

Air Quality

Chapter 3.3

SUMMARY OF FINDINGS

The proposed Project will result in less than significant impacts to Air Quality. A detailed review of potential impacts is provided in the analysis below.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Air Quality. As required in Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in Section 15126.2 a), “[a]n EIR shall identify and focus on the significant environmental effects of the proposed Project. In assessing the impact of a proposed Project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the Project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the Project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision will have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas.”¹

The environmental setting provides a description of the Air Quality in the County. The regulatory setting provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County 2030 General Plan, the Tulare County General Plan Background Report and/or the Tulare County

¹ 2012 CEQA Guidelines, Section 15126.2 (a)

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General Plan Revised DEIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

Thresholds of Significance

The significance criteria for this analysis were developed from criteria presented in Appendix G, “Environmental Checklist Form”, of the CEQA Guidelines. The proposed project would result in a significant impact if it would:

- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a nonattainment area for an applicable federal or State ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors);
- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Expose sensitive receptors to substantial pollutant concentrations; or
- Create objectionable odors affecting a substantial number of people.

“To assist in the evaluation of the air quality impacts, the Air District regulated contaminants are discussed briefly below:

Carbon Monoxide (CO)

Sources: Internal combustion engines, principally in vehicles, produce carbon monoxide due to incomplete fuel combustion. Various industrial processes also produce carbon monoxide emissions through incomplete combustion. Gasoline-powered motor vehicles are typically the major source of this contaminant.

Effects: Carbon monoxide does not irritate the respiratory tract, but passes through the lungs directly into the blood stream and by interfering with the transfer of fresh oxygen to the blood, deprives sensitive tissues of oxygen. CO is not known to have adverse effects on vegetation, visibility or materials.

Level of Significance: The Air District has not established a CO emissions significance threshold for development projects covered by the Air District’s Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI).

Nitrogen Dioxide (NO₂)/Nitrogen Oxides (NO_x)

Sources: High combustion temperatures in both external combustion sources and internal combustion sources cause nitrogen and oxygen to combine and form nitric oxide. Further reaction produces additional oxides of nitrogen. Combustion in motor vehicle engines, power plants, refineries and other industrial operations are the primary sources in the region. Railroads and aircraft are other potentially significant sources of combustion air contaminants.

Effects: Oxides of nitrogen are direct participants in photochemical smog reactions. The emitted compound, nitric oxide, combines with oxygen in the atmosphere in the presence of hydrocarbons and sunlight to form nitrogen dioxide and ozone. Nitrogen dioxide, the most significant of these pollutants, can color the atmosphere at concentrations as low as 0.5 ppmv on days of 10-mile visibility. NO_x is an important air pollutant in the region because it is a primary receptor of ultraviolet light, which initiates the reactions producing photochemical smog. It also reacts in the air to form nitrate particulates.

Level of Significance: The Air District has established a NO_x emissions significance threshold for development projects covered by the GAMAQI of 10 tons per year.

Sulfur Dioxide (SO₂)/Sulfur Oxides (SO_x)

Sources: SO₂ is the primary combustion product of sulfur, or sulfur containing fuels. Fuel combustion is the major source of this pollutant, while chemical plants, sulfur recovery plants, and metal processing facilities are minor contributors. Gaseous fuels (natural gas, propane, etc.) typically have lower percentages of sulfur containing compounds than liquid fuels such as diesel or crude oil. SO₂ levels are generally higher in the winter months. Decreasing levels of SO₂ in the atmosphere reflect the use of natural gas in power plants and boilers.

Effects: At high concentrations, sulfur dioxide irritates the upper respiratory tract. At lower concentrations, when respirated in combination with particulates, SO₂ can result in greater harm by injuring lung tissues. Sulfur oxides (SO_x), in combination with moisture and oxygen, results in the formation of sulfuric acid, which can yellow the leaves of plants, dissolve marble, and oxidize iron and steel. Sulfur oxides can also react to produce sulfates that reduce visibility and sunlight.

Level of Significance: The Air District has not established a SO_x emissions significance threshold for development projects covered by the GAMAQI.

Particulates

Sources: Particulate matter consists of particles in the atmosphere resulting from many kinds of dust and fume-producing industrial and agricultural operations, from combustion, and from atmospheric photochemical reactions. Natural activities also increase the level of particulates in the atmosphere; wind-raised dust and ocean spray are two sources of naturally occurring particulates.

Effects: In the respiratory tract, very small particles of certain substances may produce injury by themselves, or may contain absorbed gases that are injurious. Particulates of aerosol size suspended in the air can both scatter and absorb sunlight, producing haze and reducing visibility. They can also cause a wide range of damage to materials.

Level of Significance: Although a threshold was not established in GAMAQI by the AIR DISTRICT, 15 tons per year threshold for PM₁₀ was utilized in this analysis. This threshold was

established by Air District as the limit at which an impact to the SJVAB may occur.

Hydrocarbons (HC) and other Reactive Organic Gases (ROG)

Sources: Motor vehicles are the major source of reactive hydrocarbons in the basin. Other sources include evaporation of organic solvents and petroleum production and refining operations.

Effects: Certain hydrocarbons can damage plants by inhibiting growth and by causing flowers and leaves to fall. Levels of hydrocarbons currently measured in urban areas are not known to cause adverse effects in humans. However, certain members of this contaminant group are important components in the reactions which produce photochemical oxidants.

Level of Significance: The Air District has established a ROG emissions significance threshold for development projects covered by the GAMAQI of 10 tons per year.”²

ENVIRONMENTAL SETTING

“Tulare County falls within the southern portion of the San Joaquin Valley Air Basin (SJVAB), which is bordered on the east by the Sierra Nevada range, on the west by the Coast Ranges, and on the south by the Tehachapi Mountains. These features restrict air movement through and out of the SJVAB.

The topography of Tulare County significantly varies in elevation from its eastern to western borders, which results in large climatic variations that ultimately affect air quality. The western portion of the County is within the low-lying areas of the SJVAB. This portion of the County is much dryer in comparison to the eastern portion that is located on the slopes of the Sierra Nevada Mountains. The higher elevation contributes to both increased precipitation and a cooler climate.

Wind direction and velocity in the eastern section varies significantly from the western portion of the County. The western side receives northwesterly winds. The eastern side of the County exhibits more variable wind patterns, but the wind direction is typically up-slope during the day and down-slope in the evening. Generally, the wind direction in the eastern portion of the County is westerly; however terrain differences can create moderate directional changes.

The SJVAB is highly susceptible to pollutant accumulation over time due to the transport of pollutants into the SJVAB from upwind sources. Stationary emission sources in the County include the use of cleaning and surface coatings and industrial processes, road dust, local burning, construction/demolition activities, and fuel combustion. Mobile emissions are primarily generated from the operation of vehicles. According to air quality monitoring data, the SJVAB has been in violation for exceeding ozone and PM10 emission standards for many years.”³

² Air Quality Impact Analysis, pages 38 to 39

³ Tulare County 2030 General Plan RDEIR, page 3.3-9

Existing Conditions Overview

“Unlike other air basins in California, the pollution in the San Joaquin Valley Air Basin (SJVAB) is not produced by large urban areas. Instead, emissions are generated by many moderate sized communities and rural uses. Emission levels in the Central Valley have been decreasing overall since 1990. This can be primarily attributed to motor vehicle emission controls that reduce the amount of vehicle emissions and controls on industrial/stationary sources. In spite of these improvements, the San Joaquin Valley is still identified as having some of the worst air quality in the nation.

The main source of CO and NO_x emissions is motor vehicles. The major contributors to ROG emissions are mobile sources and agriculture. ROG emissions from motor vehicles have been decreasing since 1985 due to stricter standards, even though the vehicle miles have been increasing. Stationary source regulations implemented by the AIR DISTRICT have also substantially reduced ROG emissions. ROG from natural sources (mainly from trees and plants) is the largest source of this pollutant in Tulare County. Atmospheric modeling accomplished for recent ozone planning efforts has found that controlling NO_x is more effective at reducing ozone concentrations than controlling ROG. However, controls meeting RACT and BACT are still required for AIR DISTRICT plans.

The SJVAB has been ranked the 2nd worst in the United States for O₃ levels, even though data shows that overall O₃ has decreased between 1982 and 2001.

Direct PM₁₀ emissions have decreased between the years 1975 and 1995 and have remained relatively constant since 2000. The main sources of PM₁₀ in the SJVAB are from vehicles traveling on unpaved roads and agricultural activities. Regional Transportation Planning Agencies must implement BACM for sources of fine particulate matter (PM₁₀) to comply with federal attainment planning requirements for PM₁₀.

Attainment status is based on air quality measurements throughout the entire SJVAB. A violation at a single air monitoring station anywhere in the air basin leads to a non-attainment designation for the entire air basin. In summary, the attainment status of Tulare County is as follows:

- **O₃. 1-hour Ozone.** In 2005 EPA revoked the 1-hour ambient air quality standard so there is no federal designation. Although the standard was revoked, the AIR DISTRICT was required to continue to implement many of the 1-hour planning requirements. The SJVAB is currently classified as non-attainment/severe for the State standard. The California Air Resources Board submitted the 2004 Extreme Ozone Attainment Demonstration Plan to the EPA on November 15, 2004. On August 21, 2008, the District adopted Clarifications for the 2004 Extreme Ozone Attainment Demonstration Plan for 1-hour Ozone. On June 30, 2009, EPA proposed approval and partial disapproval of San Joaquin Valley's 2004 Extreme Ozone Attainment Plan for 1-hour ozone

8-hour Ozone. Attainment status is designated non-attainment for the State. On April 30, 2007 the Governing Board of the San Joaquin Valley Air Pollution Control District voted to request the EPA to reclassify the San Joaquin Valley Air Basin as nonattainment/extreme for the federal 8-hour ozone standard. The California Air Resources Board, on June 14, 2007, approved this request and forwarded it to the EPA for action on November 16, 2007. The reclassification would become effective upon EPA final rule making after a notice and comment process and is not yet in effect.

- **PM10.** Federal attainment status for the County is Attainment as of September 28, 2008. The SJVAB and the County are designated nonattainment for the State.
- **PM2.5.** The County is classified as non-attainment for both State and federal standards.
- **Carbon Monoxide: CO.** Tulare County is in attainment/unclassified for both State and federal standards.
- **Nitrogen Dioxide: NO₂.** Tulare County is attainment/unclassified at the federal level and classified attainment at the State level.
- **Sulfur Dioxide: SO₂.** Tulare County is in attainment/unclassified at the federal level, and classified attainment at the State level.
- **Sulfates (no federal standard).** Tulare County is classified attainment at the State level.
- **Lead (no federal designation).** Tulare County is classified attainment at the State level.
- **Hydrogen Sulfide: H₂S (no federal standard).** Unclassified by the State.
- **Visibility Reducing Particles (no federal standard).** Unclassified by the State.
- **Vinyl Chloride (no federal standard).** Tulare County is classified attainment at the State level.⁴

Air Quality Monitoring and Existing Emission Levels

“Geographic areas and air basins are classified for each pollutant as either attainment or non-attainment. In general, “non-attainment” means that the applicable standard has been exceeded anywhere within the air basin... Measured ambient air pollutant concentrations determine the attainment status within an area. There are several ambient air monitoring stations in Tulare County, three of which are located in mountainous areas at Sequoia National Park: Lower Kaweah (measures ozone); Sequoia and Kings Canyon National Park ([SEKI], measures ozone); and Lookout Point at Sequoia National Park (measures ozone). An air monitoring station is also located in a low-lying area of the County in Visalia (North Church Street - measures ozone, PM10, PM2.5, and CO). The air monitoring station at SEKI typically records the highest levels of ozone in Tulare County. According to the National Parks Conservation Association, SEKI ranked number 1 in ground-level ozone production out of all the National Parks in 2004. This ground-level ozone is responsible for hazy conditions that SEKI often experiences. As a result, SEKI does conduct visibility monitoring. **Table 3.3-2** shows ambient air quality data for maximum concentrations of the non-attainment pollutants at each of the air monitoring stations located in Tulare County.

