

EXECUTIVE SUMMARY

ES.1 Introduction / Background

PacifiCorp, in its California Public Utilities Commission (CPUC) application for the Yreka-Weed Transmission Line Upgrade Project (A.05-12-011), filed on December 13, 2005, seeks a Permit to Construct (PTC) approximately 18.6 miles of 115 kilovolt (kV) single-circuit transmission line between the Yreka and Weed Junction Substations pursuant to CPUC General Order (GO) 131-D. The application includes the Proponent's Environmental Assessment (PEA) (PacifiCorp, 2005) prepared pursuant to Rule 2.4 of CPUC's Rules of Practice and Procedure.

In its application, PacifiCorp, which currently owns a single-circuit 69 kV electric transmission system in the Yreka-Weed area of Siskiyou County, requested authorization to upgrade the existing 69 kV transmission line (Line 1) with a new 17 mile 115 kV transmission line within existing right-of-way and to install an additional 1.6 miles of 115 kV transmission line within a new right-of-way from the existing Line 1, heading due east to the Weed Junction Substation. The upgraded and new line together would be called Line 75.

A Draft MND was prepared for the Proposed Project and was released on September 1, 2006 for public and agency comment. The CPUC held a public information meeting on September 20, 2006 to describe the Proposed Project and to solicit public comment on the Proposed Project and the Draft MND. The public comment period ended on October 2, 2006, and the CPUC prepared responses to all public and agency comments that had been submitted. A Final MND (SCH #: 2006092006), together with responses to comments, was published on October 17, 2006 (CPUC, 2006).

On October 19, 2006, in decision D.06-10-047, the CPUC adopted the Final MND for the Proposed Project and approved for construction all portions of the project north of Pole 15/44 (comprising approximately 17 miles of the 18.6-mile transmission line plus rebuilding of the Lucerne Substation). That decision left open for hearings and further evidentiary submissions a short piece of the route at the southern end, termed the "First Project/Southern Portion" (Southern Portion), which had been the subject of dispute among parties to the proceeding.

Construction of the approved portion of the project began in November 2006 and is now completed down to Pole 19/43. To optimize construction efficiency, completion of the remainder of the approved portion from Pole 19/43 south to 14/44 (approximately 0.5 mile in length) is planned to occur with construction of the Southern Portion.

On March 15, 2007, the Commission ruled on the Southern Portion in D.07-03-043, finding that “[e]valuation of other routes is necessary so the Commission may consider the full range of options in this proceeding.” Accordingly, the Commission ordered that an EIR be prepared to evaluate alternative routes for the Southern Portion.

The Weed Segment, which had been previously analyzed in the October 2006 Final MND, was the subject of a separate application by PacifiCorp (A.07-01-046) filed on January 26, 2007 (PacifiCorp, 2007). On April 4, 2007, noting that no decision has yet been made on the Weed Segment application, the CPUC ruled that the Weed Segment shall also be included in the EIR, to avoid the issue of piecemealing.

This EIR has been prepared to consider the potential environmental impacts from the Proposed Project Southern Portion and the Weed Segment, and to identify and evaluate a range of alternatives to that portion of the proposed alignment. Hereafter in this EIR, references to the Proposed Project means that portion of the originally-proposed Line 1 project termed the First Project/Southern Portion (or Southern Portion).

ES.1.1 Proposed Project

The Proposed Project would consist of upgrading approximately 0.7 miles of existing 69 kV transmission line to 115 kV, and construction of a new 1.6-mile section of 115 kV transmission line, approximately 1.2 miles of which no line currently exists. The Weed Segment would consist of upgrading approximately 1.5 miles of existing single-circuit 69 kV transmission line to a double-circuit 115 kV transmission line and would also include rebuilding the Weed Substation from 69 kV to 115 kV.

Most of the upgraded and new transmission line would be constructed using wood poles that would be taller and approximately six inches larger in diameter than the existing poles. Approximately eight of the new poles would be self-supporting steel structures that have the color appearance of wood. A summary of the major components of the Proposed Project and the Weed Segment is provided in Table ES-1.

The Proposed Project is located in Siskiyou County, north of the City of Weed, California (Figure ES-1), and generally traverses open space within the valley floor of Mount Shasta. A portion of the Proposed Project route (approximately 0.7 miles) is within an existing PacifiCorp transmission line right-of-way (ROW). Approximately 1.2 miles of the Proposed Project route would require acquisition of new ROW, and crosses at least one stream channel.

The Weed Segment is located near the City of Weed, California, which is located where Highway 97 and Interstate 5 meet (Figure ES-1).

**TABLE ES-1
SUMMARY OF PROJECT COMPONENTS**

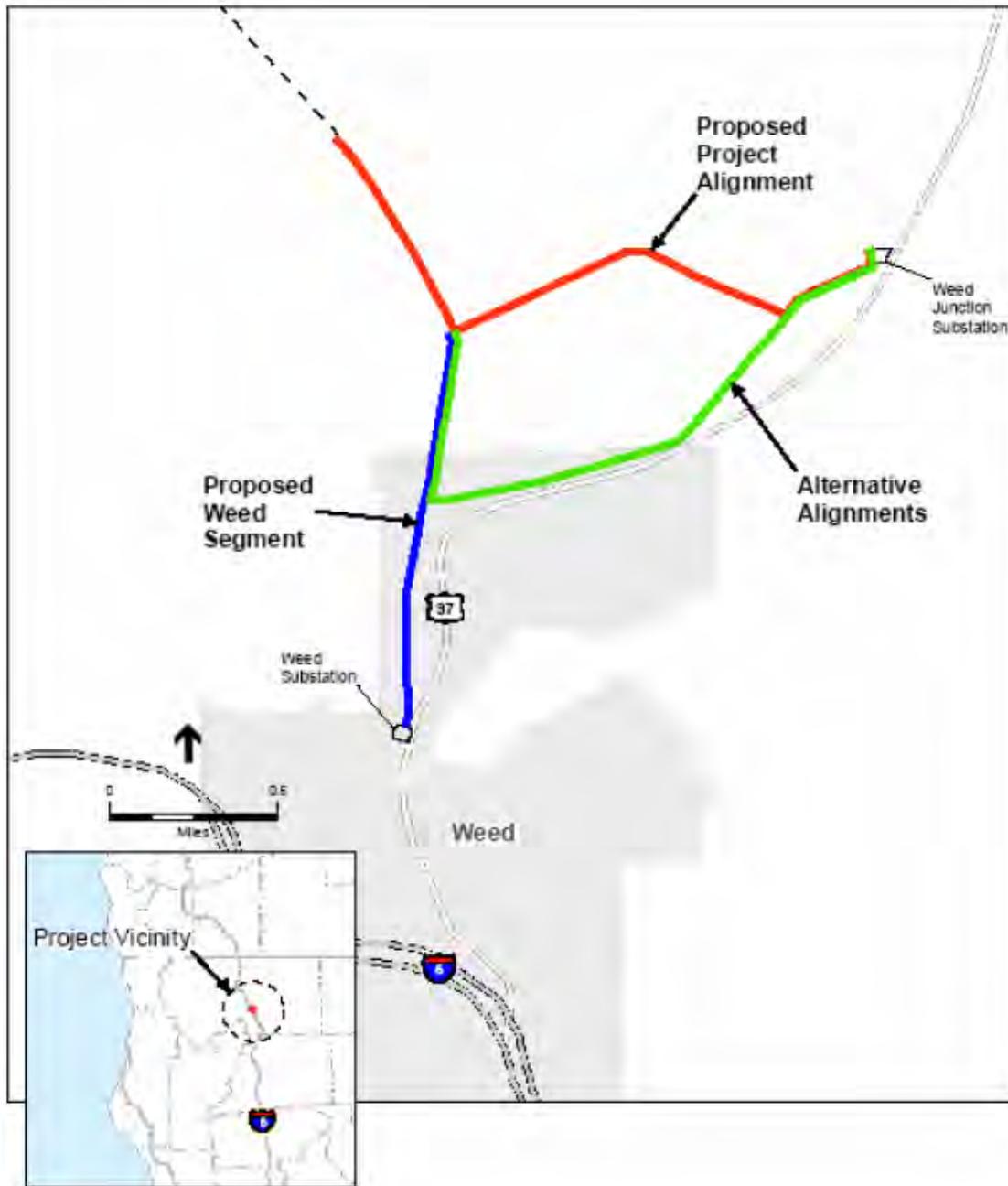
PROPOSED PROJECT
<ul style="list-style-type: none"> • Replace the existing single-circuit 69 kV transmission line with a single-circuit 115 kV line from Pole 15/44 to Pole 8/45 (requiring replacement of approximately 15 existing poles) • Install an approximately 1.6 mile new single-circuit 115 kV line from Pole 8/45 to the Weed Junction Substation (requiring installation of approximately 19 new poles and replacement of approximately 7 existing poles) • Increase conductor size to 795 aluminum conductor with steel reinforcement (ACSR) • Transfer existing distribution and telecommunication lines to the new wood poles; remove existing wood poles • Voltage of new circuit: 115 kV alternating current • Pole Type: wood poles, with approximately 4 self-supporting steel poles (see Appendix C) • Pole Height: generally 56 to 75 feet above ground surface (ags) • Span between Poles: approximately 200 to 250 feet where distribution is present (i.e., upgraded portion) and 400 to 600 feet where no distribution is present (i.e., new line).
WEED SEGMENT
<p>Weed Substation</p> <ul style="list-style-type: none"> • Construct a temporary 14+ MVA (megavolt ampere) substation adjacent to the existing Weed Substation • Expand the substation fenced area and construct a new standard 115 kV to 12.5kV substation • Increase substation capacity from 12.5 MVA to 25 MVA • Remove temporary substation <p>Transmission Line Upgrade</p> <ul style="list-style-type: none"> • Build a double circuit 115 kV 1.5-mile transmission line within existing 50-foot right-of-way (requiring replacement of approximately 27 poles and installation of approximately 4 new poles) • Pole Type: wood poles, with approximately 4 self-supporting steel poles (see Appendix C) • Pole Height: generally 61 to 80 feet above ground surface (ags) • Transfer existing distribution underbuild to the new poles • Separate Line 75 at the tap point (Pole 8/45) to form a loop through the rebuilt Weed Substation

PacifiCorp identified the objectives for the Yreka-Weed Transmission Line Upgrade in its PEA as follows:

- **Meet electric system demand** – to ensure that the system has adequate capacity to safely and reliably meet local and contractual electric system demand.
- **Ensure transmission system reliability** – to ensure the area transmission system meets planning criteria by providing an alternative transmission path in case of an outage of Line 14 between Hart Switching Station and Weed Junction by meeting Western Electricity Coordinating Council (WECC) N-1 Criteria (one line out of service).
- **Meet summer 2008 peak loads** – In order to meet this objective, construction must be started in the fall of 2007 as the ground may be too wet for construction in the spring.

PacifiCorp identified the objectives for the Weed Segment in its PEA as follows:

- **Handle increased load** – increase the Weed Substation voltage from 69 to 115 kV and capacity from 12.5 to 25 MVA (megavolt ampere, a measure of apparent power).
- **Provide transmission capacity** – build a looped 115 kV transmission line extension to serve the Weed Substation thereby increasing capacity so that the load can be served.
- **Improve service reliability** – the 115 kV transmission loop would provide two transmission sources with capacity to feed the Weed Substation.



PacifiCorp's Yreka-Weed Transmission Line Upgrade Project. 205439
Figure ES-1
Project Location

SOURCE: PacifiCorp (2006)

ES.1.2 Summary of Public Involvement Activities

On April 13, 2007 pursuant to the State CEQA Guidelines (Sections 21080.4 and 15082(a)), the CPUC provided a Notice of Preparation (NOP) for the Proposed Project and Weed Segment to responsible and trustee agencies and to other interested parties. The NOP solicited both written and verbal comments on the EIR's scope during a 30-day comment period and provided information on a forthcoming public scoping meeting. The CPUC held one public and agency scoping meeting at the College of the Siskiyous Theatre Building, Weed, California on May 2, 2007 from 6:30 p.m. to 8:30 p.m. to solicit verbal comments on the scope of the EIR.

During the public scoping meeting held on May 2, 2007, participants were able to comment on the scope of issues to be included in the EIR for the Proposed Project and the Weed Segment. Written comments were also collected throughout the public comment period. There were 17 oral comments in the public scoping meeting and 15 letters or e-mails were received during the scoping period. Appendix A to this EIR contains the Scoping Report, which includes a copy of the NOP, the NOP mailing list, a detailed description of all verbal and written comments received, transcripts of the oral comments, and copies of the written comments.

ES.1.3 Areas of Controversy / Public Scoping Issues

Private citizens and homeowners provided the majority of the comments during the scoping process. In addition to private individuals, comments were received from the following organizations and government agencies:

- Siskiyou County Board of Supervisors
- Weed Berean Church
- Volcanic Legacy Community Partnership
- Meyers Nave Riback Silver & Wilson, PLC
- Department of the Army, San Francisco District, U.S. Army Corps of Engineers
- Roseberg Forest Products
- Crystal Geyser Roxane Water Company
- North Coast Regional Water Quality Control Board.

The Scoping Report in Appendix A describes how the comments are addressed in the EIR and which comments are not covered under CEQA. The overarching themes in the written and oral comments received are as follows:

- General support for upgrading the transmission line, but differing views on which alternative would be the most feasible with the least amount of environmental impacts
- Support and opposition for varying options
- Potential impacts on scenic views, both in the Hoy Valley and along Highway 97, a designated National Scenic Byway and County Scenic Highway; as well as an Eligible State Scenic Highway.

- Potential health impacts from the electrical infrastructure
- Potential impacts to water quality and water supply in the project area
- Ensure that perceived inadequacies in the NOP and MND will not be repeated
- Potential impacts to the proposed Weed Berean Church and the Lincoln Heights community.

ES.2 Alternatives

Alternatives to PacifiCorp's Proposed Project are identified and evaluated in accordance with CEQA Guidelines. CEQA Guidelines (Section 15126(a)) state:

An EIR shall describe a reasonable range of alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project.

CEQA Guidelines (Section 15364) define feasibility as:

. . . capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.

Alternatives to the Proposed Project were suggested during the scoping period (April 13 to May 15, 2007). Other alternatives were presented by PacifiCorp in its PEA, by the CPUC in Decision D.07-03-043, or developed by the EIR preparers. Particular emphasis was placed on developing feasible alternatives which would place the upgraded transmission line entirely within PacifiCorp's existing ROW.

In total, the alternatives screening process has culminated in the identification and screening of approximately 10 potential alternatives for PacifiCorp's proposed 115 kV transmission line upgrade. These alternatives range from routing adjustments to undergrounding of the new transmission line. "Non-wires alternatives"¹ are addressed as well.

Alternatives to the Proposed Project were screened according to CEQA guidelines to determine those alternatives to carry forward for analysis in the EIR and alternatives to eliminate from detailed consideration. The alternatives were primarily evaluated according to: (1) whether they would meet most of the basic project objectives; (2) whether they would be feasible considering legal, regulatory and technical constraints; and (3) whether they have the potential to substantially lessen any of the significant effects of the Proposed Project.² Other factors considered, in accordance with CEQA Guidelines (CEQA Guidelines Section 15126.6(f)), were site suitability,

¹ "Non-wires alternatives" include methods of meeting project objectives that do not require major transmission lines (e.g., renewable energy supplies, conservation and demandside management, etc.).

