

Air Quality

Chapter 3.3

SUMMARY OF FINDINGS

The proposed Cutler-Orosi Community Plan Update (Project) will result in *Less Than Significant Impacts* to Air Quality through the Year 2030 Planning Horizon. A detailed review of potential impacts is provided in the following analysis. An Air Quality and Greenhouse Gas Analysis Technical Memorandum prepared by Tulare County Resource Management Agency (RMA) staff which is included in Appendix “A” of this document and is used as the basis for determining this Project will result in *Less Than Significant Impacts*.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Program/Project 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 would 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 hazardous areas.”¹

¹ CEQA Guidelines. Section 15126.2(a). Accessed September 2021 at:

The “Environmental Setting” section provides a description of the air quality in the County. The “Regulatory Setting” section provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County General Plan 2030 Update, Tulare County General Plan 2030 Update Background Report, and/or Tulare County General Plan 2030 Update Recirculated Draft Environmental Impact Report (RDEIR) incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist Item questions. The following are potential thresholds for significance.

- Result in an exceedance of criteria pollutants as established in the 1990 Clean Air Act amendments.
- Result in an exceedance of San Joaquin Valley Unified Air Pollution Control District (SJVAPCD, District, or Air District) criteria pollutant threshold. (See GAMAQI Thresholds of Significance for Criteria pollutants below, Table 3.3-4)
- Result in nuisance odors.
- Result in emissions of toxic air contaminants (TAC).
- 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.

ENVIRONMENTAL SETTING

San Joaquin Valley Air Basin

Topography

The topography of a region is important for air quality because mountains can block airflow that would help disperse pollutants and can channel air from upwind areas that transports pollutants to downwind areas. The San Joaquin Valley (SJV or Valley) covers the entirety of the San Joaquin Valley Air Basin (SJVAB or Air Basin) which includes San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare, and the valley portion of Kern counties. The SJVAB is generally shaped like a bowl.

“The climate of the SJV is modified by topography. This creates climatic conditions that are particularly conducive to air pollution formation. ...[The] SJV is surrounded by mountains on three sides and open to the Sacramento Valley and the San Francisco Bay Area to the north.

The SJVAB is the southern half of California's Central Valley and is approximately 250 miles long and averages 35 miles wide. The SJV is bordered by the Sierra Nevada Mountains in the east (8,000 to 14,491 feet in elevation), the Coast Ranges in the west (averaging 3,000 feet in elevation), and the Tehachapi mountains in the south (6,000 to 7,981 feet in elevation). There is a slight downward elevation gradient from Bakersfield in the southeast end (elevation 408 feet) to sea level at the northwest end where the valley opens to the San Francisco Bay at the Carquinez Straits. At its northern end is the Sacramento Valley, which comprises the northern half of California's Central Valley. The bowl shaped topography inhibits movement of pollutants out of the valley.”²

Climate

“The SJV is in a Mediterranean Climate Zone. Mediterranean Climates Zones occur on the west coast of continents at 30 to 40 degrees latitude and are influenced by a subtropical high-pressure cell most of the year. Mediterranean Climates are characterized by sparse rainfall, which occurs mainly in winter. Summers are hot and dry. Summertime maximum temperatures often exceed 100 degrees F in the Valley.

The subtropical high-pressure cell is strongest during spring, summer and fall and produces subsiding air, which can result in temperature inversions in the Valley. A temperature inversion can act like a lid, inhibiting vertical mixing of the air mass at the surface. Any emissions of pollutants can be trapped below the inversion. Most of the surrounding mountains are above the normal height of summer inversions (1,500-3,000 feet).

Winter-time high pressure events can often last many weeks with surface temperatures often lowering into the thirties degree Fahrenheit. During these events, fog can be present and inversions are extremely strong. These wintertime inversions can inhibit vertical mixing of pollutants to a few hundred feet.”³

Wind Pattern

“Wind speed and direction play an important role in dispersion and transport of air pollutants. Wind at the surface and aloft can disperse pollution by mixing and by transporting the pollution to other locations.

