Inc.

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Appendix A	Introduction to the Roads Inventory Analysis and GIS Maps

Appendix A – Document Bound Separately

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Appendix B ODOT Maintenance Management System

(ODOT Descriptions and Minimization and Avoidance Best Management Practices are provided for reference only. PacifiCorp may consider using these practices as guidelines for future road and other transportation-related structure maintenance, but is not obligated or regional to follow them.)

ODOT MAINTENANCE MANAGEMENT SYSTEM (MMS)
Descriptions and Minimization and Avoidance Best Management Practices

Surface Work (MMS 100-110)

Description: Surface and inlay repair includes all repairs of road bases, surface, and shoulder irregularities, including asphalt and concrete surfaces. Asphalt plant production includes production of asphalt for patching materials, staging, moving, stockpiling and setup of asphalt plants.

Minimization and Avoidance

Best Management Practices for surface and shoulder activity types will include:

- Eliminating diesel as a releasing or cleaning agent.
- Using environmentally sensitive cleaning and releasing agents.
- Using heat sources to heat and clean tack nozzles during operations.
- Carrying adequate erosion control supplies (diapers, kitty litter, shovels, etc.) to keep materials out of water bodies.
- Disposing of excess material at appropriate sites, depending upon material being disposed.

Best Management Practices for Asphalt Plant Production will include:

- ODOT will ensure that Contractors and ODOT staff who fuel and operate asphalt plants have an adequate spill plan and materials for spill containment.
- ODOT will establish mixing plants outside of riparian corridors, site location to be approved by the Region Environmentalist/ODOT Biologist, and/or resource agencies.
- If possible ODOT will use commercial asphalt plants for asphalt supply, where economically feasible.
- ODOT will provide areas for truck chute cleanout with proper containment of wet concrete.
- ODOT will protect inlets and catchments from fresh concrete during inclement weather.
- Where possible, ODOT will perform surface work in dry weather, to minimize any runoff of potentially hazardous material.

Shoulder Blading/Rebuilding (MMS 111, 112)

Description: This action includes shoulder blading and rebuilding to correct rutting and buildup of materials, to remove weeds, for safety, and to maintain proper drainage. This activity is similar to ditching, and has similar best management practices. However, it should be considered a different activity than ditching.

Minimization and Avoidance

- ODOT Maintenance will install check dams to protect sensitive resources, when appropriate.

- Specific sites will be evaluated for alternatives to blading, such as berming, curbing or paving shoulder.

- Where practicable, ODOT will evaluate the width of the blading activity and if appropriate, modify the width to minimize disturbance of vegetation.

- Where possible, ODOT Maintenance will blade in dry weather, but while moisture is still present in soil and aggregate (to minimize dust).

- ODOT Maintenance will incorporate this activity into local IVM plans to consider and minimize impacts of this activity on streams.

- Where appropriate, ODOT will permanently stabilize disturbed soils using BMPs (seeding, plants, etc.).

Dust Abatement (No ODOT MMS)

Description: Dust abatement involves application of a dust palliative to non-paved road surfaces to temporarily stabilize surface soils, leading to a reduction of dust during the dry season. Palliatives are applied in liquid form and could include calcium magnesium acetate, magnesium chloride, emulsified asphalts, or lignon sulfonates.

Mitigation and Avoidance:

- During preparation for application of dust palliatives, gravel berms will be constructed at the low shoulders of the roadway to inhibit liquid palliatives from entering waters of the State.

- Dust palliatives will not be applied during rain.

- Methods or materials shall be applied in a matter that is not detrimental to either water or vegetation.

- Carrying adequate spill protection.

- Using environmentally sensitive cleaning agents.

- Disposing of excess materials at appropriate sites.

(NOTE: ODOT does not use dust palliatives. This was included for other transportation authorities wishing to use this document.)

Sweeping/Flushing (MMS 116, 117)

Description: This activity includes sweeping and flushing of roadways, curbs and bridge decks to remove dirt and debris, and scupper (weep holes or direct drains on bridges) cleaning. Materials are recovered (and disposed of) under Activity #117, or sidecast (not picked up) under activity #116. Scupper cleaning involves sweeping of material away from clogged scuppers. Clogged scuppers are normally freed using a steel rod.

Minimization and Avoidance

Best Management Practices will include:

- Use of water (as needed) to reduce dust during sweeping.
- Storage/disposal of removal materials at an appropriate site in an appropriate manner as part of the local material disposal plan. Removed material may be temporarily stored in stable locations to prevent the material from entering wetlands or waterways.
- ODOT Maintenance will recycle sweeping materials where appropriate
- Where feasible, ODOT Maintenance will schedule sweeping during damp weather, to minimize dust production.
- Where feasible, coordinate crews to follow sweeping/flushing with bridge drainage cleaning.
- ODOT Maintenance will remove sweepings produced within 25 feet of identified sensitive spawning areas as identified in coordination with resource agencies, if the design of the facility allows.
- Where appropriate and practical, place sediment barriers in site-specific locations along stream routes or direct drainage routes, to route sweeping material away from watercourse.

Ditch Shaping and Cleaning (MMS 120)

Definition: Ditch: a facility, typically parallel to the road, that carries stormwater runoff draining from the ODOT facility and adjacent properties. It is not a channelized stream, or fish bearing stream.

Description: This action includes use of equipment for cleaning and reshaping of ditches including loading, hauling, and disposing of excess materials. This activity is performed in all weather. Material is removed to an appropriate location for disposal or storage. Vegetation located in the ditch is removed during cleaning.

Minimization and Avoidance:

- ODOT Maintenance will dispose of removed material above the bank line an d not in any waterway or wetland.

- ODOT Maintenance will use erosion control devices such as check dams, silt fences, and other acceptable techniques, when the potential exists to have sediment or other materials enter a water of the State.

- ODOT Maintenance will use best management practices identified in the local Integrated Vegetation Management plan.

- ODOT Maintenance will reseed drainage ditches and steep slopes as appropriate. (Ditches functioning as rock fall areas (as determined by the ODOT District Manager), as opposed to drainage facilities will not be reseeded).

- When possible, ODOT Maintenance will perform ditch work in optimum weather to minimize environmental impacts, and consult with ODFW and/or the Region Environmentalist if silt devises are inadequate to filter water prior to draining to watercourses.

- Evaluate and modify, where feasible and appropriate, existing ditch slopes to trap sediments, and support development of vegetation.

- Recycle excavated material when feasible.

This activity may require a section 404 of the Clean Water Act and/or DSL fill removal permit. (See "Flow Chart" Appendix E)

Culvert and Inlet Cleaning (MMS 121), Culvert/Inlet Repair (MMS 123), Miscellaneous Hand/Minor Repair (MMS 129) includes cleaning of detention ponds, swales, pump stations, and wash rack sumps

Description: This action includes clearing of dirt and debris from culvert inlet/outlets to restore function, and repair of damaged passing devices (culverts, siphons, and box culverts, catch basins, drop inlets). Culvert cleaning is done by equipment including backhoe, vactor/jet router (a machine with a high-pressure hose and/or a powerful vacuum), and shovels. Vegetation may be removed during cleaning. Culvert cleaning is done in all weather.

Culvert/inlet cleaning includes removal of beaver dam material that clogs culverts to prevent flooding and culvert failure.

Minimization and Avoidance:

- ODOT Maintenance will install erosion/sediment control during culvert/trash rack cleaning, where erosion control devices can feasibly be installed. ODOT Maintenance will dispose of materials above the bank line and not in any waterway or wetland.

- When and where possible, ODOT Maintenance will perform work at low flow, and may divert flow to minimize turbidity.

Culvert and Inlet Repair

- Any work, which must be performed in flowing water, will be completed during ODFW in-water work period for that system, or as negotiated with ODFW.

- ODOT Maintenance will closely coordinate with ODFW on the removal of m aterial from culvert when work is performed in ODFW identified stream reaches supporting sensitive fish species, or significant, limiting habitat elements.

- Cleaning schedule/methods and repair of culvert/trash racks will be communicated to ODFW (by letter) at least two weeks prior to cleaning, in ODFW identified sensitive areas, such as spawning grounds. Any in-water work will be coordinated with ODFW to ensure no fish stranding occurs, to minimize sediment impacts (except during emergencies) and to clarify in-water work periods in transitional stream reaches.

- Culvert replacement or extension will frequently require permits outside the scope of

this guide, potentially including a U.S. Army Corps of Engineer 404 permit, DSL permit, and other permits. Any culvert replacement or extension may be required to meet provisions for fish passage as required by ORS 498.268 and ORS 509.605. Culvert replacement for culverts identified as requiring fish passage will only occur following guidelines outlined in the ODFW Guidelines: Criteria for Stream and Road Crossings (1996), and in coordination with Region Environmentalist, ODOT Biologist, ODFW or other resource agency.

Tidegate Maintenance

- ODOT will coordinate with the appropriate resource agencies (USFS, OD FW, USACOE) when ODOT maintained tidegates fail or need replacement or removal.

- If possible, ODOT maintenance will inspect and clean structures prior to the rainy season.

Fish ladder maintenance will follow the above minimization measures described for culvert repair and cleaning, including coordination with ODFW, use of erosion/sediment control where feasible, and disposal of material above the bank and not in any waterways or wetlands, or in mutually agreed upon locations. Fish ladder maintenance may occur 1-3 times/year and entails work generally from the banks of the drainage with a backhoe. Additional handwork and weir repair may also be occasionally required. Vegetation may be removed during cleaning.

Erosion Repair (MMS 122)

Description: This action involves repairing water damage to roadways and fillslopes, including import and shaping of material to restore slope and grade lines. In-water work covered by this action could include, but is not limited to, replacement of riprap or rock which have been removed due to bank erosion, gabion baskets, etc.

Minimization and Avoidance

- Any installation of material that exceeds the material removed by bank erosion (below bankfull stage) will constitute a significant action. Increases in the material profile will require additional coordination with regulating agencies, and are not covered in this document. (See Appendix D)

- Replacement of riprap will follow ODFW in-water work periods, in non-emerge ncy situations. Situations which require expedited ODOT Maintenance action, but which are not technically defined as ëmergencies'(under the ESA or by the Division of State Lands (DSL)) will be addressed with ODFW, and potentially the National Marine Fisheries Service/U.S. Fish and Wildlife Service individually.

- Erosion repair work will consider use of bioengineering solutions where practicable. Practicable use areas include areas not shaded by bridge elements, outside of the two-year flood plain where success is probable and safety of the structural elements are assured. (See Appendix D)
- In large riverine systems (e.g. the Umpqua River) where in-water replacement of

riprap is required, ODOT Maintenance will attempt to create barbs to increase backwater areas, where appropriate, practical, and feasible. ODOT Hydraulics and ODFW will be consulted on all barb designs and locations, and ODOT will follow all environmental procedures.

- Any erosion repair activities (responses and cleanup of erosion problems, not the erosive action itself) which causes significant changes in the topography or vegetation within the riparian management area will be coordinated with ODFW and/or regulating agencies.

Best Management Practices will include:

- Disposal of removed material at appropriate sites (stable locations outside the RMA, or if within the RMA, so the material won't be washed into wetlands or waterways)
- Use of erosion control methods in a timely manner, including seeding and mulching specific areas with non-invasive species, installing silt fences and installing other devices as appropriate.
- ODOT Maintenance will take precautionary measures on erodible areas (chicken wire, chain link, rock matting) where eroding areas are identified, and where precautionary measures can be successfully and safely applied.
- ODOT Maintenance will coordinate with ODFW and wetland permitting agencies (US Army Corps of Engineers (USACOE) and DSL) when placing riprap that is in addition to existing conditions and within the two-year floodplain of waters of the State. This activity may require a section 404 of the Clean Water Act and/or DSL fill removal permit. If a DSL permit is needed, the work is outside the scope of this guide (See Appendix D).

Channel Maintenance (MMS 124)

Definition: Channel: a channel is different from a ditch in that a channel is a facility that collects drainage water, can be parallel or perpendicular to the highway facility, and may or may not be a natural stream.

Description: This action includes cleaning and repairing existing channels, including placing riprap to restore and grade.

Minimization and Avoidance

- Installation of new sections of riprap in existing draining systems (i.e. in systems acting as streams) will be considered a significant action, and will not be considered in this document.

- During replacement of significant sections of riprap within drainage channels acting as streams, ODOT will attempt to employ bioengineering solutions where appropriate (stable and not cost-prohibitive).

- Any excess material will be removed from channels after maintenance actions are completed. No material, which could contribute sediment to downstream habitats, will be deposited below the bank or in waterways or wetlands.
- Within the two-year floodplain of system s supporting sensitive fishes, ODOT

Maintenance will perform work during the ODFW in-water work window, or as negotiated with ODFW.