² At the screening stage, it is neither possible nor legally required to evaluate all of the impacts of the alternatives in comparison to the Proposed Project with absolute certainty, nor is it possible to quantify impacts. However, it is possible to identify elements of an alternative that are likely to be the sources of impact and to relate them, to the extent possible, to general conditions in the subject area.

economic viability, availability of infrastructure, general plan consistency, other regulatory limitations, jurisdictional boundaries, and proponent's control over alternative sites. Economic factors or costs of the alternatives (beyond economically feasible) were not considered in the screening of alternatives since CEQA Guidelines require consideration of alternatives capable of eliminating or reducing significant environmental effects even though they may "impede to some degree the attainment of project objectives or would be more costly" (CEQA Guidelines Section 16126.6(b)).

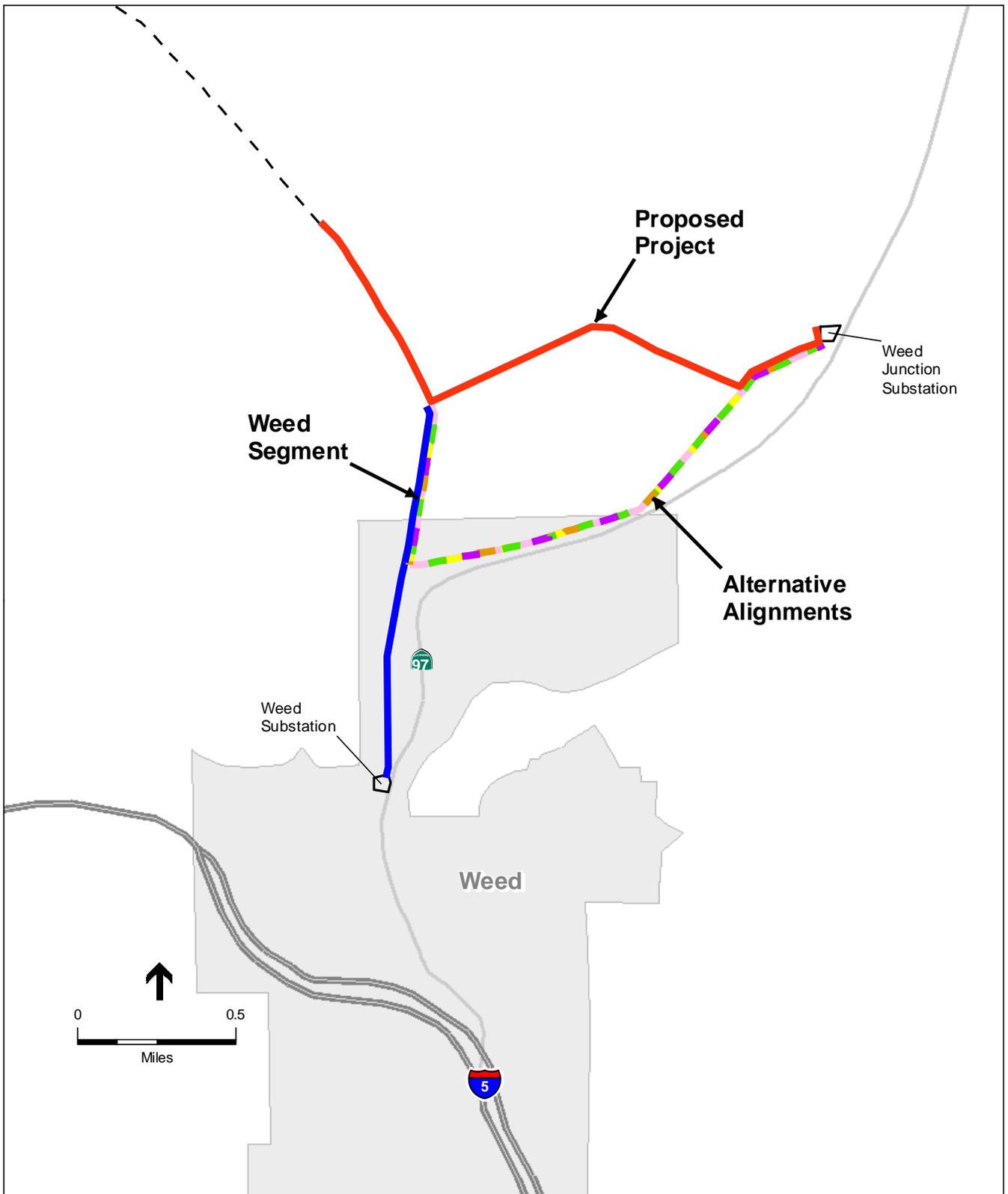
In addition to CEQA requirements regarding the alternatives screening methodology, the Commission, in D.07-03-043, ordered the assessment of "the environmental impacts of all the route options discussed" in D.07-03-043. This EIR meets that order. The environmental impacts of all routes at issue in D.07-03-043 are either fully assessed in this EIR or are assessed to the extent that they can be appropriately screened out pursuant to the legal requirements of CEQA. Moreover, the alternatives discussed in D.07-03-043 that are dropped from further analysis due to the CEQA alternative screening analysis are along the same "route" as the alternatives that are retained for full CEQA analysis.

The detailed results of the alternatives screening analysis are contained in Section 3 of the EIR. A summary description of the alternatives considered and the results of screening are provided below. Figure ES-2 illustrates the general alignment of the six route alternatives compared to the Proposed Project and Weed Segment. As is discussed in greater detail in the sections which follow, PacifiCorp Option 1 would expand the existing 50-foot ROW to 100 feet, PacifiCorp Option 4 would "shift" the ROW 15 feet to the north, while the Mackintosh Option 5, Option 4-ALJ3, and Mackintosh/ALJ Variations A and B would stay entirely within the existing 50-foot ROW.

ES.2.1 Alternatives Fully Evaluated in this EIR

PacifiCorp Option 4 Alternative

Description. This alternative (a modified version of Option 4 in the PacifiCorp Application and PEA) would include upgrading the existing 69 kV line from Pole 15/44 south to Pole 8/45, same as for the Proposed Project. At Pole 8/45 the 115 kV single circuit line would continue south under this alternative with pole-for-pole replacement to Pole 19/45, where the alignment would veer east parallel to, but 15 feet north of, an existing 69 kV line generally along Highway 97 until reaching approximately 1.7 miles into the Weed Junction Substation. New taller wood poles would be installed approximately 15 feet directly north of each existing pole in the 69 kV ROW, thus requiring an additional 15-foot ROW easement. Once the new poles are installed, the existing 69 kV line and distribution underbuild would be swung over to the new poles, and the existing poles would be removed. Once the old poles are removed, 15 feet of the easement on the southern edge would be "released", so that the total easement would remain at 50 feet but shifted 15 feet to the north.



PacifiCorp's Weed-Yreka Transmission Line Upgrade - Southern Portion, 205439
 SOURCES: ESA (2007), PacifiCorp (2007), ESRI Streetmap USA (2006)

Figure ES-2

Overview of Alternative Alignments

Alternatives

- PacifiCorp Option 1
- PacifiCorp Option 4
- Mackintosh/ALJ Variations A and B
- Mackintosh Option 5
- Option 4 - ALJ3

Rationale for Full Analysis. This alternative would meet all project objectives and would meet all legal, regulatory, and technical feasibility criteria. It would avoid any potential degradation of aesthetic resources or impacts to groundwater that may occur along the new 1.6-mile segment of the Proposed Project. However, this alternative would result in shifting the existing ROW to the north by 15 feet for approximately 1.7 miles through mature stands of conifers and other types of vegetation, some of which would need to be trimmed or removed to shift the ROW 15 feet to the north. Also, the Highway 97 corridor along which portions of this alternative route would follow is part of the Volcanic Legacy Scenic Byway, a designated County Scenic Highway, and an Eligible State Scenic Highway. The taller poles and heavier conductor along this alternative route may result in degradation of scenic views to residents and visitors traveling Highway 97.

Mackintosh/ALJ Variation A Alternative

Description. This alternative was developed by the EIR team to achieve construction of the transmission line upgrade entirely within PacifiCorp's existing ROW. Similar to the Proposed Project, this alternative would upgrade the existing 69 kV line from Pole 15/44 south to Pole 8/45. At Pole 8/45 the 115 kV single circuit line would continue south with pole-for-pole replacement to Pole 19/45, where the alignment would veer east within an existing 69 kV line ROW following generally along Highway 97 approximately 1.7 miles until reaching the Weed Junction Substation. For this alternative, a temporary 115/69 kV transformer of approximately 20 MVA (megavolt ampere) capacity would be required at the Weed Substation to serve existing load to Weed and the International Paper substation. Once the temporary transformer is installed and operational, the 69 kV line between the Weed and Weed Junction Substations could be de-energized, thus allowing construction of the new double circuit line in the centerline of the existing ROW.

Rationale for Full Analysis. This alternative would meet all project objectives and would meet all legal, regulatory, and technical feasibility criteria. It would avoid any potential degradation of aesthetic resources or impacts to groundwater that may occur along the new 1.6-mile segment of the Proposed Project. Because this alternative would result in construction of the new line generally on the centerline of the existing ROW, minimal trimming or removal of trees would be required. The Highway 97 corridor along which portions of this alternative route would follow is part of the Volcanic Legacy Scenic Byway, a designated County Scenic Highway, and an Eligible State Scenic Highway. The taller poles and heavier conductor along this alternative route may result in degradation of scenic views to residents and visitors traveling Highway 97.

Mackintosh/ALJ Variation B Alternative

Description. This alternative was developed by the EIR team as a second variation to achieve construction of the transmission line upgrade entirely within PacifiCorp's existing ROW. Similar to the Proposed Project, this alternative would upgrade the existing 69 kV line from Pole 15/44 south to Pole 8/45. At Pole 8/45 the 115 kV single circuit line would continue south with pole-for-pole replacement to Pole 19/45, where the alignment would veer east within an existing 69 kV line ROW following generally along Highway 97 approximately 1.7 miles until reaching the Weed Junction Substation. For this alternative, a temporary pole line would be constructed in the

existing ROW approximately 15 feet south of the each existing pole. The existing 69 kV transmission line and distribution underbuild would then be moved over “hot” (energized) to the temporary poles. The existing poles in the centerline of the ROW would then be removed and new double circuit poles would be installed with new 115 kV conductor. When construction of the new poles with the new 115 kV conductor is complete, the 69 kV line and distribution underbuild would be moved over hot and the temporary poles removed.

Rationale for Full Analysis. This alternative would meet all project objectives and would meet all legal, regulatory, and technical feasibility criteria. It would avoid any potential degradation of aesthetic resources or impacts to groundwater that may occur along the new 1.6-mile segment of the Proposed Project. Because this alternative would result in construction of the new line generally on the centerline of the existing ROW, minimal trimming or removal of trees would be required. The Highway 97 corridor along which portions of this alternative route would follow is part of the Volcanic Legacy Scenic Byway, a designated County Scenic Highway, and an Eligible State Scenic Highway. The taller poles and heavier conductor along this alternative route may result in degradation of scenic views to residents and visitors traveling Highway 97.

No Project Alternative

Description. In addition to the route alternatives described above, the EIR evaluates the No Project Alternative, in accordance with CEQA requirements. CEQA Guidelines [Section 15126.6(e)], state that the No Project Alternative must include (a) the assumption that conditions at the time of the Notice of Preparation (i.e., baseline environmental conditions) would not be changed since the Proposed Project would not be installed, and (b) the events or actions that would be reasonably expected to occur in the foreseeable future if the project were not approved.

Under the No Project Alternative, other actions by PacifiCorp or other entities would need to compensate for existing system limitations if the anticipated load growth occurs. If neither the Proposed Project nor any alternative were approved by the CPUC, and predicted load growth occurs, PacifiCorp would need to evaluate alternative courses of action that could be implemented to prevent electricity shortages in the project area. This alternative includes either of the following components or combination of components:

- Construction of new transmission facilities at 115 kV or higher voltage, requiring the development of a new transmission corridor from either the east or north into the Weed area.
- Construction of additional regional generation.

ES.2.2 Alternatives Eliminated from Further Consideration

The alternatives listed below were evaluated for their potential to meet CEQA requirements but were ultimately eliminated from consideration in the EIR. The two Mackintosh/ALJ variations carried forward for full analysis draw substantially from the concepts first advanced in the “Mackintosh Option 5” and “Option 4-ALJ3” alternatives, which are discussed in CPUC Decision 07-03-043. While those two alternatives as originally described each have substantial

project objective and or technical feasibility issues, they each do contain meaningful route variations which need to be evaluated in this EIR to meet the requirements of CEQA and the ordering paragraphs of CPUC Decision 07-03-043. As illustrated in Figure ES-2, the two Mackintosh/ALJ variations would follow essentially the same route as the original “Mackintosh Option 5” and “Option 4-ALJ3” alternatives but without the project objective or feasibility issues.

PacifiCorp Option 1 Alternative

Description. This Alternative (called Option 1 in the PacifiCorp Application and PEA) would include upgrading the existing 69 kV line from Pole 15/44 to Pole 8/45, similar to the Proposed Project. At Pole 8/45 the line would continue south with pole-for-pole replacement to Pole 19/45, where the alignment would veer east to parallel an existing 69 kV line generally along Hwy 97 approximately 1.7 miles until reaching the Weed Junction Substation. New poles would be installed approximately 50 feet directly north of those in the existing 69 kV ROW, thus requiring an additional 50-foot ROW easement for approximately 1.7 miles. When completed, this Alternative would have two sets of poles – the existing 69 kV line with distribution underbuild, plus the new 115 kV line on new poles approximately 50 feet north of the existing 69 kV poles, resulting in a 100-foot total easement.

Rationale for Elimination. This alternative meets project objectives and is technically feasible, but would have substantially greater impacts to biological resources compared to the Proposed Project because of the substantial and permanent tree removal that would be required to expand the ROW by 50 feet. Because there are other feasible alternatives which follow generally the same route but which avoid the substantial impacts to biological resources associated with doubling the width of the ROW, this alternative was eliminated from further consideration.

Mackintosh Option 5 Alternative

Description. This alternative, suggested by property owners Don and Judy Mackintosh, would upgrade the existing 69 kV Line 1 to 115 kV starting from Pole 15/44 and proceeding southerly to the Weed Substation, then looping back to the north with a double circuit on the same poles to Pole 19/45. From Pole 19/45 the line would turn to the east and replace the 69 kV Line 1 using the existing poles for approximately 1.7 miles to Weed Junction Substation. For construction of the easterly segment, the existing Line 1 between Weed and Weed Junction would be shut down and removed from Pole 19/45 to Weed Junction to clear the existing pole line for new 115 kV conductors to be installed on the existing poles. All work would be within the existing ROW. The end result would be a single pole line in the existing 50-foot wide easement carrying 115 kV and distribution circuits. This alternative proposes that the Weed Substation upgrade plan be modified to include a separate 115/69 kV transformer or a single three-winding 115/69/12.5 kV transformer to serve power at 69 kV to International Paper and at 12 kV for the local distribution. This new equipment would require an expansion of the Weed Substation footprint by up to 20,000 square feet.

