

## 4.3 Air Quality

This section evaluates the potential for the Proposed Project, the Weed Segment, as well as the alternative options, to impact regional and local air quality from stationary and mobile sources of air emissions from construction activities and operational sources. This section is based on a review of existing documentation of air quality conditions in the region, air quality regulations from the U.S. Environmental Protection Agency (USEPA), the California Air Resources Board (CARB), and the Siskiyou County Air Pollution Control District (SCAPCD).

### 4.3.1 Setting

Air quality is a function of both the rate and location of pollutant emissions under the influence of meteorological conditions and topographic features that influence pollutant movement and dispersal. Atmospheric conditions such as wind speed, wind direction, atmospheric stability, and air temperature gradients interact with the physical features of the landscape to determine the movement and dispersal of air pollutants, which affects air quality.

### Regional Topography, Meteorology, and Climate

The potential for high pollutant concentrations developing at a given location depends upon the quantity of pollutants emitted into the atmosphere in the surrounding area or upwind, and the ability of the atmosphere to disperse the air pollutants. The atmospheric pollution potential, as the term is used in this EIR, is independent of the location of emission sources and is instead a function of factors such as topography and meteorology.

The study area, which includes the Proposed Project, Weed Segment, and alternative option areas, is located in Shasta Valley, in Siskiyou County, California. The study area is located in the vicinity of Weed, at the base of the Cascade Range in the Northeast Plateau Air Basin. In this area of California, the Coast Range merges with the Cascade Range to create an extensive area of rugged mountain terrain more than 200 miles in width. The Cascades range from approximately 5,000 to 10,000 feet in height, with Mt. Shasta rising to 14,161 feet above sea level (WRCC, 2007a). The study area portion of Shasta Valley has an average elevation of approximately 3,600 feet above mean sea level and. The unique variation of elevation and rugged terrain contributes to the fluctuating climate in the study area.

Warm winters, cool summers, small daily and seasonal temperature ranges, and high relative humidity are characteristic of the area nearest the Pacific Ocean. With increasing distance east of the Coast Range, the maritime influence decreases. Areas that are well protected from the ocean, such as the study area, experience a more continental climate type with warmer summers, colder winters, greater daily and seasonal temperature ranges, and generally lower relative humidity.

The study area typically has average maximum and minimum winter (i.e., January) temperatures of 43 and 23 ° F, respectively, while average summer (i.e., July) maximum and minimum temperatures are 85 and 48 ° F, respectively. Precipitation in Weed averages approximately 26 inches per year, with 19 inches of snowfall (WRCC, 2007b).

## Existing Air Quality

SCAPCD operates a regional monitoring network that measures the ambient concentrations of criteria pollutants. Existing levels of air quality in the study area can generally be inferred from ambient air quality measurements conducted by SCAPCD at its closest stations, the Yreka – Foothill Drive monitoring station located approximately 25 miles to the north-northwest and the Mount Shasta-North Old State Road monitoring station located approximately eight miles to the south-southeast. The Yreka monitoring station measures concentrations of ozone, particulate matter equal to or less than 10 microns (PM<sub>10</sub>), and particulate matter less than 2.5 microns (PM<sub>2.5</sub>) and the Shasta monitoring station only measures PM<sub>10</sub>.

Background ambient concentrations of pollutants are determined by pollutant emissions in a given area as well as wind patterns and meteorological conditions for that area. As a result, background concentrations can vary among different locations within an area. However, areas located close together and exposed to similar wind conditions can be expected to have similar background pollutant concentrations. Table 4.3-1 shows a five-year (2002 – 2006) summary of ozone and PM<sub>2.5</sub> monitoring data collected at the Yreka station and a summary of PM<sub>10</sub> monitoring data collected at the Shasta station. The data are compared with the California Ambient Air Quality Standards (CAAQS) and National Ambient Air Quality Standards (NAAQS) that are/were applicable during the measurement summary period (see Table 4.3-1 notes). As indicated in the table, no violations of the applicable ozone, PM<sub>2.5</sub>, or PM<sub>10</sub> standards were recorded in Yreka or Shasta during the five year summary period.

**TABLE 4.3-1  
AIR QUALITY DATA SUMMARY (2001–2006) FOR THE PROJECT AREA**

Pollutant	Standard	Monitoring Data by Year				
		2002	2003	2004	2005	2006
<b>Ozone</b>						
Highest 1 Hour Average (ppm)		0.087	0.089	0.077	0.070	0.080
Days over State Standard	0.09	0	0	0	0	0
Days over National Standard	0.12	0	0	0	0	0
Highest 8 Hour Average (ppm)		0.075	0.074	0.071	0.064	0.072
Days over National Standard*	0.08	0	0	0	0	0
<b>Particulate Matter (PM<sub>2.5</sub>)</b>						
Highest 24 Hour Average (µg/m <sup>3</sup> )		NA	NA	NA	26.0	22.0
Days over National Standard*	65	---	---	---	0	0
<b>Particulate Matter (PM<sub>10</sub>):</b>						
Highest 24 Hour Average (µg/m <sup>3</sup> )		47.1	30.6	29.3	27.5	28.6
Estimated Days over State Standard	50	0	0	0	0	0
Annual Average (µg/m <sup>3</sup> )	30	14.6	10.8	10.5	11.5	11.0

NOTES: \*The CARB approved a State 8-hour ozone standard of 0.07 on May 17, 2006 and USEPA approved a new Federal 24-hour PM<sub>2.5</sub> Standard of 35 µg/m<sup>3</sup> on September 21, 2006. The Federal 8-hour ozone and old Federal 24-hour PM<sub>2.5</sub> standards are presented in the table because they are the ones that CARB used to determine the amount of days that concentrations exceeded the standards.  
NA = Data not available. ppm = parts per million; µg/m<sup>3</sup> = micrograms per cubic meter.

SOURCE: CARB 2007a

## **Sensitive Receptors**

For the purposes of air quality and public health and safety, sensitive receptors are generally defined as land uses with population concentrations that would be particularly susceptible to disturbance from dust and air pollutant concentrations, or other disruptions associated with project construction and/or operation. Sensitive receptor land uses generally include schools, day care centers, libraries, hospitals, residential area, and parks. Some sensitive receptors are considered to be more sensitive than others to air pollutants. The reasons for greater than average sensitivity include pre-existing health problems, proximity to emissions sources, or duration of exposure to air pollutants. Schools, hospitals, and convalescent homes are considered to be relatively sensitive to poor air quality because children, elderly people, and the infirmed are more susceptible to respiratory distress and other air quality-related health problems than the general public. Residential areas are considered sensitive to poor air quality because people usually stay home for extended periods of time, with associated greater exposure to ambient air quality. Recreational uses are also considered sensitive due to the greater exposure to ambient air quality conditions because vigorous exercise associated with recreation places a high demand on the human respiratory system.

