

PACIFICORP'S  
APPLICATION TO CONSTRUCT  
YREKA-WEED TRANSMISSION LINE UPGRADE PROJECT,  
SOUTHERN PORTION  
CPUC A.05-12-011  
SCH #: 2007042080  
Draft Environmental Impact Report

Prepared for:  
California Public Utilities Commission

July 2007



PUBLIC UTILITIES COMMISSION  
505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3298



**To:** State Clearinghouse, Responsible and Trustee Agencies, Property Owners & Interested Parties

**From:** Mike Rosauer, Environmental Project Manager

**Subject:** NOTICE OF AVAILABILITY OF A DRAFT ENVIRONMENTAL IMPACT REPORT (DRAFT EIR) AND PUBLIC HEARING:  
PacifiCorp's Yreka-Weed Transmission Line Upgrade Project,  
Southern Portion (A.05-12-011)  
SCH No. 2007042080

**Date:** July 31, 2007

The California Public Utilities Commission (CPUC) has prepared a Draft Environmental Impact Report (Draft EIR) under the California Environmental Quality Act (CEQA) for consideration of PacifiCorp's application to construct, operate and maintain the Yreka-Weed Transmission Line Upgrade Project, Southern Portion (A.05-12-011). The Draft EIR details the Proposed Project and Weed Segment, evaluates and describes the potential environmental impacts associated with the construction, operation and maintenance of PacifiCorp's Proposed Project and Weed Segment, identifies those impacts that could be significant, and presents mitigation measures, which, if adopted by the CPUC or other responsible agencies, could avoid or minimize these impacts. The Draft EIR also evaluates alternatives to the Proposed Project, including the No Project Alternative, as required by CEQA.

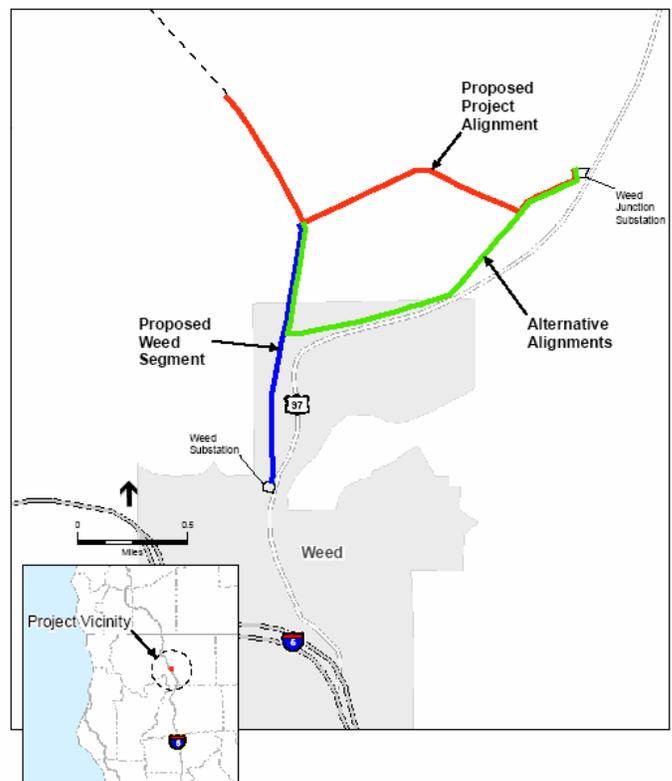
### Description of the Proposed Project and Weed Segment.

PacifiCorp, which currently owns a single-circuit 69kV electric transmission system in the Yreka-Weed area of Siskiyou County, requests authorization to upgrade the existing 69kV transmission line (Line 1) with a new 115kV transmission line within existing right-of-way from Pole 15/44 to Pole 8/45 and to install an additional 1.6 miles of 115kV transmission line within a new right-of-way from Pole 8/45 east to the Weed Junction Substation.

The Weed Segment would include a rebuild of the Weed Substation from 69kV to 115kV and upgrade of approximately 1.5 miles of single-circuit 69kV transmission line to a double-circuit 115kV transmission line from the Weed Substation north to Pole 8/45.