Especially in summer, winds in the Valley most frequently blow from the northwesterly direction. The region's topographic features restrict air movement and channel the air mass towards the southeastern end of the Valley. Marine air can flow into the basin from the San Joaquin River Delta and over Altamont Pass and Pacheco Pass, where it can flow along the axis of the valley,

² San Joaquin Valley Unified Air District Pollution Control District (SJVAPCD). Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI). Page 16. Accessed September 2021 at: <https://www.valleyair.org/transportation/GAMAQI.pdf>

³ Ibid. 17.

over the Tehachapi pass, into the Southeast Desert Air Basin. The Coastal Range is a barrier to air movement to the west and the high Sierra Nevada range is a significant barrier to the east (the highest peaks in the southern Sierra Nevada reach almost halfway through the Earth's atmosphere). Many days in the winter are marked by stagnation events where winds are very weak. Transport of pollutants during winter can be very limited. A secondary but significant summer wind pattern is from the southeasterly direction and can be associated with nighttime drainage winds, prefrontal conditions and summer monsoons.

Two significant diurnal wind cycles that occur frequently in the Valley are the sea breeze and mountain-valley upslope and drainage flows. The sea breeze can accentuate the northwest wind flow, especially on summer afternoons. Nighttime drainage flows can accentuate the southeast movement of air down the valley. In the mountains during periods of weak synoptic scale winds, winds tend to be upslope during the day and downslope at night. Nighttime and drainage flows are especially pronounced during the winter when flow from the easterly direction is enhanced by nighttime cooling in the Sierra Nevada. Eddies can form in the valley wind flow and can recirculate a polluted air mass for an extended period. Such an eddy occurs in the Fresno area during both winter and summer.”⁴

Temperature, Sunlight and Ozone Production

“Solar radiation and temperature are particularly important in the chemistry of ozone formation. The SJVAB averages over 260 sunny days per year. Photochemical air pollution (primarily ozone) is produced by the atmospheric reaction of organic substances (such as volatile organic compounds) and nitrogen dioxide under the influence of sunlight. Ozone concentrations are very dependent on the amount of solar radiation, especially during late spring, summer and early fall. Ozone levels typically peak in the afternoon. After the sun goes down, the chemical reaction between nitrous oxide and ozone begins to dominate. This reaction tends to scavenge the ozone in the metropolitan areas through the early morning hours, resulting in the lowest ozone levels, possibly reaching zero at sunrise in areas with high nitrogen oxides emissions. At sunrise, nitrogen oxides tend to peak, partly due to low levels of ozone at this time and also due to the morning commuter vehicle emissions of nitrogen oxides.

Generally, the higher the temperature, the more ozone formed, since reaction rates increase with temperature. However, extremely hot temperatures can "lift" or "break" the inversion layer. Typically, if the inversion layer doesn't lift to allow the buildup of contaminants to be dispersed, the ozone levels will peak in the late afternoon. If the inversion layer breaks and the resultant afternoon winds occur, the ozone will peak in the early afternoon and decrease in the late afternoon as the contaminants are dispersed or transported out of the SJVAB.

Ozone levels are low during winter periods when there is much less sunlight to drive the photochemical reaction.”⁵

⁴ Op. Cit. 17 to 18.

⁵ Op. Cit. 18.

Temperature Inversions

“The vertical dispersion of air pollutants in the SJV can be limited by persistent temperature inversions. Air temperature in the lowest layer of the atmosphere typically decreases with altitude. A reversal of this atmospheric state, where the air temperature increases with height, is termed an inversion. The height of the base of the inversion is known as the "mixing height". This is the level to which pollutants can mix vertically. Mixing of air is minimized above and below the inversion base. The inversion base represents an abrupt density change where little air movement occurs.

Inversion layers are significant in determining pollutant concentrations. Concentration levels can be related to the amount of mixing space below the inversion. Temperature inversions that occur on the summer days are usually encountered 2,000 to 2,500 feet above the valley floor. In winter months, overnight inversions occur 500 to 1,500 feet above the valley floor.”⁶

Precipitation, Humidity and Fog

“Precipitation and fog may reduce or limit some pollutant concentrations. Ozone needs sunlight for its formation, and clouds and fog can block the required solar radiation. Wet fogs can cleanse the air during winter as moisture collects on particles and deposits them on the ground. Atmospheric moisture can also increase pollution levels. In fogs with less water content, the moisture acts to form secondary ammonium nitrate particulate matter. This ammonium nitrate is part of the Valleys PM_{2.5} and PM₁₀ problem.