Rationale for Elimination. This alternative would avoid establishing a new ROW or either expanding or shifting the existing ROW for the proposed transmission line, and so would avoid

any degradation of aesthetic resources or impacts to groundwater that may occur along the new 1.6-mile segment of the Proposed Project. This alternative would not be likely to result in any substantial new environmental impacts along its proposed alignment.

However, this alternative does not meet the criteria for technical feasibility. It proposes eliminating the existing 69 kV line and replacing it with a 115 kV line using the existing poles for the approximately 1.7-mile route between Pole 19/45 and the Weed Junction Substation. This is not technically feasible for the following reasons:

- the existing poles would fail to provide the required minimum ground clearance in violation of CPUC General Order (GO) 95
- minimum clearance requirements between circuits would not be met, in violation of National Electric Safety Code Rules 235E1 and 235E3B and GO95
- the existing poles would not meet GO95 criteria for wind and ice loading with the larger (and heavier) insulators and heavier conductor required for the 115 kV line.

Also, removal of the 69 kV line between the Weed Junction and Weed Substations would eliminate PacifiCorp's ability to provide support at 69 kV to Line 2 at Weed Junction resulting in reduced system reliability and failure to meet project objectives. This alternative was therefore eliminated from further consideration.

Option 4-ALJ3 Alternative

Description. This alternative consists of upgrading existing 69 kV Line 1 to 115 kV starting from Pole 15/44 and proceeding southerly to the Weed Substation and then looping back to the north with a double circuit on the same poles to Pole 19/45. From Pole 19/45 the line would turn to the east following the same alignment as the 69 kV Line 1 for approximately 1.7 miles to the Weed Junction Substation. For construction of the easterly segment, the existing 69 kV Line 1 would be de-energized and the line demolished. In its place, within the existing ROW, a new double circuit 115/69 kV line would be built. The end result would be one double-circuit pole line in the existing 50-foot wide easement carrying 115 and 69 kV circuits and distribution underbuild. Prior to de-energizing the existing 69 kV line, additional modifications to the Weed Substation would need to be completed to provide continuous 69 kV service to the International Paper substation. This alternative would require either adding a permanent 115/69 kV transformer in addition to the planned 115/12 kV transformer, or adding a single "three-wire" 115/69/12.5 kV transformer. Adding this equipment to the Weed Substation would require a permanent expansion of the footprint by approximately 5,000 square feet.

Rationale for Elimination. This alternative would avoid establishing a new ROW or either expanding or shifting the existing ROW for the proposed transmission line, and so would avoid any degradation of aesthetic resources or impacts to groundwater that may occur along the new 1.6-mile segment of the Proposed Project. This alternative would not be likely to result in any substantial new environmental impacts along its proposed alignment. This alternative would not be likely to result in any substantial new environmental impacts along its proposed alignment.

Using a single “three-wire” 115/69/12.5 kV transformer for this alternative is not technically feasible because of reliability issues, so this alternative would require use of separate 115/69 kV and 115/12 kV transformers at the Weed Substation to avoid the risk of prolonged outages. The lead time for procurement of a new transformer for permanent installation is approximately 15 months, which would extend the construction schedule into the summer of 2009 past the estimated time when Line 14 is projected to exceed its thermal limit resulting in PacifiCorp’s failure to meet Western Electricity Coordinating Council (WECC) N-1 Criteria, thus creating a risk of prolonged outage to the area. Therefore, this alternative fails to substantially meet all three objectives of the Proposed Project and was eliminated from further consideration.

Undergrounding Alternative

Description. This alternative would consist of installing the new 115 kV transmission line underground for the approximately 1.7-mile easterly segment to the Weed Junction Substation. The potential routes for this underground installation would include (a) the same route as the Proposed Project east from Pole 8/45, (b) the same route as the existing ROW east from Pole 19/45, or (c) through the Caltrans ROW for Highway 97. Open trenching would be the most common construction method, requiring trench dimensions approximately 5 to 8 feet wide and 5 to 10 feet deep. Total ground disturbance for open trenching would be up to 40-feet wide, resulting in a total disturbed area of approximately 8 acres for the 1.7-mile route. A 10-foot wide by 24-foot long splice vault would be required approximately every 1,800 feet.

Wetland areas or other sensitive surface features would need to be avoided by either horizontal directional drilling (HDD) or direct boring methods. Excavation of pits for cable pulling and conduit installation would be required on either side of the surface feature to be avoided. These pits would be approximately 40 to 50 feet wide by 10 to 20 feet deep and up to 100 feet long depending upon the length of the boring. Subsurface volcanic debris and rock outcroppings in the project area would likely require rock drilling and/or blasting and backfilling of the trench with suitable backfill material.

Rationale for Elimination. This alternative is technically feasible. However, the difficult soil conditions and the sensitive environmental resources that would have to be avoided would substantially delay completion of the project and would likely result in PacifiCorp’s failure to meet its objective of meeting electric system demand and improving system reliability prior to Line 14 exceeding its thermal limit. This alternative would also fails to meet the environmental criteria. Temporary construction impacts to air quality, traffic, and noise would be much greater than the Proposed Project. Substantial and permanent impacts could occur to biological resources (e.g., wetland features and special status species) and surface and groundwater resources from the construction activities, especially where drilling and blasting would be required. The potential to impact significant cultural resources would also be very high, as there is a known resource in the existing ROW and there is a high likelihood of encountering previously unknown resources in the other potential alignments. Because of the potential for creating substantially significant new impacts compared to the Proposed Project, this alternative was eliminated from further consideration.

Non-Wires – Energy Conservation and Demand Side Management Alternative

Description. Energy Conservation and Demand Side Management programs are designed to reduce customer energy consumptions and/or improve electric energy efficiency. CPUC regulatory requirements dictate that supply-side and demand-side resource options should be considered on an equal basis in a utility's plan to acquire lowest cost resources.

PacifiCorp offers a number of energy efficiency programs in California, including the irrigation initiative to help irrigators in California make their operations more efficient, on-site energy audits/analysis services for business customers, and home energy analysis to help residential customers become more aware of their energy usage and provide them with personalized recommendations to make their home more energy-efficient. In addition, PacifiCorp provides customers free brochures on improving energy efficiency. Under this alternative the need for the upgraded transmission line would be met through increased conservation and load management activities similar to those noted above.

Rationale for Elimination. Reductions in demand through energy conservation programs are part of PacifiCorp's future operations and are incorporated into its long-term peak load forecasts. As separate and stand alone programs, however, these programs do not provide either the capacity or reliability needs of PacifiCorp, as stated in their objectives for the Proposed Project. Looking at PacifiCorp's local area demand of 37 MVA, a demand reduction of 35% would be necessary to reach the point at which Line 14 was not overloaded during system peak periods. The demand reduction programs which PacifiCorp has implemented in California to date have not produced sizeable enough reductions to eliminate the need for the Proposed Project, which is designed to ease such overloading. Furthermore, without completing the Line 1 upgrade to 115 kV, the Weed Segment could not be built, thereby failing to meet the objectives of that project. For these reasons, this alternative was eliminated from further consideration.

Non-Wires – Renewable Energy Resources Alternative

Description. California's Renewable Portfolio Standard (RPS) requires retail sellers of electricity to increase their procurement of eligible renewable resources by at least 1 percent per year so that 20 percent of their retail sales are procured from eligible renewable energy resources by 2017. The CEC and the CPUC approved an Energy Action Plan in addition to the Renewable Portfolio Standard. The shared goal of the Energy Action Plan is to:

“Ensure that adequate, reliable, and reasonably-priced electrical power and natural gas supplies, including prudent reserves, are achieved and provided through policies, strategies, and actions that are cost-effective and environmentally sound for California's consumers and taxpayers.”

Renewable resources that are available to the PacifiCorp territory include geothermal and solar as the principal resources. Wind and solar resources are more prevalent in the southern portion of the State, outside PacifiCorp's service territory, although the southern portion of Siskiyou County has some solar resource potential. Some geothermal resource areas are found in southern Siskiyou

County. The main obstacle to utilizing renewable generation sources is the lack of existing transmission infrastructure to transport the renewable power to the grid.

Rationale for Elimination. Renewable resources for renewable energy programs are part of PacifiCorp's future operations and are incorporated into its long-term peak load forecasts. As separate and stand-alone programs, however, the renewable resource alternative would not replace the need for upgrading the existing transmission infrastructure in the Proposed Project area. Because renewable resources would not provide either the capacity or reliability needs of PacifiCorp, and transmission infrastructure upgrades would still be required to integrate any renewable resources, this alternative was eliminated from further consideration.

ES.3 Environmental Impacts and Mitigation Measures

Impact Assessment Methodology. The analysis of environmental impacts is based upon the environmental setting applicable to each resource/issue and the manner in which the construction, operation and maintenance of the Proposed Project and Weed Segment or alternatives would affect the environmental setting and related resource conditions. In accordance with CEQA requirements and guidelines, the impact assessment methodology also considers the following three topics: (1) the regulatory setting, and evaluates whether the Proposed Project and Weed Segment or alternatives would be consistent with adopted federal, State and Local regulations and guidelines, (2) growth-inducing impacts, and (3) cumulative impacts. Regulatory compliance issues are discussed in each resource/issue area section. The EIR document is organized according to the following major issue area categories:

- Aesthetics
- Agriculture Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Public Services and Recreation
- Transportation and Traffic
- Utilities and Service Systems.

In order to provide for a comprehensive and systematic evaluation of potential environmental consequences to the resource/issue areas, the environmental impact assessments for the Proposed Project and Weed Segment and alternatives are based upon a classification system, with the following four associated definitions:

Class I: Significant impact; cannot be mitigated to a level that is not significant

Class II: Significant impact; can be mitigated to a level that is not significant

Class III: Adverse impact, less than significant

Class IV: Beneficial impacts.

Mitigation Measures. The EIR describes feasible measures that could minimize significant adverse impacts (CEQA Guidelines Section 15226.4). Within each issue area, mitigation measures are recommended where environmental effects could be substantially minimized. The mitigation measures recommended by this study have been identified in the impact assessment sections of the EIR and are presented in Mitigation Monitoring, Reporting, and Compliance Program in Section 8.

The major findings of the EIR analysis are summarized below according to resource issue area. Regulatory issues pertinent to each resource are identified, along with a summary of the primary Class I (significant, unmitigable) and Class II (significant, mitigable) impacts that would be expected from the construction and operation of the Proposed Project and the Weed Segment and the alternatives. Impact findings and mitigation measures for the Proposed Project/Weed Segment and alternatives are summarized in Tables ES-4 and ES-5, respectively, at the end of this Executive Summary.

ES.3.1 Aesthetics

Proposed Project and Weed Segment

The Proposed Project would affect scenic views from a limited portion of Hoy Road and from nearby residential properties. The Weed Segment would represent an incremental change as seen from northbound Highway 97 near the Alamo Avenue which would not substantially obstruct or affect scenic vistas toward the mountains that currently are available from Highway 97 in this area; this would be a less than significant impact. New poles at the Weed Junction Substation and rebuild of the Weed Substation would affect views from a limited portion of Highway 97, a designated National Scenic Byway, designated County Scenic Highway, and an Eligible State Scenic Highway. The Weed Segment would also affect views from a limited portion of the Lincoln Heights residential area, affecting the existing visual character and/or quality. Additionally, the Proposed Project and Weed Segment transmission lines and the Weed Segment substation upgrade could create new sources of glare.

Mitigation measures have been developed to reduce the impacts associated with visual resources. These measures include siting Poles 11, 12, 13, and 14, during final design to minimize potential effects on views from Hoy Road and from the 5026 Hoy Road residential property, respectively. Siting criteria include: where feasible, set back poles from the edge of the roadway so as to reduce their visibility; where feasible, locate poles to take advantage of available opportunities for screening provided by nearby, foreground existing vegetation and to locate poles to minimize the degree of skylining. A landscape plan may also be required if the siting criteria discussed above are not effective as determined by the CPUC mitigation monitor. At both the Weed Junction and Weed Substation a landscape plan would be prepared and screening through the use of vegetation and the incorporation of non-reflective materials, such as chain link fence with light brown vinyl slats on the perimeter fencing would be required. In regards to the Lincoln Heights neighborhood; Pole 3/46 would be sited to minimize effects and to the extent feasible, sited to take advantage of available screening opportunities provided by existing vegetation; additionally, Pole 3/46 would be redesigned to utilize a self-supporting steel pole, the siting and final design of which would be

submitted to the CPUC for review and approval before construction. Additionally, use of non-specular conductors for the transmission line and the application of non-reflective or weather finish to new structures and equipment at the Weed Substation would be required. With implementation of the mitigation measures designed for the Proposed Project and Weed Segment, impacts to visual resources would be less than significant.

However, the Proposed Project would add approximately 1.2 miles of new ROW within which approximately 15 new wood poles and 3 conductors would be installed where none currently exists. This new ROW would be constructed within approximately one-half mile of an existing transmission line ROW, and both would be visible to residents and visitors in the area. The combined visual effect of establishing a new 1.2 mile ROW containing transmission facilities while retaining the nearby existing ROW that also contains transmission facilities is significant since the overall visual character of the area would be adversely affected by such combined facilities and would be degraded from its present condition. The Proposed Project's incremental contribution to the cumulative adverse visual impact is cumulatively considerable and thus significant.

Alternatives

PacifiCorp Option 4 Alternative

The PacifiCorp Option 4 alternative would affect scenic views from an approximately ½-mile portion of Highway 97. New poles at the Weed Junction Substation, rebuild of the Weed Substation and a portion of the transmission line would affect views from a limited portion of Highway 97, a designated National Scenic Byway, designated County Scenic Highway, and an Eligible State Scenic Highway. The Weed Segment would also affect views from a limited portion of the Lincoln Heights residential area, affecting the existing visual character and/or quality. Additionally, the PacifiCorp Option 4 alternative transmission lines and the Weed Segment substation upgrade could create new sources of glare.

Mitigation measures have been developed to reduce the impacts associated with visual resources. These measures include development of a landscape plan and consultation with Siskiyou County Public Works Department, Caltrans, and the Volcanic Legacy Community Partnership to partially screen close range and long range unobstructed views of certain poles along Highway 97; however, even with implementation of this measure, due to the status of Highway 97 as a designated National Scenic Byway, designated County Scenic Highway, and an Eligible State Scenic Highway, this impact would remain significant after mitigation. For the remainder of the impacts associated with the PacifiCorp Option 4 alternative, implementation of mitigation measures designed for the Proposed Project would reduce impacts to less than significant.

Mackintosh/ALJ Variation A Alternative

The Mackintosh/ALJ Variation A alternative would affect scenic views from an approximately ½-mile portion of Highway 97. New poles at the Weed Junction Substation, rebuild of the Weed Substation and a portion of the transmission line would affect views from a limited portion of

Highway 97, a designated National Scenic Byway, designated County Scenic Highway, and an Eligible State Scenic Highway. The Weed Segment would also affect views from a limited portion of the Lincoln Heights residential area, affecting the existing visual character and/or quality. Additionally, the Mackintosh/ALJ Variation A alternative transmission lines and the Weed Segment substation upgrade could create new sources of glare.

Mitigation measures have been developed to reduce the impacts associated with visual resources. These measures include development of a landscape plan and consultation with Siskiyou County Public Works Department, Caltrans, and the Volcanic Legacy Community Partnership to partially screen close range and long range unobstructed views of certain poles along Highway 97; however, even with implementation of this measure, due to the status of Highway 97 as a designated National Scenic Byway, designated County Scenic Highway, and an Eligible State Scenic Highway, this impact would remain significant after mitigation. For the remainder of the impacts associated with the Mackintosh/ALJ Variation A alternative, implementation of mitigation measures designed for the Proposed Project would reduce impacts to less than significant.