## **Regulatory Context**

Air quality within the air basin is addressed through the efforts of various federal, State, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through legislation, regulations, planning, policy-making, education, and a variety of programs. The air pollutants of concern and agencies primarily responsible for improving the air quality within the air basin and the pertinent regulations are discussed below.

## **Criteria Air Pollutants**

Regulation of air pollution is achieved through both national and State ambient air quality standards and emission limits for individual sources of air pollutants. As required by the federal Clean Air Act, the USEPA has identified criteria pollutants and has established NAAQS to protect public health and welfare. NAAQS have been established for ozone, CO, nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), PM<sub>10</sub>, PM<sub>2.5</sub>, and lead (Pb). These pollutants are called “criteria” air pollutants because standards have been established for each of them to meet specific public health and welfare criteria.

To protect human health and the environment, the USEPA has set “primary” and “secondary” maximum ambient thresholds for all six criteria pollutants. Primary thresholds were set to protect human health, particularly sensitive receptors such as children, the elderly, and individuals suffering from chronic lung conditions such as asthma and emphysema. Secondary standards were set to protect the natural environment and prevent further deterioration of animals, crops, vegetation, and buildings.

The NAAQS are defined as the maximum acceptable concentration that may be reached, but not exceeded more than once per year. California has adopted more stringent ambient air quality standards for most of the criteria air pollutants. Table 4.3-2 presents both sets of ambient air

**TABLE 4.3-2  
STATE AND NATIONAL CRITERIA AIR POLLUTANT STANDARDS, EFFECTS, AND SOURCES**

Pollutant	Averaging Time	State Standard	National Standard	Pollutant Health and Atmospheric Effects	Major Pollutant Sources
Ozone	1 Hour 8 Hour	0.09 ppm 0.07 ppm	– 0.08 ppm	High concentrations can directly affect lungs, causing irritation. Long-term exposure may cause damage to lung tissue.	Formed when reactive organic gases and NO <sub>x</sub> react in the presence of sunlight. Major sources include on-road motor vehicles, solvent evaporation, and commercial / industrial mobile equipment.
Carbon Monoxide	1 Hour 8 Hour	20 ppm 9.0 ppm	35 ppm 9 ppm	Classified as a chemical asphyxiant, CO interferes with the transfer of fresh oxygen to the blood and deprives sensitive tissues of oxygen.	Internal combustion engines, primarily gasoline-powered motor vehicles.
Nitrogen Dioxide	1 Hour Annual	0.25 ppm –	– 0.053 ppm	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown.	Motor vehicles, petroleum-refining operations, industrial sources, aircraft, ships, and railroads.
Sulfur Dioxide	1 Hour 3 Hour 24 Hour Annual	0.25 ppm – 0.04 ppm –	– 0.5 ppm 0.14 ppm 0.03 ppm	Irritates upper respiratory tract; injurious to lung tissue. Can yellow the leaves of plants, destructive to marble, iron, and steel. Limits visibility and reduces sunlight.	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
Respirable Particulate Matter (PM <sub>10</sub> )	24 Hour Annual	50 µg/m <sup>3</sup> 20 µg/m <sup>3</sup>	150 µg/m <sup>3</sup> 50 µg/m <sup>3</sup>	May irritate eyes and respiratory tract, decreases in lung capacity, cancer and increased mortality. Produces haze and limits visibility.	Dust and fume-producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
Fine Particulate Matter (PM <sub>2.5</sub> )	24 Hour Annual	– 12 µg/m <sup>3</sup>	35 µg/m <sup>3</sup> 15 µg/m <sup>3</sup>	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and results in surface soiling.	Fuel combustion in motor vehicles, equipment, and industrial sources; residential and agricultural burning; Also, formed from photochemical reactions of other pollutants, including NO <sub>x</sub> , SO <sub>2</sub> , and organics.
Lead	Monthly Quarterly	1.5 µg/m <sup>3</sup> –	– 1.5 µg/m <sup>3</sup>	Disturbs gastrointestinal system, and causes anemia, kidney disease, and neuromuscular and neurological dysfunction.	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.

ppm = parts per million  
µg/m<sup>3</sup> = micrograms per cubic meter

SOURCE: CARB 2007b and SCAQMD, 1993

quality standards (i.e., national and State) and provides a brief discussion of the related health effects and principal sources for each pollutant. California has also established State ambient air quality standards for sulfates, hydrogen sulfide, and vinyl chloride; however, air emissions of these pollutants are not expected under the project and thus, there is no further mention of these pollutants in this EIR. The Northeast Plateau Air Basin generally has good air quality and is currently in attainment or unclassified status for all federal and State ambient air quality standards (SCAPCD, 2007). However, CARB has indicated that this summer (2007) it may change the attainment status of the study area relative to the State's new eight-hour ozone standard, from attainment to non-attainment based on measured ozone levels in recent years (SCAPCD, 2007).

### **Ozone**

Ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and that can cause substantial damage to vegetation and other materials. Ozone is not emitted directly into the atmosphere, but is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving reactive organic gases (ROG) and nitrogen oxides (NO<sub>x</sub>). ROG and NO<sub>x</sub> are known as precursor compounds for ozone. Significant ozone production generally requires ozone precursors to be present in a stable atmosphere with strong sunlight for approximately three hours.

Ozone is a regional air pollutant because it is not emitted directly by sources, but is formed downwind of sources of ROG and NO<sub>x</sub> under the influence of wind and sunlight. Ozone concentrations tend to be higher in the late spring, summer, and fall, when the long sunny days combine with regional subsidence inversions to create conditions conducive to the formation and accumulation of secondary photochemical compounds, like ozone.

### **Carbon Monoxide**

Carbon monoxide is a non-reactive pollutant that is a product of incomplete combustion and is mostly associated with motor vehicle traffic. High CO concentrations develop primarily during winter when periods of light winds combine with the formation of ground level temperature inversions (typically from the evening through early morning). These conditions result in reduced dispersion of vehicle emissions. Motor vehicles also exhibit increased CO emission rates at low air temperatures. When inhaled at high concentrations, CO combines with hemoglobin in the blood and reduces the oxygen-carrying capacity of the blood. This results in reduced oxygen reaching the brain, heart, and other body tissues. This condition is especially critical for people with cardiovascular diseases, chronic lung disease, or anemia.

### **Particulate Matter**

Particulate matter, including PM<sub>10</sub> and PM<sub>2.5</sub>, represent fractions of particulate matter that can be inhaled into air passages and the lungs and can cause adverse health effects. Particulate matter in the atmosphere results from many kinds of dust- and fume-producing industrial and agricultural operations, fuel combustion, and atmospheric photochemical reactions. Some sources of particulate matter, such as demolition and construction activities, are more local in nature, while others, such as vehicular traffic, have a more regional effect. Very small particles of certain

substances (e.g., sulfates and nitrates) can cause lung damage directly, or can contain adsorbed gases (e.g., chlorides or ammonium) that may be injurious to health. Particulates can also damage materials and reduce visibility.