⁴ Ibid. Page 3.3-9

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SJVAB Attainment Status

The federal non-attainment designation is subdivided into five categories (listed in order of increasing severity): marginal, moderate, serious, severe, and extreme. The degree of an area's non-attainment status reflects the extent of the pollution and the expected time period required in order to achieve attainment.

Designated non-attainment areas are generally subject to more stringent review by CARB and EPA. In the endeavor to improve air quality to achieve the standards, projects are subject to more stringent pollution control strategies and requirements for mitigation measures (such as mobile source reduction measures). If the National Ambient Air Quality Standards (NAAQS) are not achieved within the specified timeframe, federal highway funding penalties (and a federally administered implementation plan incorporating potentially harsh measures to achieve the NAAQS) will result. In summary, the attainment status of SJVAB is presented in **Table 3.3-1**.

**Table 3.3-1
SJVAB Attainment Status**

Pollutant	Designation Classification	
	Federal Standards	State Standards
Ozone – one hour	No Federal Standard ¹	Nonattainment/Severe
Ozone – eight hour	Nonattainment/Serious ²	Nonattainment ²
PM10	Attainment ³	Nonattainment
PM2.5	Nonattainment ⁴	Nonattainment
CO	Attainment/Unclassified	Attainment/Unclassified
Nitrogen Dioxide	Attainment/Unclassified	Attainment
Sulfur Dioxide	Attainment/Unclassified	Attainment
Lead	No Designation/Classification	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Vinyl Chloride	No Federal Standard	Attainment
Visibility Reducing Particles	No Federal Standard	Unclassified

1 Effective June 15, 2005, the U.S. Environmental Protection Agency (EPA) revoked the federal 1-hour ozone standard, including associated designations and classifications. However, EPA had previously classified the SJVAB as extreme nonattainment for this standard. Many applicable requirements for extreme 1-hour ozone nonattainment areas continue to apply to the SJVAB.

2 On April 30, 2007 the Governing Board of the San Joaquin Valley Air Pollution Control District voted to request EPA to reclassify the San Joaquin Valley Air Basin as extreme nonattainment for the federal 8-hour ozone standards. The California Air Resources Board, on June 14, 2007, approved this request. This request must be forwarded to EPA by the California Air Resources Board and would become effective upon EPA final rulemaking after a notice and comment process; it is not yet in effect.

3 On September 25, 2008, EPA redesignated the San Joaquin Valley to attainment for the PM10 National Ambient Air Quality Standard (NAAQS) and approved the PM10 Maintenance Plan.

4 The Valley is designated nonattainment for the 1997 federal PM2.5 standards. EPA released final designations for the 2006 PM2.5 standards in December 2008 (effective in 2009), designating the Valley as nonattainment for the 2006 PM2.5 standards.

SOURCE: AIR DISTRICT, 2008, *Ambient Air Quality Standards and Valley Attainment Status*, available at <http://www.valleyair.org/aqinfo/attainment.htm>; accessed June 5, 2009.

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Existing Air Quality

“For the purposes of background data and this air quality assessment, this analysis relied on data collected in the last three years for the CARB monitoring stations that are located in the closest proximity to the project site. **Tables 3.3-2 through 3.3-8** provide the background concentrations for ozone, particulate matter of 10 microns (PM₁₀), particulate matter of less than 2.5 microns (PM_{2.5}), carbon monoxide (CO), nitrogen dioxide (NO_x), sulfur dioxide (SO₂), and lead (Pb) as of September 2012. Since each monitoring site does not monitor all criteria pollutants information is provided from three separate monitoring sites, Fresno – 1st Street, Visalia – N Church Street and Porterville – 1839 Newcomb St. monitoring stations for 2009 through 2011. No data is available for Hydrogen Sulfide, Vinyl Chloride or other toxic air contaminants in Tulare County or any nearby counties.⁵”

**Table 3.3-2
Background Ambient Air Quality Data – Ozone⁶**

CARB Air Monitoring Station	Number of Days Exceeding 1-Hour CAAQS (0.09 ppm)			Maximum 1-Hour Concentration (ppm)		
	2009	2010	2011	2009	2010	2011
Porterville – 1839 Newcomb St.	NR	15	15	NR	0.118	0.104
Visalia – N. Church St.	23	15	9	0.120	0.122	0.119

NR = Not Reported

Source: Air Quality Impact Analysis

**Table 3.3-3
Background Ambient Air Quality Data – Ozone**

CARB Air Monitoring Station	Number of Days Exceeding 8-Hour NAAQS (0.075 ppm)			Number of Days Exceeding 8-Hour CAAQS (0.07 ppm)			Maximum 8-Hour Concentration (ppm)		
	2009	2010	2011	2009	2010	2011	2009	2010	2011
Porterville – 1839 Newcomb St.	NR	43	47	NR	75	82	NR	0.104	0.096
Visalia – N. Church St.	48	34	17	68	57	33	0.093	0.104	0.084

NR = Not Reported

Source: Air Quality Impact Analysis

**Table 3.3-4
Background Ambient Air Quality Data – PM₁₀**

CARB Air Monitoring Station	Days Exceeding 24-hour NAAQS (150 µg/m ³)			Annual Arithmetic Mean NAAQS (µg/m ³)			Days Exceeding 24-hour CAAQS (50 µg/m ³)			Maximum Concentration (µg/m ³)		
	2009	2010	2011	2009	2010	2011	2009	2010	2011	2009	2010	2011
Visalia – N. Church St.	0	0	0	41.8	33.8	33.4	20	10	11	93.2	90.8	78.1

Source: Air Quality Impact Analysis

⁵ Air Quality Impact Analysis, page 8

⁶ California Air Resources Board Website Data as of July 2012

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Table 3.3-5
Background Ambient Air Quality Data – PM_{2.5}⁷

CARB Air Monitoring Station	Days Exceeding 24-hour NAAQS (35 µg/m ³)			Annual Arithmetic Mean NAAQS (µg/m ³)			Maximum 24-Hour Concentration (µg/m ³)		
	2009	2010	2011	2009	2010	2011	2009	2010	2011
Visalia – N. Church St.	8	3	9	16.0	13.5	16.0	74.5	61.6	73.2

Source: Air Quality Impact Analysis

Table 3.3-6
Background Ambient Air Quality Data – CO⁸

CARB Air Monitoring Station	Number of Days Exceeding 8-Hour NAAQS (9.0 ppm)			Number of Days Exceeding 8-Hour CAAQS (9.0 ppm)			Maximum 8-Hour Concentration NAAQS (9.0 ppm) CAAQS (9.0 ppm)		
	2009	2010	2011	2009	2010	2011	2009	2010	2011
Fresno – 1 st St.	0	0	0	0	0	0	2.07	2.03	2.29

Source: Air Quality Impact Analysis

Table 3.3-7
Background Ambient Air Quality Data – NO_x⁹

CARB Air Monitoring Station	Annual Average (ppm)			Number of Days Exceeding CAAQS (0.03 ppm)			Maximum 1-Hour Concentration CAAQS (0.18 ppm)		
	2009	2010	2011	2009	2010	2011	2009	2010	2011
Visalia – N. Church St.	0.015	0.013	0.012	0	0	0	0.068	0.077	0.058

Source: Air Quality Impact Analysis

Table 3.3-8
Background Ambient Air Quality Data – SO_x¹⁰

CARB Air Monitoring Station	Annual Average NAAQS (0.03 ppm)			Maximum 24-Hour Concentration NAAQS (0.14 ppm) CAAQS (0.04 ppm)		
	2009	2010	2011	2009	2010	2011
Fresno – 1 st St.	0.001	0.000	0.000	0.005	0.004	0.004

Source: Air Quality Impact Analysis

“The following is a discussion of the governmentally regulated air pollutants and their recent documented levels in the vicinity of the project area that are expected to be emitted from the construction and operation of the proposed project:

Ozone (O₃)

The most severe air quality problem in San Joaquin Valley is high concentrations of O₃. High levels of O₃ cause eye irritation and can impair respiratory functions. High levels of O₃ can also affect plants and materials. Particularly vulnerable to O₃ damage are grapes, lettuce, spinach and

⁷ California Air Resources Board Website Data as of July 2012

⁸ Ibid

⁹ Ibid

¹⁰ Data not available after 2001 as of July 2012.

many types of garden flowers and shrubs. O₃ is not emitted directly into the atmosphere but is a secondary pollutant produced through photochemical reactions involving hydrocarbons (HC) and nitrogen oxides (NO_x). Significant O₃ generation requires about one to three hours in a stable atmosphere with strong sunlight. For this reason, the months of April through October comprise the "ozone season." O₃ is a regional pollutant because O₃ precursors are transported and diffused by wind concurrently with the reaction process. The data contained in **Tables 3.3-1** and **3.3-2** shows that for the 2009 through 2011 period, the project area exceeded the State one-hour average ambient O₃ standard, and the Federal and State eight-hour average ambient O₃ standards.

Suspended Particulate Matter (PM₁₀ and PM_{2.5})

Both state and Federal particulates standards now apply to particulates under 10 microns (PM₁₀) rather than to total suspended particulate (TSP), which includes particulates up to 30 microns in diameter. Continuing studies have shown that the smaller-diameter fraction of TSP represents the greatest health hazard posed by the pollutant; therefore, EPA has recently established ambient air quality standards for PM_{2.5}. The project area is classified as attainment per the EPA for PM₁₀, while non-attainment for the state for PM₁₀. The project area is classified as non-attainment for PM_{2.5} for both the Federal and State.

The largest sources of PM₁₀ and PM_{2.5} in Tulare County are vehicle movement over paved and unpaved roads, demolition and construction activities, farming operations, and unplanned fires. PM₁₀ and PM_{2.5} are considered regional pollutants with elevated levels typically occurring over a wide geographic area. Concentrations tend to be highest in the winter, during periods of high atmospheric stability and low wind speed.

Table 3.3-4 shows that PM₁₀ levels regularly exceeded the corresponding 24-hour state ambient standard over the three-year period of 2009 through 2011 but did not exceed the Federal ambient standards. **Table 3.3-5** shows that PM_{2.5} exceedences were recorded over the three-year period of 2009 through 2011 of the Federal 24-hour ambient standards. Similar levels can be expected to occur in the vicinity of the project site.

Carbon Monoxide (CO)

Ambient CO concentrations normally correspond closely to the spatial and temporal distributions of vehicular traffic. Relatively high concentrations of CO would be expected along heavily traveled roads and near busy intersections. Wind speed and atmospheric mixing also influence CO concentrations; however, under inversion conditions prevalent in the valley, CO concentrations may be more uniformly distributed over a broad area. High concentrations of CO can impair the transport of oxygen in the bloodstream and thereby aggravate cardiovascular disease, causing fatigue, headaches, and dizziness. **Table 3.3-6** shows that CO levels at the Fresno monitoring station are well below the standards for the three-year period of 2009 through 2011; therefore, the vicinity of the project site is expected to be even lower than levels measured in Fresno.

Nitrogen Dioxide (NO₂)

NO₂ is the "whiskey brown" colored gas readily visible during periods of heavy air pollution. Mobile sources and oil and gas production account for nearly all of the county's nitrogen oxides (NO_x) emissions, most of which is emitted as NO₂. Tulare County has been designated as an attainment/unclassified area for the NAAQS and attainment for the CAAQS for NO₂. In addition, **Table 3.3-7** shows that no excesses of the State NO₂ standards have been recorded at the Visalia area-monitoring station investigated over the three-year period of 2009 through 2011.

Sulfur Dioxide (SO₂)

Fuel combustion for oil and gas production and petroleum refining account for nearly all of the county's SO₂ emissions. Tulare County has been designated as an attainment/unclassified area for the NAAQS attainment for the CAAQS for SO₂. **Table 3.3-7** shows no exceedence of the more stringent state air quality standard over the three-year period in Fresno.