### Public Comment on the Draft EIR

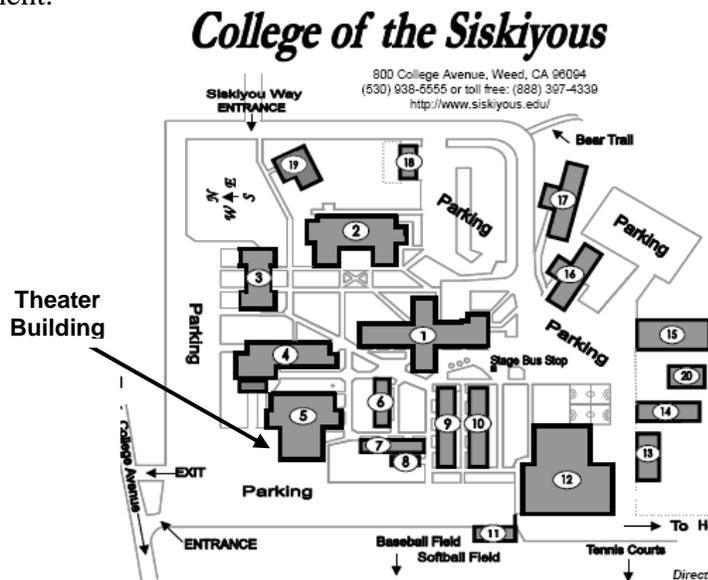
The Draft EIR is available for a 45-day public comment period July 31, 2007 through September 14, 2007. The public may present comments and concerns regarding the Proposed Project and Weed Segment and the adequacy of the Draft EIR. Written comments on the Draft EIR must be postmarked or received by fax or e-mail no later than **September 14, 2007**. Please be sure to include your name, address, and telephone number in your correspondence.



Written comments on the Draft EIR should be sent to:

**Mr. Mike Rosauer**  
**Yreka-Weed Transmission Line Upgrade Project, Southern Portion**  
**c/o Environmental Science Associates**  
**225 Bush Street, Suite 1700**  
**San Francisco, CA 94104-4207**  
**Fax: (415) 896-0332**  
**E-mail: [yreka-weed@esassoc.com](mailto:yreka-weed@esassoc.com)**

The CPUC will also hold a public participation hearing on **Tuesday, August 28, 2007 at the College of the Siskiyou, Theater, 800 College Avenue, Weed, California (see map below), between 6:30 p.m. and 8:30 p.m.** The public hearing will be held to receive oral and written comments from interested parties. Following the end of the public comment period, responses to all comments received on the Draft EIR and submitted within the specified 45-day review period will be prepared by the CPUC and included in a response to comments document, which together with the Draft EIR, will constitute the Final EIR for the Proposed Project and Weed Segment.



**Availability of Draft EIR.** Copies of the Draft EIR will be available for public review at the Yreka Branch and Weed Branch of the Siskiyou County Library, and on the project website: <http://www.yreka-weed.com>. This website will be used to post all public documents during the environmental review process and to announce any upcoming public meetings. Hard copies or CD copies of the Draft EIR may be requested by telephone at (415) 962-8468 or by e-mail at [yreka-weed@esassoc.com](mailto:yreka-weed@esassoc.com).

#### **PROJECT INFORMATION REPOSITORIES**

Yreka Branch Library  
719 4<sup>th</sup> Street  
Yreka, CA 96097  
(530) 841-4175

Weed Branch Library  
708 South Davis  
Weed, CA 96094  
(530) 938-4769

**REMINDER: Draft EIR comments will be accepted by fax, e-mail, or postmark through September 14, 2007. Please be sure to include your name, address, and telephone number.**

PACIFICORP'S  
APPLICATION TO CONSTRUCT  
YREKA-WEED TRANSMISSION LINE UPGRADE PROJECT,  
SOUTHERN PORTION  
CPUC A.05-12-011  
SCH #: 2007042080  
Draft Environmental Impact Report

Prepared for:  
California Public Utilities Commission  
505 Van Ness Avenue  
San Francisco, CA 94102

July 2007

225 Bush Street  
Suite 1700  
San Francisco, CA 94104  
415.896.0000  
[www.esassoc.com](http://www.esassoc.com)

Los Angeles

Oakland

Orlando

Petaluma

Sacramento

Seattle

Tampa

205439



# TABLE OF CONTENTS

## PacifiCorp’s Yreka–Weed Transmission Line Upgrade Project, Southern Portion (A.05-12-011) Draft Environmental Impact Report