Mackintosh/ALJ Variation B Alternative

The Mackintosh/ALJ Variation B alternative would affect scenic views from an approximately ½-mile portion of Highway 97. New poles at the Weed Junction Substation, rebuild of the Weed Substation and a portion of the transmission line would affect views from a limited portion of Highway 97, a designated National Scenic Byway, designated County Scenic Highway, and an Eligible State Scenic Highway. The Weed Segment would also affect views from a limited portion of the Lincoln Heights residential area, affecting the existing visual character and/or quality. Additionally, the Mackintosh/ALJ Variation B alternative transmission lines and the Weed Segment substation upgrade could create new sources of glare.

Mitigation measures have been developed to reduce the impacts associated with visual resources. These measures include development of a landscape plan and consultation with Siskiyou County Public Works Department, Caltrans, and the Volcanic Legacy Community Partnership to partially screen close range and long range unobstructed views of certain poles along Highway 97; however, even with implementation of this measure, due to the status of Highway 97 as a designated National Scenic Byway, designated County Scenic Highway, and an Eligible State Scenic Highway, this impact would remain significant after mitigation. For the remainder of the impacts associated with the Mackintosh/ALJ Variation B alternative, implementation of mitigation measures designed for the Proposed Project would reduce impacts to less than significant.

No Project Alternative

A new transmission line into the area would likely result in adverse effects on a scenic vista or visual character due to the linear nature of the facility and expansive views of Mount Shasta from many areas. Effects from a new power plant would be dependent on siting, but would likely have adverse impacts due to the physical size of such facilities and the presence of exhaust stacks and

cooling towers. Degradation of the existing visual character or quality of a site would be anticipated due to the likelihood that a new ROW would be required for a new transmission line. Operation of a new power plant would likely require lighting at the facility as well as around the perimeter for security purposes which would likely introduce new sources of light.

ES.3.2 Agriculture Resources

Proposed Project and Weed Segment

Construction activities would result in the temporary removal of farmland that is designated *Farmland of Statewide Importance*, or *Farmland of Local Importance*; however, with implementation of a mitigation measure this impact would be less than significant. The potential impact to conflict with existing zoning for agricultural use, or a Williamson Act contract was found to be less than significant requiring no mitigation.

Implementation of a mitigation measure developed in Section 4.4, *Biological Resources*, which would require PacifiCorp to salvage the topsoil, store topsoil separately from subsoil, and spread the topsoil either at the disturbance site upon completion of construction activities or during the restoration process, would mitigate the impact of any temporary removal of farmland that is designated *Farmland of Statewide Importance*, or *Farmland of Local Importance* to a less than significant level.

With implementation of this mitigation measure, agricultural resource impacts resulting from the Proposed Project and Weed Segment would be less than significant.

Alternatives

PacifiCorp Option 4 Alternative

Construction activities would result in the temporary removal of farmland that is designated *Farmland of Statewide Importance*, or *Farmland of Local Importance*; however, with implementation of a mitigation measure developed in Section 4.4, *Biological Resources*, which would require PacifiCorp to salvage the topsoil, store topsoil separately from subsoil, and spread the topsoil either at the disturbance site upon completion of construction activities or during the restoration process, would mitigate the impact of any temporary removal of farmland that is designated *Farmland of Statewide Importance*, or *Farmland of Local Importance* to a less than significant level. The potential to conflict with existing zoning for agricultural use, or a Williamson Act contract was found to be less than significant requiring no mitigation.

With implementation of the mitigation measure designed for the Proposed Project, agricultural resource impacts for PacifiCorp Option 4 alternative would be less than significant.

Mackintosh/ALJ Variation A Alternative

Construction activities would result in the temporary removal of farmland that is designated *Farmland of Statewide Importance*, or *Farmland of Local Importance*; however, with

implementation of a mitigation measure developed in Section 4.4, *Biological Resources*, which would require PacifiCorp to salvage the topsoil, store topsoil separately from subsoil, and spread the topsoil either at the disturbance site upon completion of construction activities or during the restoration process, would mitigate the impact of any temporary removal of farmland that is designated *Farmland of Statewide Importance*, or *Farmland of Local Importance* to a less than significant level. The potential to conflict with existing zoning for agricultural use, or a Williamson Act contract was found to be less than significant requiring no mitigation.

With implementation of the mitigation measure designed for the Proposed Project, agricultural resource impacts for Mackintosh/ALJ Variation A alternative would be less than significant.

Mackintosh/ALJ Variation B Alternative

Construction activities would result in the temporary removal of farmland that is designated *Farmland of Statewide Importance*, or *Farmland of Local Importance*; however, with implementation of a mitigation measure developed in Section 4.4, *Biological Resources*, which would require PacifiCorp to salvage the topsoil, store topsoil separately from subsoil, and spread the topsoil either at the disturbance site upon completion of construction activities or during the restoration process, would mitigate the impact of any temporary removal of farmland that is designated *Farmland of Statewide Importance*, or *Farmland of Local Importance* to a less than significant level. The potential to conflict with existing zoning for agricultural use, or a Williamson Act contract was found to be less than significant requiring no mitigation.

With implementation of the mitigation measure designed for the Proposed Project, agricultural resource impacts for Mackintosh/ALJ Variation B alternative would be less than significant.

No Project Alternative

A new power plant could result in the conversion of designated farmland and could conflict with existing zoning for agricultural use and/or a Williamson Act contract, resulting in potentially significant impacts. A new transmission line could result in the temporary conversion of designated farmland; however, it is unlikely that a transmission line would conflict with existing zoning for agricultural use and/or a Williams Act contract.

ES.3.3 Air Quality

Proposed Project and Weed Segment

Construction activities would generate emissions of criteria pollutants, including suspended and inhalable particulate matter and equipment exhaust emissions, and would potentially expose sensitive receptors to pollutant concentrations; however, with implementation of mitigation measures these impacts would be less than significant. Impacts associated with the potential to create objectionable odors affecting a substantial number of people and to substantially increase long-term emissions of greenhouse gases were found to be less than significant. No impacts were

found related to conflicts or obstruction with applicable air quality plans and to cumulatively considerable increases of non-attainment criteria pollutants.

Implementation of measures to minimize dust generation during excavation, storage, and transportation during construction (i.e., watering or applying soil stabilizers, enclosing and covering soil and other materials, covering trucks, and sweeping the streets, access roads, parking areas and staging areas, and limiting traffic speed on unpaved roads) would mitigate any impacts from criteria pollutants to less than significant levels.

With implementation of mitigation measures, air quality impacts resulting from the Proposed Project and Weed Segment would be less than significant.

Alternatives

PacifiCorp Option 4 Alternative

Construction activities would generate emissions of criteria pollutants, including suspended and inhalable particulate matter and equipment exhaust emissions, and would potentially expose sensitive receptors to pollutant concentrations; however, with implementation of mitigation measures these impacts would be less than significant. Impacts associated with the potential to create objectionable odors affecting a substantial number of people and to substantially increase long-term emissions of greenhouse gases were found to be less than significant. No impacts were found related to conflicts or obstruction with applicable air quality plans and to cumulatively considerable increases of non-attainment criteria pollutants.

With implementation of mitigation measures designed for the Proposed Project, air quality impacts for PacifiCorp Option 4 would be less than significant.

Mackintosh/ALJ Variation A Alternative

Construction activities would generate emissions of criteria pollutants, including suspended and inhalable particulate matter and equipment exhaust emissions, and would potentially expose sensitive receptors to pollutant concentrations; however, with implementation of mitigation measures these impacts would be less than significant. Impacts associated with the potential to create objectionable odors affecting a substantial number of people and to substantially increase long-term emissions of greenhouse gases were found to be less than significant. No impacts were found related to conflicts or obstruction with applicable air quality plans and to cumulatively considerable increases of non-attainment criteria pollutants.

With implementation of mitigation measures designed for the Proposed Project, air quality impacts for Mackintosh/ALJ Variation A would be less than significant.

Mackintosh/ALJ Variation B Alternative

Construction activities would generate emissions of criteria pollutants, including suspended and inhalable particulate matter and equipment exhaust emissions, and would potentially expose

sensitive receptors to pollutant concentrations; however, with implementation of mitigation measures these impacts would be less than significant. Impacts associated with the potential to create objectionable odors affecting a substantial number of people and to substantially increase long-term emissions of greenhouse gases were found to be less than significant. No impacts were found related to conflicts or obstruction with applicable air quality plans and to cumulatively considerable increases of non-attainment criteria pollutants.

With implementation of mitigation measures designed for the Proposed Project, air quality impacts for Mackintosh/ALJ Variation B would be less than significant.

No Project Alternative

Impacts associated with construction emissions of a new transmission line and/or a new power plant are anticipated to be potentially significant. Operations and maintenance of a new transmission line could result in minor emissions; however, operations of a new power plant would likely result in potentially significant impacts, as it would generate long-term emissions of criteria pollutants, including suspended and inhalable particulate matter and greenhouse gases. The No Project alternative is unlikely to conflict or obstruct with any applicable air quality plans or result in cumulatively considerable increases of non-attainment criteria pollutants. Additionally, it would be unlikely that the No Project alternative would create objectionable odors affecting a substantial number of people. Given the speculative nature of the No Project alternative, it is unknown if sensitive receptors be significantly impacted.

ES.3.4 Biological Resources

Proposed Project and Weed Segment

Construction activities would impact habitat and could potentially impact habitat elements such as dens and burrows and transient wildlife; known (i.e., Pickering's ivesia) and unknown populations of special-status plant species'; jurisdictional waters of the United States; habitat within the mule deer winter range; active nest sites; and foraging bald eagles. Additionally, construction activities could potentially spread noxious or invasive weeds. Design of the Proposed Project and Weed Segment incorporates the Avian Plan Protection Guidelines to minimize impacts to raptors and other large birds. No impacts were found related to: riparian habitat; the movement/migratory corridors for native and/or migratory species; or conflicts with local policies or ordinances.

Mitigation measures are designed to address potential adverse effects on both known and unknown biological resources. Mitigation measures would include an ongoing environmental education program for construction crews; a vehicle speed restriction; a biological monitor to provide preconstruction clearance wherever ground disturbance would occur; salvage of topsoil, storage of topsoil separately from subsoil, and spreading of topsoil either at the disturbance site or during the restoration process; delineation and avoidance all known sensitive resource locations (i.e. wetlands discussed below); seasonal restriction of construction within the mule deer winter range; prohibition of trash, dumping, firearms, open fires, hunting, and pets; restoration. To avoid impacts

to wetland areas, final design of the project would incorporate the wetland delineation and the conditions of the extant permit³; modification to minimize impacts would be implemented as feasible and use of driving mats for temporary access across wetlands would occur. To minimize impacts to birds; avoidance of construction activities during the nesting season, pre-construction surveys to locate and avoid nest; and/or permission from CDFG to work during nesting season would be required. Work would halt whenever a bald eagle is observed within 100 feet of the construction area. Additionally, PacifiCorp would be required to develop and implement a Noxious Weed and Invasive Plant Control Plan, consistent with standard Best Management Practices.

With implementation of mitigation measures, impacts to biological resources resulting from the Proposed Project and Weed Segment would be less than significant.

Alternatives

PacifiCorp Option 4 Alternative

Construction activities would impact habitat and could potentially impact habitat elements such as dens and burrows and transient wildlife; known (i.e., Pickering's ivesia) and unknown populations of special-status plant species'; jurisdictional waters of the United States; habitat within the mule deer winter range; large trees that provide habitat; active nest sites; and foraging bald eagles. Additionally, construction activities could potentially spread noxious or invasive weeds. Design of the PacifiCorp Option 4 alternative incorporates the Avian Plan Protection Guidelines to minimize impacts to raptors and other large birds. No impacts were found related to: riparian habitat; the movement/migratory corridors for native and/or migratory species; or conflicts with local policies or ordinances.

With implementation of mitigation measures designed for the Proposed Project, as well as the requirement that PacifiCorp replant for the removal of large trees (i.e. larger than 30 inches dbh) at a ration of 4:1 and provide for irrigation, weed removal, and browse protection to ensure at least 80% survival at the end of five years; impacts to biological resources resulting from the PacifiCorp Option 4 alternative would be less than significant.

Mackintosh/ALJ Variation A Alternative

Construction activities would impact habitat and could potentially impact habitat elements such as dens and burrows and transient wildlife; known (i.e., Pickering's ivesia) and unknown populations of special-status plant species'; jurisdictional waters of the United States; habitat within the mule deer winter range; active nest sites; and foraging bald eagles. Additionally, construction activities could potentially spread noxious or invasive weeds. Design of the Mackintosh/ALJ Variation A alternative incorporates the Avian Plan Protection Guidelines to minimize impacts to raptors and other large birds. No impacts were found related to: riparian

³ The extant permit will not be valid for the project reviewed by this DEIR since it has expired; however, its provisions are assumed to be applicable as the permit covered the activities and impacts associated with the Proposed Project and are therefore incorporated by reference.

habitat; the movement/migratory corridors for native and/or migratory species; or conflicts with local policies or ordinances.

With implementation of mitigation measures designed for the Proposed Project impacts to biological resources resulting from the Mackintosh/ALJ Variation A alternative would be less than significant.

Mackintosh/ALJ Variation B Alternative

Construction activities would impact habitat and could potentially impact habitat elements such as dens and burrows and transient wildlife; known (i.e., Pickering's ivesia) and unknown populations of special-status plant species'; jurisdictional waters of the United States; habitat within the mule deer winter range; active nest sites; and foraging bald eagles. Additionally, construction activities could potentially spread noxious or invasive weeds. Design of the Mackintosh/ALJ Variation B alternative incorporates the Avian Plan Protection Guidelines to minimize impacts to raptors and other large birds. No impacts were found related to: riparian habitat; the movement/migratory corridors for native and/or migratory species; or conflicts with local policies or ordinances.

With implementation of mitigation measures designed for the Proposed Project impacts to biological resources resulting from the Mackintosh/ALJ Variation B alternative would be less than significant.

No Project Alternative

Impacts associated with the construction of a new transmission line and/or a new power plant are anticipated to be potentially significant. Construction of the No Project alternative would likely result in loss of habitat; while operations of the No Project alternative could result in habitat fragmentation. Construction of the No Project alternative could result in impacts to riparian habitat and/or federally protected wetlands; however given the speculative nature of the No Project alternative, it cannot be determined if effects would be significant. Habitat fragmentation, discussed above, could impede the movement of animals and potentially alter traditional patterns of home range and wildlife movement. The No Project alternative is unlikely to conflict with any local policies or ordinances protecting biological resources.

ES.3.5 Cultural Resources

Proposed Project and Weed Segment

Inadvertent impacts may occur to known archaeological resources within and in the vicinity of the study area during construction. Two archaeological resources (CA-SIS-345, a historical resource, and PE#2, a historic refuse deposit) are located within the vicinity of the study area. Construction activities could encounter currently unknown cultural resources, either prehistoric or historic, potentially causing substantial adverse changes to the significance of the resource.

Additionally, construction activities could also adversely affect unidentified paleontologic resources and result in damage to previously unidentified human remains.