### ***Other Criteria Pollutants***

Sulfur dioxide is a combustion product of sulfur or sulfur-containing fuels such as coal. SO<sub>2</sub> is also a precursor to the formation of atmospheric sulfate and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) and contributes to potential atmospheric sulfuric acid formation that could precipitate downwind as acid rain. Lead has a range of adverse neurotoxin health effects, and was formerly released into the atmosphere primarily via leaded gasoline. The phase-out of leaded gasoline in California resulted in decreasing levels of atmospheric lead.

## **Greenhouse Gas Emissions and Climate Change**

Some gases in the atmosphere affect the Earth's heat balance by absorbing infrared radiation. These gases can prevent the escape of heat in much the same way as glass in a greenhouse. This is often referred to as the "greenhouse effect," and it is responsible for maintaining a habitable climate. On Earth the gases believed to be most responsible for global warming are water vapor, carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Enhancement of the greenhouse effect can occur when concentrations of these gases exceed the natural concentrations in the atmosphere. Of these gases, carbon dioxide (CO<sub>2</sub>) and methane are emitted in the greatest quantities from human activities. Emissions of CO<sub>2</sub> are largely by-products of fossil fuel combustion, whereas methane primarily results from off-gassing associated with agricultural practices and landfills. Sulfur hexafluoride (SF<sub>6</sub>) is a greenhouse gas (GHG) commonly used in the utility industry as an insulating gas in transformers and other electronic equipment. SF<sub>6</sub>, while comprising a small fraction of the total GHGs emitted annually world-wide, is a much more potent GHG with 23,900 times the global warming potential<sup>1</sup> as CO<sub>2</sub>. There is widespread international scientific agreement that human-caused increases in GHGs has and will continue to contribute to global warming, although there is much uncertainty concerning the magnitude and rate of the warming.

Some of the potential resulting effects in California of global warming may include loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years (CARB, 2006). Globally, climate change has the potential to impact numerous environmental resources through potential, though uncertain, impacts related to future air temperatures and precipitation patterns. The projected effects of global warming on weather and climate are likely to vary regionally, but are expected to include the following direct effects (IPCC, 2001):

- Higher maximum temperatures and more hot days over nearly all land areas;
- Higher minimum temperatures, fewer cold days and frost days over nearly all land areas;
- Reduced diurnal temperature range over most land areas;

---

<sup>1</sup> Global warming potential is the potential of a gas or aerosol to trap heat in the atmosphere. CO<sub>2</sub> is assigned a global warming potential of 1.

- Increase of heat index over land areas; and
- More intense precipitation events.

Also, there are many secondary effects that are projected to result from global warming, including global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity. While the possible outcomes and the feedback mechanisms involved are not fully understood, and much research remains to be done, the potential for substantial environmental, social, and economic consequences over the long term may be great.

The California Energy Commission estimated that in 2004, California produced 492 million gross metric tons of CO<sub>2</sub>-equivalent greenhouse gas emissions (CEC, 2006). The CEC found that transportation is the source of 41 percent of the State's GHG emissions; followed by electricity generation at 22 percent and industrial sources at 21 percent.

## Regulatory Setting

### *Federal*

USEPA is responsible for implementing the myriad programs established under the federal Clean Air Act, such as establishing and reviewing the NAAQS and judging the adequacy of State Implementation Plans (SIPs), but has delegated the authority to implement many of the federal programs to the states while retaining an oversight role to ensure that the programs continue to be implemented.

### *State*

CARB is responsible for establishing and reviewing the State standards, compiling the California SIP and securing approval of that plan from USEPA, conducting research and planning, and identifying toxic air contaminants. CARB also regulates mobile sources of emissions in California, such as construction equipment, trucks, and automobiles, and oversees the activities of California's air quality management districts, which are organized at the county or regional level. County or regional air quality management districts are primarily responsible for regulating stationary sources at industrial and commercial facilities within their geographic areas and for preparing the air quality plans that are required under the federal Clean Air Act and California Clean Air Act.

### **Assembly Bill 32 – California Global Warming Solutions Act**

California Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006, was enacted as legislation in 2006 and requires the California Air Resources Board (CARB) to establish a statewide GHG emission cap for 2020 based on 1990 emission levels. AB 32 requires CARB to adopt regulations by January 1, 2008, that will identify and require selected sectors or categories of emitters of GHGs to report and verify their statewide GHG emissions, and CARB is authorized to enforce compliance with the program that will be developed. Under AB 32, CARB also is required to adopt, by January 1, 2008, a statewide GHG emissions limit equivalent to the statewide greenhouse gas emissions levels in 1990, which must be achieved by 2020. By

January 1, 2011, CARB is required to adopt rules and regulations (which shall become operative January 1, 2012), to achieve the maximum technologically feasible and cost-effective greenhouse gas emission reductions. AB 32 permits the use of market-based compliance mechanisms to achieve those reductions. AB 32 also requires CARB to monitor compliance with and enforce any rule, regulation, order, emission limitation, emissions reduction measure, or market-based compliance mechanism that it adopts.

### ***Siskiyou County***

The study area is within the jurisdiction of the SCAPCD. The SCAPCD regulates air pollutant emissions for all sources throughout Siskiyou County other than motor vehicles. The SCAPCD enforces regulations and administers permits governing stationary sources.

As required by the federal Clean Air Act and the California Clean Air Act, air basins or portions thereof have been classified as either “attainment” or “nonattainment” for each criteria air pollutant, based on whether or not the standards have been achieved. Jurisdictions of nonattainment areas are also required to prepare air quality plans that include strategies for achieving attainment. There are no air quality plans applicable to the study area because Siskiyou County is currently in attainment or unclassified status for all of the NAAQS and the CAAQS; however as mentioned above, the attainment status of the study area may soon change to non-attainment of the State eight-hour ozone standard (SCAPCD, 2007).

The Siskiyou County General Plan does not address any requirements regarding the protection and enhancement of air quality in the region. The County does not have any air quality protection policies that are applicable to the Proposed Project, Weed Segment, or any of the alternative options.

### ***City of Weed***

Portions of the Weed Segment and the project alternatives would be located within the incorporated area of the City of Weed. However, the City of Weed General Plan does not address any requirements regarding the protection and enhancement of air quality. The City does not have any air quality protection policies that are applicable to the Weed Segment or any of the alternative options.

## **4.3.2 Significance Criteria**

According to Appendix G of the CEQA Guidelines, a project would result in a significant impact if it would:

- a) Conflict with or obstruct implementation of the applicable air quality plan;
- b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality

standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);

- d) Expose sensitive receptors to substantial pollutant concentrations;
- e) Create objectionable odors affecting a substantial number of people; or
- f) Result in substantial long-term emissions of greenhouse gases.