	<u>Page</u>
<b><u>Executive Summary</u></b>	<b>ES-1</b>
ES.1 Introduction/Background.....	ES-1
ES.2 Alternatives .....	ES-5
ES.3 Environmental Impacts and Mitigation Measures .....	ES-14
ES.4 Summary Comparison of the Proposed Project and Alternatives .....	ES-39
ES.5 Impact Summary Tables.....	ES-41
<b><u>1. Introduction</u></b>	<b>1-1</b>
1.1 History and Overview of Proposed Project .....	1-1
1.2 Project Objectives, Purpose and Need .....	1-3
1.3 Agency Use of This Document .....	1-4
1.4 Public Review and Comment.....	1-5
1.5 Issues Considered and Found Not to be Significant.....	1-7
1.5.1 Geology, Soils, and Seismicity.....	1-7
1.5.2 Mineral Resources.....	1-7
1.5.3 Population and Housing.....	1-8
1.6 Reader's Guide to This EIR .....	1-9
<b><u>2. Project Description</u></b>	<b>2-1</b>
2.1 Introduction .....	2-1
2.2 Project Location .....	2-1
2.3 Existing System .....	2-1
2.4 PacifiCorp’s Proposed Project .....	2-4
2.5 Project Components .....	2-4
2.6 Right-of-Way Requirements .....	2-21
2.7 Construction .....	2-23
2.8 Operation and Maintenance .....	2-32
2.9 Electric and Magnetic Fields Summary.....	2-35
<b><u>3. Alternatives and Cumulative Projects</u></b>	<b>3-1</b>
3.1 Alternatives Development and Screening Process .....	3-1
3.2 Alternatives Screening Methodology .....	3-2
3.3 Summary of Screening Results .....	3-5
3.4 Alternatives Evaluated in this EIR.....	3-11
3.4 Alternatives Eliminated from Full EIR Evaluation.....	3-26
3.6 Cumulative Projects.....	3-33

	<u>Page</u>
<b><u>4.</u> Environmental Analysis</b>	<b>4-1</b>
Introduction to Environmental Analysis .....	4-1
<u>4.1</u> Aesthetics .....	4.1-1
<u>4.2</u> Agriculture Resources .....	4.2-1
<u>4.3</u> Air Quality .....	4.3-1
<u>4.4</u> Biological Resources .....	4.4-1
<u>4.5</u> Cultural Resources .....	4.5-1
<u>4.6</u> Hazards and Hazardous Materials.....	4.6-1
<u>4.7</u> Hydrology and Water Quality .....	4.7-1
<u>4.8</u> Land Use and Planning .....	4.8-1
<u>4.9</u> Noise .....	4.9-1
<u>4.10</u> Public Services .....	4.10-1
<u>4.11</u> Transportation and Traffic.....	4.11-1
<u>4.12</u> Utilities and Services Systems.....	4.12-1
<b><u>5.</u> Comparison of Alternatives</b>	<b>5-1</b>
5.1 Comparison Methodology.....	5-1
5.2 Evaluation of Project Alternatives .....	5-2
5.3 Environmentally Superior Alternative.....	5-3
5.4 No Project Alternative vs. the Environmentally Superior Alternative.....	5-7
<b><u>6.</u> CEQA Statutory Sections</b>	<b>6-1</b>
6.1 Growth-Inducing Effects .....	6-1
6.2 Significant Irreversible Changes .....	6-2
6.3 Cumulative Impacts .....	6-3
<b><u>7.</u> Report Preparers</b>	<b>7-1</b>
<b><u>8.</u> Mitigation Monitoring, Reporting, and Compliance Program</b>	<b>8-1</b>

## Appendices

<b><u>A.</u></b> Scoping Report
<b><u>B.</u></b> Western Electricity Coordinating Council (WECC) N-1 Criteria
<b><u>C.</u></b> Pole Structure Diagrams and Existing and Proposed Pole Heights for the Proposed Project and Alternatives
<b><u>D.</u></b> Electric and Magnetic Fields (EMF)
<b><u>E.</u></b> Air Quality Emission Calculations
<b><u>F.</u></b> PacifiCorp Wetland Delineation
<b><u>G.</u></b> USFWS Listed/Proposed Threatened and Endangered Species for Siskiyou County
<b><u>H.</u></b> Rare Plant Surveys
<b><u>I.</u></b> Native American Contact Letters
<b><u>J.</u></b> Certificate of Service and Distribution List for the Draft EIR