- Cleaning schedule/methods and repairs of channels will be communicated to ODFW (by letter) at least two weeks prior to cleaning, in ODFW identified sensitive areas, such as spawning grounds. Any in-water work will be coordinated with ODFW to ensure no fish stranding occurs, to minimize sediment impacts (except during emergencies) and to clarify in-water work periods in transitional stream reaches.

- ODOT Maintenance will use clean rock sources for channel maintenance.

- ODOT Maintenance will coordinate with ODFW and wetland permitting agencies (US Army Corps of Engineers (USACOE) and DSL) when placing riprap that is in addition to existing conditions and within the two year floodplain of waters of the State. This activity may require a section 404 of the Clean Water Act and/or DSL fill removal permit. (See Appendix D)

Fish Restoration (No ODOT MMS)

Description: This is any ODOT work that involves planting vegetation along a stream corridor (e.g. slope stabilization, replanting of removed vegetation). Any ODOT work that incorporates bioengineering into existing riprap or any ODOT work that modifies an existing drainage ditch for better water-quality control (no major construction is involved).

Minimization/Avoidance:

See Ditch Shaping and Cleaning (#120)
See Erosion Repair (#122)

Fish Betterment (No ODOT MMS)

Description: This work includes installation in culverts of baffles or weirs for fish passage, construction of berms, or detention facilities, installation of deck curbs, new culverts or jump pools for fish passage.

Minimization/Avoidance:

See Culvert and Inlet Cleaning, Culvert/Inlet Repair, Miscellaneous Hand/Minor Repair (#129)

Bridge Maintenance (MMS 160, 163) Other Structure Maintenance (MMS 169)

Description: This is a large category of ODOT Maintenance actions. There are two major categories: drift removal and maintenance of bridges and large (over six feet diameter) culverts.
Drift removal involves either using boats to maneuver the drift, hydraulic tongs to reach over the side of structure and dislodge the material, or pulling the drift from the side of

the bridge (bank) and cutting it into pieces.

Maintenance and replacement of structures includes washing, painting, scraping and patching of curbs, rails, deck joints, on wood, concrete and steel bridge components. Pesticides are applied to bridges occasionally.

Minimization and Avoidance

- All work within the flowing channel of any aquatic system will be performed during the appropriate in-water work window for that system, or as negotiated with ODFW (except when there is imminent danger to life, limb, or structure).

Drift Removal

- ODOT Maintenance will cut (only when necessary) and turn drift to allow it to flow through and under the structure, where doing so would not endanger any other crossing structures downstream.

- ODOT Maintenance will repair and restore riparian areas temporarily impacted by machinery during drift removal. Long-term access for drift removal will be coordinated with ODFW.

Bridge Cleaning/Maintenance

- The Clean Water Act and the NPDES (as regulated by the DEQ) regulate hazardous materials entering waters of the State. DEQ has stated that adequate measures, to the 'maximum extent practicable' will be taken in maintenance activities to ensure that paint and other hazardous material does not enter waters of the State. These avoidance measures, if followed, will be sufficient to avoid impacts to sensitive salmonids. ODOT Maintenance will coordinate guano removal and any other specific concerns with DEQ.

- While performing maintenance on bridge structures (above water), reasonable attempts, to the maximum extent practicable, will be made to keep material from falling from the structure into the water. Any material which does fall into the water will be removed (if possible) in the least destructive way possible, or left in place if this would be less destructive to fisheries habitat (See Appendix C).

- ODOT Maintenance will temporarily block deck drains over streams and scuppers over streams when pressure washing, sandblasting, or scraping structures, to route water off deck and into vegetated areas where practicable.

- ODOT Maintenance will remove debris from bridge decks in a manner that minimizes material entering waterbodies. Preferred methods may include removal of large debris from bridge decks with a sweeper or a shovel. Other material may be scraped by hand before being collected, removed (prior to pressure washing). Material will be disposed of as identified in the local Material Disposal Plan.

- ODOT is developing a policy to eliminate drainage systems that drain directly to streams where physically possible (See Bridge Office Practices Manual and Appendix F).

Bridge Repair (MMS 162)

Description: This includes repair of bridges and large culverts (over six feet diameter). In- water bridge repair can include repair or replacement of riprap, drainage features, and catch basins and replacement of structural members.

Minimization and Avoidance

- Bridge repair work that requires installation of riprap will consider use of bioengineering solutions, where practicable. "Practicable" use areas will include areas unshaded by bridge elements, above the full bank stage where success is probable and safety of the bridge structure is assured.

- Bridge structural repairs that require in-water work will be independently coordinated with ODFW and/or the Region Environmentalist and the responsible Engineer to minimize impacts. These contacts will determine whether or not the action will require significant modification of the aquatic system and thus require a Biological Assessment and consultation with NMFS/USFWS. In-water work may include permanent impacts, such as placing riprap, or temporary impacts such as installing falsework or stream access.

- ODOT Maintenance will coordinate with ODFW wetland permitting agencies (US Army Corps of Engineers (USACOE) and DSL), and other appropriate environmental regulators when placing riprap that is in addition to existing conditions and within the two year floodplain of waters of the State.

- ODOT Maintenance will coordinate with ODFW (where and when necessary) to divert water away from concrete work areas during structural repairs of bridges and culverts.

- When repairing drainage features ODOT, will make every attempt (within the engineering solution) to incorporate fish passage solutions and enhancements, such as adding roughness (by adding cobble) in coordination with the Region Environmentalist and/or ODFW, and ODOT Hydraulics.

- ODOT Maintenance will perform any in-water work within ODFW in-water work window, or in time frames negotiated with ODFW (See Appendix C).

Best Management Practices for bridge repair will include:

- Placing refuse material above the bank, away from waterways and wetlands.
- Ensuring that the active flowing stream will not come into contact with fresh, plastic concrete.
- Disposing of material in locations and manners identified in the local disposal plan.
- Providing a stable, appropriate concrete truck chute clean-out area and requiring the contractor to use it, to keep material from being deposited in riparian corridors.
- Using cofferdams for structural repairs as appropriate.
- Containing saw chips where feasible.
- Avoiding use of creosote or "Penta"treated wood for permanent structures.

VEGETATION MANAGEMENT

ODOT implemented an Integrated Pest Management Program as required by ORS 634.660. An Integrated Pest Management program identifies the most appropriate method for controlling a pest. For ODOT, the "pest" being controlled is unwanted vegetation, consequently, ODOT prefers the term Integrated Vegetation Management (IVM). IVM methods typically involve:

- Mechanical: using equipment such as mowers, chain saws, brushers, etc.
- Biological: using a natural predator to control the pest (flea beetle or Cinnabar Moth to control tansy ragwort, for example)
- Cultural: incorporating native, or more appropriate, plant material to out-compete the pest
- Chemical: applying appropriate chemicals

In the past two years, ODOT has required each of its maintenance districts to develop an IVM plan for vegetation management. Each plan typically includes:

- Goals and objectives for IVM
- Maps of roads and management zones
- Methods (in some cases by mile point) to be used to control vegetation
- Reports
- Best Management Practices

ODOT incorporates routine maintenance activities into the IVM program.

Definition of Danger Tree: Trees or snags, on or near the highway that are found to be weakened, unsound, undermined, leaning, or exposed so they may fall across the highway. When permission to remove the trees cannot be obtained, it is necessary to trim and do whatever else is reasonable to alleviate the hazard. (ODOT Maintenance Guide, Chapter 8, page 11, section 8.503.)

Mowing (MMS 130), Brush Mowing (MMS 132), Brush Cutting (by hand) (MMS 133)

Description: These actions are designed to restore sight distance, reduce ice (due to shading) and to control/prevent slope failure. These actions involve mechanical mowing, trimming, removal of brush and cleanup.

Minimization and Avoidance

- No alterations to the mowing policy will be necessary to avoid impacts to fish. Local Integrated Vegetation Management Plans identify mowing areas, and are designed to minimize impact to receiving waters while still maintaining grassed areas.

- Cut brush, in riparian areas, will be left in place where doing so does not interfere with sight distance, create safety issues, cause fire hazards, involve noxious weeds or the proper functioning of highway features (e.g. drainage).

- ODOT Maintenance actions will limit mowing to no more than 8 feet off edge of pavement in significant resource areas, unless needed to maintain proper functioning of highway features (e.g. drainage).

- ODOT Maintenance will maintain shade trees along streams and rivers, unless those trees are danger trees (as determined by ODOT Forester and/or appropriate resource agency), could potentially impact bridge structures, or could impact line of sight. If trees provide shade or bank stabilization within 50 feet of streams and are determined to be danger trees that must be removed, tree removal will be coordinated with ODFW or other regulatory agency.

- Only brush within 20 feet (on either side) of and under all bridge structures will be removed. All other brush not within ODOT's clearzones will be left in its current condition, unless the brush interferes with sight distance, shades the structure, or the brush is a noxious weed (e.g. scotch broom). Mapping of sensitive resource areas may lead to additional areas not being brushed.

- On culverts 6 feet or greater, ODOT Maintenance will remove 10 feet of brush on both sides of the culvert, on the upstream end of the culvert and 10 feet on both ends on the downstream side, unless the brush around the culvert is a noxious weed. If other brushing needs are identified, ODOT will coordinate with ODFW.

When removing mature trees (over 12-inch (30cm) diameter at breast height (dbh)) in riparian areas, ODOT will replant two seedling/cuttings for every tree removed. ODOT will coordinate with ODFW on species and location of trees to be replanted within the same watershed. ODOT will ensure that the replanted trees will not pose a future threat to ODOT structures.

Spraying (MMS 131)

Description: This action consists of spraying chemical to control the growth and spread of noxious weeds and brush. ODOT Maintenance does not use any restricted-use chemicals to control vegetation. Herbicides used include broad-based foliar-active herbicides and soil residual herbicides.

Minimization and Avoidance

- ODOT Maintenance follows an Integrated Vegetation Management program. The local IVM Plan maps locations of sensitive natural resources and identifies areas where spraying does not occur. The local IVM Plan includes protection of sensitive fish species. The herbicide spray program may include modification of spray times and modifications of spray widths to protect riparian areas. Specific minimization/avoidance measures will be developed on a site-specific basis.

Best Management Practices will include:

- ODOT Maintenance will eliminate spray activities on structures located over streams or adjacent to wetlands.
- ODOT Maintenance will use chemicals approved for use near aquatic resources, or as directed by regulators.
- Herbicides will be used in accordance to EPA labels.
- Within riparian areas, ODOT Maintenance will hand spray around structures over water that require chemical vegetation control.

- Within 25 feet of riparian areas, ODOT will boom spray no further than eight feet from the edge of pavement.
- Within 25 feet of an active, flowing stream, ODOT will stop all boom spraying.
- Where computer-assisted spray trucks are owned, they will be utilized. Computer assisted spray trucks can manipulate the mixture and rate sprayed, and can stop and start spray activities to avoid impacting individual creeks.

Bridge Vegetation (MMS 160, 133)

Description: This includes vegetation management around existing bridges. The primary purpose of bridge vegetation management is to maintain sight distance. Bridge vegetation management must also maintain access to the bridge structure for structure maintenance, fire safety, and to maintain the integrity of the structure.

Minimization and Avoidance

- ODOT Maintenance will normally only remove brush to 20 feet on either side and under all maintained bridges for access or repair. (In some instances, road access under or adjacent to the structure will be outside the 20 foot buffer).

- Only brush necessary to perform the activity will be removed.

- When removing mature trees (over 12-inch (30cm) dbh) in riparian areas, ODOT will replant two seedling/cuttings for every tree removed. ODOT will coordinate with ODFW on species and location of seedlings/cuttings to be replanted within the same watershed. ODOT will ensure that the replanted trees will not pose a future threat to ODOT structures.

Other Vegetation Management (No ODOT MMS)

Description: The ODOT Forester, and/or resource agency staff (such as State Forestry, US Forest Service), identifies and ODOT Maintenance removes danger trees (see page 16 for definition). ODOT Maintenance also removes trees from forested areas, which are weighting unstable slide areas, and where the trees or slide have the potential to reach the highway. ODOT Maintenance also occasionally removes trees, which threaten to fall, and in the falling or uprooting, remove large portions of bank area.

Minimization and Avoidance

- Where possible, ODOT Maintenance will attempt to maintain buffer strips corresponding to these Riparian Management Areas

SIZE	**RIPARIAN MANAGEMENT WIDTHS**	**EXAMPLES**
Large	100 feet	Umpqua River, Sandy River, Willamette River
Medium	70 feet	Little Sandy River, Steamboat Creek, Pudding Creek
Small	50 feet	Most streams (first-second order tributaries)

- ODOT Maintenance will maintain shade trees along streams or rivers unless those trees are "danger trees" as described above. If trees provide shade or bank stabilization, are within 50 feet of streams, and are determined to be danger trees that must be removed, the trees will be removed in consultation with ODFW.