Regarding criterion a), there is no air quality plan that is applicable to the study area. Therefore, the Proposed Project, Weed Segment, and the alternatives would not conflict with or obstruct an applicable air quality plan and no impact would occur. Impacts related to conflicts or obstruction with applicable air quality plans are not addressed further in this EIR.

Regarding criterion c), Siskiyou County is in attainment or unclassified status for all of the NAAQS and the CAAQS. Therefore, there would be no cumulatively considerable net increase of a criteria pollutant that is non-attainment in the study area and no impact related to criteria pollutants that are non-attainment in the area would occur. Impacts related to cumulatively considerable increases of non-attainment criteria pollutants are not addressed further in this EIR.

### 4.3.3 Air Quality Impacts and Mitigation Measures

#### Approach to Analysis

This section presents an analysis of the potential air quality impacts associated with the construction and operation of the Proposed Project and Weed Segment. Emissions from construction equipment exhaust and generation of particulate matter (fugitive dust) are the primary concerns in evaluating short-term air quality impacts. Long-term impacts, however, would be negligible since emission-related activities associated with Proposed Project and Weed Segment operations and maintenance would be limited to periodic maintenance and inspection trips similar to what is occurring now along the existing lines.

Proposed Project and Weed Segment construction would employ a variety of construction and earth moving equipment. Exhaust pollutants would be emitted during construction activities from motor-driven construction equipment, construction vehicles, and workers' vehicles, and fugitive dust would be generated by ground disturbing activities as well as from heavy truck travel on paved roads. The "worst-case" scenario for daily emissions during the project construction is estimated to generate the following criteria pollutant emissions:

- ROG: 27 pounds per day
- CO: 168 pounds per day
- NO<sub>x</sub>: 221 pounds per day
- SO<sub>2</sub>: 0.2 pounds per day
- PM<sub>10</sub>: 142 pounds per day
- PM<sub>2.5</sub>: 36 pounds per day

Projected construction emissions are presented in Table 4.3-3, broken down by onsite and offsite emissions. For the worst-case day scenario, it is assumed that portions of the Proposed Project and Weed Segment would be constructed concurrently. Because the exact phasing of construction activities has not been determined, this analysis assumes that between the Proposed Project and Weed Segment, each of the construction crew types (i.e., material haul, access road construction, auger holes and direct embed poles, structure assembly, conductor assembly, Weed Substation upgrade, and restoration and cleanup) would occur on the same day. Although it is unlikely that all of the construction activity crews would overlap work on a single day, the emissions presented in Table 4.3-3 reflect the one-day worst-case construction period.

Emission factors for construction equipment such as cranes, graders, backhoes, forklifts, etc., were derived using the CARB's Off-Road 2007 emissions model. CARB's EMFAC2007 emission factor model was used to develop emission factors for on-road vehicles such as pickup and diesel semi-trucks. Onsite fugitive dust emissions were developed based on guidance from the Bay Area Air Quality Management District (BAAQMD, 1999) and fugitive dust from heavy truck paved-road travel was estimated using methods presented in USEPA's AP-42 (USEPA, 2006). PM<sub>10</sub> and PM<sub>2.5</sub> fractions of particulate matter were estimated using methods recommended by the South Coast Air Quality Management District (SCAQMD, 2006).

- 
- b) **Violate any air quality standard or contribute substantially to an existing or projected air quality violation. *Less than significant with mitigation (Class II).***

### ***Construction***

**Impact AIR-PPWS-1: Construction activities would generate emissions of criteria pollutants, including suspended and inhalable particulate matter and equipment exhaust emissions. *Less than significant with mitigation (Class II).***

The SCAPCD does not have established CEQA significance criteria to determine the significance of construction projects such as the Proposed Project and Weed Segment. However, the SCAPCD does have criteria pollutant significance thresholds for new or modified stationary source projects in the County. In lieu of CEQA significance thresholds for construction emissions, the SCAPCD has recommended comparing Proposed Project and Weed Segment emissions to its new or modified stationary source significance thresholds, which are 250 pounds per day for ROG, NO<sub>2</sub>, SO<sub>2</sub>, CO, PM<sub>10</sub>, PM<sub>2.5</sub> (SCAPCD, 2007).

Estimated onsite and offsite maximum day emissions associated with the Proposed Project and the Weed Segment are presented in Table 4.3-3. Onsite emissions include equipment exhaust from activity sources, including access road construction, hole drilling, structure assembly, conductor assembly, upgrades to Weed Substation, and restoration and clean-up. Onsite fugitive dust emissions are related to ground disturbance and vehicle travel (assumed to be two acres/day) that would occur at the various

Proposed Project and Weed Segment locations. Offsite exhaust emissions are those that would be generated by workers that would commute to the various Proposed Project and Weed Segment sites and by diesel semi-trucks hauling materials and debris in the study area. Offsite fugitive dust emissions would result from heavy truck travel on paved roads. Refer to Appendix E for the detailed assumptions that were used to estimate the Proposed Project and Weed Segment construction emissions.

**TABLE 4.3-3  
ESTIMATED PROPOSED PROJECT CONSTRUCTION EMISSIONS (pounds/day)**

<b>Activity and Equipment</b>	<b>ROG</b>	<b>CO</b>	<b>NO<sub>x</sub></b>	<b>SO<sub>2</sub></b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>
<b>Onsite</b>						
Equipment Exhaust	20	64	168	0.1	9	8
Fugitive Dust					102	21
<b>Offsite</b>						
Worker Vehicle and Haul Truck Trips	7	104	53	0.1	2	2
Fugitive Dust					28	5
<b>TOTAL</b>	<b>27</b>	<b>168</b>	<b>221</b>	<b>0.2</b>	<b>142</b>	<b>36</b>
Significance Thresholds (pounds/day)	250	250	250	250	250	250
Significant Impact?	No	No	No	No	No	No

As shown in Table 4.3-3, estimated construction emissions that would be associated with the Proposed Project and Weed Segment would not exceed the significance thresholds recommended by the SCAPCD. However, to ensure that construction emissions associated with the Proposed Project and Weed Segment would not violate any air quality standard, PacifiCorp has committed to implementing dust control measures (PacifiCorp, 2005). To formalize this commitment, implementation of Mitigation Measure AIR-PPWS-1 shall be required.

**Mitigation Measure AIR-PPWS-1:** During construction, PacifiCorp shall ensure that its employees and contractors implement the following measures.

- For all active construction areas, water as needed or apply soil stabilizers to control dust.
- Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.<sup>2</sup>
- Sweep daily (with water sweepers) all paved access roads, parking areas and staging areas at or nearby construction sites if visible soil material is carried onto adjacent public streets.

<sup>2</sup> Freeboard is the distance between the material and the top of the haul truck. This mitigation measure reduces the overtopping and slippage of material, and thus, fugitive dust.

- Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets.
- Apply (non-toxic) soil stabilizers to previously graded inactive (for more than 10 days) construction areas.
- Enclose, cover, water twice daily, or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.)
- Limit traffic speeds on unpaved roads to 15 mph.

**Significance after Mitigation:** Less than significant.

### ***Operations***

Air emissions that would be created by the Proposed Project and Weed Segment, once operational, are those that would be associated with maintenance and inspection of Proposed Project and Weed Segment components. Normal maintenance and inspection would not involve grading, excavation, or the use of any motor-driven construction equipment, but would require the use of a pick-up truck or an all terrain vehicle to access the Proposed Project and Weed Segment transmission lines a minimum of once a year and to access the Weed Substation site once a month similar to what is done now for the existing lines and substation. Emissions that would be associated with maintenance and inspection activities associated with the Proposed Project and Weed Segment would be negligible and would be considerably less than those presented in Table 4.3-3. Therefore, potential operational impacts to air quality would be less than significant (Class III).

- 
- d) Expose sensitive receptors to substantial pollutant concentrations. *Less than significant with mitigation* (Class II).**

**Impact AIR-PPWS-2: Construction activities would generate emissions of criteria pollutants, potentially exposing sensitive receptors to pollutant concentrations. *Less than significant with mitigation* (Class II).**

Several homes are located along the Proposed Project near the Weed Junction Substation and approximately two dozen homes exist along the Weed Segment in the City of Weed. Construction activities would generate emissions of criteria pollutants, including suspended and inhalable particulate matter and equipment exhaust emissions. These emissions could expose sensitive receptors to pollutant concentrations. However, Mitigation Measure AIR-PPWS-1 would reduce the impacts of construction-related dust emissions. Because impacts related to construction emissions would not exceed the significance thresholds recommended by the SCAPCD (see Impact AIR-PPWS-1 discussion, above), and because emissions would tend to be dispersed in space throughout the Proposed Project and Weed Segment areas, impacts to sensitive receptors would also be less than significant.

**Mitigation Measure AIR-PPWS-2: Implement Mitigation Measure AIR-PPWS-1.**

**Significance after Mitigation:** Less than significant.

---

**e) Create objectionable odors affecting a substantial number of people. *Less than significant* (Class III).**

The operation of the Proposed Project and Weed Segment would not create odorous emissions. However, project construction could include sources, such as diesel equipment operation, which could result in the creation of objectionable odors. Since the construction activities would be temporary and spatially dispersed, and generally take place in rural areas, these activities would not affect a substantial number of people. The Proposed Project and Weed Segment would not create objectionable odors affecting a substantial number of people. Impacts would be less than significant (Class III).

---

**f) Result in substantial long-term emissions of greenhouse gases. *Less than significant* (Class III).**

At the present time, there are no rules or regulations in place from the CARB, State Clearinghouse, or other resource agency applicable to the Proposed Project and Weed Segment that define a “significant” source or amount of GHG emissions, and there are no applicable specific GHG emission limits or caps. And, as of the time of this writing, no air districts within California have established emission thresholds for determining the significance of GHGs from development projects.

Also, while the goal of AB 32 is to reduce in-state GHG emissions to 1990 levels by the year 2020, there is no clear metric that would determine if a single project advances toward or away from this goal. Because global warming is a global issue, a pound of GHGs emitted in California would presumably have the same effect, individually and cumulatively, as a pound of GHGs emitted anywhere else in the world. Whether a single project may or may not result in new GHG emissions would need to consider any collateral change in GHG emissions that may occur elsewhere as a result of the project.

Long term GHG emissions that would be associated with the Proposed Project and Weed Segment would be limited to the use of a pick-up truck or an all terrain vehicle to access the Proposed Project and Weed Segment transmission lines a minimum of once a year and to access the Weed Substation site once a month. This activity would not be substantially different than what is taking place now for the existing lines and substation. There would be no emissions of SF<sub>6</sub> from the Proposed Project and Weed Segment, as the new transformer and switchgear proposed for the Weed Substation upgrade would not use SF<sub>6</sub> gas.

With regard to construction activities, the Proposed Project and Weed Segment's GHG emissions in the form of CO<sub>2</sub> have been estimated to be approximately 572 metric tons (see Appendix E for estimation assumptions). Under CEQA, the purpose of an EIR is to identify the significant environmental effects of a project (if any), to identify alternatives to the project, and to indicate the manner in which those significant effects can be mitigated or avoided. (Public Resources Code § 21002.1(a).) "Significant effect" is defined under CEQA as "a substantial or potentially substantial, adverse change in the environment." (Public Resources Code § 21068.). The State of California has not provided guidance as to significance thresholds for assessing the impact of greenhouse gas emissions on climate change and global warming concerns. Nothing in the CEQA guidelines has yet addressed this issue.

Given the global GHG emissions rates and inherent climate variability, the CPUC is not aware of any scientifically credible methodologies for assessing project-specific climate impacts of GHG emissions. Nonetheless, the GHG emissions that would be generated by the construction of the Proposed Project and Weed Segment would be short-term, occurring over a period of approximately eight months. Because the Proposed Project and Weed Segment would not result in any long term considerable amounts of GHG emissions, impacts are determined to be less than significant (Class III).

---

### 4.3.4 Cumulative Impacts

Siskiyou County is in attainment or unclassified status for all of the NAAQS and CAAQS. Therefore, the existing conditions are not significantly degraded. Long term operations of the Proposed Project and Weed Segment would result in negligible emissions, which would not be cumulatively considerable. Construction activities associated with the Proposed Project and Weed Segment, as described in Section 4.3.3, could have a temporary impact on local air quality through short-term increases in criteria pollutant exhaust emissions (e.g., NO<sub>x</sub>, ROG, CO, SO<sub>2</sub>, and PM<sub>10</sub>) and fugitive dust, which could be cumulatively significant when combined with other projects described in Section 3.6, *Cumulative Projects*. However, Mitigation Measure AIR-PPWS-1 would ensure that the Proposed Project and Weed Segment's temporary air quality construction impacts would be less than cumulatively considerable (i.e., because the Proposed Project and Weed Segment would be required to mitigate, and thereby reduce, its contribution to the cumulative impact). Temporary emissions of CO<sub>2</sub> would also be generated during construction activities; however, given the short-term nature of construction activities, these GHG emissions would not be cumulatively considerable. As a result, the Proposed Project and Weed Segment would not have a significant cumulative air quality impact (Class II).