Mitigation measures are designed to address potential adverse effects on both known cultural resources, and unanticipated cultural resources during the construction phase of the Proposed Project and Weed Segment. Mitigation measures would include all procedures and protocols pursuant to Section 15064.5(e)(1) of the CEQA guidelines. Measures would include, but are not limited to, avoidance of cultural resources, training of construction personnel, construction monitoring by a qualified archaeologist, contacting an applicable specialist if a resource is encountered, and halting construction activities if a cultural resource is encountered.

With implementation of mitigation measure, cultural resource impacts resulting from the Proposed Project and Weed Segment would be less than significant.

Alternatives

PacifiCorp Option 4 Alternative

Inadvertent impacts may occur to known archaeological resources within and in the vicinity of the study area during construction. Two archaeological resources (CA-SIS-345, a historical resource, and PE#2, a historic refuse deposit) are located within the vicinity of the study area. Construction activities could encounter currently unknown cultural resources, either prehistoric or historic, potentially causing substantial adverse changes to the significance of the resource. Additionally, construction activities could also adversely affect unidentified paleontologic resources and result in damage to previously unidentified human remains.

With implementation of mitigation measures designed for the Proposed Project, cultural resource impacts for PacifiCorp Option 4 would be less than significant.

Mackintosh/ALJ Variation A Alternative

Inadvertent impacts may occur to known archaeological resources within and in the vicinity of the study area during construction. Two archaeological resources (CA-SIS-345, a historical resource, and PE#2, a historic refuse deposit) are located within the vicinity of the study area. Construction activities could encounter currently unknown cultural resources, either prehistoric or historic, potentially causing substantial adverse changes to the significance of the resource. Additionally, construction activities could also adversely affect unidentified paleontologic resources and result in damage to previously unidentified human remains.

With implementation of mitigation measures designed for the Proposed Project, cultural resource impacts for Mackintosh/ALJ Variation A would be less than significant.

Mackintosh/ALJ Variation B Alternative

Inadvertent impacts may occur to known archaeological resources within and in the vicinity of the study area during construction. Two archaeological resources (CA-SIS-345, a historical

resource, and PE#2, a historic refuse deposit) are located within the vicinity of the study area. Construction activities could encounter currently unknown cultural resources, either prehistoric or historic, potentially causing substantial adverse changes to the significance of the resource. Additionally, construction activities could also adversely affect unidentified paleontologic resources and result in damage to previously unidentified human remains.

With implementation of mitigation measures designed for the Proposed Project, cultural resource impacts for Mackintosh/ALJ Variation B would be less than significant.

No Project Alternative

The localized nature of archaeological resources, the type of archaeological site, and a project's proximity to known sites would determine whether the project's actions would adversely affect a given cultural resource. Consequently, due to the speculative nature of the No Project scenario, it could not be determined if archaeological resources, paleontological resources, and human remains would be significantly impacted by project actions.

ES.3.6 Hazards and Hazardous Materials

Proposed Project and Weed Segment

During project construction activities, limited quantities of miscellaneous hazardous substances, such as gasoline, diesel fuel, hydraulic fluid, solvents, oils, etc. would be used to fuel and maintain vehicles and motorized equipment. While the project would not require long-term operational use, storage, treatment, disposal, or transport of significant quantities of hazardous materials, hazardous materials would be used during project construction activities, and some limited hazardous materials would be storage at the project staging area, within a quarter mile of a school. The project would also result in the potential to encounter contaminated soils during construction activities. However, with implementation of mitigation measures these impacts would be less than significant. Impacts related to the removal, disposal, and/or recycling of existing power line poles and substation or other transmission equipment, a transformer malfunction oil spill during project operations, interference with emergency response or evacuation plans, and wild fires were found to be less than significant requiring no mitigation.

Impacts associated with the use and storage of hazardous substances, as well as the potential to encounter contaminated soils, would be mitigated to less than significant levels by implementing Best Management Practices and preparing and enacting a number of plans (i.e., Hazardous Substance Control and Emergency Response Plan, Health and Safety Plan, Hazardous Substance Control and Emergency Response Plan, and the Worker Environmental Awareness Program).

With implementation of mitigation measures, impacts related to hazards and hazardous materials resulting from the Proposed Project and Weed Segment would be less than significant.

Alternatives

PacifiCorp Option 4 Alternative

During project construction activities, limited quantities of miscellaneous hazardous substances, such as gasoline, diesel fuel, hydraulic fluid, solvents, oils, etc. would be used to fuel and maintain vehicles and motorized equipment. While this alternative would not require long-term operational use, storage, treatment, disposal, or transport of significant quantities of hazardous materials, hazardous materials would be used during project construction activities. This alternative would also result in the potential to encounter contaminated soils during construction activities. However, with implementation of mitigation measures these impacts would be less than significant. Impacts related to the removal, disposal, and/or recycling of existing power line poles, interference with emergency response or evacuation plans, and wild fires were found to be less than significant requiring no mitigation.

With implementation of the mitigation measures designed for the Proposed Project, impacts related to hazards and hazardous materials resulting from the PacifiCorp Option 4 alternative would be less than significant.

Mackintosh/ALJ Variation A Alternative

During project construction activities, limited quantities of miscellaneous hazardous substances, such as gasoline, diesel fuel, hydraulic fluid, solvents, oils, etc. would be used to fuel and maintain vehicles and motorized equipment. While this alternative would not require long-term operational use, storage, treatment, disposal, or transport of significant quantities of hazardous materials, hazardous materials would be used during project construction activities. This alternative would also result in the potential to encounter contaminated soils during construction activities. However, with implementation of mitigation measures these impacts would be less than significant. Impacts related to the removal, disposal, and/or recycling of existing power line poles, interference with emergency response or evacuation plans, and wild fires were found to be less than significant requiring no mitigation.

With implementation of the mitigation measures designed for the Proposed Project, impacts related to hazards and hazardous materials resulting from the Mackintosh/ALJ Variation A alternative would be less than significant.

Mackintosh/ALJ Variation B Alternative

During project construction activities, limited quantities of miscellaneous hazardous substances, such as gasoline, diesel fuel, hydraulic fluid, solvents, oils, etc. would be used to fuel and maintain vehicles and motorized equipment. This alternative would not require long-term operational use, storage, treatment, disposal, or transport of significant quantities of hazardous materials, hazardous materials would be used during project construction activities. This alternative would also result in the potential to encounter contaminated soils during construction activities. However, with implementation of mitigation measures these impacts would be less than significant. Impacts related to the removal, disposal, and/or recycling of existing power line

poles, interference with emergency response or evacuation plans, and wild fires were found to be less than significant requiring no mitigation.

With implementation of the mitigation measures designed for the Proposed Project, impacts related to hazards and hazardous materials resulting from the Mackintosh/ALJ Variation B alternative would be less than significant.

No Project Alternative

During construction activities associated with a new transmission line and/or a new power plant, limited quantities of miscellaneous hazardous substances, such as gasoline, diesel fuel, hydraulic fluid, solvents, oils, etc. would likely be used to fuel and maintain vehicles and motorized equipment. A new transmission line and/or a new power plant could potentially encounter contaminated soils during construction. While a new transmission line could use hazardous materials during construction activities, it would unlikely require long-term operational use, storage, treatment, disposal, or transport of significant quantities of hazardous materials. However, operations of a new power plant under the No Project alternative could result in long-term impacts related to hazardous materials, given the potentially substantial amount of transport, use, and disposal of hazardous materials that would be required. It would be unlikely that the No Project alternative would interfere with emergency response or evacuation plans or expose people or structures to a significant risk of loss, injury, or death involving wildland fires.

ES.3.7 Hydrology and Water Quality

Proposed Project and Weed Segment

Water pollutants could be generated during construction activities and include sediment and petroleum-based fuels and lubricants. Also, construction activities may alter existing drainage pathways so as to make surface soils more susceptible to erosive forces (i.e., overland flow) and/or generate enough increased runoff, through removal/clearing of existing vegetation, to increase surface erosion; however, with implementation of mitigation measures these impacts would be less than significant. Excavation and boring of pole holes may require discharge (i.e., through dewatering) or displacement of degraded groundwater and/or soil; however, with implementation of mitigation measures this impact would be less than significant. Installation of wood poles in areas where none currently exist, and installation of steel poles (i.e. Pole 19/45 and Pole 8/45) to a depth deeper than existing wood poles, could penetrate an impermeable layer and/or form a conduit between two water-bearing layers such that it would affect the production of nearby domestic or irrigation wells and/or affect the production of nearby springs; however, with implementation of mitigation measures these impacts would be less than significant. Impacts associated with altering drainage patterns (i.e., increasing impervious surfaces) such that it would cause flooding on- or off-site were found to be less than significant.

Implementation of Best Management Practices (BMPs) and measures to control and minimize surface erosion (i.e., filtering runoff, slope re-vegetation, water bars and diversion swales, and avoiding steep slopes) would mitigate any water quality impacts from sediment and other

pollutants to less than significant levels. Implementation of measures to control the discharge of potentially degraded groundwater (i.e., segregation and testing, and obtaining permits if necessary) would mitigate any water quality impacts from dewatering activities to less than significant levels. Implementation of measures to prevent forming a conduit for shallow groundwater during pole installation (i.e., properly sealing auger holes with a bentonite/cement mixture, and having this procedure completed and overseen by qualified professionals) would mitigate any impacts to groundwater hydrology and spring function to less than significant levels.

With implementation of the mitigation measures, hydrology and water quality impacts resulting from the Proposed Project and Weed Segment would be less than significant.

Alternatives

PacifiCorp Option 4 Alternative

Water pollutants could be generated during construction activities and include sediment and petroleum-based fuels and lubricants. Also, construction activities may alter existing drainage pathways so as to make surface soils more susceptible to erosive forces (i.e., overland flow) and/or generate enough increased runoff, through removal/clearing of existing vegetation, to increase surface erosion; however, with implementation of mitigation measures these impacts would be less than significant. Excavation and boring of pole holes may require discharge (i.e., through dewatering) or displacement of degraded groundwater and/or soil; however, with implementation of mitigation measures this impact would be less than significant. Installation of wood poles in areas where none currently exist, and installation of a steel pole (i.e. Pole 19/45) to a depth deeper than existing wood poles, could penetrate an impermeable layer and/or form a conduit between two water-bearing layers such that it would affect the production of nearby domestic or irrigation wells and/or affect the production of nearby springs; however, with implementation of mitigation measures these impacts would be less than significant. Impacts associated with altering drainage patterns (i.e., increasing impervious surfaces) such that it would cause flooding on- or off-site were found to be less than significant.

With implementation of mitigation measures designed for the Proposed Project, impacts to hydrology and water quality impacts from the PacifiCorp Option 4 alternative would be less than significant.

Mackintosh/ALJ Variation A Alternative

Water pollutants could be generated during construction activities and include sediment and petroleum-based fuels and lubricants. Also, construction activities may alter existing drainage pathways so as to make surface soils more susceptible to erosive forces (i.e., overland flow) and/or generate enough increased runoff, through removal/clearing of existing vegetation, to increase surface erosion; however, with implementation of mitigation measures these impacts would be less than significant. Excavation and boring of pole holes may require discharge (i.e., through dewatering) or displacement of degraded groundwater and/or soil; however, with implementation of mitigation measures this impact would be less than significant. Installation of

wood poles in areas where none currently exist, and installation of a steel pole (i.e. Pole 19/45) to a depth deeper than existing wood poles, could penetrate an impermeable layer and/or form a conduit between two water-bearing layers such that it would affect the production of nearby domestic or irrigation wells and/or affect the production of nearby springs; however, with implementation of mitigation measures these impacts would be less than significant. Impacts associated with altering drainage patterns (i.e., increasing impervious surfaces) such that it would cause flooding on- or off-site were found to be less than significant.

With implementation of mitigation measures designed for the Proposed Project, impacts to hydrology and water quality impacts from the Mackintosh/ALJ Variation A alternative would be less than significant.

Mackintosh/ALJ Variation B Alternative

Water pollutants could be generated during construction activities and include sediment and petroleum-based fuels and lubricants. Also, construction activities may alter existing drainage pathways so as to make surface soils more susceptible to erosive forces (i.e., overland flow) and/or generate enough increased runoff, through removal/clearing of existing vegetation, to increase surface erosion; however, with implementation of mitigation measures these impacts would be less than significant. Excavation and boring of pole holes may require discharge (i.e., through dewatering) or displacement of degraded groundwater and/or soil; however, with implementation of mitigation measures this impact would be less than significant. Installation of wood poles in areas where none currently exist, and installation of a steel pole (i.e. Pole 19/45) to a depth deeper than existing wood poles, could penetrate an impermeable layer and/or form a conduit between two water-bearing layers such that it would affect the production of nearby domestic or irrigation wells and/or affect the production of nearby springs; however, with implementation of mitigation measures these impacts would be less than significant. Impacts associated with altering drainage patterns (i.e., increasing impervious surfaces) such that it would cause flooding on- or off-site were found to be less than significant.

With implementation of mitigation measures designed for the Proposed Project, impacts to hydrology and water quality impacts from the Mackintosh/ALJ Variation B alternative would be less than significant.

No Project Alternative

Construction of a new transmission line and/or power plant would likely result short-term water quality impacts and associated with ground disturbing activities during construction that could be addressed by implementation of a Storm Water Pollution and Prevention Plan (SWPPP) and/or BMPs. It is not anticipated that construction of a new transmission line would likely alter drainage patterns such that they would cause flooding on- or off-site. Construction of a power plant would result in an increase in the amount of impervious surface area; however any subsequent increase in stormwater runoff would likely be small, would require a discharge permit and/or a permit from the local Publicly-Owned Treatment Works (POTW); therefore, impacts would likely be less than significant impact. Operation of a power generation facility would

require a supply of process water (e.g., for cooling) and depending on the quantity and the source, there could be a potential impact on existing groundwater supply wells which could likely be mitigated by placing restriction on amounts of water to be extracted; however, the feasibility of such a mitigation measure is speculative at this time. The need to discharge process water used for cooling is unlikely, as most of this water would evaporate and that which doesn't would likely be recycled through the process water system.

ES.3.8 Land Use and Planning

Proposed Project and Weed Segment

Construction activities could conflict with constraints identified in the Siskiyou County General Plan; however, with implementation of a mitigation measure this impact would be less than significant. Construction would not conflict with any other applicable land use plan, policy, or regulation of an agency or jurisdiction over the project. Other land use impacts, including the potential to physically divide an established community or conflict with a habitat conservation plan or natural community conservation plan, were found to be less than significant requiring no mitigation.

Implementation of mitigation measures developed in Section 4.4, *Biological Resources* (i.e., special status species and deer winter range habitat mitigation) and Section 4.6, *Hazards and Hazardous Materials* (i.e., erosion mitigation) would mitigate the impacts of any conflicts with the Siskiyou County General Plan physical constraints to a less than significant level.

With implementation of mitigation measures, land use impacts resulting from the Proposed Project and Weed Segment would be less than significant.

Alternatives

PacifiCorp Option 4 Alternative

Construction activities could conflict with constraints identified in the Siskiyou County General Plan; however, with implementation of a mitigation measure this impact would be less than significant. Construction would not conflict with any other applicable land use plan, policy, or regulation of an agency or jurisdiction over the project. Other land use impacts, including the potential to physically divide an established community or conflict with a habitat conservation plan or natural community conservation plan, were found to be less than significant requiring no mitigation.