The winds and unstable air conditions experienced during the passage of winter storms result in periods of low pollutant concentrations and excellent visibility. Between winter storms, high pressure and light winds allow cold moist air to pool on the SJV floor. This creates strong low-level temperature inversions and very stable air conditions, which can lead to Tule fog. Wintertime conditions favorable to fog formation are also conditions favorable to high concentrations of PM_{2.5} and PM₁₀.”⁷

Tulare County

Tulare County is located within the southern portion of the SJVAB. Due to the SJVAB’s light and wind patterns, long periods of warm and sunny days, and surrounding mountains, air quality in the County can occur at any time of the year. The following discussion on topography and climate in the County of Tulare are taken from the Tulare County 2030 General Plan Recirculated Draft Environmental Impact Report (RDEIR).

“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

⁶ Op. Cit. 19.

⁷ Op. Cit.

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.”⁸

Existing Air Quality Conditions

SJVAB Attainment Status

The United States Environmental Protection Agency (EPA) and the California Air Resources Board (ARB) designate air basins where ambient air quality standards are exceeded as “nonattainment” areas. If standards are met, the area is designated as an “attainment” area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered “unclassified.” National nonattainment areas are further designated as marginal, moderate, serious, severe, or extreme as a function of deviation from standards. Current attainment designations for the SJVAB are provided in **Table 3.3-1**.

Table 3.3-1 San Joaquin Valley Air Basin Attainment Status		
Pollutant	Designation	
	National	State
Ozone—1-hour	No Federal Standard	Nonattainment/Severe
Ozone—8-hour	Nonattainment/Extreme	Nonattainment
PM10	Attainment	Nonattainment
PM2.5	Nonattainment	Nonattainment
Carbon monoxide	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
Visibility-reducing particles	No Federal Standard	Unclassified
Vinyl chloride	No Federal Standard	Unclassified

Source: Air District, <http://www.valleyair.org/aqinfo/attainment.htm>

⁸ Tulare County. General Plan 2030 Update Background Report. Page 6-12 to 6-13.

“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 ... emission standards for many years.”⁹ As of December 2017, the SJVAB is in nonattainment for federal and state ozone and PM_{2.5} standards, attainment for federal PM₁₀ standards, and nonattainment for state PM₁₀ standards.

Local Air Quality Conditions

Existing local air quality conditions can be characterized by reviewing air pollution concentration data near the Project Planning Area for comparison with the NAAQS and the CAAQS. Air samples are collected continuously for some pollutants and periodically for other pollutants depending on the type of monitoring equipment installed. Monitoring sites are usually chosen to be representative of the emissions in a community. There are currently 37 active air monitoring stations in the SJVAB. Of these, there are currently four stations in Tulare County operated by various agencies: Porterville (Air District); Ash Mountain (Sequoia National Park); Lower Kaweah (Sequoia National Park); and Visalia–Church St. (ARB).¹⁰ For pollutants not measured by any station in the project area, the next closest monitor with those emissions must be identified. The measurements made at these stations may not be representative of the Project Planning Area, but they are assumed to provide a conservative estimate for smaller communities like Cutler-Orosi.

The Visalia-Church station is the closest station to Cutler-Orosi and is representative of the community. This station measures ozone (O₃), particulate matter (PM), and nitrogen dioxide (NO₂) emissions. There are no monitoring stations in Tulare County that measure carbon monoxide (CO) and sulfur dioxide (SO₂). The nearest stations currently monitoring these pollutants are located in Fresno County: the Fresno-Garland and Fresno-Foundry Park sites in Fresno, and the Clovis-N. Villa Avenue site in Clovis.¹¹ Historically the Fresno-First St. station recorded this data; however this site last recorded SO₂ emissions in 2011 and CO emissions in 2012. **Table 3.3-2** summarizes the published air monitoring data from 2018 through 2020 (except where noted), which is the most recent data available. The amount over the standards and the number of days each year that the standards were exceeded provide an indicator of the severity of the air quality problems in the local area

Table 3.3-2. Air Quality Monitoring Summary

Air Pollutant	Averaging Time	Item	2018	2019	2020
Ozone (O ₃)	1-hour	State Max 1-hour (ppm) ¹	0.112	0.093	0.127

⁹ Tulare County General Plan 2030 Update. RDEIR. Page 3.3-9.

¹⁰ SJVAPCD. 2021 Air Monitoring Network Plan. Figure 1, Page 2. Accessed September 2021 at: <https://valleyair.org/aqinfo/Docs/2021-Air-Monitoring-Network-Plan.pdf>.

¹¹ ARB. Almanac Resources, Air Quality Data Monitoring. Accessed September 2021 at: <https://ww2.arb.ca.gov/resources/documents/almanac-resources>.