Lead (Pb) and Suspended Sulfate

Ambient Pb levels have dropped dramatically due to the increase in the percentage of motor vehicles that run exclusively on unleaded fuel. No ambient Pb levels were taken over the three-year period of 2009 through 2011.”¹¹

REGULATORY SETTING

Federal Agencies & Regulations

Clean Air Act

“The Federal Clean Air Act (CAA), adopted in 1970 and amended twice thereafter (including the 1990 amendments), establishes the framework for modern air pollution control. The act directs the Environmental Protection Agency (EPA) to establish ambient air standards, the National Ambient Air Quality Standards (NAAQS)... for six pollutants: ozone, carbon monoxide, lead, nitrogen dioxide, particulate matter (less than 10 microns in diameter [PM10] and less than 2.5 microns in diameter [PM2.5]), and sulfur dioxide. The standards are divided into primary and secondary standards; the former are set to protect human health with an adequate margin of safety and the latter to protect environmental values, such as plant and animal life.

Areas that do not meet the ambient air quality standards are called “non-attainment areas”. The Federal CAA requires each state to submit a State Implementation Plan (SIP) for non-attainment areas. The SIP, which is reviewed and approved by the EPA, must demonstrate how the federal standards will be achieved. Failing to submit a plan or secure approval could lead to the denial of federal funding and permits for such improvements as highway construction and sewage treatment plants. For cases in which the SIP is submitted by the State but fails to demonstrate achievement of

¹¹ Air Quality Impact Analysis, pages 11 to 12

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the standards, the EPA is directed to prepare a federal implementation plan or EPA can “bump up” the air basin in question to a classification with a later attainment date that allows time for additional reductions needed to demonstrate attainment, as is the case for the San Joaquin Valley.

SIPs are not single documents. They are a compilation of new and previously submitted plans, programs (such as monitoring, modeling, permitting, etc.), district rules, state regulations and federal controls. The California SIP relies on the same core set of control strategies, including emission standards for cars and heavy trucks, fuel regulations and limits on emissions from consumer products. California State law makes the California Air Resources Board (CARB) the lead agency for all purposes related to the SIP. Local Air Districts and other agencies, such as the Bureau of Automotive Repair and the Department of Pesticide Regulation, prepare SIP elements and submit them to CARB for review and approval. The CARB forwards SIP revisions to the EPA for approval and publication in the Federal Register.”¹²

¹² Tulare County 2030 General Plan RDEIR, pages 3.3-1 to 3.3-2

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**Table 3.3-9
State & 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	0.09 ppm	---	(a) Decrease of pulmonary function and localized lung edema in humans and animals; (b) Risk to public health implied by alterations in pulmonary morphology and host defense in animals; (c) Increased mortality risk; (d) Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (e) Vegetation damage; (f) Property damage.	Formed when reactive organic gases (ROG) and nitrogen oxides (NO _x) react in the presence of sunlight. Major sources include on-road motor vehicles, solvent evaporation, and commercial / industrial mobile equipment.
	8 hours	0.07 ppm ¹	0.075 ppm		
Carbon Monoxide	1 hour	20 ppm	35 ppm	(a) Aggravation of angina pectoris (chest pain) and other aspects of coronary heart disease; (b) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) Impairment of central nervous system functions; (d) Possible increased risk to fetuses.	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9 ppm		
Nitrogen Dioxide	1 hour	0.18 ppm	---	(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) Risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; (c) Contribution to atmospheric discoloration - Colors atmosphere reddish-brown.	Motor vehicles, petroleum refining operations, industrial sources, aircraft, ships, and railroads.
	Annual Avg.	0.030	0.053 ppm		
Sulfur Dioxide	1 hour	0.25 ppm	---	Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma. Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient sulfur dioxide levels. It is not clear whether the two pollutants act synergistically or one pollutant alone is the predominant factor.	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	3 hours	---	0.5 ppm		
	24 hours	0.04 ppm	0.14 ppm		
	Annual Avg.	---	0.03 ppm		
Respirable Particulate Matter (PM10)	24 hours	50 mg/m ³	150 mg/m ³	(a) Exacerbation of symptoms in sensitive patients with respiratory or cardiovascular disease; (b) Declines in pulmonary function growth in children; (c) Increased risk of premature death from heart or lung diseases in the elderly.	Dust and fume-producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	Annual Avg.	20 mg/m ³	---		
	24 hours	---	35 mg/m ³		

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Fine Particulate Matter (PM2.5)	24 hours	---	35 mg/m ³	Daily fluctuations in PM2.5 levels have been related to hospital admissions for acute respiratory conditions, school absences, and increased medication use in children and adults with asthma.	Fuel combustion in motor vehicles, equipment, and industrial sources; residential and agricultural burning; Also, formed from photochemical reactions of other pollutants, including NO _x , sulfur oxides, and organics.
	Annual Avg.	12 mg/m ³	15 mg/m ³		
Lead	Rolling 3-Month Average NAAQS/Monthly Avg. State	1.5 mg/m ³	0.15 mg/m ³	Lead accumulates in bones, soft tissue, and blood and can affect the kidneys, liver, and nervous system. It can cause impairment of blood formation and nerve conduction. The more serious effects of lead poisoning include behavior disorders, mental retardation, neurological impairment, learning deficiencies, and low IQs. Lead may also contribute to high blood pressure and heart disease.	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Quarterly	---	1.5 mg/m ³		
Hydrogen Sulfide	1 hour	0.03 ppm	No National Standard	High levels of hydrogen sulfide can cause immediate respiratory arrest. It can irritate the eyes and respiratory tract and cause headache, nausea, vomiting, and cough. Long exposure can cause pulmonary edema.	Geothermal Power Plants, Petroleum Production and refining
Sulfates	24 hour	25 mg/m ³	No National Standard	(a) Decrease in ventilatory function; (b) Aggravation of asthmatic symptoms; (c) Aggravation of cardio-pulmonary disease; (d) Vegetation damage; (e) Degradation of visibility; (f) Property damage.	Produced by the reaction in the air of SO ₂ .
Visibility Reducing Particles	8 hour	Extinction of 0.23/km; visibility of 10 miles or more	No National Standard	Reduces visibility, reduced airport safety, lower real estate value, and discourages tourism.	See PM2.5.

ppm = parts per million; mg/m³ = micrograms per cubic meter.

¹ This concentration was approved by the Air Resources Board on April 28, 2005 and became effective May 17, 2006.

SOURCE: California Air Resources Board, 2008a. *Ambient Air Quality Standards*, available at <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf> Standards last updated November 17, 2008. California Air Resources Board, 2001. *ARB Fact Sheet: Air Pollution Sources, Effects and Control*, <http://www.arb.ca.gov/research/health/fs/fs2/fs2.htm>, page last updated December 2005.

SOURCE OF EFFECTS: SCAQMD, Table 2-1 page 2-2, 2007 and U.S. EPA, 2010.

State Agencies & Regulations

California Clean Air Act

“The California CAA of 1988 establishes an air quality management process that generally parallels the federal process. The California CAA, however, focuses on attainment of the State ambient air quality standards [see **Table 3.3-9**], which, for certain pollutants and averaging periods, are more stringent than the comparable federal standards. Responsibility for meeting California’s standards is addressed by the CARB and local air pollution control districts (such as the eight county AIR DISTRICT, which administers air quality regulations for Tulare County). Compliance strategies are presented in district-level air quality attainment plans.

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The California CAA requires that Air Districts prepare an air quality attainment plan if the district violates State air quality standards for criteria pollutants including carbon monoxide, sulfur dioxide, nitrogen dioxide, PM_{2.5}, or ozone. Locally prepared attainment plans are not required for areas that violate the State PM₁₀ standards. The California CAA requires that the State air quality standards be met as expeditiously as practicable but does not set precise attainment deadlines. Instead, the act established increasingly stringent requirements for areas that will require more time to achieve the standards.

The air quality attainment plan requirements established by the California CAA are based on the severity of air pollution caused by locally generated emissions. Upwind air pollution control districts are required to establish and implement emission control programs commensurate with the extent of pollutant transport to downwind districts.”¹³

California Air Resources Board

“The CARB is responsible for establishing and reviewing the State ambient air quality standards, compiling the California State Implementation Plan (SIP) and securing approval of that plan from the U.S. EPA. As noted previously, federal clean air laws require areas with unhealthy levels of ozone, inhalable particulate matter, carbon monoxide, nitrogen dioxide, and sulfur dioxide to develop SIPs. SIPs are comprehensive plans that describe how an area will attain NAAQS. The 1990 amendments to the Federal CAA set deadlines for attainment based on the severity of an area’s air pollution problem. State law makes CARB the lead agency for all purposes related to the SIP. The California SIP is periodically modified by the CARB to reflect the latest emission inventories, planning documents, and rules and regulations of various air basins. The CARB produces a major part of the SIP for pollution sources that are statewide in scope; however, it relies on the local Air Districts to provide emissions inventory data and additional strategies for sources under their jurisdiction. The SIP consists of the emission standards for vehicular sources and consumer products set by the CARB, and attainment plans adopted by the local air agencies as approved by CARB. The EPA reviews the air quality SIPs to verify conformity with CAA mandates and to ensure that they will achieve air quality goals when implemented. If EPA determines that a SIP is inadequate, it may prepare a Federal Implementation Plan for the nonattainment area, and may impose additional control measures.

In addition to preparation of the SIP, the CARB also regulates mobile emission sources in California, such as construction equipment, trucks, automobiles, and oversees the activities of air quality management districts and air pollution control districts, which are organized at the county or regional level. The local or regional Air Districts are primarily responsible for regulating stationary emission sources at industrial and commercial facilities within their jurisdiction and for preparing the air quality plans that are required under the Federal CAA and California CAA.”¹⁴

¹³ Ibid. page 3.3-1

¹⁴ Ibid. pages 3.3-6 to 3.3-7

San Joaquin Valley Air Pollution Control District

“The San Joaquin Valley Air Pollution Control District (Air District) is made up of eight counties in California’s Central Valley: San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare, and the San Joaquin Valley Air Basin portion of Kern.

The Air District is primarily responsible for regulating stationary source emissions within Tulare County and preparing the air quality plans (or portions thereof) for its jurisdiction. Air District’s primary approach of implementing local air quality plans occurs through the adoption of specific rules and regulations. Stationary sources within the jurisdiction are regulated by the Air District’s permit authority over such sources and through its review and planning activities. For example, the Air District adopted its Regulation VIII-(Fugitive PM¹⁰ Prohibitions), on October 21, 1993 and amended it on several occasions since then. This Regulation consists of a series of emission reduction rules intended to implement the PM10 Maintenance Plan. The PM10 Maintenance Plan emphasizes reducing fugitive dust as a means of achieving attainment of the federal standards for PM10. Regulation VIII specifically addresses the following activities:

- construction, demolition, excavation, extraction;
- handling and storage of bulk materials;
- landfill disposal sites;
- paved and unpaved roads; and
- vehicle and/or equipment parking, shipping and receiving, transfer, fueling, and service areas.

The Air District has limited authority to regulate transportation sources and indirect sources that attract motor vehicle trips.

- Rule 9510 (Indirect Source Review) requires developers to mitigate project emissions through 1) on-site design features that reduce trips and vehicle miles traveled, 2) controls on other emission sources, and 3) with reductions obtained through the payment of a mitigation fee used to fund off-site air quality mitigation projects. Rule 9510 requires construction related NOx emission reductions of 20 percent and PM10 reductions of 45 percent. Rule 9510 requires a 33 percent reduction in operational NOx emissions and a 50 percent reduction in PM10. The reductions are calculated by comparing the unmitigated baseline emissions and mitigated emissions from the first year of project operation. The Air District recommends using the [CalEEMOD] model to quantify project emissions and emission reductions. Rule 9510 was adopted to reduce the impacts of development on Air District’s attainment plans.