- Prior to removing trees within an RMA to reduce weight on a failing slope, coordination will be performed with the Region Environmentalist, ODFW, and/or the appropriate regulatory agency. Removal of many trees from streamside areas will require a replanting and erosion control plan. Significant consideration will be given to retaining trees, which provide stream shading (e.g. within 50 feet of the active channel).

- Permanent solutions to chronically unstable areas will be pursued through the project development process. Solutions could include artificial hillside drainage or permanent shoring.

- When removing mature trees (over 12-inch (30cm) dbh) in riparian areas, ODOT will replant two seedling/cuttings for every tree removed. ODOT will coordinate with ODFW and/or the Region Environmentalist on species and location of seedling/cuttings to be replanted within the same watershed. ODOT will ensure that the replanted trees will not pose a future threat to ODOT structures.

Accident Clean up (MMS 149)

Description: This action includes removal of accident debris, and may include response to hazardous spills. Upon knowledge of an incident, ODOT Maintenance's prioritized responsibilities consist of 1) maintenance of public safely 2) ensuring through DEQ, contractors or other responsible parties that the appropriate cleanup is properly performed as identified in local accident response procedures.

Guardrail Replacement (MMS 151)

Description: This activity involves repair and replacement of existing guardrail sections.
Minimization and Avoidance

- In unstable situations, areas downslope from guardrail replacement will be protected with erosion control measures (silt fences and other appropriate devices) where appropriate to minimize additional sediment loadings into aquatic systems.

Attenuator Maintenance (MMS 153)

Description: This activity includes service, repair, replacement, and realignment of damaged attenuators (physical systems that are strategically placed along exit ramps, bridge abutments, etc. to minimize impacts and cushion vehicles). Following impact, attenuators compact, releasing fluid (often ethylene glycol) which can flow directly to drainage systems.

Minimization and Avoidance

- ODOT Maintenance will use non-chemical systems when installing new attenuators.

- When replacing attenuators, ODOT will install those devices found to be the most environmentally sound.

- ODOT Maintenance will use absorbent dams or diapers around attenuators during repair or maintenance.

- ODOT Maintenance will identify and close inlets (if appropriate and can be done safely) during attenuator maintenance.

Snow and Ice Removal (MMS 170) and Sanding (MMS 171)

Description: Snow/ice removal consists of plowing snow and ice from bridges, roadways, and shoulders. Sanding activities put sand on road and bridge surfaces to provide for safer driving surfaces. Calcium magnesium acetate (CMA), potassium acetate and magnesium chloride are applied as anti-icers, to prevent water from bonding to the pavement. Winter weather will determine rates of application for sand and anti-icers and de-icers. ODOT recycles sanding material into shoulders. ODOT crews estimates that anywhere from 10-50% of the sand applied is re-used or trapped. The majority of the sand is removed from the road by plows, up to 60 feet off the road. ODOT captures sand around bridges, and near streams where possible.

Minimization and Avoidance

- ODOT Maintenance develops winter management and operation plans that identify critical areas, levels of service for roads and methods for maintaining levels of service during winter weather.

Best Management Practices include:

- Reducing application rates of sand
- Using CMA on bridges and roads where permitted and during freezing fog in lieu of sanding, when optimum conditions exist, where adjacent water bodies support a 100:1 dilution factor or there is a vegetative buffer between the road and water body and where there is no standing, shallow water.
- Placing barriers in site specific locations where appropriate and practical, along streams or direct drainages to route sanding/anti-icing material away from watercourses.
- Reducing plowing speed in sensitive areas.
- Stopping sidecast sweeping within 50 feet of structures over water, where structurally possible.
- Identifying and creating facilities to capture sanding material where appropriate.
- Reducing quantity of sand applied where appropriate.
- Cleaning inlets prior to first rain as feasible.
- Modifying blade angles or blower hoppers in sensitive areas.
- Educating ODOT Maintenance staff on water quality and fishery resource issues.

- ODOT Maintenance will be limiting the use of magnesium chloride over the next year to certain geographic areas, and within two years is expected to eliminate the use completely.

(NOTE: manufacturers and distributors are working on providing impartial documentation on the environmental impact of magnesium chloride. ODOT reserves the right to use magnesium chloride if environmental clearances by regulators and engineers are obtained.)

Emergency Maintenance (MMS 180)

Description: This action includes fixing damage to roadways, the roadside and structures (bridges) caused by storms, floods, and other activities. These actions may not be technically defined as an emergency under the Endangered Species Act (Presidential declaration), however, failure to perform these activities may result in immediate threat to life, limb or structures (See Appendix G).

Minimization and Avoidance

- ODOT will provide quick response and first inspection, and notify appropriate resource staff in a timely manner.

- In coordination with ODFW and/or Region Environmentalist, ODOT Maintenance will repair any damage to fishery or water resources caused by ODOT Maintenance responses to the emergency.

- ODOT Maintenance will avoid additional impacts to wetlands or streams where possible.

- ODOT Maintenance will provide, if possible, adequate erosion control or bank stabilization necessary to keep material from entering watercourses.

- ODOT Maintenance will identify and plan for slide debris disposal sites as part of local disposal plans. Appropriate sites for long and short-term material disposal will be identified and cleared for any potential wetland or sensitive species impact and mapped.

- Remedial actions for emergencies will include bioengineering and fish friendly designs, where practicable for stability and safety.

Settlements and Slides (MMS 181)

Description: This action includes repair of settlements and slides by placing fill and removing material. Settlement/slide repairs are done primarily when a road is in danger of collapse, and to forestall an emergency.

Minimization and Avoidance

- Emergency Maintenance (#181) and Erosion Repair (#122) Minimization/Avoidance actions will be followed. Environmental clearances may be required.

Extraordinary Maintenance (MMS 189)

Description: This activity includes work, which is extraordinary, but not specifically identified as a separate activity. Examples include: military operations, forest and other fire response, cleaning benches and moats, ice floes, transient housing control and cleanup, slides and sumps, and broken water line repair and cleanup.

Minimization and Avoidance

- ODOT Maintenance will practice sound housekeeping activities to ensure sediment and other materials do not enter watercourses.

- ODOT will repair any damage to fish habitat caused directly by ODOT actions.

Stockpiling (MMS 190)

Description: Stockpiling materials for ODOT Maintenance activities.

Minimization and Avoidance

- ODOT will develop site plans for areas adjacent to or near riparian areas to identify erosion and sediment control needs, and to ensure stability of the material.

- Sites will be identified as part of the local disposal plan.

Appendix C PacifiCorp Road Management Responsibilities by Draft Upper Klamath River Management Plan/EIS and RMP Amendments Alternative

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PacifiCorp Road Management Responsibilities by Draft Upper Klamath River Management Plan/EIS and RMP Amendments Alternative.

	Segment 1[A]	Segment 2[B]	Segment 3[C]
Alternative 1	• The short portion of Topsy Grade Road that passes through PacifiCorp land in the northeast corner of Segment 1, and the portion of the Powerhouse road that crosses PacifiCorp land would receive spot improvements. This would improve vehicle travel and access to the canyon, as well as to lands adjacent to the canyon.	• In Segment 2, the construction of about one-third of a miles of road on PacifiCorp land (T.41S, R.5E, Section 12, and T.41S, R.6E, Section 7) would allow the exiting road to be obliterated but maintain access to the area via other routes. • Obliterating more than a mile of roads in the vicinity of Frain Ranch and at the south end of the Klamath River edge road will reduce access to the river to a minor extent, but other roads provide similar access. Continuation of the Pokegama Closure affects less than two miles of road on PacifiCorp lands. Administrative closure (gating) of powerline roads on PacifiCorp would reduce road damage and long-term maintenance needs.	• The more than nine miles of roads on PacifiCorp land that access irrigation diversions, rangelands, and timber stands in Segment 3 will remain closed to general public use in this alternative, thus reducing possible road damage and long-term maintenance needs. Spot improvements on about 0.5 miles of Topsy Grade as it passes through PacifiCorp land will improve overall access to the planning area.
Alternative 2	• Reconstructing the bridge immediately downstream from J.C. Boyle Dam would increase public and administrative access. New administrative use closures proposed for slightly more than a mile of roads that access PacifiCorp lands and facilities would reduce maintenance needs and deterioration of the road surface. Spot improvements to a short portion of Topsy Grade Road and a portion of the Powerhouse road would improve access to the canyon, as well as to lands adjacent to the canyon.	• Constructing a short (less than 0.3 miles) connecting road on the north end of Frain Ranch would allow obliteration of more than half a mile of road on PacifiCorp land, as well as a portion of road on adjacent BLM land. • Obliteration of more than half a mile of road on the north end of Frain Ranch, nearly 3 miles of road in riparian reserves in the vicinity of Frain Ranch, short lengths of spur roads near Caldera Rapid, and many other user-created roads in the southern portion of the Frain Ranch area outside of riparian reserves would decrease motorized travel on PacifiCorp lands. • Limited administrative use closures of	• New roads near the Beswick Hot Springs will provide access to the proposed Shovel Creek campground and day use area but would not substantially expand the transportation system. • Implementing administrative use closures on the upper portion of the Negro Creek road, as well as associated spur roads, would eliminate public motorized access to low voltage powerlines that cross the drainage. • Permitted public use (a type of administrative use) proposed on about 2.5 miles of road to the south of the river would expand available road travel options near Shovel Creek and up to the Panther Canyon Overlook. Public use on

PacifiCorp Road Management Responsibilities by Draft Upper Klamath River Management Plan/EIS and RMP Amendments Alternative.

	Segment 1[A]	Segment 2[B]	Segment 3[C]
		powerline roads west of the river and two miles of road in the Pokegama Closure would decrease public access, but would reduce road damage and long-term maintenance needs. • Limited spot improvements on the segment of the Powerhouse road east of the Hells Corner Rapid overlook, as well as spot resurfacing on the Topsy Grade Road, would improve public safety of the roads.	these roads would be permitted only when the roads were dry enough to avoid being damaged, and portions of these roads would be improved to reduce erosion and road-surface damage. The road leading to Fishing Access #6 would also be improved to allow easier access by vehicles towing trailers.
Alternative 3	• The recommendation to close nearly two miles of access roads on PacifiCorp land to public use would reduce damage to adjacent resources and maintenance needs on those roads. Public motorized access to the fish ladder area and the bridge site immediately downstream from J.C. Boyle Dam will be removed by these actions. • Spot improvements to short portions of the Topsy Grade Road and Powerhouse Road that pass though PacifiCorp land in Segment 1 would improve access to the canyon, as well as to lands adjacent to the canyon.	• Construction of a short (less than 0.3 miles) connecting road on the north end of Frain Ranch would slightly add to the road system, but would allow obliteration of more than half a mile of road on PacifiCorp land, as well as a portion of road on adjacent BLM land. • Obliteration of more than five miles of road (primarily at Frain Ranch on both sides of the river and also near Chert Creek), limited road decommissioning near Caldera Rapid, limited administrative use closures (powerline roads), and continuation of the seasonal Pokegama Closure (less than two miles of road) would reduce public access, as well as road damage and long-term maintenance needs. • Limited spot improvements, including minor road widening on the Powerhouse road and the Topsy Grade Road, would improve the safety of the roads, but would require increased maintenance. Resurfacing the Powerhouse road where it crosses Chert Creek meadow will	• Obliteration of the lower portion of the road to Stateline Recreation Area (contingent on the relocation of that recreation site), and the decommissioning Hessig Creek road would reduce administrative access to areas of BLM and PacifiCorp land, and would also make access to adjacent private land more inconvenient. • It is recommended that the entire length of the Shovel Creek road would be open only for administrative use, and some spurs off that road could be obliterated. • Approximately four miles of roads on both sides of the river that access PacifiCorp ranch and forest lands and adjacent public lands. Portions of these roads would be improved to reduce erosion and road-surface damage. These actions would also result in improved administrative access. Improvement of the road leading to Fishing Access #6 would allow safer travel, especially by vehicles with trailers.

PacifiCorp Road Management Responsibilities by Draft Upper Klamath River Management Plan/EIS and RMP Amendments Alternative.