Page**List of Figures**

ES-1	Project Location.....	ES-4
ES-2	Overview of Alternative Alignments .....	ES-8
2-1	Project Location .....	2-2
2-2(a)	Transmission System Pre-Project.....	2-3
2-2(b)	Transmission System Post-Proposed Project.....	2-3
2-3	Overview Map - Proposed Project and Weed Segment.....	2-5
2-3(a)	Proposed Project Detail .....	2-9
2-3(b)	Proposed Project Detail .....	2-11
2-3(c)	Proposed Project Detail .....	2-13
2-3(d)	Weed Segment Detail.....	2-15
2-3(e)	Weed Segment Project Detail.....	2-17
2-4	Graphical Representation of Proposed Pole 8/45.....	2-19
2-5	Typical Pole Designs .....	2-20
2-6	Weed Substation Modification Plan View .....	2-22
2-7	Typical Construction Sequence .....	2-27
2-8	Typical Conductor Stringing Activity .....	2-29
2-9	Estimated EMF Levels with and without EMF Reduction Measures.....	2-36
3-1	Overview of Alternative Alignments .....	3-37
3-2	Representative Detail of Alternative Alignments .....	3-39
3-3	PacifiCorp Option 4 Alternative.....	3-40
3-3(a)	PacifiCorp Option 4 Alternative.....	3-41
3-3(b)	PacifiCorp Option 4 Alternative.....	3-42
3-3(c)	PacifiCorp Option 4 Alternative.....	3-43
3-4	Mackintosh/ALJ Variation A and B Alternatives .....	3-44
3-4(a)	Mackintosh/ALJ Variation A and B Alternatives .....	3-45
3-4(b)	Mackintosh/ALJ Variation A and B Alternatives .....	3-46
3-4(c)	Mackintosh/ALJ Variation A and B Alternatives .....	3-47
4.1-1	Regional Landscape Context.....	4.1-39
4.1-2a	Photographs of the Visual Setting.....	4.1-40
4.1-2b	Photographs of the Visual Setting.....	4.1-41
4.1-2c	Photographs of the Visual Setting.....	4.1-42
4.1-2d	Photographs of the Visual Setting.....	4.1-43
4.1-2e	Photographs of the Visual Setting.....	4.1-44
4.1-2f	Photographs of the Visual Setting.....	4.1-45
4.1-2g	Photographs of the Visual Setting.....	4.1-46
4.1-3	Photo Viewpoint Locations.....	4.1-47
4.1-4a	Existing View from Hoy Road (VP 2) .....	4.1-50
4.1-4b	Visual Simulation of Proposed Project from Hoy Road (VP 2).....	4.1-51
4.1-5a	Existing View from Hoy Road (VP 3) .....	4.1-52
4.1-5b	Visual Simulation of Proposed Project from Hoy Road (VP 3).....	4.1-53
4.1-6a	Existing View from Hoy Road (VP 4) .....	4.1-54
4.1-6b	Visual Simulation of Proposed Project from Hoy Road (VP 4).....	4.1-55
4.1-7a	Existing View from Hoy Road (VP 9) .....	4.1-56
4.1-7b	Visual Simulation of Proposed Project from Hoy Road (VP 9).....	4.1-57
4.1-8a	Existing View from Highway 97 at 1st Avenue (VP 25).....	4.1-58
4.1-8b	Visual Simulation of Proposed Project from Highway 97 at 1st Avenue (VP 25).....	4.1-59
4.1-9a	Existing View from Highway 97 at Weed Junction Substation (VP 26).....	4.1-60
4.1-9b	Visual Simulation of Proposed Project from Highway 97 Junction Substation (VP 26).....	4.1-61