Other Air District Rules and Regulations that affect development in Tulare County include:

- Rule 2201 (New and Modified Stationary Source Review): This rule requires new and modified stationary emission sources to implement best available control technology and to offset emissions exceeding thresholds contained in the rule. The rule implements the federal Title V permitting program for the San Joaquin Valley Air Basin.
- Rule 4101 - Visible Emissions

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- Rule 4102 (Nuisance): The purpose of this rule is to protect the health and safety of the public, and applies to any source operation that emits or may emit air contaminants or other materials.
- Rule 4565 (Biosolids, Animal Manure, and Poultry Litter Operations): Limit VOC emissions from operations involving the management of biosolids, animal manure, or poultry litter.^{15]}
- Rule 4566 (Green Waste Composting and Operations)
- Rule 4601 (Architectural Coatings): The purpose of this rule is to limit Volatile Organic Compounds (VOC) emissions from architectural coatings. Emissions are reduced by limits on VOC content and providing requirements on coatings storage, cleanup, and labeling.
- Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations): The purpose of this rule is to limit VOC emissions from asphalt paving and maintenance operations. If asphalt paving will be used, then the paving operations will be subject to Rule 4641.
- Rule 4202 - Particulate Matter - Emission Rate

The Air District's Governing Board has also recently adopted the 2008 PM_{2.5} Plan. This plan highlights a variety of measures designed to achieve all the PM_{2.5} standards - the 1997 federal standards, the 2006 federal standards, and the state standard - as soon as possible.

The district has published a Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI) (Air District, page 1, 2002), an advisory document that provides lead agencies, consultants, and project applicants with uniform procedures for addressing air quality in environmental documents. A major part of the GAMAQI includes a discussion of air quality control measures that are recommended for use in mitigating construction and operation-related impacts. The district has also published Air Quality Guidelines for General Plans (Air District, page 1-1, 2005), which provides guidance to local officials and staff on developing and implementing local policies and programs to be included in local jurisdictions' general plans.¹⁶

PM 2.5 Plan

“The *2012 PM_{2.5} Plan* established the District's strategy for attaining the 2006 PM_{2.5} standard as expeditiously as possible, and synthesizes the [Air] District's strategies for improving air quality and public health in the Valley. The [Air District has to] demonstrate attainment of the newest federal standards for fine particulate matter (PM_{2.5}) as expeditiously as possible. Through this comprehensive attainment strategy, the Valley will achieve attainment of the federal PM_{2.5} standard by 2019... reducing NO_x emissions, the predominant pollutant leading to the formation of PM_{2.5}, by 55% over this period. In addition to these much-needed NO_x reductions, the District's strategy also reduces direct PM_{2.5} emissions that not only assist the Valley in attaining the standard as fast as possible, but also reduce the PM_{2.5} emissions that pose the greatest health impacts to Valley residents.”¹⁷

¹⁵ Air District Web Site, http://www.valleyair.org/air_quality_plans/pm25plans2012_old-122112.htm

¹⁶ Tulare County 2030 General Plan RDEIR pages 3.3-7 to 3.3-8

¹⁷ Air District Web Site, http://www.valleyair.org/air_quality_plans/pm25plans2012_old-122112.htm

Local Policy & Regulations

Tulare County General Plan Policies

“The General Plan has a number of policies that apply to projects within Tulare County. General Plan policies that relate to the proposed Project are listed below.

AQ-1.1 Cooperation with Other Agencies

The County shall cooperate with other local, regional, Federal, and State agencies in developing and implementing air quality plans to achieve State and federal Ambient Air Quality Standards. The County shall partner with the AIR DISTRICT, Tulare County Association of Governments (TCAG), and the California Air Resource Board to achieve better air quality conditions locally and regionally.

AQ-1.2 Cooperation with Local Jurisdictions

The County shall participate with cities, surrounding counties, and regional agencies to address cross-jurisdictional transportation and air quality issues.

AQ-1.3 Cumulative Air Quality Impacts

The County shall require development to be located, designed, and constructed in a manner that would minimize cumulative air quality impacts. Applicants shall be required to propose alternatives as part of the State CEQA process that reduce air emissions and enhance, rather than harm, the environment.

AQ-1.4 Air Quality Land Use Compatibility

The County shall evaluate the compatibility of industrial or other developments which are likely to cause undesirable air pollution with regard to proximity to sensitive land uses, and wind direction and circulation in an effort to alleviate effects upon sensitive receptors.

AQ-1.5 California Environmental Quality Act (CEQA) Compliance

The County shall ensure that air quality impacts identified during the CEQA review process are consistently and reasonably mitigated when feasible.

AQ-1.6 Purchase of Low Emission/Alternative Fuel Vehicles

The County shall encourage County departments and agencies to replace existing vehicles with low emission/alternative fuel vehicles as appropriate.

AQ-1.7 Support Statewide Climate Change Solutions

The County shall monitor and support the efforts of Cal/EPA, CARB, and the AIR DISTRICT, under AB 32 (Health and Safety Code §38501 et seq.), to develop a recommended list of emission reduction strategies. As appropriate, the County will evaluate each new project under the updated General Plan to determine its consistency with the emission reduction strategies.

AQ-1.8 Greenhouse Gas Emissions Reduction Plan/Climate Action Plan

The County will develop a Greenhouse Gas Emissions Reduction Plan (Plan) that identifies greenhouse gas emissions within the County as well as ways to reduce those emissions. The

Plan will incorporate the requirements adopted by the California Air Resources Board specific to this issue. In addition, the County will work with the Tulare County Association of Governments and other applicable agencies to include the following key items in the regional planning efforts.

1. Inventory all known, or reasonably discoverable, sources of greenhouse gases in the County,
2. Inventory the greenhouse gas emissions in the most current year available, and those projected for year 2020, and
3. Set a target for the reduction of emissions attributable to the County's discretionary land use decisions and its own internal government operations.

AQ-1.9 Support Off-Site Measures to Reduce Greenhouse Gas Emissions

The County will support and encourage the use of off-site measures or the purchase of carbon offsets to reduce greenhouse gas emissions.

AQ-1.10 Alternative Fuel Vehicle Infrastructure

County shall support the development of necessary facilities and infrastructure needed to encourage the use of low or zero-emission vehicles (e.g. electric vehicle charging facilities and conveniently located alternative fueling stations, including CNG filling stations).¹⁸

County Responses to Air Quality Conditions

Ozone

“The SJVAB has severe ozone problems. The EPA has required the Air District to demonstrate in a plan, substantiated with modeling, that the ozone NAAQS could be met by the November 15, 2005 deadline. However, the district could not provide this demonstration for several reasons, including that its achievement would require regulation of certain source categories not currently under the jurisdiction of the district. According to the district, in order to meet the standard the SJVAB must reduce the total emissions inventory by an additional 30 percent (300 tons per day). Because attainment by the deadline could not be demonstrated by the mandated deadlines, the federal sanction clock was started. The clock was to be stopped if the Air District SIP could demonstrate compliance with specified federal requirements by November 15, 2005. However, the district recognized that it could not achieve demonstration in time. Therefore, the district, through petition by the State on behalf of AIR DISTRICT, sought a change in the federal nonattainment classification from “severe” to “extreme” nonattainment with the ozone standard. An extreme nonattainment designation would effectively move the compliance deadline to year 2010 before federal sanctions would begin.

On February 23, 2004, EPA publicly announced its intention to grant the request by the State of California to voluntarily reclassify the SJVAB from a “severe” to an “extreme” 1-hour ozone nonattainment area. The EPA stated that, except for a demonstration of attainment of the ozone standard by 2005, the Air District has submitted all of the required severe area plan requirements

¹⁸ Tulare County 2030 General Plan, pages 9-4 to 9-6

and they were deemed complete. The CARB submitted the 2004 Extreme Ozone Attainment Demonstration Plan to EPA on November 15, 2004. On August 21, 2008, the District adopted Clarifications for the 2004 Extreme Ozone Attainment Demonstration Plan for 1-hour Ozone, and on October 16, 2008, EPA proposed to approve the District's 2004 Extreme Ozone Attainment Demonstration Plan for 1-hour Ozone.

The County continues to evaluate and consider a variety of federal, State, and Air District programs in order to respond to the non-attainment designation for Ozone that the SJVAB has received, and will continue to adopt resolutions to implement these programs. The Tulare County Board of Supervisor resolutions are described below. These resolutions were adopted in 2002 and 2004, respectively.

Resolution 2002-0157

Resolution 2002-0157, as adopted on March 5, 2002, requires the County to commit to implementing the Reasonably Available Control Measures included in the Resolution. The following Reasonably Available Control Measures were included in the resolution:

- Increasing transit service to the unincorporated communities of Woodville, Poplar and Cotton Center;
- Purchase of three new buses and installation of additional bicycle racks on buses;
- Public outreach to encourage the use of alternative modes of transportation;
- Providing preferential parking for carpools and vanpools;
- Removing on-street parking and providing bus pullouts in curbs to improve traffic flow;
- Supporting the purchase of hybrid vehicles for the County fleet;
- Mandating that the General Plan 2030 Update implement land use policies supporting public transit and vehicle trip reduction; and
- Programming \$13,264,000 of highway widening projects.

Resolution 2004-0067

As part of a follow up effort to Resolution 2002-0157 and to address the federal reclassification to Extreme non-attainment for ozone, the County Board of Supervisors adopted Resolution 2004-067. The resolution contains additional Reasonably Available Control Measures as summarized below:

- Encouraging land use patterns which support public transit and alternative modes of transportation;
- Exploring concepts of Livable Communities as they address housing incentives and transportation;
- Consideration of incentives to encourage developments in unincorporated communities that are sensitive to air quality concerns; and
- Exploring ways to enhance van/carpool incentives, alternative work schedules, and other Transportation Demand Management strategies.

PM10

On September 25, 2008, EPA redesignated the San Joaquin Valley to attainment for the PM10 NAAQS and approved the PM10 Maintenance Plan. However, prior to this redesignation, Tulare County Board of Supervisors adopted the following resolution (Resolution 2002-0812) on October 29, 2002. Although now designated in attainment of the federal PM10 standard, all requirements included in the AIR DISTRICT PM10 Plan are still in effect. The resolution contains the following Best Available Control Measures (BACMs) to be implemented in order to reduce PM10 emissions in the County:

- Paving or stabilizing of unpaved roads and alleys;
- Paving, vegetating, chemically stabilizing unpaved access points onto paved roads;
- Curbing, paving, or stabilizing shoulders on paved roads;
- Frequent routine sweeping or cleaning of paved roads;
- Intensive street cleaning requirements for industrial paved roads and streets providing access to industrial/ construction sites; and
- Debris removal after wind and rain runoff when blocking roadways.”¹⁹

Criteria Pollutants

“For construction impacts, the pollutant of greatest concern to the District is respirable particulate matter (PM10).²⁰ The Air District recommends that significance be based on a consideration of the control measures to be implemented during project construction (Air District, page 23, 2002). Compliance with Regulation VIII, Rule 8011, and implementation of appropriate mitigation measures to control PM10 emissions are considered by the Air District to be sufficient to render a project’s construction-related impacts less than significant. The Air District GAMAQI contains a list of feasible control measures for construction-related PM10 emissions.

The Air District’s GAMAQI also includes significance criteria for evaluating operational-phase emissions from direct and indirect sources associated with a project. Indirect sources include motor vehicle traffic resulting from the project and do not include stationary sources covered under permit with the Air District. For this analysis, the project would be considered to have a significant effect on the environment if it would exceed the following thresholds:

- Cause a net increase in pollutant emissions of reactive organic gases (ROG) or NO_x exceeding 10 tons per year.
- Cause a violation of State CO concentration standards. The level of significance of CO emissions from mobiles sources is determined by modeling the ambient concentration under project conditions and comparing the resultant 1- and 8-hour concentrations to the respective State CO standards of 20.0 and 9.0 parts per million.
- Cause “visible dust emissions” due to onsite operations and thereby violate AIR DISTRICT Regulation VIII²¹.

¹⁹ Tulare County 2030 General Plan RDEIR, pages 3.3-12 - 3.3-14

²⁰ Construction equipment emits particulate matter, carbon monoxide and ozone precursors. The SJVAPCD has determined that these emissions would cause a significant air quality impact only in the case of a very large or very intense construction project (SJVAPCD, 2002).

²¹ Visible dust is defined by the SJVAPCD as “visible dust of such opacity as to obscure an observer’s view to a degree equal to or greater than an opacity of 40 percent, for a period or periods aggregating more than three minutes in any one hour.