Draft Environmental Impact Report
 Draft Cutler-Orosi Community Plan 2021 Update
 SCH No. 2021040258

Table 3.3-2. Air Quality Monitoring Summary

Air Pollutant	Averaging Time	Item	2018	2019	2020
	8-hour	Days > State Standard (0.09 ppm)	8	0	7
		State Max 8-hour (ppm)	0.095	0.082	0.103
		Days > State Standard (0.07 ppm)	53	22	36
		National Max 8-hour (ppm)	0.094	0.082	0.102
		Days > National Standard (0.070 ppm)	58	26	37
Inhalable coarse particulate matter (PM ₁₀)	Annual	State Average (µg/m ³)	52.0	46.3	60.5
		National Average (µg/m ³) ²	52.5	45.7	59.4
	24-hour	State 24-hour (µg/m ³)	159.6	418.5	305.7
		Days > State Standard (50 µg/m ³)	164.4	115.8	157.0
		National 24-hour (µg/m ³)	153.4	411.1	317.4
Days > National Standard (150 µg/m ³)	0	5.0	20.2		
Fine particulate matter (PM _{2.5})	Annual	State Average (µg/m ³)	17.4	12.3	ID
		National Average (µg/m ³)	17.3	12.9	19.6
	24-hour	State 24-hour (µg/m ³)	96.2	47.2	136.1
		National 24-hour (µg/m ³)	86.8	47.2	127.1
		Days > National Standard (35 µg/m ³)	42.3	19.9	51.2
Carbon monoxide (CO)	8-hour	Max 8-hour (ppm)	Unavailable	Unavailable	Unavailable
		Days > State and National Standards (9 ppm)	Unavailable	Unavailable	Unavailable
Nitrogen dioxide (NO ₂)	Annual	State Average (ppb)	10	9	9
	1-hour	State Max 1-hour (ppb)	69	70	53
		Days > State Standard (180 ppb)	0	0	0
		National Max 1-hour (ppb)	69.2	70.7	53.4
		Days > National Standard (100 ppb)	0	0	0
Sulfur dioxide (SO ₂)	Annual	State Average (ppm)	Unavailable	Unavailable	Unavailable
	24-hour	Max 24-hour (ppm)	Unavailable	Unavailable	Unavailable

Abbreviations: ppm = parts per million; ppb = parts per billion; > = exceeded; µg/m³ = micrograms per cubic meter; ID = insufficient data; max = maximum

1 The national 1-hour ozone standard was revoked in June 2005. Statistics related to the revoked standard are shown in *italics*.

2 The national annual average PM10 standard was revoked in December 2006 and is no longer in effect. Statistics related to the revoked standard are shown in *italics*.

Note: An exceedance of a standard is not necessarily related to a violation of the standard.

Source: Air Resources Board, <https://www.arb.ca.gov/adam/topfour/topfour1.php>

Draft Environmental Impact Report
 Draft Cutler-Orosi Community Plan 2021 Update
 SCH No. 2021040258

Table 3.3-3 provides the federal and state ambient air quality standards and identifies the properties and health effects of each of the criteria pollutants.

Table 3.3-3 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 and any sources that burn fuels (e.g., gasoline, natural gas, wood, oil), solvent evaporation, petroleum processing and storage, pesticides and commercial/ industrial mobile equipment.
	8 hours	0.07 ppm	0.070 ppm		
Respirable Particulate Matter (PM10)	24 hours	50 µg/m ³	150 µg/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. Daily fluctuations in PM _{2.5} levels have been related to hospital admissions for acute respiratory conditions, school absences, and increased medication use in children and adults with asthma.	Dust and fume-producing industrial and agricultural operations, combustion of any fuel (including fireplaces), atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	Annual Average	20 µg/m ³	---		
Fine Particulate Matter (PM2.5)	24 hours	---	35 µg/m ³		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 Average	12 µg/m ³	12 µg/m ³		
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, and any source that burns fuel such as heavy construction equipment, farming equipment and residential heating.
	8 hours	9.0 ppm	9 ppm		

Draft Environmental Impact Report
 Draft Cutler-Orosi Community Plan 2021 Update
 SCH No. 2021040258

Table 3.3-3 State & National Criteria Air Pollutant Standards, Effects, and Sources					
Nitrogen Dioxide	1 hour	0.18 ppm	100 ppb	(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. See also Carbon Monoxide.
	Annual Average	0.030 ppm	0.053 ppm		
Sulfur Dioxide	1 hour	0.25 ppm	75 ppb	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, coal or oil burning power plants and industries, oil refineries, chemical plants, sulfur recovery plants, and metal processing.
	3 hours	---	0.5 ppm		
	24 hours	0.04 ppm	0.14 ppm		
	Annual Average	---	0.03 ppm		
Lead	30 Day Average	1.5 µg/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; deterioration of lead paint. Past source: combustion of leaded gasoline.
	Quarterly	---	1.5 µg/m ³		
	Rolling 3-Month Average	---	0.15 µg/m ³		
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.