	Segment 1[A]	Segment 2[B]	Segment 3[C]
		substantially prolong the length of time this road can be used without causing resource damage.	
Alternative 4	• Reconstructing the bridge immediately downstream from J.C. Boyle Dam would increase public and administrative access through Segment 1. The roads leading to the proposed bridge site are in good condition on both sides of the river, so no improvement beyond the current maintenance program is expected to be required. • About one-half mile of native surface roads that provide access to a portion of the flume would be closed to public access. • The portion of the Powerhouse road that is located on PacifiCorp land would be resurfaced and would provide safer more convenient travel.	• About one-third of a mile of new road recommended for construction on PacifiCorp land adjacent to Chert Creek (extending onto BLM as well), would replace the existing Chert Creek road and thereby maintain a secondary motorized access route to the Hoover Ranch area. • The recommended obliteration of slightly more than two miles of road on PacifiCorp land (including the existing Chert Creek road, one mile of excess roads in the vicinity of Frain Ranch, and the Klamath River edge road) would reduce overall motorized access within the canyon. • Two miles of road that are on PacifiCorp land will continue to be affected by the Pokegama (seasonal) Closure. • Road improvements would provide safer travel on about 2.5 miles of PacifiCorp road, primarily along the Powerhouse and Topsy Grade Roads.	• Recommended new roads built on PacifiCorp land near the Beswick Hot Springs would provide needed access to the proposed Shovel Creek campground and day use area but would not add significantly to the transportation system. • Public use would be allowed on about 2.5 miles of road to the south of the river when the roads were dry enough to avoid being damaged. This change in road status would add substantially to the open road system in this segment. • Extensive improvements would occur on the road leading to Fishing Access #6 to facilitate safer and easier use by vehicles pulling trailers.

[A] *Segment 1 of the BLM's planning area begins at the J.C. Boyle Dam and continues downstream to the J.C. Boyle Powerhouse. Much of this area is within the proposed FERC Project boundary.*
[B] *Segment 2 of the BLM's planning area begins at the J.C. Boyle Powerhouse and continues downstream to the Oregon/California state line. The majority of this segment is not within the proposed FERC Project boundary. The access road from the J.C. Boyle Powerhouse downstream to the turnaround to the south of Spring Island Boater Access is the only PacifiCorp managed road within this BLM planning area segment.*
[C] *Segment 3 of the BLM's planning area beings at the Oregon/California state line and continues downstream to approximately Copco Reservoir. Much of this area is within the proposed FERC Project boundary.*
Source: BLM 2003

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Appendix D Project Maintained Roads Summary

Appendix D. PacifiCorp Road Classifications, Maintenance Levels, and Cost Sharing for Identified Roads in the Proposed FERC Project Boundary by Route ID, Name, and Map Number.

ROUTE_ID	NAME	App. A Tile #	Project Road Type	Project Main. Level	Project Responsibility %	Ownership	To Termini	From Termini	Length (mile)
20000051	POWERHOUSE RIVER ACCESS RD.	20	PMH	2	100	BLM/Private	1289	1301	0.12
20000052	POWERHOUSE RIVER ACCESS RD.	20	PMH	2	100	BLM	1292	1296	0.04
20000054	LINK RIVER TRAIL	33	PMH	2	100	PacifiCorp	9	62	1.47
30000001	UNNAMED PRIVATE RD.	01	PMH	2	100	PacifiCorp	2797	2782	0.71
30000002	UNNAMED PRIVATE RD.	01	PMH	2	100	PacifiCorp	2786	2790	0.01
30000003	UNNAMED PRIVATE RD.	01	PMH	2	100	PacifiCorp	2784	2781	0.16
30000004	UNNAMED PRIVATE RD.	01	PMH	2	100	PacifiCorp	2780	2782	0.04
30000005	UNNAMED PRIVATE RD.	01	PMH	3	100	PacifiCorp	2776	2776	0.07
30000007	UNNAMED PRIVATE RD.	01	PMH	2	100	PacifiCorp	2745	2773	0.44
30000008	UNNAMED PRIVATE RD.	01	PMH	2	100	PacifiCorp	2751	2750	0.25
30000009	OLD QUARRY RD.	02	PMH	3	100	BLM/PacifiCorp	2658	2652	0.19
30000013	COPCO VILLAGE RD.	05,06	PMH	2	100	PacifiCorp	2245	2233	0.02
30000014	COPCO VILLAGE RD.	05,06	PMH	2	100	PacifiCorp	2305	2242	0.27
30000015	UNNAMED PRIVATE RD.	04,05,06	PMH	2	100	PacifiCorp	2237	2246	0.01
30000018	UNNAMED PRIVATE RD.	04,05,06	PMH	2	100	PacifiCorp	2093	2113	0.46
30000019	UNNAMED PRIVATE RD.	06	PMH	2	100	PacifiCorp	2104	2107	0.05
30000020	SCHOOLHOUSE RD.	05,06	PMH	2	100	PacifiCorp	2311	2305	0.05
30000021	COPCO VILLAGE RESIDENCE RD.	05,06	PMH	2	100	PacifiCorp	2322	2305	0.10
30000022	COPCO VILLAGE POWERHOUSE RD.	05,06	PMH	2	100	PacifiCorp	2150	2305	0.37
30000023	BUNKHOUSE RD.	05,06	PMH	2	100	PacifiCorp	2276	2294	0.14
30000024	BUNKHOUSE RD.	05,06	PMH	2	100	PacifiCorp	2269	9999	0.23
30000025	COPCO VILLAGE POWERHOUSE RD.	05,06	PMH	2	100	PacifiCorp	2177	2175	0.02
30000026	WATER TOWER RD.	05,06	PMH	2	100	PacifiCorp	2146	2269	0.29
30000027	WATER TOWER RD.	05,06	PMH	2	100	PacifiCorp	2138	2156	0.06
30000028	DUMP RD.	05,06	PMH	2	100	PacifiCorp	2268	2269	0.04
30000029	COPCO CANYON ACCESS RD.	05,06	PMH	2	100	PacifiCorp	2297	2269	0.61
30000030	COPCO CANYON ACCESS RD.	05,06	PMH	2	100	PacifiCorp	2079	2297	0.87
30000031	COMM. TOWER RD.	05,06	PMH	2	100	PacifiCorp	2160	2297	0.26
30000032	COPCO CANYON ACCESS RD.	05,06	PMH	2	100	PacifiCorp	2084	2095	0.11
30000033	COPCO 2 DAM - SOUTH ACCESS RD.	06	PMH	2	100	PacifiCorp	2070	2101	0.78
30000034	COPCO VILLAGE - S. ACCESS RD.	05,06	PMH	2	100	PacifiCorp/Private	2632	2348	0.64
30000038	IRON GATE DAM ACCESS RD.	01	PMH	3	100	PacifiCorp	2730	2729	0.21
30000039	IRON GATE DAM ACCESS RD.	01	PMH	3	100	PacifiCorp	2728	2730	0.21
30000040	UNNAMED PRIVATE RD.	01	PMH	3	100	PacifiCorp	2733	2736	0.02
30000041	UNNAMED PRIVATE RD.	01	PMH	3	100	PacifiCorp	2722	2730	0.14
30000042	UNNAMED PRIVATE RD.	01	PMH	2	100	PacifiCorp	2713	2706	0.24
30000043	COPCO NO.2 VILLAGE RD.	06,09,10	PMH	2	100	PacifiCorp/Private	2031	1963	0.47
30000044	UNNAMED PRIVATE RD.	06,09,10	PMH	2	100	Private	1969	1961	0.03
30000045	COPCO NO.2 VILLAGE RD.	06	PMH	2	100	PacifiCorp	2026	2029	0.26
30000046	COPCO NO.2 VILLAGE RD.	06,10	PMH	2	100	PacifiCorp	2032	2031	0.09
30000047	COPCO NO.2 POWERHOUSE RD.	06,10	PMH	2	100	PacifiCorp	2069	2031	0.43
30000048	COPCO NO.2 POWERHOUSE RD.	06,10	PMH	2	100	PacifiCorp	2054	2073	0.12
30000049	COPCO NO.2 POWERHOUSE RD.	06,10	PMH	2	100	PacifiCorp	2058	2056	0.02
30000050	COPCO 2 DAM - NORTH ACCESS RD.	06	PMH	2	100	PacifiCorp	2062	2066	0.08
30000051	CINDER QUARRY RD.	06	PMH	2	100	PacifiCorp	2013	1923	0.58
30000064	UNNAMED PRIVATE RD.	06,07	PMH	2	100	PacifiCorp/Private	1831	1751	0.60
30000065	UNNAMED PRIVATE RD.	07	PMH	2	100	PacifiCorp	1770	1782	0.26

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ROUTE_ID	NAME	App. A Tile #	Project Road Type	Project Main. Level	Project Responsibility %	Ownership	To Termini	From Termini	Length (mile)
30000066	UNNAMED PRIVATE RD.	06,07	PMH	2	100	PacifiCorp	1838	1744	0.87
30000067	UNNAMED PRIVATE RD.	07	PMH	2	100	PacifiCorp	1741	1744	0.01
30000068	UNNAMED PRIVATE RD.	07	PMH	2	100	PacifiCorp/Private	1737	1751	0.26
30000072	UNNAMED PRIVATE RD.	06	PMH	2	100	PacifiCorp	1962	1979	0.06
30000073	UNNAMED PRIVATE RD.	06	PMH	2	100	PacifiCorp	1948	1975	0.09
30000074	UNNAMED PRIVATE RD.	06	PMH	2	100	PacifiCorp	1970	9997	0.10
30000083	SHOVEL CREEK ACCESS RD.	12,13,14	PMH	2	100	PacifiCorp	2498	2271	1.14
30000084	SHOVEL CREEK ACCESS RD.	13,14	PMH	2	100	PacifiCorp	2456	2412	0.08
30000085	SHOVEL CREEK ACCESS RD.	13	PMH	2	100	PacifiCorp	2500	2448	0.12
30000086	SHOVEL CREEK ACCESS RD.	13	PMH	2	100	PacifiCorp	2511	2498	0.05
30000115	UNNAMED OHV TRAIL	21	PMH	2	100	PacifiCorp	1162	1146	0.00
30000116	JC BOYLE DAM RD.	21	PMH	2	100	PacifiCorp	1106	1160	0.59
30000117	RED BARN RD.	21	PMH	2	100	PacifiCorp	1101	1148	0.39
30000118	RED BARN ACCESS RD.	21	PMH	2	100	PacifiCorp	1122	1143	0.10
30000119	RED BARN ACCESS RD.	21	PMH	2	100	PacifiCorp	1126	1134	0.13
30000120	RED BARN ACCESS RD.	21	PMH	2	100	PacifiCorp	1112	1123	0.06
30000141	KENO DAM RD.	24	PMH	2	100	PacifiCorp	796	804	0.19
30000144	JC BOYLE DAM RD/SPRING ISLAND	19,20,21	PMH	2	100	PacifiCorp/Private/BLM	1090	1288	3.91
30000145	JC BOYLE TUNNEL ACCESS RD.	20	PMH	2	100	BLM	1287	1298	0.17
30000146	JC BOYLE TUNNEL ACCESS RD.	20	PMH	2	100	BLM	1286	1299	0.20
30000147	JC BOYLE TUNNEL ACCESS RD.	20	PMH	2	100	BLM	1283	1313	0.63
30000148	JC BOYLE CANAL ACCESS RD.	20,21	PMH	2	100	PacifiCorp/Private/BLM	1278	1111	2.09
30000149	UNNAMED PRIVATE RD.	21	PMH	2	100	PacifiCorp/BLM	1151	1125	0.10
30000150	UNNAMED PRIVATE RD.	21	PMH	2	100	PacifiCorp	1127	1142	0.08
30000151	UNNAMED PRIVATE RD.	21	PMH	2	100	PacifiCorp	1124	1131	0.05
30000152	JC BOYLE DAM RD.	21	PMH	2	100	PacifiCorp	1119	1103	0.10
30000153	UNNAMED T-LINE ACCESS RD.	21	PMH	2	100	PacifiCorp	1107	1108	0.02
30000155	JC BOYLE DAM RD.	21	PMH	2	100	PacifiCorp	1113	1106	0.06
30000156	JC BOYLE DAM - MAIN RD.	21	PMH	2	100	PacifiCorp/Private	1106	1010	0.57
30000157	UNNAMED PRIVATE RD.	21	PMH	2	100	PacifiCorp/Private	1016	1084	0.50
30000158	UNNAMED PRIVATE RD.	21	PMH	2	100	PacifiCorp	1074	1073	0.07
30000159	UNNAMED PRIVATE RD.	21	PMH	2	100	PacifiCorp	80159	90159	0.03
30000163	JC BOYLE DAM RD.	21	PMH	2	100	PacifiCorp	1094	1092	0.03
30000164	JC BOYLE DAM RD.	21	PMH	2	100	PacifiCorp	1110	1098	0.09
30000166	UNNAMED PRIVATE RD.	33	PMH	2	100	PacifiCorp	35	22	0.18
30000167	UNNAMED PRIVATE RD.	33	PMH	2	100	PacifiCorp	29	8	0.17
30000170	UNNAMED PRIVATE RD.	33	PMH	2	100	PacifiCorp/Private	58	36	0.39
30000171	MILL ST.	33	PMH	2	100	Unknown	78	68	0.03
30000172	SHOVEL CREEK ACCESS RD.	13	PMH	2	100	PacifiCorp	2495	2498	0.06
30000173	COPCO NO.2 POWERHOUSE RD.	06	PMH	2	100	PacifiCorp	2040	2042	0.04
30000174	UNNAMED PRIVATE RD.	33	PMH	2	100	PacifiCorp/Private	70	65	0.03
50000003	UNNAMED PRIVATE RD.	01	PMH	2	100	Private	2805	2797	0.09
50000034	UNNAMED PRIVATE RD.	05,06,10	PMH	2	100	PacifiCorp/Private	95034	2125	0.67
50000036	UNNAMED PRIVATE RD.	05,06,10	PMH	2	100	PacifiCorp/Private	2059	95036	0.46
50000102	COPCO VILLAGE RESIDENCE RD.	04,05,06	PMH	2	100	PacifiCorp	2317	2314	0.03
50000326	UNNAMED OHV TRAIL	24	PMH	2	100	PacifiCorp	825	824	0.01
50000427	MILL ST.	33	PMH	2	100	PacifiCorp	68	62	0.11