## 4.3.5 Alternatives

### PacifiCorp Option 4 Alternative

- b) **Violate any air quality standard or contribute substantially to an existing or projected air quality violation. *Less than significant with mitigation (Class II).***

#### ***Construction***

**Impact AIR-OPT4-1: Construction activities would generate emissions of criteria pollutants, including suspended and inhalable particulate matter and equipment exhaust emissions. *Less than significant with mitigation (Class II).***

Estimated onsite and offsite maximum day emissions associated with the PacifiCorp Option 4 alternative would be the same as those estimated for the Proposed Project and the Weed Segment (see Table 4.3-3). Refer to Appendix E for the detailed assumptions that were used to estimate the construction emissions. However, the PacifiCorp Option 4 alternative would require approximately 12 additional new poles, require disturbance of approximately 1.5 additional acres of access road work, and would require more vegetation clearing compared to the Proposed Project and Weed Segment. Although the maximum daily emissions estimate associated with the PacifiCorp Option 4 alternative is the same as that for the Proposed Project and Weed Segment, the overall construction period associated with the PacifiCorp Option 4 alternative would likely require an additional month to complete, resulting in greater overall total construction emissions compared to the Proposed Project.

Estimated construction emissions that would be associated with the PacifiCorp Option 4 alternative would not exceed the significance thresholds recommended by the SCAPCD. However, to ensure that construction emissions would not violate any air quality standard, PacifiCorp has committed to implementing dust control measures (PacifiCorp, 2005). To formalize this commitment, implementation of Mitigation Measure AIR-OPT4-1 shall be required.

**Mitigation Measure AIR-OPT4-1:** Implement Mitigation Measure AIR-PPWS-1.

**Significance after Mitigation:** Less than significant.

#### ***Operations***

Air emissions that would be created by the operation of the PacifiCorp Option 4 alternative are the same as those that would be associated with the Proposed Project and Weed Segment components related to maintenance and inspection of the transmission line. Normal maintenance and inspection would not involve grading, excavation, or the use of any motor-driven construction equipment, but would require the use of a pick-up truck or an all terrain vehicle to access the transmission line a minimum of once a year

similar to what is done now for the existing lines and substation. Emissions that would be associated with maintenance and inspection activities associated with the PacifiCorp Option 4 alternative would be negligible and would be considerably less than those presented in Table 4.3-3. Therefore, potential operational impacts to air quality would be less than significant (Class III).

---

- d) **Expose sensitive receptors to substantial pollutant concentrations. *Less than significant with mitigation* (Class II).**

**Impact AIR-OPT4-2: Construction activities would generate emissions of criteria pollutants, potentially exposing sensitive receptors to pollutant concentrations. *Less than significant with mitigation* (Class II).**

Several homes are located along the PacifiCorp Option 4 alternative near the Weed Junction Substation and along State Route 97. Construction activities associated with the PacifiCorp Option 4 alternative would generate emissions of criteria pollutants, including suspended and inhalable particulate matter and equipment exhaust emissions. These emissions could expose sensitive receptors to pollutant concentrations. However, Mitigation Measure AIR-OPT4-2 would reduce the impacts of construction-related dust emissions. Because impacts related to construction emissions would not exceed the significance thresholds recommended by the SCAPCD (see Impact AIR-OPT4-1 discussion, above), and because emissions would tend to be dispersed in space throughout the PacifiCorp Option 4 alternative area, impacts to sensitive receptors would also be less than significant.

**Mitigation Measure AIR-OPT4-2:** Implement Mitigation Measure AIR-PPSW-1.

**Significance after Mitigation:** Less than significant.

---

- e) **Create objectionable odors affecting a substantial number of people. *Less than significant* (Class III).**

Operations of the PacifiCorp Option 4 alternative would not create odorous emissions. However, project construction could include sources such as diesel equipment operation, which could result in the creation of objectionable odors. Since construction activities would be temporary and spatially dispersed, and generally take place in rural areas, these activities would not affect a substantial number of people. The PacifiCorp Option 4 alternative would not create objectionable odors affecting a substantial number of people. Impacts would be less than significant (Class III).

---

f) **Result in substantial long-term emissions of greenhouse gases. *Less than significant (Class III).***

The generation of long term GHG emissions that would be associated with the PacifiCorp Option 4 alternative would be limited to the use of a pick-up truck or an all terrain vehicle to access the transmission line a minimum of once a year, similar to what is done now for the existing lines and substation. The total GHG emissions in the form of CO<sub>2</sub> that would be generated during PacifiCorp Option 4 alternative construction activities has been estimated to be approximately 661 metric tons (see Appendix E for estimation assumptions). The State of California has not provided guidance as to significance thresholds for assessing the impact of greenhouse gas emissions on climate change and global warming concerns. Nothing in the CEQA guidelines has yet addressed this issue.

Given the global GHG emissions rates and inherent climate variability, the CPUC is not aware of any scientifically credible methodologies for assessing project-specific climate impacts of GHG emissions. Nonetheless, the GHG emissions that would be generated by the construction of the PacifiCorp Option 4 alternative would be short-term, occurring over a period of up to nine months. Because the PacifiCorp Option 4 alternative would not result in any long term considerable amounts of GHG emissions, impacts are determined to be less than significant (Class III).

---

## **Mackintosh/ALJ Variation A Alternative**

b) **Violate any air quality standard or contribute substantially to an existing or projected air quality violation: *Less than significant with mitigation (Class II).***

### ***Construction***

**Impact AIR-VAR/A-1: Construction activities would generate emissions of criteria pollutants, including suspended and inhalable particulate matter and equipment exhaust emissions. *Less than significant with mitigation (Class II).***

Estimated onsite and offsite maximum day emissions associated with the Mackintosh/ALJ Variation A alternative would be the same as those estimated for the Proposed Project and the Weed Segment (see Table 4.3-3). Refer to Appendix E for the detailed assumptions that were used to estimate the construction emissions. However, the Mackintosh/ALJ Variation A alternative would require approximately 12 additional new poles, require disturbance of approximately 1.5 additional acres of roadway work, additional substation work associated with the temporary transformer, and would require slightly more vegetation clearing compared to the Proposed Project and Weed Segment. Although the maximum daily emissions estimate associated with the Mackintosh/ALJ Variation A alternative is the same as that for the Proposed Project and Weed Segment, the overall construction period associated with the Mackintosh/ALJ Variation A

alternative would likely require an additional month to complete, resulting in greater overall total construction emissions compared to the Proposed Project.

Estimated construction emissions that would be associated with the Mackintosh/ALJ Variation A alternative would not exceed the significance thresholds recommended by the SCAPCD. However, to ensure that construction emissions would not violate any air quality standard, PacifiCorp has committed to implementing dust control measures (PacifiCorp, 2005). To formalize this commitment, implementation of Mitigation Measure AIR-VAR/A-1 shall be required.