Draft Environmental Impact Report
 Draft Cutler-Orosi Community Plan 2021 Update
 SCH No. 2021040258

Table 3.3-3 State & National Criteria Air Pollutant Standards, Effects, and Sources					
Sulfates	24 hour	25 µg/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 .
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
Vinyl Chloride	24 hour	0.01 ppm	No National Standard	Short-term exposure to high levels of vinyl chloride in the air causes central nervous system effects, such as dizziness, drowsiness, and headaches. Long-term exposure through inhalation and oral exposure has resulted in liver damage. Cancer is a major concern from exposure to vinyl chloride via inhalation, as vinyl chloride exposure has been shown to increase the risk of a rare form of liver cancer in humans.	Discharge of exhaust gases from factories that manufacture or process vinyl chloride, or evaporation from areas where chemical wastes are stored; outgas from new plastic parts.
<p><i>Sources (accessed February 2018):</i></p> <p><i>ARB:</i> https://www.arb.ca.gov/research/health/fs/fs1/fs1.htm; http://www.arb.ca.gov/research/health/fs/fs2/fs2.htm; https://www.arb.ca.gov/research/aaqs/caaqs/ozone/ozone.htm; https://www.arb.ca.gov/research/aaqs/caaqs/pm/pm.htm; https://www.arb.ca.gov/research/aaqs/caaqs/co/co.htm; https://www.arb.ca.gov/research/aaqs/caaqs/no2-1/no2-1.htm; https://www.arb.ca.gov/research/aaqs/caaqs/so2-1/so2-1.htm; https://www.arb.ca.gov/research/aaqs/caaqs/pb-1/pb-1.htm; https://www.arb.ca.gov/research/aaqs/caaqs/h2s/h2s.htm; https://www.arb.ca.gov/research/aaqs/caaqs/sulf-1/sulf-1.htm; https://www.arb.ca.gov/research/aaqs/caaqs/vrp-1/vrp-1.htm; http://www.arb.ca.gov/research/aaqs/caaqs/vc/vc.htm;</p> <p><i>EPA:</i> https://www3.epa.gov/airnow/particle/pm-color.pdf; http://www.epa.gov/airnow/ozone-c.pdf; https://www.epa.gov/no2-pollution/fact-sheets-and-additional-information-regarding-2010-revision-primary-national; https://www.epa.gov/sites/production/files/2016-06/documents/20120320factsheet_secondary_standards.pdf; https://www.epa.gov/indoor-air-quality-iaq/volatile-organic-compounds-impact-indoor-air-quality; http://www.epa.gov/ttnatw01/hlthef/vinylchl.html; and https://www.epa.gov/sites/production/files/2016-09/documents/vinyl-chloride.pdf.</p>					

REGULATORY SETTING

Federal Agencies & Regulations

Federal 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 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

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., which, for certain pollutants and averaging periods are more stringent than the comparable federal standards. Responsibility for meeting California’s standards is

¹² Tulare County General Plan 2030 Update. RDEIR. Pages 3.3-1 to 3.3-2.

addressed by the CARB and local air pollution control districts (such as the eight county SJVAPCD, which administers air quality regulations for Tulare County). Compliance strategies are presented in district-level air quality attainment plans.

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.”¹³

“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.”¹⁴

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

¹³ Ibid. Pages 3.3-2 to 3.3-3.

¹⁴ Op. Cit. Page 3.3-5.

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.”¹⁵

On-Road Heavy-Duty Vehicles Program.¹⁶ On-road heavy-duty vehicles are major contributors to poor air quality in California. In particular, emissions from these vehicles are highly disproportionate to the total population of these vehicles. The problem is complicated by the large number of heavy-duty vehicles registered in other states that travel on California's highways and roads, while bringing goods and commerce into and out of our state. The ARB works closely with the EPA, engine and vehicle manufacturers, and other interested parties to address this issue by establishing and enforcing emissions standards. Other programs that work in concert with this program include the Heavy-Duty Vehicle Inspection Program which requires heavy-duty trucks and buses to be inspected for excessive smoke and tampering, and engine certification label compliance; the Periodic Smoke Inspection Program which requires diesel and bus fleet owners conduct annual smoke opacity inspections of their vehicles and repair those with excessive smoke emissions; and the Emission Control Label Inspection Program which requires each vehicle operating in California, including those in transit from Mexico, Canada, or any other state, to be equipped with engines that meet California and/or EPA or equivalent emission standards and be labeled as such.