With implementation of mitigation measures designed for the Proposed Project, land use impacts for PacifiCorp Option 4 alternative would be less than significant.

Mackintosh/ALJ Variation A Alternative

Construction activities could conflict with constraints identified in the Siskiyou County General Plan; however, with implementation of a mitigation measure this impact would be less than

significant. Construction would not conflict with any other applicable land use plan, policy, or regulation of an agency or jurisdiction over the project. Other land use impacts, including the potential to physically divide an established community or conflict with a habitat conservation plan or natural community conservation plan, were found to be less than significant requiring no mitigation.

With implementation of mitigation measures designed for the Proposed Project, land use impacts for Mackintosh/ALJ Variation A alternative would be less than significant.

Mackintosh/ALJ Variation B Alternative

Construction activities could conflict with constraints identified in the Siskiyou County General Plan; however, with implementation of a mitigation measure this impact would be less than significant. Construction would not conflict with any other applicable land use plan, policy, or regulation of an agency or jurisdiction over the project. Other land use impacts, including the potential to physically divide an established community or conflict with a habitat conservation plan or natural community conservation plan, were found to be less than significant requiring no mitigation.

With implementation of mitigation measures designed for the Proposed Project, land use impacts for Mackintosh/ALJ Variation B alternative would be less than significant.

No Project Alternative

Depending on the location, a new power plant could physically divide an established community, resulting in a potentially significant impact. However, a new transmission line would likely not divide an established community and the impact would be less than significant. The No Project alternative's potential to conflict with a habitat conservation plan or natural community conservation plan was found to be less than significant. Given the speculative nature of the No Project alternative, it could not be determined if consistency with land use plans, policies, or regulations would occur.

ES.3.9 Noise

Proposed Project and Weed Segment

Equipment noise during project construction is the primary concern that would be associated with the Proposed Project. Given the short duration of temporary construction noise impacts at any one location, construction noise would not be considered significant at affected residences if the residents are given advance notice and if construction is limited to daytime hours. Furthermore, implementation of mitigation measures would ensure that noise impacts would be less than significant. During operation, noise from corona discharge along high-voltage transmission lines and from operation of additional equipment at Weed Substation would result in negligible less than significant long-term noise impacts. Impacts associated with construction-related

groundborne vibration/noise and ambient noise levels in the study area were also found to be less than significant.

Implementation of mitigation measures, including noise reduction and suppression techniques and limiting construction activities to daytime hours would reduce impacts associated with construction noise to a less than significant level.

With implementation of mitigation measures, construction noise impacts resulting from the Proposed Project and Weed Segment would be less than significant.

Alternatives

PacifiCorp Option 4 Alternative

Equipment noise during project construction is the primary concern that would be associated with the PacifiCorp Option 4 alternative. Given the short duration of temporary construction noise impacts at any one location, construction noise would not be considered significant at affected residences if the residents are given advance notice and if construction is limited to daytime hours. Furthermore, implementation of mitigation measures would ensure that noise impacts would be less than significant. During operation, noise from corona discharge along high-voltage transmission lines would result in negligible less than significant long-term noise impacts. Impacts associated construction-related groundborne vibration/noise and ambient noise levels in the study area were also found to be less than significant.

With implementation of the mitigation measures designed for the Proposed Project, noise impacts resulting from the PacifiCorp Option 4 alternative would be less than significant.

Mackintosh/ALJ Variation A Alternative

Equipment noise during project construction is the primary concern that would be associated with the Mackintosh/ALJ Variation A alternative. Given the short duration of temporary construction noise impacts at any one location, construction noise would not be considered significant at affected residences if the residents are given advance notice and if construction is limited to daytime hours. Furthermore, implementation of mitigation measures would ensure that noise impacts would be less than significant. During operation, noise from corona discharge along high-voltage transmission lines would result in negligible less than significant long-term noise impacts. Impacts associated construction-related groundborne vibration/noise and ambient noise levels in the study area were also found to be less than significant.

With implementation of the mitigation measures designed for the Proposed Project, noise impacts resulting from the Mackintosh/ALJ Variation A alternative would be less than significant.

Mackintosh/ALJ Variation B Alternative

Equipment noise during project construction is the primary concern that would be associated with the Mackintosh/ALJ Variation B alternative. Given the short duration of temporary construction

noise impacts at any one location, construction noise would not be considered significant at affected residences if the residents are given advance notice and if construction is limited to daytime hours. Furthermore, implementation of mitigation measures would ensure that noise impacts would be less than significant. During operation, noise from corona discharge along high-voltage transmission lines would result in negligible less than significant long-term noise impacts. Impacts associated construction-related groundborne vibration/noise and ambient noise levels in the study area were also found to be less than significant.

With implementation of the mitigation measures designed for the Proposed Project, noise impacts resulting from the Mackintosh/ALJ Variation B alternative would be less than significant.

No Project Alternative

A new transmission line and/or a new power plant under the No Project alternative would likely result in equipment noise during construction and are generally considered temporary in nature. Furthermore, implementation of mitigation measures similar to those defined for the Proposed Project would likely reduce any potential noise impacts to less than significant. Long-term noise that would be created by a new transmission line under the No Project alternative would be associated with maintenance and inspection activities. However, operations of a new power plant under the No Project alternative would generate long-term noise, potentially resulting in an increase in ambient noise levels by 3 dBA or more.

ES.3.10 Public Services and Recreation

Proposed Project and Weed Segment

Construction activities could result in a temporary increase in the demand for fire protection and police services; and could restrict access for emergency vehicles; however, with implementation of mitigation measures these impacts would be less than significant. Impacts associated with schools, recreation, and other public facilities were found to be less than significant requiring no mitigation.

Mitigation measures have been developed to reduce the impacts to fire protection and police services and resulting from access restrictions to less than significant. Two mitigation measures have been designed to address impacts to fire protection services. The first mitigation measure would implement a Health and Safety Plan that was developed in Section 4.6, *Hazards and Hazardous Materials*, which would address emergency medical services and procedures in the case of emergency. The second mitigation measure would require PacifiCorp to site all water tanks in the project area available for fire suppression, carry fire suppression equipment, and coordinate with the local fire departments. To mitigate the potential impact to police services, PacifiCorp would be required to implement the following three mitigation measures: implement precautionary measures to minimize theft and vandalism; provide traffic control, if necessary, in coordination with the appropriate police agency; and implement public safety measures (i.e., covering and securing all open holes) to protect vehicles and pedestrians. To address the issues of restricted access for emergency vehicles and fire department response times, a mitigation measure

has been developed requiring PacifiCorp to coordinate with local emergency service providers prior to construction.

With implementation of mitigation measures, public service impacts resulting from the Proposed Project and Weed Segment would be less than significant.

Alternatives

PacifiCorp Option 4 Alternative

Construction activities could result in a temporary increase in the demand for fire protection and police services; and could restrict access for emergency vehicles; however, with implementation of mitigation measures these impacts would be less than significant. Impacts associated with schools, recreation, and other public facilities were found to be less than significant requiring no mitigation.

With implementation of mitigation measures designed for the Proposed Project, public service impacts for PacifiCorp Option 4 alternative would be less than significant.

Mackintosh/ALJ Variation A Alternative

Construction activities could result in a temporary increase in the demand for fire protection and police services; and could restrict access for emergency vehicles; however, with implementation of mitigation measures these impacts would be less than significant. Impacts associated with schools, recreation, and other public facilities were found to be less than significant requiring no mitigation.

With implementation of mitigation measures designed for the Proposed Project, public service impacts for Mackintosh/ALJ Variation A alternative would be less than significant.

Mackintosh/ALJ Variation B Alternative

Construction activities could result in a temporary increase in the demand for fire protection and police services; and could restrict access for emergency vehicles; however, with implementation of mitigation measures these impacts would be less than significant. Impacts associated with schools, recreation, and other public facilities were found to be less than significant requiring no mitigation.

With implementation of mitigation measures designed for the Proposed Project, public service impacts for Mackintosh/ALJ Variation B alternative would be less than significant.

No Project Alternative

Construction, operation and maintenance of a new transmission line and construction of a new power plant would likely result in a temporary increase in the demand for fire protection and police services; and could restrict access for emergency vehicles. Operation and maintenance of a

new power plant could result in significant long-term impacts to fire protection, police, and emergency response services. Impacts associated with schools, recreation, and other public facilities would likely be less than significant.

ES.3.11 Transportation and Traffic

Proposed Project and Weed Segment

Construction activities could result in a short-term disruption of traffic flow and/or loss of travel lanes to accommodate the construction work zone which may cause the following impacts: cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system; exceed, either individually or cumulatively, a level of service established by the county congestion management agency for designed roads or highways; increase potential traffic safety hazards for vehicles, bicyclists and pedestrians on public roadways; and result in delays for emergency vehicles. However, with implementation of mitigation measures these impacts would be less than significant. Construction impacts related to increased congestion and inadequate parking supply generated by construction vehicles would be less than significant requiring no mitigation. Maintenance and inspection activities would not increase above existing levels that are employed to maintain the existing transmission line ROWs and therefore, would not result in an increase in traffic in the study area. Operational impacts would be less than significant.

Implementation of mitigation measures, including securing encroachment permits, implementation of approved traffic control plans, and coordination with local agencies to avoid cumulative traffic impacts, would reduce construction related traffic impacts to a less than significant level.

With implementation of the mitigation measures, traffic impacts resulting from the Proposed Project and Weed Segment would be less than significant.

Alternatives

PacifiCorp Option 4 Alternative

Construction activities could result in a short-term disruption of traffic flow and/or loss of travel lanes to accommodate the construction work zone which may cause the following impacts: cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system; exceed, either individually or cumulatively, a level of service established by the county congestion management agency for designed roads or highways; increase potential traffic safety hazards for vehicles, bicyclists and pedestrians on public roadways; and result in delays for emergency vehicles. However, with implementation of mitigation measures these impacts would be less than significant. Construction impacts related to increased congestion and inadequate parking supply generated by construction vehicles would be less than significant requiring no mitigation. Maintenance and inspection activities would not increase above existing levels that are employed to maintain the existing transmission line ROWs and therefore, would not result in an increase in traffic in the study area. Operational impacts would be less than significant.

With implementation of the mitigation measures designed for the Proposed Project, traffic impacts for PacifiCorp Option 4 would be less than significant.

Mackintosh/ALJ Variation A Alternative

Construction activities could result in a short-term disruption of traffic flow and/or loss of travel lanes to accommodate the construction work zone which may cause the following impacts: cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system; exceed, either individually or cumulatively, a level of service established by the county congestion management agency for designed roads or highways; increase potential traffic safety hazards for vehicles, bicyclists and pedestrians on public roadways; and result in delays for emergency vehicles. However, with implementation of mitigation measures these impacts would be less than significant. Construction impacts related to increased congestion and inadequate parking supply generated by construction vehicles would be less than significant requiring no mitigation. Maintenance and inspection activities would not increase above existing levels that are employed to maintain the existing transmission line ROWs and therefore, would not result in an increase in traffic in the study area. Operational impacts would be less than significant.

With implementation of the mitigation measures designed for the Proposed Project, traffic impacts for Mackintosh/ALJ Variation A would be less than significant.

Mackintosh/ALJ Variation B Alternative

Construction activities could result in a short-term disruption of traffic flow and/or loss of travel lanes to accommodate the construction work zone which may cause the following impacts: cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system; exceed, either individually or cumulatively, a level of service established by the county congestion management agency for designed roads or highways; increase potential traffic safety hazards for vehicles, bicyclists and pedestrians on public roadways; and result in delays for emergency vehicles. However, with implementation of mitigation measures these impacts would be less than significant. Construction impacts related to increased congestion and inadequate parking supply generated by construction vehicles would be less than significant requiring no mitigation. Maintenance and inspection activities would not increase above existing levels that are employed to maintain the existing transmission line ROWs and therefore, would not result in an increase in traffic in the study area. Operational impacts would be less than significant.

With implementation of the mitigation measures designed for the Proposed Project, traffic impacts for Mackintosh/ALJ Variation B would be less than significant.

No Project Alternative

Construction of a new transmission line and/or a new power plant could result in a short-term disruption of traffic flow and/or loss of travel lanes to accommodate the construction work zone which may cause the following impacts: cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system; exceed, either individually or

cumulatively, a level of service established by the county congestion management agency for designed roads or highways; increase potential traffic safety hazards for vehicles, bicyclists and pedestrians on public roadways; and result in delays for emergency vehicles. A new transmission line is not anticipated to result in construction impacts related to increased congestion and inadequate parking supply generated by construction vehicles. Additionally, maintenance and inspection of a new transmission line is unlikely to significantly increase above existing levels. However, operations of a new power plant under the No Project alternative would likely generate long-term daily commute trips associated with the plant workforce. Depending on the location of that development, the additional traffic may impact local traffic and contribute to increased congestion.

ES.3.12 Utilities and Service Systems

Proposed Project and Weed Segment

Construction activities could inadvertently contact underground utility lines and/or facilities during excavation and other ground disturbance, possibly leading to short-term utility service interruptions; however with implementation of a mitigation measure this impact would be less than significant. Impacts associated with the demand and capacity of utility services, as well as compliance with federal, state, and local regulations, were found to have less than significant impacts requiring no mitigation.

To mitigate the potential impact to underground utility lines and/or facilities, PacifiCorp would be required to notify Underground Service Alert prior to initiation of construction activities with ground disturbances, as well as delineate the area to be excavated, and hand expose to the point of no conflict within the tolerance zone of any utility.

With implementation of this mitigation measure, utilities service impacts resulting from the Proposed Project and Weed Segment would be less than significant.

Alternatives

PacifiCorp Option 4 Alternative

Construction activities could inadvertently contact underground utility lines and/or facilities during excavation and other ground disturbance, possibly leading to short-term utility service interruptions; however with implementation of a mitigation measure this impact would be less than significant. Impacts associated with the demand and capacity of utility services, as well as compliance with federal, state, and local regulations, were found to have less than significant impacts requiring no mitigation.

With implementation of the mitigation measure designed for the Proposed Project, utility service impacts for PacifiCorp Option 4 alternative would be less than significant.

Mackintosh/ALJ Variation A Alternative

Construction activities could inadvertently contact underground utility lines and/or facilities during excavation and other ground disturbance, possibly leading to short-term utility service interruptions; however with implementation of a mitigation measure this impact would be less than significant. Impacts associated with the demand and capacity of utility services, as well as compliance with federal, state, and local regulations, were found to have less than significant impacts requiring no mitigation.

With implementation of the mitigation measure designed for the Proposed Project, utility service impacts for Mackintosh/ALJ Variation A alternative would be less than significant.

Mackintosh/ALJ Variation B Alternative

Construction activities could inadvertently contact underground utility lines and/or facilities during excavation and other ground disturbance, possibly leading to short-term utility service interruptions; however with implementation of a mitigation measure this impact would be less than significant. Impacts associated with the demand and capacity of utility services, as well as compliance with federal, state, and local regulations, were found to have less than significant impacts requiring no mitigation.

With implementation of the mitigation measure designed for the Proposed Project, utility service impacts for Mackintosh/ALJ Variation B alternative would be less than significant.