**List of Figures (continued)**

4.1-10a	Existing View from Private Residence on Hoy Road (VP 5) .....	4.1-62
4.1-10b	Visual Simulation of Proposed Project from Private Residence on Hoy Road (VP 5) .....	4.1-63
4.1-11a	Existing View from Private Access (VP 7) .....	4.1-64
4.1-11b	Visual Simulation of Proposed Project from Private Access Road (VP 7) ....	4.1-65
4.1-12a	Existing View from Private Residence on Hoy Road (VP 8) .....	4.1-66
4.1-12b	Visual Simulation of Proposed Project from Private Residence on Hoy Road (VP 7) .....	4.1-67
4.1-13a	Existing View from Kennedy Road (VP 15).....	4.1-68
4.1-13b	Visual Simulation of Proposed Project from Kennedy Road (VP 15) .....	4.1-69
4.1-14a	Existing View from Highway 97 near Weed Substation (VP 18) .....	4.1-70
4.1-14b	Visual Simulation of Proposed Project from Highway 97 near Weed Substation (VP 18).....	4.1-71
4.1-15a	Existing View from Highway 97 near California Street (VP 20).....	4.1-72
4.1-15b	Visual Simulation of PacifiCorp Option 4 Alternative from Highway 97 near California Street (VP 20) .....	4.1-73
4.1-16a	Existing View from California Street at Center Street (VP 21) .....	4.1-74
4.1-16b	Visual Simulation of PacifiCorp Option 4 Alternative from California Street at Center Street (VP 21).....	4.1-75
4.1-17a	Existing View from Highway 97 Southbound (VP 22) .....	4.1-76
4.1-17b	Visual Simulation of PacifiCorp Option 4 Alternative from Highway 97 Southbound (VP 22).....	4.1-77
4.1-18a	Existing View from Highway 97 near Angel Valley Road (VP 27) .....	4.1-78
4.1-18b	Visual Simulation of PacifiCorp Option 4 Alternative from Highway 97 near Angel Valley Road (VP 24) .....	4.1-79
4.1-19a	Existing View from Highway 97 at 1st Street (VP 25) .....	4.1-80
4.1-19b	Visual Simulation of PacifiCorp Option 4 Alternative from Highway 97 at 1st Avenue (VP 25) .....	4.1-81
4.1-20a	Existing View from Highway 97 at Weed Junction Substation (VP 26) .....	4.1-82
4.1-20b	Visual Simulation of PacifiCorp Option 4 Alternative from Highway 97 at Weed Junction Substation (VP 26) .....	4.1-83
4.1-21a	Existing View from Highway 97 near California Street (VP 20).....	4.1-84
4.1-21b	Visual Simulation of Mackitosh/ALJ Variation B Alternative from Highway 97 near California Street (VP 20) .....	4.1-85
4.1-22a	Existing View from California Street at Center Street (VP 21) .....	4.1-86
4.1-22b	Visual Simulation of Mackitosh/ALJ Variation B Alternative from California Street at Center Street (VP 21) .....	4.1-87
4.1-23a	Existing View from Highway 97 Southbound (VP 22) .....	4.1-88
4.1-23b	Visual Simulation of Mackitosh/ALJ Variation B Alternative from Highway 97 Southbound (VP 22) .....	4.1-89
4.1-24a	Existing View from Highway 97 near Angel Valley Road (VP 24) .....	4.1-90
4.1-24b	Visual Simulation of Mackitosh/ALJ Variation B Alternative from Highway 97 near Angel Valley Road (VP 24).....	4.1-91
4.1-25a	Existing View from Highway 97 at 1st Avenue (VP 25).....	4.1-92
4.1-25b	Visual Simulation of Mackitosh/ALJ Variation B Alternative from Highway 97 at 1st Avenue (VP 25) .....	4.1-93
4.1-26a	Existing View from Highway 97 at Weed Junction Substation (VP 26) .....	4.1-94
4.1-26b	Visual Simulation of Mackitosh/ALJ Variation B Alternative from Highway 97 at Weed Junction Substation (VP 26).....	4.1-95
4.2-1	Important Farmlands.....	4.2-3

Page**List of Figures (continued)**

4.2-1(a)	Important Farmlands.....	4.2-4
4.2-1(b)	Important Farmlands.....	4.2-5
4.2-1(c)	Important Farmlands.....	4.2-6
4.2-1(d)	Important Farmlands.....	4.2-7
4.2-1(e)	Important Farmlands.....	4.2-8
4.2-2	Williamson Act Contracts.....	4.2-9
4.4-1	Wildlife Habitat Types.....	4.4-3
4.4-2	Jurisdictional Wetlands.....	4.4-7
4.4-3	Special Status Species.....	4.4-9
4.7-1	Proposed Project and Weed Segment Area and Shasta River Watershed ....	4.7-3
4.7-2	Groundwater Movement, Springs, and Wells in the Study Area.....	4.7-7
4.8-1	Land Use and Zoning Designations.....	4.8-9