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Although the Air District GAMAQI recognizes that PM10 is a major air quality issue in the basin, it does not establish quantitative thresholds for potential impact significance. However, for the purposes of this analysis, a PM10 emission of 15 tons per year from project operations is used as a significance threshold. 15 tons per year is the Air District threshold level at which new stationary sources requiring Air District permits must provide emissions “offsets”. This threshold of significance for PM10 is consistent with the ROG and NOx thresholds of 10 tons per year, which are also, offset thresholds established in Air District Rule 2201.

Stationary sources that comply, or that would comply, with Air District Rules and Regulations are generally not considered to have a significant air quality impact.”²²

Toxic Air Contaminants

“The operation of any project with the potential to expose sensitive receptors to substantial levels of toxic air contaminants (TAC’s) would be deemed to have a potentially significant impact. More specifically, proposed development projects that have the potential to expose the public to TAC’s in excess of the following thresholds would be considered to have a significant air quality impact:

- Probability of contracting cancer for the Maximally Exposed Individual²³ exceeds 10 in one million.
- Ground-level concentrations of non-carcinogenic TAC’s would result in a Hazard Index greater than 1 for the Maximally Exposed Individual.

Application of these standards would typically apply to the preparation of more detailed project-specific health risk assessments (based on a detailed air dispersion modeling effort) that would occur as individual projects are considered under the proposed project. For this programmatic assessment of the proposed project, the assessment of TAC’s is conducted at a qualitative level with specific policies and implementation measures provided to address the potential impacts associated with this issue.”²⁴

²² Tulare County 2030 General Plan RDEIR, page 3.3-15

²³ Maximally Exposed Individual represents the worst-case risk estimate based on a theoretical person continuously exposed for 70 years at the point of highest compound concentration in air.

²⁴ Tulare County 2030 General Plan RDEIR, pages 3.3-15 – 3.3-16

IMPACT EVALUATION

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

a) **Conflict with or obstruct implementation of the applicable air quality plan?**

Project Impact Analysis: *Less than Significant Impact*

The Project is currently permitted by the Air District for processing 156,000 tons per year (TPY). This Project's tonnage limits are in compliance with the Air District's Rule 4565.

The Project currently operates under Air District permit numbers:

- S-3594-1-1
- S-3594-2-0
- S-3594-4-1
- S-3594-5-1
- S-3594-6-0
- S-3594-7-0
- S-3594-8-0
- S-3594-9-0

The current actual usage is approximately 75,000 TPY, or approximately 80,000 tons per year more than the current 156,000 TPY limit. Air District Rule 4565 (Green Waste Composting and Operations) requires composting and digestion facilities to comply with VOC from biosolids, and animal manure. The Project has existing permits under this Rule and is seeking Air District permits for the proposed additional amounts of compost and biosolids for digestion. The expansion from 156,000 tons per year to 216,000 tons per year, and the additional 60,000 tons of Fat, Oil and Grease for digestion, will be consistent and compliant with the rules/regulations noted earlier.

The proposed Project does not conflict or obstruct with any of Tulare County's Air Quality Policies, as listed above, or Climate Action Plan Policies. General Plan Policies AQ-1.7 to 1.9 require that new development adhere to AB32's policies, adhere to the Climate Action Plan, and create off sets/off site. The Project is implementing these measures by reducing air emissions that would normally occur at a land fill.

All other necessary air quality permits will be acquired by Harvest Power prior to starting the additional site based on the Air District's Air Basin Plan, rules and/or regulations, and applicable permits. In addition, there are no noted conflicts with the Air District's Control Strategy for PM 2.5. Therefore, the Project will not conflict or obstruct on any applicable air quality policies.

Cumulative Impact Analysis: ***Less than Significant Impact***

The geographic area of this cumulative analysis is San Joaquin Air Basin. This cumulative analysis is based on the information provided in the Air Quality Impact Assessment.

The allowed tonnage specified in the two use permits is a reflection of the maximum allowed by the Air District. This increase in tonnage would not add to the indirect impacts to the Air District Plan by the adjacent dairy, vineyard, and other agricultural uses. Therefore, the potential cumulative impact to the Air District’s Basin Plan would be less than Significant.

Mitigation Measures:

None Required.

Conclusion: ***Less than Significant Impact***

The Project’s limits on composting and digestion facilities will reduce air emissions by taking the Fat, Oil and Grease and Green Waste out of the traditional waste stream and will be limited to the amount set by the Air District. The Project will also obtain all necessary Air District permits. Therefore, the Project will implement, and will not conflict or obstruct, the Air District’s and Tulare County’s General Plan Policies.

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

Project Impact Analysis: ***Less than Significant Impact with Mitigation***

“State CEQA Guidelines – Appendix G (Environmental Checklist) states that a project that would “*violate any air quality standard or contribute substantially to an existing or projected air quality violation*” would be considered to create significant impacts on air quality. Therefore, an air quality impact analysis should determine whether the emissions from a project would cause or contribute significantly to violations of the National (NAAQS) or California Ambient Air Quality Standards (CAAQS) when added to existing ambient concentrations.

In order to determine what comprises “significant impact levels” the U.S. EPA has established the federal Prevention of Significant Deterioration (PSD) program to assess whether a project should be required to conduct a detailed cumulative increment analysis in areas deemed to be in attainment with the NAAQS. A project’s impacts are considered negligible if emissions are below PSD significant impact levels (SIL) for a particular pollutant. When a SIL is exceeded, an additional “increment analysis” is required. The increment analysis encompasses both the project and certain other existing, proposed, and reasonably foreseeable projects. Incremental increases in deterioration of air quality may be considered minor or insignificant. Emissions impacts below these thresholds are considered

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insignificant on both a project level and a cumulative level. The projected emissions for the proposed project are significantly below levels that would require analysis under the federal PSD program. Similarly, the San Joaquin Valley Air Basin is classified as non-attainment for the ozone NAAQS and, as such, is subject to “non-attainment new source review” (NSR). PSD SILs and increments are more stringent than the state or NAAQS and represent the most stringent significance criteria. As the project is not considered a “stationary source” under NSR, it will not be subject to either PSD or NSR review.²⁵”

Short-Term Emissions

“Short-term emissions are primarily related to the grading and construction phases of a project and are recognized to be short in duration and without lasting impacts on air quality.

As the precise construction details about the proposed project were unknown at the time this analysis was conducted, the default equipment provided in CalEEMod along with estimates from the project proponent were used to estimate the (short-term) grading, construction, and paving phase emissions along with ramp-up flaring emissions. While emissions from the project are expected to vary substantially from day to day, they are expected to be approximately equal over the course of the construction period. Many variables are factored into the calculation of construction emissions such as length of the construction period, number of each type of equipment, site characteristics, area climate, and construction personnel activities. In order to present the most conservative approach to estimating construction emissions from the project; all equipment was assumed to be in use 6 to 8 cumulative hours per day at full power, which is the CalEEMod default. In reality, much of this equipment will be used significantly less than this due to idling time, operator breaks, equipment breakdowns, etc.

According to the GAMAQI, it is recommended that projects with buildout periods in excess of five (5) years also model the proposed project’s emissions at the projected mid-way point²⁶. As the subject project is *not* expected to have a buildout of more than five years an additional (intermediate) CalEEMod modeling run is not required for the project. **Table 3.3-10** presents the project’s unmitigated and mitigated short-term emissions based on the full buildout period.

**Table 3.3-10
Short-Term Project Emissions**

Emissions Source	Pollutant (tons/year)					
	ROG	NOx	CO*	SOx*	PM ₁₀	PM _{2.5} *
Unmitigated Emissions						
Construction Emissions – 2013	0.70	4.64	3.29	0.01	0.34	0.31
Construction Emissions – 2014	1.56	2.14	9.03	0.00	0.23	0.23
SJVAPCD Annual Threshold	10	10	NA	NA	15	NA
Is Threshold Exceeded Before Mitigation?	No	No	-	-	No	-
Mitigated Emissions						

²⁵ Air Quality Impact Analysis, pages 16 to 17

²⁶ SJVAPCD GAMAQI, page 40

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Construction Emissions – 2013	0.70	4.64	3.29	0.01	0.33	0.30
Construction Emissions – 2014	1.56	2.14	9.03	0.00	0.23	0.23
SJVAPCD Annual Threshold	10	10	NA	NA	15	NA
Is Threshold Exceeded After Mitigation?	No	No	-	-	No	-

NOTES:

* The SJVAPCD has not established significance thresholds for CO, SO_x or PM_{2.5}.

Source: Air Quality Impact Analysis

As calculated, the short-term emissions, for each year of construction, are predicted to be less than SJVAPCD significance threshold levels. Short-term emissions from the project as calculated by CalEEMod, using the default equipment listing, and ramp-up flaring calculations would be less than SJVAPCD significance levels. Project construction emissions are expected to remain below significance threshold levels and are therefore less than significant.”²⁷

Baseline Emissions

“The Harvest Power facility is currently in operation. In order to consider the true impacts to the SJVAB proposed by the project’s modifications, this analysis examined baseline site emissions compared to predicted emissions after the project’s modifications. Emissions attributable to the existing operation are already incorporated into the air basin’s existing emissions inventory through inclusion in the Tulare County General Plan, the San Joaquin Valley Air Pollution Control District Emissions Inventory and the California Air Resources Board Statewide Emissions Inventory. Baseline emissions were calculated using existing equipment and sources at the site along with existing traffic values that occurred at the facility in 2011. The calculated baseline emissions are presented in **Table 3.3-12**.

Long-Term Emissions

Long-term emissions are related to the activities that will occur indefinitely because of project operations and are the primary focus of the SJVAPCD and of this analysis. Long-term emissions are caused by operational (mobile) sources and area (heating, cooling and structural) sources. The greatest of these emissions impacts emanate from mobile sources traveling to and from the project area. Long-term emissions will start with the completion of construction on the project site. Long-term emissions will consist of the following components:

Fugitive Dust Emissions

Operation of the project site at full buildout is not expected to present a significant source of fugitive dust (PM₁₀) emissions. The main source of PM₁₀ emissions will be from vehicular traffic associated with the project site.

PM₁₀ generated as a part of fugitive dust emissions, as noted by the regulatory agencies, pose a potentially serious health hazard, alone or in combination with other pollutants. Control

²⁷ Air Quality Impact Analysis, pages 19 to 20

measures required and enforced by the SJVAPCD under Regulation VIII will assist in minimizing these emissions to a less than significant level. The following SJVAPCD Rules and Regulations apply to the control of fugitive dust from the proposed project:

- Rule 4102 - Nuisance
- Rule 8011 - General Requirements
- Rule 8021 - Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities
- Rule 8041 - Carryout and Trackout
- Rule 8051 - Open Areas

Compliance with applicable SJVAPCD Rules and Regulations, the local zoning codes, and additional mitigation measures required in this analysis will reduce PM₁₀ fugitive dust emissions even further to ensure that the project's emissions remain at a "*less than significant*" level.

Fugitive Composting Emissions

Operation of the project site at full buildout is not expected to present a significant source of fugitive VOC emissions. The main source of VOC emissions will be from stockpiles and windrows associated with the project site.

VOC generated as a part of fugitive emissions, as noted by the regulatory agencies, pose a potentially serious health hazard, alone or in combination with other pollutants. Control measures required and enforced by the Air District will assist in minimizing these emissions to a less than significant level. The following Air District Rules and Regulations apply to the control of fugitive composting emissions from the proposed project:

- Rule 4101 - Visible Emissions
- Rule 4102 - Nuisance
- Rule 4202 - Particulate Matter - Emission Rate
- Rule 4565 - Biosolids, Animal Manure, and Poultry Litter Operations
- Rule 4566 - Green Waste Composting and Operations

Compliance with all the applicable SJVAPCD Rules and Regulations and local zoning codes will reduce VOC fugitive composting emissions even further to ensure that the project's emissions remain at a "*less than significant*" level."²⁸

Equipment and Vehicle Exhaust

"Exhaust emissions from this project include emissions produced from delivery trucks and employees traveling to and from the site and operational equipment usage. Emitted pollutants include CO, ROG, NO_x, SO_x, PM₁₀ and PM_{2.5}.

²⁸ Air Quality Impact Analysis, pages 20 to 22

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Exhaust emissions will vary from day to day. The variables factored into estimating total project emissions include: level of activity, site characteristics, weather conditions, and predicted number of deliveries.