Low-Emission Vehicle Program.¹⁷ The ARB first adopted Low-Emission Vehicle (LEV) program standards in 1990. The first LEV standards ran from 1994 through 2003. LEV II regulations, which ran from 2004 through 2010, represent continuing progress in emission reductions. However, as the State's passenger vehicle fleet continued to grow and more sport utility vehicles and pickup trucks are used as passenger cars, the more stringent LEV II standards were needed to provide reductions necessary for California to meet federally mandated clean air goals outlined in the 1994 State Implementation Plan (SIP). In 2012, ARB adopted the LEV III amendments to California's LEV regulations to provide reductions needed to achieve the latest ozone and PM_{2.5} standards. These amendments include more stringent emission standards for both criteria pollutants and greenhouse gases for new passenger vehicles.

In-Use Off-Road Diesel-Fueled Fleets.¹⁸ On July 26, 2007, the ARB adopted a regulation to reduce diesel particulate matter (DPM) and NOx emissions from in-use (existing) off-road heavy-duty diesel vehicles in California. These vehicles are used in construction, mining, and industrial operations. The regulation limits idling to no more than five consecutive minutes, requires reporting and labeling, and requires disclosure of the regulation upon vehicle sale. Performance requirements of the rule are based on a fleet's average NOx emissions, which can be met by replacing older vehicles with newer, cleaner vehicles or by applying exhaust retrofits. The regulation was amended in 2010 to delay the original timeline of the performance requirements

¹⁵ Op. Cit. 3.3-6 to 3.3-7.

¹⁶ ARB. Accessed September 2021 at: <https://www.arb.ca.gov/msprog/onroadhd/onroadhd.htm> and <https://www.arb.ca.gov/enf/hdvp/hdvp.htm>.

¹⁷ ARB. Accessed September 2021 at: <http://www.arb.ca.gov/msprog/levprog/levprog.htm>; <https://www.arb.ca.gov/msprog/levprog/levii/levii.htm>; <https://www.arb.ca.gov/msprog/levprog/levii/factsht.pdf>; and <https://www.arb.ca.gov/regact/2012/leviiighg2012/leviiighg2012.htm>.

¹⁸ ARB. Accessed September 2021 at: <http://www.arb.ca.gov/msprog/ordiesel/ordiesel.htm>; http://www.arb.ca.gov/msprog/ordiesel/faq/overview_fact_sheet_dec_2010-final.pdf; and <https://www.arb.ca.gov/regact/2010/offroadlsi10/offroadisor.pdf>.

making the first compliance deadline January 1, 2014 for large fleets (over 5,000 horsepower), 2017 for medium fleets (2,501-5,000 horsepower), and 2019 for small fleets (2,500 horsepower or less).

In-Use On-Road Heavy-Duty Diesel Vehicles (Bus and Truck).¹⁹ On December 12, 2008, the ARB adopted the Truck and Bus Regulation that requires diesel trucks and buses that operate in California to be upgraded to reduce emissions and applies to nearly all privately and federally-owned diesel fueled trucks and buses and to privately and publicly owned school buses with a gross vehicle weight rating greater than 14,000 pounds. In light of the economic recession amendments that restructured the Truck and Bus Regulation were adopted by the ARB on December 17, 2010 and again on April 25, 2014. Beginning January 1, 2012, heavier trucks must be retrofitted with PM filters and older trucks engines must be replaced with 2010 model year or newer beginning January 1, 2015. By January 1, 2023, nearly all trucks and buses will need to have 2010 model year engines or equivalent. To allow for flexibility of compliance with the regulations, the regulation provides a variety of options tailored to fleets operating low use vehicles, fleets operating in selected vocations like agricultural and construction, and small fleets of three or fewer trucks.