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ROUTE_ID	NAME	App. A Tile #	Project Road Type	Project Main. Level	Project Responsibility %	Ownership	To Termini	From Termini	Length (mile)
20000001	OVERLOOK POINT RD.	01,02	PMR	3	100	PacifiCorp	2678	2679	0.28
20000002	MIRROR COVE RD.	02,03	PMR	2	100	PacifiCorp	2566	2567	0.07
20000003	MIRROR COVE RD.	02,03	PMR	2	100	PacifiCorp	2555	2562	0.24
20000004	JUNIPER POINT REC. RD.	03	PMR	2	100	PacifiCorp	2389	2381	0.23
20000005	CAMP CREEK PULLOFF RD.	03	PMR	2	100	PacifiCorp	2211	2204	0.10
20000006	CAMP CREEK CAMPGROUND RD.	03	PMR	2	100	PacifiCorp	2292	2281	0.05
20000007	CAMP CREEK CAMPGROUND RD.	03	PMR	2	100	PacifiCorp	2258	2287	0.04
20000008	CAMP CREEK CAMPGROUND RD.	03	PMR	2	100	PacifiCorp	2312	2287	0.08
20000009	CAMP CREEK DAY USE AREA	03	PMR	2	100	PacifiCorp	2241	2263	0.04
20000010	CAMP CREEK DAY USE AREA	03	PMR	2	100	PacifiCorp	2257	2179	0.17
20000011	CAMP CREEK RD.	03	PMR	2	100	PacifiCorp	2154	2281	0.16
20000012	WANAKA SPRINGS RD.	03	PMR	2	100	PacifiCorp	2338	2303	0.19
20000013	WANAKA SPRINGS RD.	03	PMR	2	100	PacifiCorp	2320	2319	0.06
20000014	JENNY CREEK REC. RD.	04	PMR	2	100	PacifiCorp	2116	2139	0.13
20000016	FALL CREEK REC. RD.	04,05,06	PMR	2	100	PacifiCorp	2296	2244	0.14
20000017	FALL CREEK REC. RD.	04,05,06	PMR	2	100	PacifiCorp	2252	2267	0.08
20000018	LONG GULCH REC. AREA	01,02	PMR	3	100	PacifiCorp	2685	2702	0.38
20000019	LONG GULCH REC. AREA	01,02	PMR	2	100	PacifiCorp	2694	2692	0.04
20000020	LONG GULCH REC. AREA	01,02	PMR	2	100	PacifiCorp	2689	2696	0.25
20000021	LONG GULCH REC. AREA	01,02	PMR	2	100	PacifiCorp	2689	2689	0.28
20000022	MALLARD COVE REC. RD.	10	PMR	2	100	PacifiCorp	2251	2251	0.12
20000023	COPCO COVE RD.	06,09	PMR	2	100	PacifiCorp	1996	2007	0.13
20000024	COPCO COVE RD.	06,09	PMR	2	100	PacifiCorp	2005	2002	0.02
20000025	COPCO COVE RD.	06,09	PMR	2	100	PacifiCorp	2112	2001	0.03
20000026	FISHING ACCESS #1 ROAD	11	PMR	2	100	PacifiCorp	2479	2474	0.13
20000030	FISHING ACCESS #3 PARKING	12	PMR	2	100	PacifiCorp	2492	2487	0.02
20000031	FISHING ACCESS #5 PARKING	12,13	PMR	2	100	PacifiCorp	2230	2190	0.05
20000033	FISHING ACCESS #6	14	PMR	2	100	PacifiCorp	1854	1853	0.03
20000036	PIONEER CROSSING REC. RD.	22	PMR	2	100	PacifiCorp/Private	776	767	0.09
20000039	KENO REC. AREA MAIN RD.	24	PMR	2	100	PacifiCorp	1053	755	0.98
20000040	KENO REC. AREA RD.	24	PMR	2	100	PacifiCorp	826	799	0.10
20000041	KENO REC. AREA RD.	24	PMR	2	100	PacifiCorp	740	808	0.17
20000042	KENO REC. AREA RD.	24	PMR	2	100	PacifiCorp/BLM	766	90043	0.22
20000043	KENO REC. AREA RD.	24	PMR	2	100	BLM	743	90043	0.22
20000044	KENO REC. AREA RD.	24	PMR	2	100	BLM	721	744	0.18
20000045	KENO REC. AREA RD.	24	PMR	2	100	PacifiCorp/BLM	748	748	0.09
20000046	KENO REC. AREA RD.	24	PMR	2	100	BLM	774	761	0.11
20000047	KENO REC. AREA RD.	24	PMR	2	100	PacifiCorp/BLM	796	755	0.20
20000048	KENO REC. AREA RD.	24	PMR	2	100	PacifiCorp/BLM	900048	811	0.12
20000049	KENO REC. AREA RD.	24	PMR	2	100	PacifiCorp/BLM	820	866	0.00
20000053	PIONEER CROSSING WEST REC. RD.	22	PMR	2	100	PacifiCorp	829	813	0.11
30000006	FISH HATCHERY BOAT LAUNCH RD.	01	PMR	3	100	PacifiCorp	2774	2767	0.07
30000014	COPCO VILLAGE RD.	04,05,06	PMR	2	100	PacifiCorp	2242	2305	0.01
30000090	STATELINE TAKEOUT RD.	15	PMR	2	100	PacifiCorp/BLM	1727	1708	0.04
30000133	SPORTSMANS PARK ACCESS RD.	22	PMR	2	100	PacifiCorp	479	485	0.07
20000027	FISH ACCESS #2 TRAIL	11,12	TRL	2		PacifiCorp	2518	2549	0.12
20000029	FISH ACCESS #3 TRAIL	12	TRL	2		PacifiCorp	2457	2486	0.07

Appendix D. PacifiCorp Road Classifications, Maintenance Levels, and Cost Sharing for Identified Roads in the Proposed FERC Project Boundary by Route ID, Name, and Map Number.

ROUTE_ID	NAME	App. A Tile #	Project Road Type	Project Main. Level	Project Responsibility %	Ownership	To Termini	From Termini	Length (mile)
20000032	FISHING ACCESS #6 TRAIL	14	TRL	2		PacifiCorp	1850	1865	0.09
20000034	FISHING ACCESS #6 TRAIL	14	TRL	2		PacifiCorp	1842	1849	0.05
20000049	KENO REC. AREA TRAIL	24	TRL	2		PacifiCorp/BLM	90048	866	0.14
30000137	GAUGE STATION TRAIL	24	TRL	77		PacifiCorp	921	837	0.33
30000138	GAUGE STATION TRAIL	24	TRL	77		PacifiCorp	895	870	0.18
30000139	GAUGE STATION TRAIL	24	TRL	77		PacifiCorp	837	835	0.01
30000140	GAUGE STATION TRAIL	24	TRL	2		PacifiCorp/Private	837	784	0.24
30000076	FALL CREEK TRAIL	06	TRL	2		PacifiCorp	1968	9998	0.03
30000016	UNNAMED T-LINE ACCESS RD.	04,05,06	PTL	2	100	PacifiCorp	2253	2186	0.18
30000017	UNNAMED T-LINE ACCESS RD.	05,06	PTL	2	100	PacifiCorp	2122	2219	0.41
30000052	UNNAMED T-LINE ACCESS RD.	06	PTL	2	100	Private	1924	1942	0.05
30000053	UNNAMED T-LINE ACCESS RD.	06	PTL	2	100	PacifiCorp	1916	1872	0.30
30000054	UNNAMED T-LINE ACCESS RD.	06	PTL	2	100	PacifiCorp	1876	1887	0.04
30000055	UNNAMED T-LINE ACCESS RD.	06	PTL	2	100	PacifiCorp	1912	1910	0.21
30000056	UNNAMED T-LINE ACCESS RD.	06	PTL	2	100	PacifiCorp	1915	1904	0.06
30000057	UNNAMED T-LINE ACCESS RD.	06	PTL	2	100	PacifiCorp	1930	1907	0.07
30000058	UNNAMED T-LINE ACCESS RD.	06	PTL	2	100	PacifiCorp/Private	1932	1908	0.92
50000035	UNNAMED TLINE ACCESS. RD.	05,06	PTL	2	100	PacifiCorp/Private	2144	2109	0.10
50000061	UNNAMED T-LINE ACCESS RD.	11	PTL	2	100	Private	2400	2391	0.12
50000062	UNNAMED T-LINE ACCESS RD.	11	PTL	2	100	Private	2400	2380	0.08
50000082	UNNAMED PRIVATE RD.	09	PTL	2	100	Private	1889	1892	0.04
50000163	UNNAMED PRIVATE RD.	21,22	PTL	2	100	Private	945	892	0.18

Appendix E Jointly Maintained Roads Summary

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Appendix E. Jointly Maintained Roads Summary. (Jointly Maintained Road Classifications, Maintenance Levels, and Responsibility Percentages for Identified Roads in the Proposed FERC Project Boundary by Route ID, Name, and Map Number).

ROUTE_ID	NAME	App. A Tile #	Project Road Type	Project Main. Level	Project Responsibility %	Ownership	To Termini	From Termini	Length (mile)
11000008	TOPSY GRADE RD.	04,05,06	JMH	2	UNK	PacifiCorp	1957	2242	1.62
30000035	IRON GATE DAM RD.	01	JMH	3	10	PacifiCorp	2767	2766	0.01
30000035	IRON GATE DAM RD.	01	JMH	3	90	PacifiCorp	2767	2769	0.05
30000035	IRON GATE ESTATES RD.	01	JMH	3	10	PacifiCorp	2729	2769	0.72
30000036	IRON GATE ESTATES RD.	01,02	JMH	3	10	PacifiCorp	2702	2729	0.50
30000037	IRON GATE ESTATES RD.	01,02	JMH	3	10	PacifiCorp	2672	2702	0.01
30000061	UNNAMED PRIVATE RD.	06	JMH	2	20	PacifiCorp	1955	1931	0.08
30000063	UNNAMED PRIVATE RD.	07	JMH	2	UNK	Private	1752	1760	0.19
30000064	UNNAMED PRIVATE RD.	06,07	JMH	2	UNK	PacifiCorp/Private	1831	1752	0.21
30000068	UNNAMED PRIVATE RD.	07	JMH	2	UNK	PacifiCorp/Private	1752	1737	0.13
30000070	UNNAMED PRIVATE RD.	08	JMH	2	UNK	Private/BLM	1484	1447	0.43
30000071	SPRING CREEK	08	JMH	2	UNK	Private/BLM	1426	1447	0.46
30000075	FALL CREEK ACCESS RD.	06	JMH	3	UNK	PacifiCorp	9998	2009	0.14
30000143	SPRING ISLAND RD.	20	JMH	2	95	Private/BLM	1288	1294	0.07
30000144	SPRING ISLAND RD.	19,20,21	JMH	2	95	PacifiCorp/BLM/Private	1288	1090	3.76
30000149	UNNAMED PRIVATE RD.	21	JMH	2	UNK	BLM/PacifiCorp	1151	1125	0.18
30000160	UNNAMED PRIVATE RD.	21	JMH	2	UNK	PacifiCorp	1059	1048	0.02
30000161	UNNAMED PRIVATE RD.	21,22	JMH	2	UNK	Private	1018	924	0.46
30000162	JMH	21	JMH	2	UNK	PacifiCorp	1032	1056	0.32
30000167	JM WITH USBR	33	JMH	2	UNK	PacifiCorp	29	8	0.32
30000168	JM WITH USBR	33	JMH	2	UNK	PacifiCorp	14	10	0.03
30000132	SPORTSMANS PARK ACCESS RD.	22	JMR	2	UNK	PacifiCorp	490	488	0.00
20000037	SPORTSMANS PARK RD.	22	JMR	2	UNK	PacifiCorp/Private	509	695	0.65
20000038	SPORTSMANS BOAT LAUNCH RD.	22	JMR	2	UNK	PacifiCorp/Private	479	509	0.14
30000142	SPRING ISLAND RD.	20	JMR	2	90	Private/BLM	1312	1288	0.47
50000251	BLM CAMPGROUND RD.	19,20,21	JMR	2	90	Private/BLM	1372	1312	0.09

Appendix F National Bridge Inspection Standards (NBIS)

CODE OF FEDERAL REGULATIONS

23 HIGHWAYS - PART 660

Subpart C - National Bridge Inspection Standards

§ 650.301 Application of Standards.