**List of Tables**

ES-1	Summary of Project Components.....	ES-3
ES-2	Summary of Significant Unmitigable (Class I) Environmental Impacts of the Proposed Project/Weed Segment and Alternatives .....	ES-41
ES-3	Proposed Project/Weed Segment vs. Alternatives Summary of Environmental Impact Conclusions.....	ES-42
ES-4	Summary of Impacts and Mitigation for the Proposed Project and Weed Segment .....	ES-43
ES-5	Summary of Impacts and Mitigation for the Alternative Routes .....	ES-47
1-1	Summary of Potential Permit Requirements.....	1-5
2-1	Summary of Project Components.....	2-4
2-2	Summary of Access Road Requirements .....	2-25
2-3	Summary of Typical Pole Installation Metrics .....	2-27
2-4	Transmission Line Construction Estimated Personnel and Equipment.....	2-33
2-5	General Purpose for the Equipment Expected to Be Used during Project Construction.....	2-34
2-6	Proposed Construction Schedule .....	2-34
3-1	Summary of Preliminary Significant Environmental Impacts of the Proposed Project and the Weed Segment .....	3-6
3-2	Summary of Alternatives Screening Analysis Pacificorp Yreka-Weed Transmission Line Upgrade Project, Southern Portion .....	3-8
3-3	Summary of Typical Pole Installation Metrics for the Project with Pacificorp Option 4 Alternative.....	3-12
3-4	Summary of Access Road Requirements for the Project with Pacificorp Option 4 Alternative.....	3-13
3-5	Proposed Construction Schedule for the Project with Pacificorp Option 4 Alternative .....	3-14
3-6	Summary of Typical Pole Installation Metrics for the Project with Mackintosh/ALJ Variation A alternative .....	3-16
3-7	Summary of Access Road Requirements for the Project with Mackintosh/ALJ Variation A Alternative .....	3-17
3-8	Proposed Construction Schedule for the Project with Mackintosh/ALJ Variation A Alternative.....	3-19
3-9	Summary of Typical Pole Installation Metrics for the Project with Mackintosh/ALJ Variation B Alternative .....	3-21

**List of Tables (continued)**

3-10	Summary of Access Road Requirements for the Project with Mackintosh/ALJ Variation B Alternative .....	3-22
3-11	Proposed Construction Schedule for the Project with Mackintosh/ALJ Variation B Alternative.....	3-23
3-12	Cumulative Scenario – Approved and Pending Projects .....	3-34
4.2-1	Farmland Conversion from 2002–2004 in Siskiyou County .....	4.2-11
4.2-2	Temporary Construction Impacts to Agricultural Lands .....	4.2-14
4.2-3	Permanent impacts to Agricultural lands from Pole Placement .....	4.2-15
4.2-4	Temporary Construction Impacts to Agricultural Lands .....	4.2-17
4.2-5	Permanent Impacts to Agricultural Lands from Pole Placement.....	4.2-18
4.2-6	Temporary Construction Impacts to Agricultural Lands .....	4.2-20
4.2-7	Permanent Impacts to Agricultural Lands from Pole Placement.....	4.2-21
4.2-8	Temporary Construction Impacts to Agricultural Lands .....	4.2-23
4.2-9	Permanent Impacts to Agricultural Lands from Pole Placement.....	4.2-24
4.3-1	Air Quality Data Summary (2001–2006) for the Project Area .....	4.3-2
4.3-2	State and National Criteria Air Pollutant Standards, Effects, and Sources .....	4.3-4
4.3-3	Estimated Proposed Project Construction Emissions .....	4.3-11
4.4-1	Special-status species Reported in or Considered for the Proposed Project and Weed Segment Area.....	4.4-10
4.6-1	Regulatory Agency Databases Accessed.....	4.6-2
4.6-2	Hazardous Materials Sites in the Study Area.....	4.6-5
4.6-3	Federal and State Laws and Regulations Regarding Hazardous Materials.....	4.6-7
4.7-1	Shasta Valley Hydrologic Area .....	4.7-10
4.7-2	Definitions of Beneficial Uses of Surface Waters.....	4.7-11
4.7-3	Proposed 2006 CWA Section 303(d) List of Water Quality Limited Segments in the Proposed Project Area .....	4.7-12
4.8-1	Siskiyou County General Plan Constraints .....	4.8-3
4.8-2	General Plan and Zoning Designations for the Proposed Project, Weed Segment, and Alternatives .....	4.8-5
4.9-1	Ambient Noise Levels in the Study Area.....	4.9-4
4.9-2	Siskiyou County Land Use Compatibility for Exterior Community Noise.....	4.9-6
4.9-3	City of Weed Exterior Noise Limits .....	4.9-6
4.9-4	Typical Noise Levels from Construction Equipment.....	4.9-9
5-1	Summary of Significant Unmitigable (Class I) Environmental Impacts of the Proposed Project/Weed Segment and Alternatives .....	5-3
5-2	Proposed Project/Weed Segment vs. Alternatives Summary of Environmental Impact Conclusions.....	5-5
8-1	Mitigation Monitoring, Reporting and Compliance Program for Yreka-Weed 115 kV Transmission Line Upgrade Project, Southern Portion and the Weed Segment.....	8-9