California Air Toxics Program.²⁰ In the 1980's, serious industrial accidents, in conjunction with researchers warning that exposure to very small amounts of toxic chemicals could cause long-term health problems, heightened public concern over the dangers of air toxics. As a result, the public demanded protection and control over the release of air toxics. The Air Toxics Program was created to protect the public's health; identify, prevent and control toxic emissions; identify health risks to the public; reduce emissions from high risk sources; increase community awareness of air toxics; improve interagency cooperation; and continue to reduce air toxics emissions in the future.

Key features of the program include compliance with the Toxic Air Contaminant Identification and Control Act (AB 1807-1983), the Air Toxics "Hot Spots" Information and Assessment Act (AB2588-1987), and the 1992 amendment to the law (SB1731). The 1990 Amendments of the federal CAA set up a nationwide air toxics control program. In 1993, the ARB expanded the TAC list to almost 200 substances to include the hazardous air pollutants (HAPs) identified in the 1990 federal CAA Amendments.

The federal program focuses on larger industrial sources that are of the highest national priority, such as chemical manufacturers. California's program focuses on protecting the public from all significant sources, regardless of size. The ARB works with both federal and local agencies to implement federal requirements in California while maintaining current public health safeguards and avoiding regulatory duplication.

¹⁹ ARB. Accessed September 2021 at: <http://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm>; <https://www.arb.ca.gov/regact/2008/truckbus08/tsd.pdf>; and <https://www.arb.ca.gov/regact/2014/truckbus14/tb14isor.pdf>.

²⁰ ARB. Accessed September 2021 at: <http://www.arb.ca.gov/html/brochure/airtoxic.htm>

Diesel Risk Reduction Plan.²¹ In August 1998, the ARB identified DPM as TACs and was required to determine the need for further control of DPM emissions. On September 28, 2000, the ARB approved the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles and the Risk Management Guidance for the Permitting of New Stationary Diesel-Fueled Engines. The ARB's Diesel Risk Reduction Plan has led to the adoption of new state regulatory standards for all new on-road, off-road, and stationary diesel-fueled engines and vehicles to reduce DPM emissions by about 90% overall from year 2000 levels. The plan requires all new diesel-fueled vehicles and engines to use diesel particulate filters and very low-sulfur diesel fuel. The projected emission benefits associated with the full implementation of this plan, including federal measures, are reductions in DPM emissions and associated cancer risks of 75% by 2010 and 85% by 2020.

ATCM for School Bus Idling.²² On December 12, 2002, the ARB adopted the Airborne Toxic Control Measure (ATCM) to Limit School Bus Idling and Idling at Schools. The ATCM, which became effective July 16, 2003, limits school bus idling and idling at or near schools to only when necessary for safety or operational concerns and targets school buses, school pupil activity buses, youth buses, paratransit vehicles, transit buses, and heavy-duty commercial motor vehicles that operate at or near schools. In 2009, SB 124 (Oropeza), codified the ATCM limiting school bus idling and clarified authority of peace officers and Air District to enforce the program.

ATCM for Diesel-Fueled Commercial Motor Vehicle Idling.²³ On July 22, 2004, the ARB adopted the ATCM to Limit Diesel-Fueled Commercial Motor Vehicle Idling and subsequently amended it on October 20, 2005, October 19, 2009, and December 12, 2013. The ATCM requires, among other things, that drivers of diesel-fueled commercial motor vehicles with gross vehicle weight ratings greater than 10,000 pounds, including buses and sleeper berth equipped trucks, not idle the vehicle's primary diesel engine longer than five minutes at any location. Vehicles with 2008 and newer model year diesel engines must either be equipped with a non-programmable engine shutdown system that automatically shuts down the engine after five minutes of idling or meet a stringent NOx idling emission standard. Emissions producing alternative technologies such as diesel-fueled auxiliary power systems and fuel-fired heaters are also required to meet emission performance requirements and requirements specified in the Low Emission Vehicle regulations. However, the regulation also contains exemptions allowing engine operation for power take-off, maintenance, extreme weather or emergency conditions, emergency vehicles, military and tactical vehicles, armored vehicles, workover rigs, etc.

ATCM for Asbestos.²⁴ Asbestos is found in a natural state, known as naturally occurring asbestos. Exposure and disturbance of rock and soil that naturally contain asbestos can result in

²¹ ARB. Accessed September 2021 at: <https://www.arb.ca.gov/diesel/background.htm>; <https://www.arb.ca.gov/diesel/documents/rmg.htm>; and <http://www.arb.ca.gov/diesel/documents/rpfinal.pdf>.

²² ARB. Accessed September 2021 at: <https://www.arb.ca.gov/toxics/sbidling/sbidling.htm>.