**Mitigation Measure AIR-VAR/A-1:** Implement Mitigation Measure AIR-PPWS-1.

**Significance after Mitigation:** Less than significant.

### ***Operations***

Air emissions that would be created by operations of the Mackintosh/ALJ Variation A alternative are the same as those that would be associated with the Proposed Project and Weed Segment components related to maintenance and inspection of the transmission line. Normal maintenance and inspection would not involve grading, excavation, or the use of any motor-driven construction equipment, but would require the use of a pick-up truck or an all terrain vehicle to access the transmission line a minimum of once a year similar to what is done now for the existing lines and substation. Emissions that would be associated with maintenance and inspection activities associated with the Mackintosh/ALJ Variation A alternative would be negligible and would be considerably less than those presented in Table 4.3-3. Therefore, potential operational impacts to air quality would be less than significant (Class III).

- 
- d) Expose sensitive receptors to substantial pollutant concentrations. *Less than significant with mitigation (Class II).***

**Impact AIR-VAR/A-2: Construction activities would generate emissions of criteria pollutants, potentially exposing sensitive receptors to pollutant concentrations. *Less than significant with mitigation (Class II).***

Several homes are located along the Mackintosh/ALJ Variation A alternative near the Weed Junction Substation and along State Route 97. Construction activities associated with the Mackintosh/ALJ Variation A alternative would generate emissions of criteria pollutants, including suspended and inhalable particulate matter and equipment exhaust emissions. These emissions could expose sensitive receptors to pollutant concentrations. However, Mitigation Measure AIR-VAR/A-2 would reduce the impacts of construction-related dust emissions. Because impacts related to construction emissions would not exceed the significance thresholds recommended by the SCAPCD (see Impact AIR-EIR-2

discussion, above), and because emissions would tend to be dispersed in space throughout the Mackintosh/ALJ Variation A alternative area, impacts to sensitive receptors would also be less than significant.

**Mitigation Measure AIR-VAR/A-2:** Implement Mitigation Measure AIR-PPSW-1.

**Significance after Mitigation:** Less than significant.

---

e) **Create objectionable odors affecting a substantial number of people. *Less than significant* (Class III).**

Operations of the Mackintosh/ALJ Variation A alternative would not create odorous emissions. However, project construction could include sources, such as diesel equipment operation, which could result in the creation of objectionable odors. Since the construction activities would be temporary and spatially dispersed, and generally take place in rural areas, these activities would not affect a substantial number of people. The Mackintosh/ALJ Variation A alternative would not create objectionable odors affecting a substantial number of people. Impacts would be less than significant (Class III).

---

f) **Result in substantial long-term emissions of greenhouse gases. *Less than significant* (Class III).**

The generation of long term GHG emissions that would be associated with the Mackintosh/ALJ Variation A alternative would be limited to the use of a pick-up truck or an all terrain vehicle to access the transmission line a minimum of once a year, similar to what is done now for the existing lines and substation. The total GHG emissions in the form of CO<sub>2</sub> that would be generated during Mackintosh/ALJ Variation A alternative construction activities has been estimated to be approximately 667 metric tons (see Appendix E for estimation assumptions). The State of California has not provided guidance as to significance thresholds for assessing the impact of greenhouse gas emissions on climate change and global warming concerns. Nothing in the CEQA guidelines has yet addressed this issue.

Given the global GHG emissions rates and inherent climate variability, the CPUC is not aware of any scientifically credible methodologies for assessing project-specific climate impacts of GHG emissions. Nonetheless, the GHG emissions that would be generated by the construction of the Mackintosh/ALJ Variation A alternative would be short-term, occurring over a period of up to nine months. Because the Mackintosh/ALJ Variation A alternative would not result in any long term considerable amounts of GHG emissions, impacts are determined to be less than significant (Class III).

## Mackintosh/ALJ Variation B Alternative

- b) **Violate any air quality standard or contribute substantially to an existing or projected air quality violation. *Less than significant with mitigation (Class II).***

### **Construction**

**Impact AIR-VAR/B-1: Construction activities would generate emissions of criteria pollutants, including suspended and inhalable particulate matter and equipment exhaust emissions. *Less than significant with mitigation (Class II).***

Estimated onsite and offsite maximum day emissions associated with the Mackintosh/ALJ Variation B alternative would be the same as those estimated for the Proposed Project and the Weed Segment (see Table 4.3-3). Refer to Appendix E for the detailed assumptions that were used to estimate the construction emissions. However, the Mackintosh/ALJ Variation B alternative would require approximately 12 additional new poles, 33 temporary poles, require disturbance of approximately 1.5 additional acres of roadway work, and would require more vegetation clearing compared to the Proposed Project and Weed Segment. Although the maximum daily emissions estimate associated with the Mackintosh/ALJ Variation B alternative is the same as that for the Proposed Project and Weed Segment, the overall construction period associated with the Mackintosh/ALJ Variation B alternative would likely require an additional month to complete, resulting in greater overall total construction emissions compared to the Proposed Project.

Estimated construction emissions that would be associated with the Mackintosh/ALJ Variation B alternative would not exceed the significance thresholds recommended by the SCAPCD. However, to ensure that construction emissions would not violate any air quality standard, PacifiCorp has committed to implementing dust control measures (PacifiCorp, 2005). To formalize this commitment, implementation of Mitigation Measure AIR-VAR/B-1 shall be required.

**Mitigation Measure AIR-VAR/B-1: Implement Mitigation Measure AIR-PPWS-1.**

**Significance after Mitigation:** Less than significant.

### **Operations**

Air emissions that would be created by the Mackintosh/ALJ Variation B alternative, once operational, are the same as those that would be associated with the Proposed Project and Weed Segment components related to maintenance and inspection of the transmission line. Normal maintenance and inspection would not involve grading, excavation, or the use of any motor-driven construction equipment, but would require the use of a pick-up truck or an all terrain vehicle to access the transmission line a minimum of once a year similar to what is done now for the existing lines and substation. Emissions that would be

associated with maintenance and inspection activities associated with the Mackintosh/ALJ Variation B alternative would be negligible and would be considerably less than those presented in Table 4.3-3. Therefore, potential operational impacts to air quality would be less than significant (Class III).

---

**d) Expose sensitive receptors to substantial pollutant concentrations. *Less than significant with mitigation* (Class II).**

**Impact AIR-VAR/B-2: Construction activities would generate emissions of criteria pollutants, potentially exposing sensitive receptors to pollutant concentrations. *Less than significant with mitigation* (Class II).**

Several homes are located along the Mackintosh/ALJ Variation B alternative near the Weed Junction Substation and along State Route 97. Construction activities associated with the Mackintosh/ALJ Variation B alternative would generate emissions of criteria pollutants, including suspended and inhalable particulate matter and equipment exhaust emissions. These emissions could expose sensitive receptors to pollutant concentrations. However, Mitigation Measure AIR-VAR/B-2 would reduce the impacts of construction-related dust emissions. Because impacts related to construction emissions would not exceed the significance thresholds recommended by the SCAPCD (see Impact AIR-VAR/B-1 discussion, above), and because emissions would tend to be dispersed in space throughout the Mackintosh/ALJ Variation B alternative area, impacts to sensitive receptors would also be less than significant.