**Table 3.3-11
Emission Sources**

Emissions Source	Service and Pollutants
Facility Building ¹	Air conditioning and heating system as well as water heater emissions will occur from the manufacturing facility. While most of the facility will operate with electrical power, minor sources of combustion are used for these incidental items. Criteria pollutant emissions will consist of ROG, NO _x , CO, SO ₂ , PM ₁₀ and PM _{2.5} .
Equipment and Vehicles ²	Delivery and employee vehicles will be used to transport product and employees to and from the facility. Criteria pollutant emissions will consist of ROG, NO _x , CO, SO ₂ , PM ₁₀ and PM _{2.5} .
Stationary Source Emissions ³	The composting facility is a stationary source which emits fugitive VOC and PM ₁₀ emissions.

NOTES:
¹ Emissions factors and emissions were based on CalEEMod
² Emissions factors and emissions were based on CalEEMod and EMFAC2011
³ Emissions factors and emissions were based on District Emissions Factors

Source: Air Quality Impact Analysis

The emissions from this project were evaluated based on the incremental difference between the current operation of the facility and the post-project operation of the facility. If the proposed project is approved it is expected to have the long-term air quality impacts shown in the **Table [3.3-12]**.²⁹

**Table 3.3-12
Long-Term Incremental Emissions**

Emissions Source	Pollutant (tons/year)					
	ROG	NO _x	CO*	SO _x *	PM ₁₀	PM _{2.5} *
Baseline						
Direct Exhaust Emissions	1.37	9.60	6.21	0.01	0.65	0.65
Indirect Exhaust Emissions	0.03	3.51	0.23	0.00	0.04	0.02
Fugitive Dust Emissions	-	-	-	-	0.41	0.04
Area Source Emission	0.01	0.00	0.00	0.00	0.00	0.00
Stationary Source Emission ¹	768.94	-	-	-	0.16	-
Baseline Total	770.34	13.11	6.45	0.01	1.26	0.71
Project Emissions						
Direct Exhaust Emissions	1.53	10.80	6.91	0.01	0.72	0.72
Indirect Exhaust Emissions	0.04	5.96	0.34	0.00	0.08	0.03
Fugitive Dust Emissions	-	-	-	-	0.70	0.07
Area Source Emission	0.01	0.00	0.00	0.00	0.00	0.00
Stationary Source Emission ¹	804.54	-	-	-	0.17	-

²⁹ Air Quality Impact Analysis, page 22

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Project Total	806.12	16.76	7.25	0.01	1.65	0.82
Total Incremental Increase Long-Term Emissions (Including Stationary Source Fugitive Emissions)²	35.77	3.56	0.81	0.00	0.39	0.11
Total Incremental Increase Long-Term Emissions (Excluding Stationary Source Fugitive Emissions)²	0.17	3.56	0.81	0.00	0.38	0.11
SJVAPCD Threshold	10	10	NA	NA	15	NA
Is Threshold Exceeded After Mitigation?	No	No	-	-	No	-

NOTES:

¹ This emissions are under control and enforcement of the SJVAPCD and are fugitive in nature

² Numbers may not add due to rounding by the CalEEMod and EMFAC2011

* The SJVAPCD has not established significance thresholds for CO, SOx or PM_{2.5}

Source: Air Quality Impact Analysis

The Stationary Source emissions from the composting facility require permits to operate from the SJVAPCD. SJVAPCD controls and quantifies the emissions from these sources and they are assumed to be mitigated to the greatest feasible extent. Since the emissions are controlled by the SJVAPCD and accounted for in the State Implementation plan they are considered *less than significant* from a CEQA standpoint. Furthermore, the stationary source VOC emissions associated with this project are fugitive emissions and according the SJVAPCD are not counted toward major source or offset thresholds.

As calculated, the long-term operational and area source emissions associated with the proposed project would be less than SJVAPCD threshold levels when calculated without the fugitive stationary source emissions and would, therefore, not pose a significant impact.”³⁰

Cumulative Impact Analysis: ***Less than Significant Impact with Mitigation***

The geographic area of this cumulative analysis is San Joaquin Air Basin. This cumulative analysis is based on the information provided in the Air Quality Impact Assessment.

“A review of the City of Tulare and the Tulare County Resource Management Agency’s files indicates that there are zero (0) Tentative Tracts or other planned developments within a one-mile radius of the proposed project site. Projects that are planned but have not been submitted for review or approved by the county are not included in this analysis as there is no way to know or ascertain what they might consist of. The SJVAPCD requires use of a one-mile radius to identify HAP emissions as well as for most odor sources³¹. A one-mile limit is recommended by the SJVAPCD for HAPs pollutants as such emissions primarily impact individuals that reside or work within the immediate vicinity (one-mile) of the emissions source.

³⁰ Ibid, page 23

³¹ SJVAPCD GAMAQI, page 53

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**Table 3.3-13
2020 Emissions Projections**

	ROG	NO _x	PM ₁₀
Proposed Project	35.77 ¹	3.56	0.39
Tulare County	46,683	12,410	24,637
San Joaquin Valley Air Basin	211,663	119,063	125,888
Proposed Project Percent of Tulare County	0.08	0.03	0.002
Proposed Project Percent of SJVAB	0.02	0.003	0.0003
Tulare County Percent of SJVAB	22.05	10.42	19.57

Notes: The emission estimates for Tulare County and the SJVAB are based on 2020 projections. The Proposed Project emission estimates are for the proposed incremental emissions increase that is not already included in the San Joaquin Valley Air Basin Emissions Inventory. The Project's emissions are expected to decline as cleaner, less polluting vehicles replace vehicles with higher emissions.
¹ All but 0.17 tons of these emissions are fugitive emissions which are permitted, controlled and accounted for within the SIP by the /SJVAPCD.

Source: California Air Resources Board (www.arb.ca.gov/app/emsinv/emssumcat.php)

“As shown above, the proposed project will pose an extremely minute impact on regional ozone and PM₁₀ formation. When mitigation measures and compliance with applicable rules, such as SJVAPCD’s Rule 9510 (Indirect Source Rule) is considered, the regional contribution to these cumulative impacts will be almost negligible. It is reasonable to conclude that *the project is not cumulatively significant with regard to regional impacts.*”

The listing provided below in **Table [3.3-14]** is only a geographical reference to demonstrate the construction activity in the project vicinity. The number or size of these projects is of no particular significance since no “cumulative” emissions thresholds have been established by the SJVAPCD or the Tulare County Resource Management Agency. In accordance with SJVAPCD guidance, fireplaces were not considered since they are seasonal in nature and because residential developments are prohibited from installing wood burning fireplaces³².”

**Table 3.3-14
Cumulative Long-Term Emissions***

Scheduled Developments**	Pollutant (tons/year)					
	ROG	NO _x	CO	Sox	PM ₁₀	PM _{2.5}
This Project***	35.77	3.56	0.81	0.00	0.39	0.11
None	-	-	-	-	-	-

NOTES:
* The SJVAPCD has not established significance thresholds for cumulative emissions.
** These emissions (other than the proposed project) are overestimated, as they are discretionary projects that are subject to various mitigation measures that have not yet been determined nor their impacts reduced herein.
*** Emissions presented are “mitigated” emissions for the proposed project only. All but 0.17 tons of ROG emissions are fugitive emissions which are permitted, controlled and accounted for within the SIP by the /SJVAPCD.

Source: Air Quality Impact Analysis

“As details regarding the proposed emissions from the various projects listed above were not readily available through the Tulare County Resource Management Agency, no emissions estimates were modeled using the CalEEMod computer model to predict cumulative impacts ([see Attachment E] under Appendix H for output results). Additionally, no cumulative significance thresholds are shown since no cumulative thresholds have been established by the SJVAPCD, CARB or other regulatory authority. Since no projects are either currently under construction or, at a minimum, approved by the City of Tulare Planning Division for

³² SJVAPCD Rule 4901, Amended July 17, 2003

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consistency with applicable regulation and the project alone does not exceed any significant thresholds, for the purposes of this analysis, it is assumed that they are in conformance with the regional AQAP and will not pose a significant contribution to the cumulative impacts to air quality in the SJVAB.”³³

“The most recent, certified San Joaquin Valley Air Basin Emission Inventory data available from the California Air Resources Board (CARB) is based on data gathered for the 2008 annual inventory.³⁴ This data will be used to assist the SJVAPCD in demonstrating attainment of Federal 1-hour Ozone Standards and contained 220,642 tons/year VOC (ROG) and 210,495 tons/year NOx³⁵ from all sources. On a regional basis, the proposed project represents approximately 0.02% of the ROG and 0.002% of the NOx emissions in the air basin. The incremental increase posed by the project upon the air basin appears to be insignificant since basin emissions would be essentially the same regardless of whether or not the project is built.”³⁶

Since the direct impacts are not significant, and the baseline is currently under any of the quantified SJVAPCD thresholds, the emissions from the Project would not add significantly to surrounding cumulative impacts to air quality, so long as they attain all required permits from the Air District.”³⁷

Mitigation Measures:

3.3-1 The applicant shall obtain all required permits from the Air District prior to implementing any elements of the proposed Project.

Conclusion:

Less than Significant Impact with Mitigation

“The Stationary Source emissions from the composting facility require permits to operate from the SJVAPCD. SJVAPCD controls and quantifies the emissions from these sources, and they are assumed to be mitigated to the greatest feasible extent. Since the emissions are controlled by the SJVAPCD and accounted for in the State Implementation plan they are considered less than significant [with the added mitigation of attaining all the required Air District permits].”³⁸

³³ California Air Resources Board (CARB) Emissions Inventory Database

³⁴ Ibid.

³⁵ San Joaquin Valley Air Basin Emissions Inventory to Demonstrating Attainment of Federal 1-hour Ozone Standards, San Joaquin Valley Air Pollution Control District, February 2007

³⁶ California Air Resources Board (CARB) Emissions Inventory Database

³⁷ Air Quality Impact Analysis, pages 30 to 33

³⁸ Ibid.

- 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)?**

Project Impact Analysis: *Less than Significant Impact*

Measures Used in Areas with Severe Air Quality Issues

“Several special interest groups have suggested what has come to be known as the “one-molecule theory”. This theory supposes that the addition of even one molecule of a criteria pollutant in a non-attainment air basin would constitute a significant increase. While these groups have attempted to enforce this theory in various jurisdictions, the Court of Appeals has held that CEQA does not require this approach. One court has stated, “the ‘one [additional] molecule rule’ is not the law” (*Communities for a Better Environment v California Resources Agency* 2002, 103 Cal.App.4th 98, 119). Therefore, the Measures of Significance included in the following tables were applied to the subject project to determine the project’s level of significance.”³⁹

**Table 3.3-15
Measures of Significance – OZONE (ROG and NOx Emissions)**

Agency	Level	Description
Measures Adopted for the Evaluation of Impacts Under CEQA		
SJVAPCD	10 tons/yr NOx 10 tons/yr ROG	SJVAPCD Guide for Assessing and Mitigating Air Quality Impacts, August 20, 1998 (Revised January 10, 2002)
SJVAPCD	Not Significant	If Construction Emissions do not exceed CEQA Guide for Ozone Precursors During Operation, then Construction Impacts are Assumed to be Less Than Significant when compliance with Regulation VIII is achieved and the control measures of GAMAQI Tables 6-3 and 6-4 are implemented as appropriate.