The National Bridge Inspection Standards in this part apply to all structures defined as bridges located on all public roads. In accordance with the AASHTO (American Association of State Highway and Transportation Officials) Transportation Glossary, a "bridge" is defined as a structure including supports erected over a depression or an obstruction, such as water, highway, or railway, and having a track or passageway for carrying traffic or other moving loads, and having an opening measured along the center of the roadway of more than 20 feet between undercopings of abutments or spring lines of arches, or extreme ends of openings for multiple boxes; it may also include multiple pipes, where the clear distance between openings is less than half of the smaller contiguous opening.

§ 650.303 Inspection procedures.

(a) Each highway department shall include a bridge inspection organization capable of performing inspections preparing reports, and determining ratings in accordance with the provisions of the AASHTO Manual[1] and the Standards contained herein.

(b) Bridge inspectors shall meet the minimum qualifications stated in §650.307. National Bridge Inspection Standards.

(c) Each structure required to be inspected under the Standards shall be rated as to its safe load carrying capacity in accordance with Section 4 of the AASHTO Manual. If it is determined under this rating procedure that the maximum legal load under State law exceeds the load permitted under the Operating Rating, the bridge must be posted in conformity with the AASHTO Manual or in accordance with State law.

(d) Inspection records and bridge inventories shall be prepared and maintained in accordance with the standards.

(e) The individual in charge of the organizational unit that has been delegated the responsibilities for bridge inspection, reporting and inventory shall determine and designate on the individual inspection and inventory records and maintain a master list of the following:

(1) Those bridges which contain fracture critical members, the location and description of such members on the bridge and the inspection frequency and procedures for inspection of such members. (Fracture critical members are tension members of a

NATIONAL BRIDGE INSPECTION STANDARDS (Cont')

bridge whose failure will probably cause a portion of or the entire bridge to collapse.)

(2) Those bridges with underwater members which cannot be visually evaluated during periods of low flow or examined by feel for condition, integrity and safe load capacity due to excessive after depth or turbidity. These members shall be described, the inspection frequency stated, not to exceed five years, and the inspection procedure specified.

(3) Those bridges which contain unique or special features requiring additional attention during inspection to ensure the safety of such bridges and the inspection frequency and procedure for inspection of each such feature.

(4) The date of last inspection of the features designated in paragraphs (e)(1) through (e)(3) of this section and a description of the findings and follow-up actions, if necessary, resulting from the most recent inspection of fracture critical details, underwater members or special features of each so designated bridge.

§ 650.305 Frequency of inspections.

(a) Each bridge is to be inspected at regular intervals not to exceed 2 years in accordance with Section 2.3 of the AASHTO Manual.

(b) Certain types or groups of bridges will require inspection at less than 2-year intervals. The depth and frequency to which bridges are to be inspected will depend on such factors as age, traffic characteristics, state of maintenance, and known deficiencies. The evaluation of these factors will be the responsibility of the individual in charge of the inspection program.

(c) The maximum inspection interval may be increased for certain types or groups of bridges where past inspection reports and favorable experience and analysis justifies the increased interval of inspection. If a State proposes to inspect some bridges at greater than the specified 2-year interval, the State shall submit a detailed proposal and supporting data to the Federal Highway Administrator for approval.

§ 650.307 Qualifications of personnel.

(a) The individual in charge of the organizational unit that has been delegated the responsibilities for bridge inspection, reporting, and inventory shall possess the following minimum qualifications:

(1) Be a registered professional engineer; or

(2) Be qualified for registration as a professional engineer under the laws of the State: or

NATIONAL BRIDGE INSPECTION STANDARDS (Cont')

(3) Have a minimum of 10 years experience in bridge inspection assignments in a responsible capacity and have completed a comprehensive training course based on the, "Bridge Inspector's Training Manual[2], which has been developed by a joint Federal State task force, and subsequent additions to the manual[3].

(b) An individual in charge of a bridge inspection team shall possess the following minimum qualifications:

(1) Have the qualifications specified in paragraph (a) of this section; or

(2) Have a minimum of years experience in bridge inspection assignments in a responsible capacity and have completed a comprehensive training course based on the "Bridge Inspectors Training Manual", which has been developed by a joint Federal State task force.

(3) Current certification as a Level III or IV Bridge Safety Inspector under the National Society of Professional Engineer's program for National Certification in Engineering Technologies (NICET)[4] is an alternative acceptable means for establishing that a bridge inspection team leader is qualified.

§650.309 Inspection Report.

The findings and results of bridge inspections shall be recorded on standard forms. The data required to complete the forms and the functions which must be performed to compile the data are contained in Section 3 of the AASHTO Manual.

§660.311 Inventory.

(a) Each State shall prepare and maintain an inventory of all bridge structures subject to the Standards. Under these Standards, certain structure inventory and appraisal data must be collected and retained within the various departments of the State organization for collection by the Federal Highway Administration as needed. A tabulation of this data is contained in the structure inventory and appraisal sheet distributed by the Federal Highway Administration as part of the Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation's Bridges (Coding Guide) in January of 1979. Reporting procedures have been developed by the Federal Highway Administration.

NATIONAL BRIDGE INSPECTION STANDARDS (Cont')

(b) Newly completed structures, modification of existing structures which would alter previously recorded data on the inventory forms or placement of load restriction signs on the approaches to or at the structure itself shall be entered in the State's inspection reports and the computer inventory file as promptly as practical, but no later than 90 days after the change in the status of the structure for bridges directly under the State's jurisdiction and no later than 180 days after the change in status of the structure for all other bridges on public roads within the State.

[1]The "AASHTO Manual" referred to in this part is the 'Manual for Maintenance Inspection of Bridges 1983' together with subsequent Interim changes or the most recent version of the AASHTO manual published by the American Association of State Highway and Transportation Officials. A copy of the Manual may be examined during normal business hours at the office of each Division Administrator of the Federal Highway Administration, at the office of each Regional Federal Highway Administrator, and at the Washington Headquarters of the Federal Highway Administration. The addresses of those document inspection facilities are set forth in Appendix D to Part 7 of the regulations of the Office of the Secretary (40 CFR Part 7). In addition, a copy of the Manual may be secured upon payment in advance by writing to the American Association of State Highway and Transportation Officials, 444 N. Capitol, Street, N. W, suite 225, Washington, D.C. 20001

[2]The "Bridge Inspector's Training Manual" may be purchased from the Superintendent of Documents, V. S. Government Printing Office, Washington, D.C. 20402.

[3]The following publications are supplements to the "Bridge Inspector's Training Manual"., "Bridge Inspector's Manual for Movable Bridges, " 1977, GPO Stock No. 050-002-00103-5,, "Culvert Inspector's Training Manual, " July 1986, GPO Stock No. 050-001-0030-7, and "Inspection of Fracture Critical Bridge Members, " 1986, GPO Stock No. 050-001-00302-3.

[4]For information on NICET program certification contact: National Institute for Certification in Engineering Technologies, 1420 King Street, Alexandria, Virginia 22314. Attention: -John D. Antrim, P.E., Phone (703) 684-2835.

Effective date October 25, 1988.

NATIONAL BRIDGE INSPECTION STANDARDS (Cont')

Amendment (July 27, 1994)

7736.04b - Regional Foresters. (FSM 7731.04a).

7736.04c - Regional Staff Directors for Engineering Activities. It is the responsibility of the Regional Staff Director for engineering activities to certify in writing the qualifications of the following (23 CFR 650.307):

1. The individual in charge of the organizational unit who has been delegated the responsibilities for bridge inspection, reporting, and inventory.

2. The individuals in charge of bridge inspection teams.

7736.04d - Forest Supervisors. It is the responsibility of each Forest Supervisor to:

1. Ensure that technical inspections are performed on all structures meeting the definition of a bridge (FSM 7705).

2. Ensure that those bridges subject to the National Bridge Inspection Standards (NBIS) are identified.

3. Ensure that all bridges are inventoried in accordance with direction in FSM 7736.4.

4. Ensure that the bridge inventory and permanent bridge records are maintained in accordance with direction in FSH 7709.56b, Sec. 8.2, including documentation of the bridge condition and appraisal.

5. Ensure that annual reports for bridges subject to the NBIS are prepared and submitted to the State Bridge Engineer.

6. Ensure that structural load rating analyses are performed on all road bridges and, where needed, the safe load carrying capacity of all restricted bridges are posted.

NATIONAL BRIDGE INSPECTION STANDARDS (Cont')

7736.05 - Definitions. (FSM 7705).

77356.1 - Bridges Subject to the National Bridge Inspection Standards. Bridges and culverts on Forest Service development roads "open to public travel" (FSM 1535.11), and having a total length exceeding 20 feet (6.1 m) are subject to the NBIS (23 CFR 650.301).

In general, for bridge inspection program purposes, bridges subject to the NBIS are located on Forest Service development roads that have a Road Maintenance Level 3, 4, or 5 (FSH 7709.58, sec. 12.3); or a designated Traffic Service Level A, B, or C (FSH 7709.56, Sec. 4.1, Exhibit 01). There may be minor exceptions to this direction for bridges on such roads not open to public travel that are used for contractual and administrative purposes only, such as PacifiCorp.

7736.2 - Technical Inspections. Perform technical inspections for all bridges, including trail bridges, to identify actual conditions that may lead to structural or functional restrictions. Update inventory records, and establish maintenance priorities. In addition, use technical inspection reports of all road bridges to provide the basis for conducting structural analysis to determine the safe load carrying capacity.

7736.21 - Technical Inspection of Bridges Subject to the National Bridge Inspection Standards. Refer below:

7736.21a - Inspection. Inspect all road bridges subject to the NBIS (FSM 7736.01) in accordance with 23 CFR 650.303, paragraphs (a) through (e); except in paragraph (c), posting restricted bridges shall be in accordance with direction in FSM 7736.52.

7736.21b - Inspection Intervals. Inspect bridges subject to the NBIS at 2-year intervals (23 CFR 650.307). Submit all requests to increase the inspection interval for eligible bridges through the Regional Staff Director for engineering activities to the Director of Engineering, Washington Office (FSM 7736.04a), for approval in accordance with FSH 7709.56b, Section 8.12.

7736.22 - Technical Inspection of Bridges Not Subject to the National Bridge Inspection Standards. Refer below:

7736.22a - Inspection. Inspection procedures for bridges not subject to the NBIS shall be the same as in 7736.21a, except as follows:

a. 23 CFR 650.303, paragraph (c). Inspect and rate trail bridges for load carrying capacity in accordance with Regional guidance (FHS 7709.56b, sec. 05).

NATIONAL BRIDGE INSPECTION STANDARDS (Cont')

b. 23 CFR 650.303, paragraph (e). Application of the requirements to list bridges requiring special inspections shall be in accordance with Regional guidance (FSH 7709.56b, sec. 05).

7736.22b - Inspection Intervals. Inspect road bridges not subject to the NBIS at 2-year intervals, except when increases up to 4 years have been granted in accordance with Regional guidance (FHS 7709.56b, sec. 05). Inspection intervals for trail bridges must not exceed 4 years.

7736.23 - Inspection Reports. Record findings and results of inspections of all bridges in accordance with Regional guidance (FSH 7709.56b, sec. 05 and 8.15). Record data items compatible with the inventory requirements in FSM 7736.4.

Annually, submit a report of data required by the Federal Highway Administration (FHWA) (FHWA Coding Guide, FSM 7736.4) to the local State Bridge Engineer for each bridge subject to the NBIS. Do not report any inventory data not listed in the FHWA Coding Guide to the State of Oregon (FSM 1535.11; FSM 7736.04d, para. 6).