**Mitigation Measure AIR-VAR/B-2: Implement Mitigation Measure AIR-PPSW-1.**

**Significance after Mitigation:** Less than significant.

---

**e) Create objectionable odors affecting a substantial number of people. *Less than significant* (Class III).**

Operations of the Mackintosh/ALJ Variation B alternative would not create odorous emissions. However, project construction could include sources, such as diesel equipment operation, which could result in the creation of objectionable odors. Since the construction activities would be temporary and spatially dispersed, and generally take place in rural areas, these activities would not affect a substantial number of people. The Mackintosh/ALJ Variation B alternative would not create objectionable odors affecting a substantial number of people. Impacts would be less than significant (Class III).

---

f) **Result in substantial long-term emissions of greenhouse gases: *Less than significant* (Class III).**

The generation of long term GHG emissions that would be associated with the Mackintosh/ALJ Variation B alternative would be limited to the use of a pick-up truck or an all terrain vehicle to access the transmission line a minimum of once a year, similar to what is done now for the existing lines and substation. The total GHG emissions in the form of CO<sub>2</sub> that would be generated during Mackintosh/ALJ Variation B alternative construction activities has been estimated to be approximately 888 metric tons (see Appendix E for estimation assumptions). The State of California has not provided guidance as to significance thresholds for assessing the impact of greenhouse gas emissions on climate change and global warming concerns. Nothing in the CEQA guidelines has yet addressed this issue.

Given the global GHG emissions rates and inherent climate variability, the CPUC is not aware of any scientifically credible methodologies for assessing project-specific climate impacts of GHG emissions. Nonetheless, the GHG emissions that would be generated by the construction of the Mackintosh/ALJ Variation B alternative would be short-term, occurring over a period of up to nine months. Because the Mackintosh/ALJ Variation B alternative would not result in any long term considerable amounts of GHG emissions, impacts are determined to be less than significant (Class III).

---

## No Project

For the purposes of this analysis, the No Project Alternative includes the following two assumptions: 1) the project would not be implemented and the existing conditions in the study area would not be changed; and 2) a new transmission line and/or additional power generation would be constructed in or near the study area to supply power to the Weed area. Given the highly speculative nature of the No Project Alternative assumptions, this analysis is qualitative in nature.

b) **Violate any air quality standard or contribute substantially to an existing or projected air quality violation.**

### ***Construction***

Construction of a new transmission line and/or a power plant under the No Project scenario would likely result in daily maximum emissions similar to those associated with the Proposed Project and the Weed Segment (see Table 4.3-4); however, the overall construction period would likely be longer than that of the Proposed Project and Weed Segment, resulting in more total construction emissions. Construction equipment such as cranes, graders, backhoes, forklifts, semi-tractor trucks, etc. would also be used to construct one of these projects associated with the No Project scenario. Depending on the

size of the No Project scenario project, daily emissions could exceed the SCAPCD's thresholds of 250 pounds per day for criteria pollutants.

### ***Operations***

Air emissions that would be created by a new transmission line under the No Project scenario would be minor, and would be associated with maintenance and inspection activities similar to those that would be associated with the Proposed Project and Weed Segment components. Operations of a fossil fueled power plant under the No Project scenario would generate long-term emissions of criteria pollutants. Depending on the capacity of the power plant, long-term air emissions could be potentially significant.

---

**d) Expose sensitive receptors to substantial pollutant concentrations.**

Construction emissions that would be associated with the No Project Alternative scenario projects would generate emissions of criteria pollutants, including suspended and inhalable particulate matter and equipment exhaust emissions. These emissions could expose sensitive receptors to short-term pollutant concentrations. Operations of a fossil fuel power plant would generate long-term emissions of air pollutants. However, given the speculative nature of the No Project scenario, it is unknown if sensitive receptors would be significantly impacted by implementation of the scenario. Depending on the location of sensitive receptors relative to the No Project scenario, impacts may be significant.

---

**e) Create objectionable odors affecting a substantial number of people.**

The operations of a new transmission line and/or a power plant under the No Project scenario would not create odorous emissions, such as methane or hydrogen sulfide. However, construction could include sources, such as diesel equipment operation, which could result in the creation of objectionable odors. Since the construction activities would be temporary, spatially dispersed (in the case of a transmission line), and would generally take place in rural areas, these activities would not be likely to affect a substantial number of people.

---

**f) Result in substantial long-term emissions of greenhouse gases.**

Construction of a new transmission line and/or a power plant under the No Project scenario would result in GHG emissions in the form of CO<sub>2</sub>. Operations of a new power plant would also result in long-term emissions of CO<sub>2</sub>, potentially resulting in significant impacts.

## References – Air Quality

- Bay Area Air Quality Management District (BAAQMD), 1999. *BAAQMD CEQA Guidelines – Assessing the Air Quality Impacts of Projects and Plans*, December 1999.
- CARB (California Air Resources Board). 2007a. *Aerometric Data Analysis and Management* website (<http://www.arb.ca.gov/adam/welcome.html>) accessed May 11, 2007.
- CARB. 2007b. *Ambient Air Quality Standards*. Obtained online (<http://www.arb.ca.gov/aqs/aaqs2.pdf>) May 11, 2007.
- California Air Resources Board, 2006. Climate Change website (<http://www.arb.ca.gov/cc/120106workshop/intropres12106.pdf>) accessed December 1, 2006.
- California Energy Commission (CEC), 2006. *Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004*. December 2006.
- Intergovernmental Panel on Climate Change (IPCC), 2001. Climate Change 2001: Working Group I: The Scientific Basis, Section F.5, Table 4; <http://www.grida.no/climate/ipcc%5Ftar/wg1/032.htm#f5>, accessed February 26, 2007.
- SCAPCD (Siskiyou County Air Pollution Control District). 2007. Personal communication with Elden Beck of SCAPCD on May 31, 2007.
- SCAQMD (South Coast Air Quality Management District). 1993. *CEQA Air Quality Handbook*.
- SCAQMD. 2006. Final – Methodology to Calculate Particulate Matter (PM) 2.5 and PM 2.5 Significance Thresholds. October 2006.
- USEPA (U.S. Environmental Protection Agency). 2006. AP-42, Miscellaneous Sources, Section 13.2.1, Paved Roads. Updated November 2006.
- WRCC (Western Regional Climate Center). 2007a. *Climate of California Narrative*. Obtained online (<http://www.wrcc.dri.edu/narratives/CALIFORNIA>) on May 11, 2007.
- WRCC. 2007b. *Period of Record Monthly Climate Summaries for Weed, California*. Obtained online (<http://www.wrcc.dri.edu/summary/Climsmnca.html>) on May 11, 2007.
- PacifiCorp, 2005. Proponent's Environmental Assessment for the Yreka / Weed Transmission Upgrade Project. November, 2005.