No Project Alternative

Impacts associated with a new power plant could substantially increase the demand for utility services beyond the capacity of the service providers resulting in potentially significant impacts. Additionally, construction of a new power plant and/or a new transmission line could inadvertently contact underground utility lines and/or facilities during excavation and other ground disturbance, possibly leading to short-term utility service interruptions; this could be a potentially significant impact. A new transmission line would likely result in less than significant impacts related to the demand and capacity of utility services. Both a new power plant and/or a new transmission line would be required to comply with federal, state, and local statutes and regulations related to solid waste; therefore, impacts would likely be less than significant

ES.4 Summary Comparison of the Proposed Project and Alternatives

ES.4.1 Methodology

CEQA requires identification of an environmentally superior alternative, but does not provide specific direction regarding the methodology of alternatives comparison. Each project must be evaluated for the issues and impacts that are most important; this will vary depending on the project type and the environmental setting. Issue areas that are generally given more weight in

comparing alternatives are those with long-term impacts (e.g., visual impacts and permanent loss of habitat or loss of use of recreational facilities). Impacts associated with construction (i.e., temporary or short-term) or those that are easily mitigable to less than significant levels are considered to be less important.

The methodology used to compare alternatives in this EIR started with identification of alternatives. Based on alternatives suggested during scoping, an intensive evaluation process was completed that resulted in the determination that the EIR would analyze three alternative route variations. A No Project alternative was also identified. The second step required assessment of the environmental impacts of the Proposed Project/Weed Segment and the alternatives. The third step was the comparison of the impacts of each alternative to those of the Proposed Project/Weed Segment to determine the environmentally superior alternative. The environmentally superior alternative was then compared to the No Project alternative.

Although this comparison focuses on the most important issue areas (e.g., hydrology and water quality, visual resources, and biological resources), determining an environmentally superior alternative is difficult because of the many factors that must be balanced. While the EIR identifies an environmentally superior alternative, it is possible that the Commission could balance the importance of each impact area differently and reach a different conclusion.

ES.4.2 Summary of Significant (Class I) Unmitigable Impacts

As shown in Table ES-2, no significant unmitigable environmental impacts were identified for the Weed Segment. The Proposed Project would result in a cumulatively considerable change to the visual character of the study area, which is a significant and unmitigable impact. Significant unmitigable visual impacts were also identified for each of the three route alternatives.

ES.4.3 Environmentally Superior Alternative

Table ES-3 summarizes the environmental impact conclusions of the Proposed Project/Weed Segment and the alternatives. Although the Proposed Project and the three route alternatives would each have significant unmitigable visual impacts, the degraded visual character of the Proposed Project is afforded more weight in this analysis than the visual impacts of the alternatives along approximately 0.5 miles of Highway 97. The principal basis for this determination is that the degraded views along Highway 97 would be visible to passing motorists for less than a minute. Although fewer people (mostly local residents and visitors driving on Hoy Road) would be affected by the cumulative visual impact created by constructing the new 1.2-mile ROW, the degraded visual character would be of longer duration and, in the case of local residents, a constant experience. Among the three route alternatives, the differences in environmental impacts are generally subtle. However, the Mackintosh/ALJ Variation B alternative would keep the new transmission line within the existing ROW, would avoid most of the mature tree removal associated with the PacifiCorp Option 4 alternative, and would reduce the risk of electricity curtailments that would be possible with the Mackintosh/ALJ Variation A alternative. Therefore, the Mackintosh/ALJ Variation B alternative has been identified as the environmentally superior alternative.

**TABLE ES-2
SUMMARY OF SIGNIFICANT UNMITIGABLE (CLASS I) ENVIRONMENTAL IMPACTS
OF THE PROPOSED PROJECT/WEED SEGMENT AND ALTERNATIVES**

Alternative	Significant (Class I) Impacts
Proposed Project	Would result in a cumulatively considerable impact to visual resources in the study area as a result of constructing a new 1.2-mile ROW for the transmission line where none currently exists
Weed Segment	No significant (Class I) unmitigable environmental impacts would occur with the Weed Segment
Class I Impacts Eliminated or Created by Alternatives	
PacifiCorp Option 4 Alternative	<p>Would eliminate the cumulatively significant visual impact of the Proposed Project</p> <p>Would adversely affect views along an approximately 0.5-mile portion of the Highway 97 corridor, which is an Eligible State Scenic Highway, a County Scenic Highway, and part of the Volcanic Legacy National Scenic Byway</p>
Mackintosh/ALJ Variation A Alternative	<p>Would eliminate the cumulatively significant visual impact of the Proposed Project</p> <p>Would adversely affect views along an approximately 0.5-mile portion of the Highway 97 corridor, which is an Eligible State Scenic Highway, a County Scenic Highway, and part of the Volcanic Legacy National Scenic Byway</p>
Mackintosh/ALJ Variation B Alternative	<p>Would eliminate the cumulatively significant visual impact of the Proposed Project</p> <p>Would adversely affect views along an approximately 0.5-mile portion of the Highway 97 corridor, which is an Eligible State Scenic Highway, a County Scenic Highway, and part of the Volcanic Legacy National Scenic Byway</p>

ES.4.4 Environmentally Superior Alternative vs. No Project Alternative

The environmentally superior alternative (the Mackintosh/ALJ Variation B alternative) would keep the new transmission line within an existing ROW and would have minimal long-term impacts on residences or other sensitive land uses. In comparison, the most significant impacts of the No Project alternative would be its likelihood of creating long-term air emissions and noise impacts. In addition, the No Project alternative has the potential to result in electric service disruption. Overall, the environmentally superior alternative is preferred over the No Project alternative.

**TABLE ES-3
PROPOSED PROJECT/WEED SEGMENT VS. ALTERNATIVES
SUMMARY OF ENVIRONMENTAL IMPACT CONCLUSIONS**

Issue Area	Proposed Project and Weed Segment	PacifiCorp Option 4 Alternative	Mackintosh/ALJ Variation A Alternative	Mackintosh/ALJ Variation B Alternative
Aesthetics	Would result in cumulatively significant unmitigable visual impacts resulting from new 1.2-mile ROW where none currently exists.	Would result in significant unmitigable visual impacts along Hwy 97. Would require shifting existing ROW 15 feet north for approximately 1.7 miles, resulting in removal of several mature trees.	Would result in significant unmitigable visual impacts along Hwy 97. Would keep new line in existing ROW, but would require longer to construct possibly resulting in local electricity curtailments in summer 2009.	Would result in significant unmitigable visual impacts along Hwy 97. Preferred because would keep new line in existing ROW, have less impact to mature trees, and reduces risk of electricity curtailments.
Agriculture Resources	No preference	No preference	No preference	No preference
Air Quality	No preference	No preference	No preference	No preference
Biological Resources	No preference	No preference	No preference	No preference
Cultural Resources	No preference	No preference	No preference	No preference
Hazards / Hazardous Materials	No preference	No preference	No preference	No preference
Hydrology and Water Quality	No preference	No preference	No preference	No preference
Land Use and Planning	No preference	No preference	No preference	No preference
Noise	No preference	No preference	No preference	No preference
Public Services	No preference	No preference	No preference	No preference
Transportation and Traffic	No preference	No preference	No preference	No preference
Utilities and Service Systems	No preference	No preference	No preference	No preference

ES.5 Impact Summary Tables

Tables ES-4 and ES-5 on the following pages summarize all identified impacts of the Proposed Project and Weed Segment (Table ES-4) and alternatives (Table ES-5). For each impact, the following information is presented: impact number and title, impact class (Class I, II, III, or IV), applicable mitigation measure, and residual impact (whether significant or less than significant).

**TABLE ES-4
SUMMARY OF IMPACTS AND MITIGATION FOR THE PROPOSED PROJECT AND WEED SEGMENT**

Impact	Impact Class^a	Mitigation Measure(s)	Residual Impact
Aesthetics			
AES-PPWS^b-1: Poles 11 and 12 could affect scenic views from a limited portion of Hoy Road	Class II	AES-PPWS-1a: Poles 11 and 12 shall be sited to minimize potential effects on views from Hoy Road AES-PPWS-1b: Develop and implement landscape plan	Less than significant
AES-PPWS-2: Poles 13 and 14 could affect scenic views from nearby private residential property	Class II	AES-PPWS-2a: Poles 12 through 14 shall be sited to minimize potential effects on views from the 5026 Hoy Road residential property AES-PPWS-2b: Develop and implement landscape plan	Less than significant
Weed Segment visible in scenic vistas from limited portions of Highway 97	Class III	None required	Less than significant
AES-PPWS-3: Weed and Weed Junction Substations visible from Highway 97	Class II	AES-PPWS-3a: Landscaping at the Weed Junction Substation AES-PPWS-3b: Perimeter fencing at the Weed Junction Substation AES-PPWS-3c: Landscaping at the Weed Substation AES-PPWS-3d: Perimeter fencing at the Weed Substation	Less than significant
AES-PPWS-4: Visual character in the Lincoln Heights residential area	Class II	AES-PPWS-4a: Pole 3/46 shall be sited to minimize visual impact AES-PPWS-4b: Pole 3/46 shall use TF285 structure	Less than significant
AES-PPWS-5: Transmission lines could create glare	Class II	AES-PPWS-5: Use non-specular conductor	Less than significant
AES-PPWS-6: Weed Substation upgrades could create glare	Class II	AES-PPWS-6: Use non-reflective or weathered finish	Less than significant
Cumulative: Proposed Project's incremental degradation of visual character would be cumulatively considerable	Class I	AES-PPWS-1a, 1b, 2a, 2b, and 5	Significant
Agriculture Resources			
AG-PPWS-1: Temporary removal of designated farmland	Class II	AG-PPWS-1: Implement Mitigation Measure BIO-PPWS-2b (below)	Less than significant
Conflict with zoning or Williamson Act contract	Class III	None required	Less than significant
Air Quality			
AIR-PPWS-1: Construction emissions of criteria pollutants	Class II	AIR-PPWS-1: Implement dust control measures	Less than significant
Operational emissions of criteria pollutants	Class III	None required	Less than significant
AIR-PPWS-2: Construction impacts to sensitive receptors	Class II	AIR-PPWS-2: Implement Mitigation Measure AIR-PPWS-1	Less than significant
Create objectionable odors	Class III	None required	Less than significant
Result in substantial long-term emissions of greenhouse gases	Class III	None required	Less than significant

^a Impact Classes: Class I (significant, unmitigable); Class II (less than significant with mitigation incorporated); Class III (less than significant); Class IV (beneficial)

^b PPWS is the abbreviation for Proposed Project and Weed Segment.

**TABLE ES-4 (Continued)
SUMMARY OF IMPACTS AND MITIGATION FOR THE PROPOSED PROJECT AND WEED SEGMENT**

Impact	Impact Class^a	Mitigation Measure(s)	Residual Impact
Biological Resources			
BIO-PPWS-1: Construction activities would impact habitat	Class II	BIO-PPWS-1: General measures to avoid or minimize impacts	Less than significant
BIO-PPWS-2: Construction activities would impact special-status plant species	Class II	BIO-PPWS-2a: For known locations, establish exclusion zone BIO-PPWS-2b: Salvage, store, and replace topsoil	Less than significant
BIO-PPWS-3: Construction activities may spread noxious or invasive weeds	Class II	BIO-PPWS-3: Develop and implement Noxious Weed and Invasive Plant Control Plan	Less than significant
BIO-PPWS-4: Construction activities may impact active nest sites	Class II	BIO-PPWS-4: Construct during the non-nesting season	Less than significant
BIO-PPWS-5: Construction activities may disturb foraging bald eagles	Class II	BIO-PPWS-5: Halt activities when a bald eagle is seen within 100 yards	Less than significant
BIO-PPWS-6: Temporary loss of mule deer winter range	Class II	BIO-PPWS-6: No construction between November 15 and March 15	Less than significant
Collision/electrocution hazard to raptors and other large birds	Class III	None required	Less than significant
BIO-PPWS-7: Construction impact to jurisdictional waters of the United States	Class II	BIO-PPWS-7: Avoidance, use of driving mats	Less than significant
Cultural Resources			
CUL-PPWS-1: Adverse impacts to CA-SIS-345H	Class II	CUL-PPWS-1: Avoidance and monitor	Less than significant
CUL-PPWS-2: Inadvertent impacts to PE-#2	Class II	CUL-PPWS-2: Avoidance	Less than significant
CUL-PPWS-3: Impacts to unknown cultural resources	Class II	CUL-PPWS-3: Monitor for discovery; avoid or recover	Less than significant
CUL-PPWS-4: Impacts to unidentified paleontologic resources	Class II	CUL-PPWS-4: Monitor for discovery; avoid or recover	Less than significant
CUL-PPWS-5: Damage to unidentified human remains	Class II	CUL-PPWS-5: Monitor for discovery; contact Coroner	Less than significant
Hazards / Hazardous Materials			
HAZ-PPWS-1: Use of hazardous materials during construction	Class II	HAZ-PPWS-1a: Implement Best Management Practices HAZ-PPWS-1b: Develop and implement Hazardous Substance Control and Emergency Response Plan HAZ-PPWS-1c: Develop and implement Health and Safety Plan HAZ-PPWS-1d: Develop and implement Worker Environmental Awareness Program HAZ-PPWS-1e: Provide Emergency Spill Supplies and Equipment	Less than significant
HAZ-PPWS-2: Release previously unidentified haz materials	Class II	HAZ-PPWS-2: Develop procedures; implement if encountered	Less than significant
Removal and disposal of old poles and equipment	Class III	None required	Less than significant
Spills during operations	Class III	None required	Less than significant

**TABLE ES-4 (Continued)
SUMMARY OF IMPACTS AND MITIGATION FOR THE PROPOSED PROJECT AND WEED SEGMENT**

Impact	Impact Class^a	Mitigation Measure(s)	Residual Impact
Hazards / Hazardous Materials (cont.)			
HAZ-PPWS-3: Hazardous materials within one-quarter mile of an existing school	Class II	HAZ-PPWS-3: Implement Mitigation Measures HAZ-PPWS-1a through HAZ-PPWS-1e	Less than significant
Impair emergency response	Class III	None required	Less than significant
Risk from wildland fires	Class III	None required	Less than significant
Hydrology and Water Quality			
HYD-PPWS-1: Soil erosion and sediment in stormwater runoff	Class II	HYD-PPWS-1: Implement erosion control measures	Less than significant
HYD-PPWS-2: Release previously contaminated groundwater	Class II	HYD-PPWS-2: Implement inspection and test measures	Less than significant
HYD-PPWS-3: Affect flow of springs or shallow groundwater	Class II	HYD-PPWS-3: Implement Mitigation Measures HYD PPWS-4a and HYD-PPWS-4b (below)	Less than significant
HYD-PPWS-4: Affect production of nearby domestic or irrigation water sources	Class II	HYD-PPWS-4a: Modify installation method for steel pole at 19/45 HYD-PPWS-4b: Modify installation method for steel pole at 8/45	Less than significant
HYD-PPWS-5: Impact local drainage patterns	Class II	HYD-PPWS-5: Implement Mitigation Measure HYD PPWS-1	Less than significant
Result in on- or off-site flooding	Class III	None required	Less than significant
Land Use and Planning			
Physically divide an established community	Class III	None required	Less than significant
LU-PPWS-1: Construction activity constraints	Class II	LU-PPWS-1: Implement Mitigation Measures BIO-PPWS-2, BIO-PPWS-6, and HYD-PPWS-1	Less than significant
Noise			
NOI-PPWS-1: Construction noise	Class II	NOI-PPWS-1a: Construction activity within 2,000 feet of residences between 7:00 a.m. and 7:00 p.m. only NOI-PPWS-1b: Implement noise reduction and suppression techniques	Less than significant
Operational noise	Class III	None required	Less than significant
Groundborne vibration or noise	Class III	None required	Less than significant
Permanent noise levels	Class III	None required	Less than significant
Public Services			
PS-PPWS-1: Demand for fire protection services	Class II	PS-PPWS-1a: Implement Mitigation Measure HAZ-PPWS-1c PS-PPWS-1b: Water tanks in project areas during construction	Less than significant
PS-PPWS-2: Emergency vehicle response times	Class II	PS-PPWS-2: Coordinate with emergency service providers	Less than significant