Appendix G Rolling 5-Year Transportation Action Plan

ROLLING 5-YEAR TRANSPORTATION ACTION PLAN
CALENDAR YEAR _____

Klamath Hydroelectric Project
FERC Project No. 2082

AUTHORIZATIONS
(if applicable)

Final Approved: PacifiCorp _____ (date) _____ (signature)

BLM _____ (date) _____ (signature)

ATTACHMENTS
(if applicable) **PacifiCorp** PPL Project Work Plan #s: _____ (insert #s)

BLM BLM Project Work Plan #s: _____ (insert #s)

SUMMARY OF PLANNED MANAGEMENT PLAN ACTIVITIES FOR CALENDAR YEAR (_____)
(insert bulleted summaries and PWP #s)

Road Maintenance and Reconstruction (Capital Improvement)

-

Bridge and Major Culverts

-

Road Decommissioning, Abandonment and Conversions

-

Periodic Monitoring and Inspections

-

Roadway Coordination and Management

-

MANAGEMENT PLAN ACTIVITIES SUMMARY BY CALENDAR YEAR

Management Plan Activities	PRIOR YEAR CY _____ Dates	$	CURRENT YR. CY_____ Dates	$	OUT YEAR #1 CY _____ Dates	$	OUT YEAR #2 CY _____ Dates	$	OUT YEAR #3 CY _____ Dates	$
ROAD MAINTENANCE AND RECONSTRUCTION (CAPITAL IMPROVEMENT)										
Project Maintained Road Maintenance										
Jointly Maintained Road Maintenance										
BRIDGE AND MAJOR CULVERTS										
Project Maintained Bridge and Major Culvert Maintenance										
Jointly Maintained Bridge and Major Culvert Maintenance										
ROAD DECOMMISSIONING, ABANDONMENT, AND CONVERSIONS										
Project Responsible Road Decommissioning										
• Work description (PWP # __):										
• Work description (PWP # __):										

Management Plan Activities	PRIOR YEAR CY _____ Dates	$	CURRENT YR. CY_____ Dates	$	OUT YEAR #1 CY _____ Dates	$	OUT YEAR #2 CY _____ Dates	$	OUT YEAR #3 CY _____ Dates	$
PERIODIC MONITORING AND INSPECTIONS										
Project Road, Bridge and Major Culvert Monitoring										
Project Bridge and Major Culvert Inspections										
ROADWAY COORDINATION AND MANAGEMENT										
• Rolling 5-Year TAP Development and Coordination										
• Roadway GIS Mapping and Dataset Updates										

SUMMARY OF RESULTS FROM THE PREVIOUS CALENDAR YEAR ACTION PLAN
(Insert bullet summaries below)

Projects Completed Last Year

-
-

Projects Not Completed and Carried forward to the Current Year

-
-

Unanticipated Events Summary

-
-

Annual Calendar Year Balance Sheet (Enter in Excel)

Item by PWP #	Budget Planned $	Budget Spent $	Budget Variance $	Comments

SUMMARY OF PLANNED ACTIVITIES FOR THE NEXT THREE CALENDAR OUT-YEARS
(Insert bullet summaries below)

Road Maintenance and Reconstruction (Capital Improvement)

-

Bridge and Major Culverts

-

Road Decommissioning, Abandonment, and Conversions

-

Periodic Monitoring and Inspections

-

Roadway Coordination and Management

-

CHANGES IN MANAGEMENT PLAN RESPONSIBILITIES OF THE PARTIES: ASSUMPTIONS, RATIONALE, AND PERCENTAGES

Provide a description below:

-

Sample Project Work Plan (PWP)
For
(Add Name)

Project:		**Task 1 (insert description**		**Task 2 (insert description)**		**Task 3 (insert description)**		**Task 4 (insert description)**		**Totals**
Job Code:		**TMPT03**		**SSPS03**		**YR2003**		**YR2211**		
Personnel	Cost/day	Days	Cost	Days	Cost	Days	Cost	Days	Cost	Days
C.Emerson	$186.90	100	$18,690	10	$1,869	2	$374	2	$374	114
C. Cole	$145.00	100	$14,500	30	$4,350		$0		$0	130
Temp GS-5 (1)	$113.36	95	$10,769	30	$3,401	3	$340		$0	128
Temp GS-5 (fall)	$109.00		$0		$0		$0		$0	0
Temp GS-4	$99.90		$0		$0		$0		$0	0
Temp GS-4	$99.90		$0		$0		$0		$0	0
Temp GS-4	$99.90		$0		$0		$0		$0	0
Temp GS-4	$99.90		$0		$0		$0		$0	0
Temp GS-4	$99.90		$0		$0		$0		$0	0
Temp GS-4	$99.90		$0		$0		$0		$0	0
SCA	$43.68		$0		$0		$0		$0	0
Vehicles/Equipment	Cost/Mn-Mi	Mn/ Miles	Cost	Mn/ Miles	Cost	Mn/ Miles	Cost	Mn/ Miles	Cost	Months/Miles
255-7203 - Exp FOR	276.00	12	$3,312		$0		$0		$0	12
255-7203 - Exp USE	0.18	8000	$1,440		$0		$0		$0	8,000
8188 FOR	198.00	6	$1,188		$0		$0		$0	6
8188 USE	0.19	2000	$380		$0		$0		$0	2,000
	0.00		$0		$0		$0		$0	0
	0.00		$0		$0		$0		$0	0
	0.00		$0		$0		$0		$0	0
	0.00		$0		$0		$0		$0	0
Supplies/Misc.			Cost		Cost		Cost		Cost	
Overtime			$0		$0		$0		$0	$0
Travel & Training			$300		$0		$0		$0	$300
Supplies			$400		$0		$0		$0	$400
			$0		$0		$0		$0	$0
			$0		$0		$0		$0	$0
			$0		$0		$0		$0	$0
Direct Project Totals			$50,979		$9,620		$714		$374	$61,687
Program Management			$100		$100		$100		$100	$400
Overhead %	10.0%		$5,108		$972		$81		$47	$6,209
Total Project Cost			$56,187		$10,692		$895		$521	$68,295

Remarks

Prepared By:

Appendix H Grant of Right-of-Way to PacifiCorp by the USDI-BLM

(a template is provided herein; the actual document to be inserted after received from the USDI-BLM and final documentation is prepared by PacifiCorp for the USDI-BLM after license issuance)

FORM 2800-14
(August 1985)

Issuing Office
Roseburg District Office

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
RIGHT-OF-WAY GRANT/TEMPORARY USE PERMIT

SERIAL NUMBER OR

---

1. A right-of-way is hereby granted pursuant to Title V of the Federal Land Policy and Management Act of October 21, 1976 (90 Stat. 2776; 43 U.S.C. 1761).

2. Nature of Interest:

   a. By this instrument, the holder:

   receives a right to construct, operate, maintain, and terminate buried communications cables, and the necessary above ground appurtenances thereto on public lands described as follows:

   T. S., R. W., Willamette Meridian, Oregon
   Sec.

   b. The right-of-way area granted herein is feet wide, feet long and contains acres, more or less.

   c. This instrument shall terminate on _____, years from its effective date unless prior thereto, it is relinquished, abandoned, terminated, or modified pursuant to the terms and conditions of this instrument or any applicable federal law or regulation.

   d. This instrument may be renewed. If renewed, the right-of-way shall be subject to the regulations existing at the time of renewal and any other terms and conditions that the authorized officer deems necessary to protect the public interest.

   e. Notwithstanding the expiration of this instrument or any renewal thereof, early relinquishment, abandonment, or termination, the provisions of this instrument, to the extent applicable, shall continue in effect and shall be binding on the holder, its successors, or assigns, until they have fully satisfied the obligations and/or liabilities accruing herein before or on account of the expiration, or prior termination, of the grant.

3. Rental:

For and in consideration of the rights granted, the holder agrees to pay the Bureau of Land Management fair market value rental as determined by the authorized officer unless specifically exempted from such payment by regulation. Provided, however, that the rental may be adjusted by the authorized officer, whenever necessary, to reflect changes in the fair market rental value as determined by the application of sound business management principles, and so far as practicable and feasible, in accordance with comparable commercial practices.

4. Terms and Conditions:

a. This grant is issued subject to the holder's compliance with all applicable regulations contained in Title 43 Code of Federal Regulations parts 2800 and 2880.

b. Upon grant termination by the authorized officer, all improvements shall be removed from the public lands within 30 days, or otherwise disposed of as provided in paragraph (4)(d) or as directed by the authorized officer.

c. Each grant issued pursuant to the authority of paragraph (1)(a) for a term of 20 years or more shall, at a minimum, be reviewed by the authorized officer at the end of the 20th year and at regular intervals thereafter not to exceed 10 years. Provided, however, that a right-of-way granted herein may be reviewed at any time deemed necessary by the authorized officer.

d. The stipulations, plans, maps, or designs set forth in Exhibits "A" and "B", dated the date of this grant, attached hereto, are incorporated into and made a part of this grant instrument as fully and effectively as if they were set forth herein in their entirety.

e. Failure of the holder to comply with applicable law or any provision of this right-of-way grant shall constitute grounds for suspension or termination thereof.

f. The holder shall perform all operations in a good and workmanlike manner so as to ensure protection of the environment and the health and safety of the public.

g. This grant is subject to all valid rights existing on the effective date of this grant.

h. There is reserved to the authorized officer, the right to grant additional rights-of-way or permits for compatible uses on, over, under or adjacent to the land involved in this grant.

i. The right-of-way shall be relinquished to the United States if the authorized uses are no longer needed.

j. Compliance will be in accordance with all other terms and conditions as specified herein and in Exhibit "B", attached hereto and made a part hereof.

k. The holder shall indemnify the United States against any and all liability for damage to life or property arising from the occupancy or use of public lands under this grant.

l. The United States will not be held liable for any damage to the facilities appurtenant to authorized use caused by the general public or as a result of fire, wind, or other natural disasters or as a result of silvicultural practices, timber harvesting operations, or other actions stemming from the normal land management activities of the Bureau of Land Management.

IN WITNESS WHEREOF, The undersigned agrees to the terms and conditions of this right-of-way grant.

Bureau of Land Management

_____	_____
(Signature of Holder)	(Signature of Authorized Officer)
_____	_____
(Title)	(Title)
_____	_____
(Date)	(Effective Date of Grant)

STANDARD FORM 299 (10/95)
Prescribed by DOI/USDA/DOT
P.L. 96-487 and Federal
Register Notice 5-22-95

APPLICATION FOR TRANSPORTATION AND UTILITY SYSTEMS AND FACILITIES ON FEDERAL LANDS

FORM APPROVED
OMB NO. 1004-0060
Expires: August 31, 1998

FOR AGENCY USE ONLY

Application Number

Date Filed

NOTE: Before completing and filing the application, the applicant should completely review this package and schedule a preapplication meeting with representatives of the agency responsible for processing the application. Each agency may have specific and unique requirements to be met in preparing and processing the application. Many times, with the help of the agency representative, the application can be completed at the preapplication meeting.

1. Name and address of applicant *(include zip code)*

2. Name, title, and address of authorized agent if different from Item 1 *(include zip code)*

3. TELEPHONE *(area code)*

Applicant

Authorized Agent

4. As applicant are you? *(check one)*

a. ☐ Individual
b. ☐ Corporation*
c. ☐ Partnership/Association*
d. ☐ State Government/State Agency
e. ☐ Local Government
f. ☐ Federal Agency

* *If checked, complete supplemental page*

5. Specify what application is for: *(check one)*

a. ☐ New authorization
b. ☐ Renewing existing authorization No.
c. ☐ Amend existing authorization No.
d. ☐ Assign existing authorization No.
e. ☐ Existing use for which no authorization has been received*
f. ☐ Other*

* *If checked, provide details under Item 7*

6. If an individual, or partnership are you a citizen(s) of the United States? ☐ Yes ☐ No

7. Project description *(describe in detail):* (a) Type of system or facility, *(e.g., canal, pipeline, road)*; (b) related structures and facilities; (c) physical specifications *(length, width, grading, etc.);* (d) term of years needed; (e) time of year of use or occupation; (f) Volume or amount of product to be transported; (g) duration and timing of construction; and (h) temporary work areas needed for construction *(Attach additional sheets, if additional space is needed.)*

8. Attach a map covering area and show location of project proposal

9. State or Loc. government approval: ☐ Attached ☐ Applied for ☐ Not required

10. Nonreturnable application fee: ☐ Attached ☐ Not required

11. Does project cross international boundary or affect international waterways? ☐ Yes ☐ No *(If "yes," indicate on map)*

12. Give statement of your technical and financial capability to construct, operate, maintain, and terminate system for which authorization is being requested.

This form is authorized for local reproduction.

13a. Describe other reasonable alternative routes and modes considered.

b. Why were these alternatives not selected?

c. Give explanation as to why it is necessary to cross Federal Lands.

14. List authorizations and pending applications filed for similar projects which may provide information to the authorizing agency. *(Specify number, date, code, or name)*

15. Provide statement of need for project, including the economic feasibility and items such as: (a) cost of proposal *(construction, operation, and maintenance);* (b) estimated cost of next best alternative; and (c) expected public benefits.

16. Describe probable effects on the population in the area, including the social and economic aspects and the rural lifestyles.

17. Describe likely environmental effects that the proposed project will have on: (a) air quality; (b) visual impact; (c) surface and ground water quality and quantity; (d) the control or structural change on any stream or other body of water; (e) existing noise levels; and (f) the surface of the land, including vegetation, permafrost, soil, and soil stability.

18. Describe the probable effects that the proposed project will have on (a) populations of fish, plantlife, wildlife, and marine life, including threatened and endangered species; and (b) marine mammals, including hunting, capturing, collecting, or killing these animals.