Source: Air Quality Impact Analysis

**Table 3.3-16
Measures Based on Ambient Air Quality Impacts (NOx)**

Agency	Level	Description
CARB	338 µg/m3	California One-Hour AAQS for NO ₂
CARB	57 µg/m3	California annual AAQS for NO ₂
USEPA	188 µg/m3	National One-Hour AAQS for NO ₂
USEPA	100 µg/m3	National annual AAQS for NO ₂
USEPA	1.0 µg/m3	Class II significant impact level for PSD
USEPA	25 µg/m3	Class II increment for PSD

Source: Air Quality Impact Analysis

³⁹ Air Quality Impact Analysis, pages 16 - 17

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Table 3.3-17
Measures of Significance – CARBON MONOXIDE (CO)

Agency	Level	Description
Measures Adopted for the Evaluation of Impacts Under CEQA		
SJVAPCD	9 ppm, 8-hr avg	SJVAPCD Guide for Assessing and Mitigating Air Quality Impacts, August 20, 1998 (Revised January 10, 2002)
	20 ppm, 1-hr avg	
SJVAPCD	Not Significant	If Construction Emissions do not exceed CEQA Guide for Ozone Precursors During Operation, then Construction Impacts are Assumed to be Less Than Significant when compliance with Regulation VIII is achieved and the control measures of GAMAQI Table 6-4 are implemented as appropriate.
Measures Based on Ambient Air Quality Impacts		
CARB	23,000 µg/m ³	California 1-hour AAQS for CO
	10,000 µg/m ³	National and California 8-hour AAQS for CO

Source: Air Quality Impact Analysis

Table 3.3-18
Measures of Significance – SULFUR DIOXIDE (SO₂)

Agency	Level	Description
Measures Adopted for the Evaluation of Impacts Under CEQA		
SJVAPCD	Not Significant	If Construction Emissions do not exceed CEQA Guide for Ozone Precursors During Operation, then Construction Impacts are Assumed to be Less Than Significant when compliance with Regulation VIII is achieved and the control measures of GAMAQI Table 6-4 are implemented as appropriate.
Measures Based on Ambient Air Quality Impacts		
CARB	655 µg/m ³	California 1-hour AAQS for SO ₂
	105 µg/m ³	California 24-hour AAQS for SO ₂
USEPA	196 µg/m ³	National 1-hr AAQS for SO ₂
	1,300 µg/m ³	National 3-hr AAQS for SO ₂
	80 µg/m ³	National annual AAQS for SO ₂
	25 µg/m ³	3-hr Class II significant impact level for PSD
	5 µg/m ³	24 hr Class II significant impact level for PSD
	1.0 µg/m ³	Annual Class II significant impact level for PSD
	512 µg/m ³	3-hr Class II increment for PSD
	91 µg/m ³	24 hr Class II increment for PSD
50 µg/m ³	Annual Class II increment for PSD	

Source: Air Quality Impact Analysis

Table 3.3-19
Measures of Significance – RESPIRABLE PARTICULATES (PM₁₀)

Agency	Level	Description
Measures Adopted for the Evaluation of Impacts Under CEQA		
SJVAPCD	Not Significant	If Construction Emissions do not exceed CEQA Guide for Ozone Precursors During Operation, then Construction Impacts are Assumed to be Less Than Significant when compliance with Regulation VIII is achieved and the control measures of GAMAQI Tables 6-2 and 6-3 are implemented as appropriate.
Measures Based on Ambient Air Quality Impacts		
CARB	50 µg/m ³	California 24 hour AAQS for PM ₁₀
	20 µg/m ³	California Annual AAQS for PM ₁₀

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USEPA	5 µg/m ³	24 hr Class II significant impact level for PSD
	1 µg/m ³	Annual Class II significant impact level for PSD
	30 µg/m ³	24 hr Class II increment for PSD
	17 µg/m ³	Annual Class II increment for PSD

Source: Air Quality Impact Analysis

Table 3.3-20
Measures of Significance – RESPIRABLE PARTICULATES (PM_{2.5})

Agency	Level	Description
Measures Adopted for the Evaluation of Impacts Under CEQA		
SJVAPCD	Not Significant	If Construction Emissions do not exceed CEQA Guide for Ozone Precursors During Operation, then Construction Impacts are Assumed to be Less Than Significant when compliance with Regulation VIII is achieved and the control measures of GAMAQI Tables 6-2 and 6-3 are implemented as appropriate.
Measures Based on Ambient Air Quality Impacts		
CARB	12 µg/m ³	California Annual AAQS for PM _{2.5}
USEPA	35 µg/m ³	National 24 hr AAQS for PM _{2.5}

Source: Air Quality Impact Analysis

Table 3.3-21
Measures of Significance – TOXIC AIR CONTAMINANTS (TACs)

Agency	Level	Description
Measures Adopted for the Evaluation of Impacts Under CEQA		
SJVAPCD	Not Significant	If Construction Emissions do not exceed CEQA Guide for Ozone Precursors during operation, then construction impacts are assumed to be <i>less than significant</i> when compliance with Regulation VIII is achieved and the control measures of CEQA Appendix G Tables 6-3 and 6-4 are implemented as appropriate.
	10 in one million	Carcinogenic Risk Limit for Maximally Exposed Individual
	Hazard Index >1	Chronic and Acute Hazard Index Risk for Maximally Exposed Individual. ^{40,}

Source: Air Quality Impact Analysis

The above tables in relation to **Tables 3.3-12** and **3.3-12** indicate that the Project will not have a significant impact to the non-attainment of the criteria pollutants, within the San Joaquin Valley Air Basin, under the SJVAB Plan, and the Project will not emit ozone in excess of quantitative thresholds for ozone precursors.

Cumulative Impact Analysis: ***Less than Significant Impact with Mitigation***

The geographic area of this cumulative analysis is San Joaquin Air Basin. This cumulative analysis is based on the information provided in the Air Quality Impact Assessment.

Since the project will have to mitigate their emissions through permitting the Project to Air District standards, the project will have a less than a significant impact with mitigation.

⁴⁰ Air Quality Impact Analysis, page 18

Mitigation Measures:

See mitigation measure 3.3-1.

Conclusion:

Less than Significant Impact with Mitigation

The proposed Project will not emit ozone in excess of quantitative thresholds for ozone precursors. Since the project will have to mitigate their emissions through permitting the Project to Air District standards, the project will have a less than a significant impact with mitigation.

d) Expose sensitive receptors to substantial pollutant concentrations?

Project Impact Analysis:

Less than Significant Impact

Sensitive Receptors

“Based on the emissions impacts expected, the proposed project is not expected to affect sensitive receptors. Sensitive receptors are defined as areas where young children, chronically ill individuals, the elderly or people who are more sensitive than the general population reside. Schools, hospitals, nursing homes and daycare centers are locations where sensitive receptors would likely reside. Sensitive receptors within less than one-mile from the project site are listed in **Table [3.3-22]**.

Additionally, Harvest Power currently operates under an Odor Impact Mitigation Plan (OIMP) to comply with the CalRecycle Full Composting Facility permit. The OIMP focuses on processes to prevent odor from migrating off site during the feedstock delivery, composting and curing phases and the protocol to deal with odor issues if they do arise. The processes include mixing any food materials with green materials immediately upon arrival at the site, and incorporating them into the compost windrows as soon as possible, within a maximum of 36 hours. Watering and turning regimes increase the temperature and speed of the breakdown of the material in the windrows, diminishing odor. A specific protocol for neighbor notification and response to neighbor issues is also included. The anaerobic digestion facility is designed with a bio-filter to ensure that no offensive odor migrates off site.

Therefore, based on the predicted emissions from the project and the OIMP, the project is not anticipated to have significant impacts on any known sensitive receptors.”⁴¹

⁴¹ Air Quality Impact Analysis, page 24

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Table 3.3-22
Sensitive Receptors Located ≤ 5 Miles from Project

Receptor	Type of Facility	Distance from Project (miles)	Direction from Project
Sundale Elementary School	Public K-8	0.51	SE
Sundale Preschool	Preschool	0.51	SE

Source: Air Quality Impact Analysis

Health Risks

“The proposed facility will result in emissions of [hazardous air pollutant] HAPs and will be located near existing residences, schools and businesses; therefore, an assessment of the potential risk to the population attributable to emissions of hazardous air pollutants from the proposed project is required. Ambient air concentrations were predicted with dispersion modeling to arrive at a conservative estimate of increased individual carcinogenic risk that might occur as a result of continuous exposure over a 70-year lifetime. Similarly, predicted concentrations were used to calculate non-cancer chronic hazard indices (HIs), which are the ratio of expected exposure to acceptable exposure. Individuals at businesses are not subject to a continuous exposure over a 70-year lifetime; therefore worker exposure duration for cancer risk may be adjusted to [Hotspots Analysis and Reporting Program] HARP default worker exposure assumptions.”⁴²

“The carcinogenic risk and the health hazard index (HI) for chronic and acute non-cancer risk at all of the modeled receptors do not exceed the significance levels of less than ten in one million (10×10^{-6}) and 1, respectively. Therefore, the application of HARP default worker exposure assumptions to reduce continuous exposure to less than a 70-year lifetime was not necessary for the business receptors. The risk predicted by HARP for the potential maximum impacts, as identified by receptor number, type, risk and location, are provided in **Table [3.3-23]**.”⁴³

Table 3.3-23
Potential Maximum Impacts Predicted By HARP

	Receptor	Value	UTM East	UTM North	Pathway
Excess Cancer Risk ^a	5	7.76E-06	296645	4011905	Inhalation
Chronic Hazard Index	5	3.76E-02	296645	4011905	Respiratory System
Acute Hazard Index	6	3.98E-01	296122	4011444	Respiratory System

^a Based on continuous, 70-year residential exposure for all receptors.

Source: Air Quality Impact Analysis

“As shown above in **Table [3.3-23]**, the maximum predicted cancer risk for the facility is 7.76E-06. The maximum chronic and acute non-cancer hazard indexes are 3.76E-02 and 3.98E-01 respectively. Cancer risk and chronic and acute non-cancer risk are attributable to emissions of diesel exhaust particulate matter from the on-site use of heavy-duty vehicles and

⁴² Air Quality Impact Analysis, page 25

⁴³ Air Quality Impact Analysis, page 27

equipment and compost operation emissions.

In accordance with the GAMAQI, the potential health risk attributable to the proposed project is determined to be *less than significant* based on the following conclusions:

- 1) Potential chronic carcinogenic risk from the proposed project is *below* the significance level of ten in a million at each of the modeled receptors; and
- 2) The hazard index for the potential chronic non-cancer risk from the proposed project is *below* the significance level of one at each of the modeled receptors.⁴⁴

Cumulative Impact Analysis: ***Less than Significant Impact***

The geographic area of this cumulative analysis is San Joaquin Air Basin. This cumulative analysis is based on the information provided in the Air Quality Impact Assessment.

There are sensitive receptors at the school that are within one mile, but since the Project currently has an OIMP, therefore based on the above analysis and predicted emissions from the Project and the odor control measures; the impacts to the school site are less than significant.

As the potential chronic carcinogenic risk is below the significance level and the hazard index for the potential chronic non-cancer risk from the proposed project is below the significance level, less than significant cumulative impacts related to this checklist item will occur.

Mitigation Measures:

None Required.

Conclusion: ***Less than Significant Impact***

As noted above, the project is not anticipated to have significant project specific or cumulative impacts on any known sensitive receptors.

e) Create objectionable odors affecting a substantial number of people?

Project Impact Analysis: ***Less than Significant Impact***

“Harvest Power currently operates under an Odor Impact Mitigation Plan (OIMP) to comply with the CalRecycle Full Composting Facility permit. The OIMP focuses on processes to prevent odor from migrating off site during the feedstock delivery, composting and curing phases and the protocol to deal with odor issues if they do arise. The processes include mixing any food materials with green materials immediately upon arrival at the site, and

⁴⁴ Air Quality Impact Analysis, page 27

incorporating them into the compost windrows as soon as possible, within a maximum of 36 hours. Watering and turning regimes increase the temperature and speed of the breakdown of the material in the windrows, diminishing odor. A specific protocol for neighbor notification and response to neighbor issues is also included. The anaerobic digestion facility is designed with a biofilter to ensure that no offensive odor migrates off site.

Therefore, based on the predicted emissions from the project and the OIMP, the project is not anticipated to have significant impacts on any known sensitive receptors.”⁴⁵

Cumulative Impact Analysis: ***Less than Significant Impact***

The geographic area of this cumulative analysis is San Joaquin Air Basin. This cumulative analysis is based on the information provided in the Air Quality Impact Assessment.

There are rural residential units, within the vicinity of the project, that are affected by the dairy odor on the adjacent property that the Project’s odor impact in the cumulative. Although the Project and the adjacent dairy have a cumulatively objectionable odor, there are not substantial amounts of people in the vicinity.

Mitigation Measures:

None Required.