TABLE ES-4 (Continued)
SUMMARY OF IMPACTS AND MITIGATION FOR THE PROPOSED PROJECT AND WEED SEGMENT

Impact	Impact Class^a	Mitigation Measure(s)	Residual Impact
Public Services (cont.)			
PS-PPWS-3: Demand for police services	Class II	PS-PPWS-3a: Precautionary measures to prevent vandalism PS-PPWS-3b: Traffic control for public protection PS-PPWS-3c: Public safety measures	Less than significant
Schools, parks and other public facilities	Class III	None required	Less than significant
Transportation and Traffic			
TRA-PPWS-1: Construction effects on traffic	Class II	TRA-PPWS-1a: Encroachment permits TRA-PPWS-1b: Prepare/implement traffic management plan TRA-PPWS-1c: Minimize overlap with other local construction	Less than significant
TRA-PPWS-2: Construction traffic safety hazards	Class II	TRA-PPWS-2: Implement Mitigation Measure TRA-PPWS-1b	Less than significant
TRA-PPWS-3: Construction delays for emergency vehicles	Class II	TRA-PPWS-3: Implement Mitigation Measures TRA-PPWS-1b and PS-PPWS-2	Less than significant
Inadequate Parking	Class III	None required	Less than significant
Utilities and Service Systems			
Conflict with wastewater treatment requirements	Class III	None required	Less than significant
Result in new/expanded wastewater treatment facilities	Class III	None required	Less than significant
Result in new/expanded stormwater drainage facilities	Class III	None required	Less than significant
Result in new/expanded water supply entitlements	Class III	None required	Less than significant
Exceed permitted landfill capacity	Class III	None required	Less than significant
Comply with solid waste regulations	Class III	None required	Less than significant
USS-PPWS-1: Inadvertently contact underground utility lines	Class II	USS-PPWS-1: Contact Underground Service Alert	Less than significant

**TABLE ES-5
SUMMARY OF IMPACTS AND MITIGATION FOR THE ALTERNATIVE ROUTES**

Impact	Impact Class^a	Applicable Alternatives^b	Mitigation Measure(s)	Residual Impact
Aesthetics				
AES-____-1: Scenic views from portion of Highway 97	Class II	OPT4, VAR/A, VAR/B	AES-____-1: Develop and implement landscape plan	Less than significant
AES-____-2: Weed and Weed Junction Substations visible from Highway 97	Class II	OPT4, VAR/A, VAR/B	AES-____-2: Implement Mitigation Measures AES-PPWS-3a, AES-PPWS-3b, AES-PPWS-3c, and AES-PPWS-3d	Less than significant
AES-____-3: Visual character within Highway 97 corridor	Class I	OPT4, VAR/A, VAR/B	AES-____-3: Implement Mitigation Measure AES OPT/4-1	Significant
AES-____-4: Visual character in the Lincoln Heights residential area	Class II	OPT4, VAR/A, VAR/B	AES-____-4: Implement Mitigation Measures AES-PPWS-4a and AES-PPWS-4b	Less than significant
Visual character/views from California Street	Class III	OPT4, VAR/A, VAR/B	None required	Less than significant
AES-____-5: Transmission lines could create glare	Class II	OPT4, VAR/A, VAR/B	AES-____-5: Implement Mitigation Measure AES-PPWS-5	Less than significant
AES-____-6: Weed Substation upgrades could create glare	Class II	OPT4, VAR/A, VAR/B	AES-____-6: Implement Mitigation Measure AES-PPWS-6	Less than significant
Agriculture Resources				
AG-____-1: Temporary removal of designated farmland	Class II	OPT4, VAR/A, VAR/B	AG-____-1: Implement Mitigation Measure BIO-PPWS-2b	Less than significant
Conflict with zoning or Williamson Act contract	Class III	OPT4, VAR/A, VAR/B	None required	Less than significant
Air Quality				
AIR-____-1: Construction emissions of criteria pollutants	Class II	OPT4, VAR/A, VAR/B	AIR-____-1: Implement dust control measures	Less than significant
Operational emissions of criteria pollutants	Class III	OPT4, VAR/A, VAR/B	None required	Less than significant
AIR-____-2: Construction impacts to sensitive receptors	Class II	OPT4, VAR/A, VAR/B	AIR-____-2: Implement mitigation measure AIR-PPWS-1	Less than significant

^a Impact Classes: Class I (significant, unmitigable); Class II (less than significant with mitigation incorporated); Class III (less than significant); Class IV (beneficial)

^b Alternatives Abbreviations: PacifiCorp Option 4 (OPT4); Mackintosh/ALJ Variation A (VAR/A); Mackintosh/ALJ Variation B (VAR/B)

^c A blank (____) in the impact number indicates that the impact is the same for all of the listed alternatives. In Section 4, impacts are numbered separately for each alternative; e.g., AES-OPT4-1, AES-VAR/A-1, AES-VAR/B-1

TABLE ES-5 (Continued)
SUMMARY OF IMPACTS AND MITIGATION FOR THE ALTERNATIVE ROUTES

Impact	Impact Class^a	Applicable Alternatives^b	Mitigation Measure(s)	Residual Impact
Air Quality (cont.)				
Create objectionable odors	Class III	OPT4, VAR/A, VAR/B	None required	Less than significant
Long-term emissions of greenhouse gases	Class III	OPT4, VAR/A, VAR/B	None required	Less than significant
Biological Resources				
BIO-____-1: Construction activities would impact habitat	Class II	OPT4, VAR/A, VAR/B	BIO-____-1: Implement Mitigation Measure BIO-PPWS-1	Less than significant
BIO-____-2: Construction activities would impact special-status plant species	Class II	OPT4, VAR/A, VAR/B	BIO-____-2: Implement Mitigation Measures BIO-PPWS-2a and BIO-PPWS-2b	Less than significant
BIO-____-3: Construction activities may spread noxious or invasive weeds	Class II	OPT4, VAR/A, VAR/B	BIO-____-3: Implement Mitigation Measure BIO-PPWS-3	Less than significant
BIO-____-4: Construction activities may impact active nest sites	Class II	OPT4, VAR/A, VAR/B	BIO-____-4: Implement Mitigation Measure BIO-PPWS-4	Less than significant
BIO-____-5: Construction activities may disturb foraging bald eagles	Class II	OPT4, VAR/A, VAR/B	BIO-____-5: Implement Mitigation Measure BIO-PPWS-5	Less than significant
BIO-____-6: Temporary loss of mule deer winter range	Class II	OPT4, VAR/A, VAR/B	BIO-____-6: Implement Mitigation Measure BIO-PPWS-6	Less than significant
BIO-OPT4-7: Removal of multiple large trees	Class II	OPT4	BIO-OPT4-7: Replant trees with in-kind species at 4:1 ratio	Less than significant
Collision/electrocution hazard to raptors and other large birds	Class III	OPT4, VAR/A, VAR/B	None required	Less than significant
BIO-OPT4-8: Construction impact to jurisdictional waters of the United States	Class II	OPT4	BIO-OPT4-8: Implement Mitigation Measure BIO-PPWS-7	Less than significant
BIO-____-7: Construction impact to jurisdictional waters of the United States	Class II	VAR/A, VAR/B	BIO-____-7: Implement Mitigation Measure BIO-PPWS-7	Less than significant
Cultural Resources				
CUL-____-1: Adverse impacts to CA-SIS-345H	Class II	OPT4, VAR/A, VAR/B	CUL-____-1: Implement Mitigation Measure CUL-PPWS-1	Less than significant
CUL-____-2: Inadvertent impacts to PE-#2	Class II	OPT4, VAR/A, VAR/B	CUL-____-2: Implement Mitigation Measure CUL-PPWS-2	Less than significant
CUL-____-3: Impacts to unknown cultural resources	Class II	OPT4, VAR/A, VAR/B	CUL-____-3: Implement Mitigation Measure CUL-PPWS-3	Less than significant

TABLE ES-5 (Continued)
SUMMARY OF IMPACTS AND MITIGATION FOR THE ALTERNATIVE ROUTES

Impact	Impact Class^a	Applicable Alternatives^b	Mitigation Measure(s)	Residual Impact
Cultural Resources (cont.)				
CUL-___-4: Impacts to unidentified paleontologic resources	Class II	OPT4, VAR/A, VAR/B	CUL-___-4: Implement Mitigation Measure CUL-PPWS-4	Less than significant
CUL-___-5: Damage to unidentified human remains	Class II	OPT4, VAR/A, VAR/B	CUL-___-5: Implement Mitigation Measure CUL-PPWS-5	Less than significant
Hazards / Hazardous Materials				
HAZ-___-1: Use of hazardous materials during construction	Class II	OPT4, VAR/A, VAR/B	HAZ-___-1: Implement Mitigation Measure HAZ-PPWS-1a through HAZ-PPWS-1e	Less than significant
HAZ-___-2: Release previously unidentified hazardous materials	Class II	OPT4, VAR/A, VAR/B	HAZ-___-2: Implement Mitigation Measure HAZ-PPWS-2	Less than significant
Removal and disposal of old poles and equipment	Class III	OPT4, VAR/A, VAR/B	None required	Less than significant
Spills during operations	Class III	OPT4, VAR/A, VAR/B	None required	Less than significant
HAZ-___-3: Hazardous materials within one-quarter mile of an existing school	Class II	OPT4, VAR/A, VAR/B	HAZ-___-3: Implement Mitigation Measure HAZ-PPWS-1a through HAZ-PPWS-1e	Less than significant
Impair emergency response	Class III	OPT4, VAR/A, VAR/B	None required	Less than significant
Risk from wildland fires	Class III	OPT4, VAR/A, VAR/B	None required	Less than significant
Hydrology and Water Quality				
HYD-___-1: Soil erosion and sediment in stormwater runoff	Class II	OPT4, VAR/A, VAR/B	HYD-___-1: Implement Mitigation Measure HYD PPWS-1	Less than significant
HYD-___-2: Release previously contaminated groundwater	Class II	OPT4, VAR/A, VAR/B	HYD-___-2: Implement Mitigation Measure HYD PPWS-2	Less than significant
HYD-___-3: Affect flow of springs or shallow groundwater	Class II	OPT4, VAR/A, VAR/B	HYD-___-3: Implement Mitigation Measures HYD PPWS-4a	Less than significant
HYD-___-4: Affect production of nearby domestic or irrigation water sources	Class II	OPT4, VAR/A, VAR/B	HYD-___-4: Implement Mitigation Measures HYD PPWS-4a	Less than significant
HYD-___-5: Impact local drainage patterns	Class II	OPT4, VAR/A, VAR/B	HYD-___-5: Implement Mitigation Measure HYD PPWS-1	Less than significant
Result in on- or off-site flooding	Class III	OPT4, VAR/A, VAR/B	None required	Less than significant

TABLE ES-5 (Continued)
SUMMARY OF IMPACTS AND MITIGATION FOR THE ALTERNATIVE ROUTES

Impact	Impact Class^a	Applicable Alternatives^b	Mitigation Measure(s)	Residual Impact
Land Use and Planning				
Physically divide an established community	Class III	OPT4, VAR/A, VAR/B	None required	Less than significant
LU-____-1: Construction activity constraints	Class II	OPT4, VAR/A, VAR/B	LU-____-1: Implement Mitigation Measures BIO-PPWS-2, BIO-PPWS-6, and HYD-PPWS-1	Less than significant
Noise				
NOI-____-1: Construction noise	Class II	OPT4, VAR/A, VAR/B	NOI-____-1: Implement Mitigation Measures NOI-PPWS-1a and NOI-PPWS-1b	Less than significant
Operational noise	Class III	OPT4, VAR/A, VAR/B	None required	Less than significant
Groundborne vibration or noise	Class III	OPT4, VAR/A, VAR/B	None required	Less than significant
Permanent noise levels	Class III	OPT4, VAR/A, VAR/B	None required	Less than significant
Public Services				
PS-____-1: Demand for fire protection services	Class II	OPT4, VAR/A, VAR/B	PS-____-1: Implement Mitigation Measures PS-PPWS-1a and PS-PPWS-1b	Less than significant
PS-____-2: Emergency vehicle response times	Class II	OPT4, VAR/A, VAR/B	PS-____-2: Implement Mitigation Measure PS-PPWS-2	Less than significant
PS-____-3: Demand for police services	Class II	OPT4, VAR/A, VAR/B	PS-____-3: Implement Mitigation Measures PS-PPWS-3a, PS-PPWS-3b, and PS-PPWS-3c	Less than significant
Schools, parks and other public facilities	Class III	OPT4, VAR/A, VAR/B	None required	Less than significant
Transportation and Traffic				
TRA-____-1: Construction effects on traffic	Class II	OPT4, VAR/A, VAR/B	TRA-____-1: Implement Mitigation Measures TRA-PPWS-1a, TRA-PPWS-1b, and TRA-PPWS-1c	Less than significant
TRA-____-2: Construction traffic safety hazards	Class II	OPT4, VAR/A, VAR/B	TRA-____-2: Implement Mitigation Measure TRA-PPWS-1b	Less than significant
TRA-____-3: Construction delays for emergency vehicles	Class II	OPT4, VAR/A, VAR/B	TRA-____-3: Implement Mitigation Measures TRA-PPWS-1b and PS-PPWS-2	Less than significant
Inadequate Parking	Class III	OPT4, VAR/A, VAR/B	None required	Less than significant

TABLE ES-5 (Continued)
SUMMARY OF IMPACTS AND MITIGATION FOR THE ALTERNATIVE ROUTES

Impact	Impact Class^a	Applicable Alternatives^b	Mitigation Measure(s)	Residual Impact
Utilities and Service Systems				
Conflict with wastewater treatment requirements	Class III	OPT4, VAR/A, VAR/B	None required	Less than significant
Result in new/expanded wastewater treatment facilities	Class III	OPT4, VAR/A, VAR/B	None required	Less than significant
Result in new/expanded stormwater drainage facilities	Class III	OPT4, VAR/A, VAR/B	None required	Less than significant
Result in new/expanded water supply entitlements	Class III	OPT4, VAR/A, VAR/B	None required	Less than significant
Exceed permitted landfill capacity	Class III	OPT4, VAR/A, VAR/B	None required	Less than significant
Comply with solid waste regulations	Class III	OPT4, VAR/A, VAR/B	None required	Less than significant
USS-PPWS-1: Inadvertently contact underground utility lines	Class II	OPT4, VAR/A, VAR/B	USS-PPWS-1: Implement Mitigation Measure USS-PPWS-1	Less than significant