19. State whether any hazardous material, as defined in this paragraph, will be used, produced, transported or stored on or within the right-of-way or any of the right-of-way facilities, or used in the construction, operation, maintenance or termination of the right-of-way or any of its facilities. "Hazardous material" means any substance, pollutant or contaminant that is listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. 9601 et seq., and its regulations. The definition of hazardous substances under CERCLA includes any "hazardous waste" as defined in the Resource Conservation and Recovery Act of 1976 (RCRA), as amended, 42 U.S.C. 9601 et seq., and its regulations. The term hazardous materials also includes any nuclear or by product material as defined by the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2011 et seq. The term does **not** include petroleum, including crude oil or any fraction thereof that is not otherwise specifically listed or designated as a hazardous substance under CERCLA Section 101(14), 42 U.S.C. 9601(14), nor does the term include natural gas.

20. Name all the Department(s)/Agency(ies) where this application is being filed.

I HEREBY CERTIFY, That I am of legal age and authorized to do business in the State and that I have personally examined the information contained in the application and believe that the information submitted is correct to the best of my knowledge.

Signature of Applicant	Date

Title 18, U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

APPLICATION FOR TRANSPORTATION AND UTILITY SYSTEMS AND FACILITIES ON FEDERAL LANDS

GENERAL INFORMATION
ALASKA NATIONAL INTEREST LANDS

This application will be used when applying for a right-of-way, permit, license, lease, or certificate for the use of Federal lands which lie within conservation system units and National Recreation or Conservation Areas as defined in the Alaska National Interest Lands Conservation Act. Conservation system units include the National Park System, National Wildlife Refuge System, National Wild and Scenic Rivers System, National Trails System, National Wilderness Preservation System, and National Forest Monuments.

Transportation and utility systems and facility uses for which the application may be used are:

1. Canals, ditches, flumes, laterals, pipes, pipelines, tunnels, and other systems for the transportation of water.
2. Pipelines and other systems for the transportation of liquids other than water, including oil, natural gas, synthetic liquid and gaseous fuels, and any refined produce produced therefrom.
3. Pipelines, slurry and emulsion systems, and conveyor belts for transportation of solid materials.
4. Systems for the transmission and distribution of electric energy.
5. Systems for transmission or reception of radio, television, telephone, telegraph, and other electronic signals, and other means of communications.
6. Improved rights-of-way for snow machines, air cushion vehicles, and all-terrain vehicles.
7. Roads, highways, railroads, tunnels, tramways, airports, landing strips, docks, and other systems of general transportation.

This application must be filed simultaneously with each Federal department or agency requiring authorization to establish and operate your proposal.

In Alaska, the following agencies will help the applicant file an application and identify the other agencies the applicant should contact and possibly file with:

Department of Agriculture
Regional Forester, Forest Service (USFS)
Federal Office Building, P.O. Box 21628
Juneau, Alaska 99802-1628
Telephone: (907) 586-7847 *(or a local Forest Service Office)*

Department of the Interior
Bureau of Indian Affairs (BIA)
Juneau Area Office
9109 Mendenhall Mall Road, Suite 5, Federal Building Annex
Juneau, Alaska 99802
Telephone: (907) 586-7177

Bureau of Land Management (BLM)
222 West 7th Ave., Box 13
Anchorage, Alaska 99513-7599
Telephone: (907) 271-5477 *(or a local BLM Office)*

National Park Service (NPS)
Alaska Regional Office, 2525 Gambell St., Rm. 107
Anchorage, Alaska 99503-2892
Telephone: (907) 257-2585

U.S. Fish & Wildlife Service (FWS)
Office of the Regional Director
1011 East Tudor Road
Anchorage, Alaska 99503
Telephone: (907) 786-3440

Note-Filings with any Interior agency may be filed with any office noted above or with the: Office of the Secretary of the Interior, Regional Environmental Officer, Box 120, 1675 C Street, Anchorage, Alaska 99513.

Department of Transportation
Federal Aviation Administration
Alaska Region AAL-4, 222 West 7th Ave., Box 14
Anchorage, Alaska 99513-7587
Telephone: (907) 271-5285

NOTE - The Department of Transportation has established the above central filing point for agencies within that Department. Affected agencies are: Federal Aviation Administration (FAA), Coast Guard (USCG), Federal Highway Administration (FHWA), Federal Railroad Administration (FRA).

OTHER THAN ALASKA NATIONAL INTEREST LANDS

Use of this form is not limited to National Interest Conservation Lands of Alaska.

Individual departments/agencies may authorize the use of this form by applicants for transportation and utility systems and facilities on other Federal lands outside those areas described above.

For proposals located outside of Alaska, applications will be filed at the local agency office or at a location specified by the responsible Federal agency.

SPECIFIC INSTRUCTIONS
(Items not listed are self-explanatory)

Item

7 Attach preliminary site and facility construction plans. The responsible agency will provide instructions whenever specific plans are required.

8 Generally, the map must show the section(s), township(s), and range(s) within which the project is to be located. Show the proposed location of the project on the map as accurately as possible. Some agencies require detailed survey maps. The responsible agency will provide additional instructions.

9 10 and 12 - The responsible agency will provide additional instructions.

Providing information on alternate routes and modes in as much detail as possible, discussing why certain routes or modes were rejected and why it is necessary to cross Federal lands will assist the agency(ies) in processing your application and reaching a final decision. Include only reasonable alternate routes and modes as related to current technology and economics.

14 The responsible agency will provide instructions.

15 Generally, a simple statement of the purpose of the proposal will be sufficient. However, major proposals located in critical or sensitive areas may require a full analysis with additional specific information. The responsible agency will provide additional instructions.

16 through 19 - Providing this information in as much detail as possible will assist the Federal agency(ies) in processing the application and reaching a decision. When completing these items, you should use a sound judgment in furnishing relevant information. For example, if the project is not near a stream or other body of water, do not address this subject. The responsible agency will provide additional instructions.

Application must be signed by the applicant or applicant's authorized representative.

Public reporting burden for this form is estimated to vary from 30 minutes to 25 hours per response, with an average of 2 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management, (Alternate) Bureau Clearance Officer, (WO-873), 1849 C Street, N.W., Washington, D.C. 20240, and the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, D.C. 20503.

If additional space is needed to complete any item, please put the information on a separate sheet of paper and identify it as "Continuation of Item".

(For supplemental, see reverse)

SUPPLEMENTAL

NOTE: The responsible agency(ies) will provide additional instructions	CHECK APPROPRIATE BLOCK	
I - PRIVATE CORPORATIONS	ATTACHED	FILED*
a. Articles of Incorporation	☐	☐
b. Corporation Bylaws	☐	☐
c. A certification from the State showing the corporation is in good standing and is entitled to operate within the State.	☐	☐
d. Copy of resolution authorizing filing	☐	☐
e. The name and address of each shareholder owning 3 percent or more of the shares, together with the number and percentage of any class of voting shares of the entity which such shareholder is authorized to vote and the name and address of each affiliate of the entity together with, in the case of an affiliate controlled by the entity, the number of shares and the percentage of any class of voting stock of that affiliate owned, directly or indirectly, by that entity, and in the case of an affiliate which controls that entity, the number of shares and the percentage of any class of voting stock of that entity owned, directly or indirectly, by the affiliate.	☐	☐
f. If application is for an oil or gas pipeline, describe any related right-of-way or temporary use permit applications, and identify previous applications.	☐	☐
g. If application is for an oil and gas pipeline, identify all Federal lands by agency impacted by proposal.	☐	☐
II - PUBLIC CORPORATIONS		
a. Copy of law forming corporation	☐	☐
b. Proof of organization	☐	☐
c. Copy of Bylaws	☐	☐
d. Copy of resolution authorizing filing	☐	☐
e. If application is for an oil or gas pipeline, provide information required by Item "I-f" and "I-g" above.	☐	☐
III - PARTNERSHIP OR OTHER UNINCORPORATED ENTITY		
a. Articles of association, if any	☐	☐
b. If one partner is authorized to sign, resolution authorizing action is	☐	☐
c. Name and address of each participant, partner, association, or other	☐	☐
d. If application is for an oil or gas pipeline, provide information required by Item "I-f" and "I-g" above.	☐	☐

* If the required information is already filed with the agency processing this application and is current, check block entitled "Filed." Provide the file identification information *(e.g., number, date, code, name)*. If not on file or current, attach the requested information.

NOTICE

The Privacy Act of 1974 provides that you be furnished the following information in connection with information required by this application for an authorization.

AUTHORITY: 16 U.S.C. 310; 5 U.S.C. 301.

PRINCIPAL PURPOSE: The information is to be used to process the application.

ROUTINE USES: (1) The processing of the applicant's request for an authorization. (2) Documentation for public information. (3) Transfer to appropriate Federal agencies when concurrence is required prior to granting a right in public lands or resources. (4)(5) Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions.

EFFECT OF NOT PROVIDING INFORMATION: Disclosure of the information is voluntary. If all the information is not provided, the application may be rejected.

DATA COLLECTION STATEMENT

The Federal agencies collect this information from applicants requesting right-of-way, permit, license, lease, or certification for the use of Federal lands.

The Federal agencies use this information to evaluate the applicant's proposal.

The public is obligated to submit this form if they wish to obtain permission to use Federal lands.

A reproducible copy of this form may be obtained from the Bureau of Land Management, Division of Lands, 1620 L Street, Rm. 204, Washington, D.C. 20036.

Appendix I Bridge and Major Culvert Maintenance

Appendix I. Bridge and Major Culvert Maintenance Responsibilities within the Proposed FERC Project Boundary.

Name	BR_CUL_ID	ROUTE_ID	Road Name	App. A Tile #	Project Main. Level	Last Inspection Date	Project Responsibility %	Ownership	Project Road Type
Brush Creek Bridge	101000	10000002	Copco Rd.	01	Undefined	UNK	0	Public	PUB
Fish Hatchery Bridge	101001	30000035	Iron Gate Estates Rd.	01	3	UNK	90	PacifiCorp/IGE	JMH
Bogus Creek Bridge	101002	30000001	Unnamed Private Rd.	01	2	UNK	100	PacifiCorp	PMH
Quase Creek Culvert	101003	10000005	Copco Rd.	03	Undefined	UNK	0	Public	PUB
Horseshoe Ranch Culvert	101004	10000005	Copco Rd.	03	Undefined	UNK	0	Public	PUB
Camp Creek Culvert	203001	10000005	Copco Rd.	03	Undefined	UNK	0	Public	PUB
Jenny Creek Bridge	104001	10000006	Copco Rd.	04	Undefined	UNK	0	Public	PUB
Copco Village Bridge	105001	30000014	Copco Village Rd.	05	3	UNK	100	PacifiCorp	PMH
Fall Creek Bridge	106001	10000008	Copco Rd.	06	Undefined	UNK	0	Public	PUB
Fall Creek Ped. Bridge	106002	30000075	Unnamed Private Rd.	06	2	UNK	UNK	PacifiCorp	JMH
Beaver Creek Culvert	106003	10000011	Copco Rd.	09	Undefined	UNK	0	Public	PUB
Copco Town Bridge	111001	11000001	Copco Rd.	11	Undefined	UNK	0	Public	PUB
Spannus Ranch Bridge	112001	50000209	Unnamed Private Rd.	12,14	Undefined	UNK	0	Private	PR
Shovel Creek Bridge	112002	11000005	Ager-Beswick Rd.	12,13,14	Undefined	UNK	0	Public	PUB
Hessig Ranch Bridge	114001	50000211	Unnamed Private Rd.	12,13,14	Undefined	UNK	0	Private	PR
Hwy. 66 Bridge	122001	12000002	State Highway 66	22	Undefined	UNK	0	Public	PUB

Appendix J Road Decommissioning, Abandonment, or Conversion Actions

Appendix J. Road Decommissioning, Abandonment, or Conversion Actions in the Proposed FERC Project Boundary.

ROUTE_ID	NAME	App. A Tile #	Project Class	Project Responsibility %	Road Ownership	Length (Mile)
30000010	UNNAMED PUBLIC RD.	2	1	UNK	BLM	0.03
30000011	UNNAMED PUBLIC RD.	2	1	UNK	BLM	0.02
30000012	UNNAMED PRIVATE RD.	2	1	UNK	PACIFICORP	0.04
30000132	SPORTSMANS PARK ACCESS RD.	22	1	UNK	PACIFICORP	0.00
30000134	UNNAMED PRIVATE RD.	22	1	UNK	PRIVATE/PACIFICORP	0.46
30000135	UNNAMED PRIVATE RD.	22	1	UNK	PRIVATE/PACIFICORP	0.21
30000136	UNNAMED PRIVATE RD.	22	1	UNK	PRIVATE/PACIFICORP	0.33