Conclusion: ***Less than Significant Impact***

Because the Project has an existing OIMP, that reduces the odor and the amount of surrounding rural residence, and users of the site are not substantial, the Project’s impacts from odor to a substantial amount of people are less than significant. In the cumulative, the adjacent dairies and the project’s odors create an objectionable odor, but it is a less than significant impact to a significant amount of people.

DEFINITIONS/ACRONYMS

Definitions

Ambient Air Quality Standards

These standards measure outdoor air quality. They identify the maximum acceptable average concentrations of air pollutants during a specified period of time. These standards have been adopted at a State and Federal level.

⁴⁵ Air Quality Impact Analysis, page 24

Best Available Control Measures (BACM)

A set of programs that identify and implement potentially best available control measures affecting local air quality issues.

Best Available Control Technologies (BACT)

The most stringent emission limitation or control technique of the following: 1.) Achieved in practice for such category and class of source 2.) Contained in any State Implementation Plan approved by the Environmental Protection Agency for such category and class of source. A specific limitation or control technique shall not apply if the owner of the proposed emissions unit demonstrates to the satisfaction of the APCO that such a limitation or control technique is not presently achievable 3.) Contained in an applicable federal New Source Performance Standard or 4.) Any other emission limitation or control technique, including process and equipment changes of basic or control equipment, found by the APCO to be cost effective and technologically feasible for such class or category of sources or for a specific source.

Carbon Dioxide (CO₂)

A naturally occurring gas, and also a by-product of burning fossil fuels and biomass, as well as land-use changes and other industrial processes. It is the principal anthropogenic greenhouse gas that affects the Earth's radiative balance. It is the reference gas against which other greenhouse gases are measured and therefore has a Global Warming Potential of 1.

Carbon Monoxide (CO)

Carbon monoxide is an odorless, colorless gas that is highly toxic. It is formed by the incomplete combustion of fuels and is emitted directly into the air (unlike ozone).

Climate Change

Climate change refers to a statistically significant variation in either the mean state of the climate or in its variability, persisting for an extended period (typically decades or longer). Climate change may be due to natural internal processes or external forcings, or to persistent anthropogenic changes in the composition of the atmosphere or in land use.

Global Warming

Global warming is an average increase in the temperature of the atmosphere near the Earth's surface and in the troposphere, which can contribute to changes in global climate patterns. Global warming can occur from a variety of causes, both natural and human induced. In common usage, "global warming" often refers to the warming that can occur as a result of increased emissions of greenhouse gases from human activities.

Greenhouse Effect

Trapping and build-up of heat in the atmosphere (troposphere) near the Earth's surface. Some of the heat flowing back toward space from the Earth's surface is absorbed by water vapor, carbon dioxide, ozone, and several other gases in the atmosphere and then reradiated back toward the Earth's surface. If the atmospheric concentrations of these greenhouse gases rise, the average temperature of the lower atmosphere will gradually increase.

Greenhouse Gas

Any gas that absorbs infrared radiation in the atmosphere. Greenhouse gases include, but are not limited to, water vapor, carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrochlorofluorocarbons (HCFCs), ozone (O₃), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆).

Hydrogen Sulfide (H₂S)

Hydrogen sulfide is a highly toxic flammable gas. Because it is heavier than air, it tends to accumulate at the bottom of poorly ventilated spaces.

Lead (Pb)

Lead is the only substance which is currently listed as both a criteria air pollutant and a toxic air contaminant. Smelters and battery plants are the major sources of the pollutant "lead" in the air. The highest concentrations of lead are found in the vicinity of nonferrous smelters and other stationary sources of lead emissions. The EPA's health-based national air quality standard for lead is 1.5 micrograms per cubic meter (µg/m₃) [measured as a quarterly average].

Metropolitan Planning Organization (MPO)

Tulare County Association of Governments (TCAG) is the MPO for Tulare County. MPO's are responsible for developing reasonably available control measures (RACM) and best available control measures (BACM) for use in air quality attainment plans and for addressing Transportation Conformity requirements of the federal Clean Air Act.

Mobile Source

A mobile emission source is a moving object, such as on-road and off-road vehicles, boats, airplanes, lawn equipment, and small utility engines.

Nitrogen Oxides (Oxides of Nitrogen, NO_x)

NO_x are compounds of nitric oxide (NO) and nitrogen dioxide (NO₂). NO_x are primarily created from the combustion process and are a major contributor to ozone smog and acid rain formation. NO_x also forms ammonium nitrate particulate in chemical reactions that occur when NO_x forms nitric acid and combines with ammonia. Ammonium nitrate particulate is an important contributor to PM₁₀ and PM_{2.5}.

Ozone (O₃)

Ozone is a pungent, colorless, toxic gas created in the atmosphere rather than emitted directly into the air. O₃ is produced in complex atmospheric reactions involving oxides of nitrogen, reactive organic gases (ROG), and ultraviolet energy from the sun in a photochemical reaction. Motor vehicles are the major sources of O₃ precursors.

Ozone Precursors

Chemicals such as non-methane hydrocarbons, also referred to as ROG, and oxides of nitrogen, occurring either naturally or as a result of human activities, which contribute to the formation of ozone. A major component of smog.

Photochemical

Some air pollutants are direct emissions, such as the CO produced by an automobile's engine. Other pollutants, primarily O₃, are formed when two or more chemicals react (using energy from the sun) in the atmosphere to form a new chemical. This is a photochemical reaction.

Particulate Matter 2.5 Micrometers (PM2.5)

The federal government has recently added standards for smaller dust particulates. PM2.5 refers to dust/particulates/aerosols that are 2.5 microns in diameter or smaller. Particles of this size can be inhaled more deeply in the lungs and the chemical composition of some particles is toxic and have serious health impacts.

Particulate Matter 10 Micrometers (PM10)

Dust and other particulates exhibit a range of particle sizes. Federal and State air quality regulations reflect the fact that smaller particles are easier to inhale and can be more damaging to health. PM10 refers to dust/particulates that are 10 microns in diameter or smaller. The fraction of PM between PM2.5 and PM10 is comprised primarily of fugitive dust. The particles between PM10 and PM2.5 are primarily combustion products and secondary particles formed by chemical reactions in the atmosphere.

Reactive Organic Gas (ROG)

A photo chemically reactive chemical gas, composed of non-methane hydrocarbons that may contribute to the formation of smog. Also sometimes referred to as Volatile Organic Compounds (VOCs).

Reasonable Available Control Measures (RACM)

A broadly defined term referring to technologies and other measures that can be used to control pollution. They include Reasonably Available Control Technology and other measures. In the case of PM10, RACM refers to approaches for controlling small or dispersed source categories such as road dust, woodstoves, and open burning. Regional Transportation Planning Agencies are required to implement RACM for transportation sources as part of the federal ozone attainment plan process in partnership with the AIR DISTRICT.

Reasonable Available Control Technologies (RACT)

Devices, systems, process modifications, or other apparatus or techniques that are reasonably available, taking into account: the necessity of imposing such controls in order to attain and maintain a national ambient air quality standard; the social, environmental, and economic impact of such controls; and alternative means of providing for attainment and maintenance of such a standard.

San Joaquin Valley Air Basin (SJVAB)

An air basin is a geographic area that exhibits similar meteorological and geographic conditions. California is divided into 15 air basins to assist with the statewide regional management of air quality issues. The SJVAB extends in the Central Valley from San Joaquin County in the north to the valley portion of Kern County in the south.

San Joaquin Valley Air Pollution Control District (Air District)

The Air District is the regulatory agency responsible for developing air quality plans, monitoring air quality, developing air quality regulations, and permitting programs on stationary/industrial sources and agriculture and reporting air quality data for the SJVAB. The Air District also regulates indirect sources and has limited authority over transportation sources through the implementation of transportation control measures (TCM).

Sensitive Receptors

Sensitive receptors are defined as land uses that typically accommodate sensitive population groups such as long-term health care facilities, rehabilitation centers, retirement homes, convalescent homes, residences, schools, childcare centers, and playgrounds.

Sensitive Population Groups

Sensitive population groups are a subset of the general population that are at greater risk than the general population to the effects of air pollution. These groups include the elderly, infants and children, and individuals with respiratory problems, such as asthma.

Sulfur Dioxide (SO₂)

Sulfur dioxide belongs to the family of SO_x. These gases are formed when fuel containing sulfur (mainly coal and oil) is burned, and during metal smelting and other industrial processes.

Stationary Source

A stationary emission source is a non-mobile source, such as a power plant, refinery, or manufacturing facility.

Sulfates

Sulfates occur as microscopic particles (aerosols) resulting from fossil fuel and biomass combustion. SO_x can form sulfuric acid in the atmosphere that in the presence of ammonia forms ammonium sulfate particulates, a small but important component of PM₁₀ and PM_{2.5}. Sulfates increase the acidity of the atmosphere and form acid rain.

Transportation Conformity

A federal requirement for transportation plans and projects to demonstrate that they will not result in emissions that exceed attainment plan emission budgets or exceed air quality standards.

Transportation Control Measures (TCMs)

Any measure that is identified for the purposes of reducing emissions or concentrations of air pollutants from transportation sources by reducing vehicle use or changing traffic flow or congestion conditions.

Transportation Management Agencies

Transportation Management Agencies are private, non-profit, member-controlled organizations that provide transportation services in a particular area, such as a commercial district, mall, medical center, or industrial park. Transportation Management Agencies are appropriate for any geographic area where there are multiple employers or businesses clustered together that can

benefit from cooperative transportation management or parking brokerage services. Regional and local governments, business associations, and individual businesses can all help establish Transportation Management Agencies.

Transportation Management Associations (TMAs)

Groups of employers uniting together to work collectively to manage transportation demand in a particular area.

Tulare County Association of Governments (TCAG)

TCAG is the Transportation Planning Agency (TPA) for Tulare County. TCAG is also designated as a Metropolitan Planning Organization (MPO), the agency responsible for preparing long range Regional Transportation Plans and demonstrating Transportation Conformity with air quality plans.

Wood-burning Devices

Wood-burning devices are designed to burn “solid fuels” such as cordwood, pellet fuel, manufactured logs, or any other non-gaseous or non-liquid fuels.

Acronyms

(ACM)	Asbestos Containing Materials
(BACM)	Best Available Control Measures
(CAA)	Clean Air Act
(CARB)	California Air Resources Board
(CH ₄)	Methane
(CO)	Carbon Monoxide
(CO ₂)	Carbon Dioxide
(EPA)	Environmental Protection Agency
(GAMAQI)	Guide for Assessing and Mitigating Air Quality Impacts
(HCFCs)	Hydrochlorofluorocarbons
(HFCs)	Hydrofluorocarbons
(HI)	Hazard Index
(H ₂ S)	Hydrogen Sulfide
(NAAQS)	National Ambient Air Quality Standards
(NO ₂)	Nitrogen Dioxide
(NESHAPs)	National Environmental Standards for Hazardous Air Pollutants
(MPO)	Metropolitan Planning Organization
(O ₃)	Ozone
(Pb)	Lead
(PFCs)	Perfluorocarbons
(PM _{2.5})	Particulate Matter 2.5 Micrometers
(PM ₁₀)	Particulate Matter 10 Micrometers
(RACM)	Reasonable Available Control Measures
(RACT)	Reasonable Available Control Technologies

Draft Environmental Impact Report
Harvest Power Project

(ROG)	Reactive Organic Gases
(SEKI)	Sequoia and Kings Canyon National Park
(SIP)	State Implementation Plan
(SF ₆)	Sulfur Hexafluoride
(SO ₂)	Sulfur Dioxide
(AIR DISTRICT)	San Joaquin Valley Air Pollution Control District
(SJVAB)	San Joaquin Valley Air Basin
(TAC)	Toxic Air Contaminants
(TCAG)	Tulare County Association of Governments
(TCM)	Transportation Control Measures
(URBEMIS)	Urban Emissions model
(VOC)	Volatile Organic Compound

REFERENCES

Tulare County 2030 General Plan, Recirculated Draft Environmental Impact Report (RDEIR),
February 2010

2012 CEQA Guidelines

Tulare County 2030 General Plan, August 2012