²³ ARB. Accessed September 2021 at: <https://www.arb.ca.gov/msprog/truck-idling/truck-idling.htm>; and <https://www.arb.ca.gov/regact/idling/idling.htm>.

²⁴ ARB. Accessed September 2021 at: <http://arb.ca.gov/toxics/Asbestos/general.htm>; <http://www.arb.ca.gov/toxics/asbestos/asbestos.htm>; <http://www.arb.ca.gov/toxics/atcm/asbeatcm.htm>; <http://www.arb.ca.gov/toxics/asbestos/atcm/AsbPIIGD.pdf>; <http://www.arb.ca.gov/toxics/atcm/asb2atcm.htm>; CGS, accessed September 2021 at: http://www.conservation.ca.gov/cgs/minerals/hazardous_minerals/asbestos/Pages/Index.aspx;

the release of fibers into the air and consequent exposure to the public. Asbestos most commonly occurs in ultramafic rock that has undergone partial or complete alteration to serpentine rock (serpentinite) and often contains chrysotile asbestos. Another form of asbestos, tremolite, can be found associated with ultramafic rock, particularly near faults. Sources of asbestos emissions include unpaved roads or driveways surfaced with ultramafic rock, construction activities in ultramafic rock deposits, or rock quarrying activities where ultramafic rock is present.

In July 1990, the ARB adopted an ATCM for surfacing application. The ATCM was amended in July 2000 and the amendments became effective in November 2011. The regulation prohibits the sale or use of restricted materials for unpaved surfacing unless it has been tested and found to have an asbestos content less than 0.25%. Restricted material includes aggregate material extracted from an ultramafic (or ultrabasic) rock unit as shown on the geologic maps referenced in the amended ATCM; ultramafic rock including serpentine; or aggregate material shown to have an asbestos content of 0.25% or more; or any mixture containing 10% of these materials. The regulation also establishes specific testing and notification of the restricted materials.

In July 2001, the ARB approved an ATCM for construction, grading, quarrying and surface mining operations to minimize emissions of naturally occurring asbestos, which requires the implementation of mitigation measures to minimize emissions of asbestos-laden dust. The regulation requires application of best management practices to control fugitive dust in areas known to have naturally occurring asbestos and requires notification to the local air district prior to commencement of ground-disturbing activities. The measure establishes specific testing, notification and engineering controls prior to grading, quarrying or surface mining in construction zones where naturally occurring asbestos is located on projects of any size. There are additional notification and engineering controls at work sites larger than one acre in size. These projects require the submittal of a "Dust Mitigation Plan" and approval by the Air District prior to the start of a project.

The ATCM applies to road construction and maintenance, construction and grading operations, and quarries and surface mines when the activity occurs in an area where naturally occurring asbestos is likely to be found. Areas are subject to the regulation if they are identified on maps published by the California Department of Conservation, California Geological Survey (CGS) as ultramafic rock units or if the Air Pollution Control Officer or owner/operator has knowledge of the presence of ultramafic rock, serpentine, or naturally occurring asbestos on the site. The measure also applies if ultramafic rock, serpentine, or asbestos is discovered during any operation or activity. Review of the United States Geological Survey (USGS) and CGS maps shows no ultramafic rock has been found near the community Cutler-Orosi.

Local Policy & Regulations

San Joaquin Valley Unified Air Pollution Control District (Air District)

http://www.conservation.ca.gov/cgs/geologic_hazards/hazardous_minerals/Pages/Index.aspx; and USGS, accessed September 2021 at: <http://pubs.usgs.gov/of/2011/1188/>.

The Air District is a public health agency whose mission is to improve the health and quality of life for all San Joaquin Valley residents through efficient, effective and entrepreneurial air quality-management strategies. The Air District's 11 core values include: protection of public health; active and effective air pollution control efforts while seeking to improve the Valley's economic prosperity and grow opportunities for all Valley residents; outstanding customer service; ingenuity and innovation; accountability to the public; open and transparent public process; recognition of the uniqueness of the San Joaquin Valley; continuous improvement; effective and efficient use of public funds; respect for the opinions and interests of all Valley residents; and robust public outreach and education on Valley air quality progress and continuing air quality efforts.²⁵ To achieve these core values the Air District has adopted air quality plans pursuant to the California CAA and a comprehensive list of rules to limit air quality impacts. The air plans currently in effect in the SJVAB and specific rules that apply to the proposed Project are listed and described further below.

Ozone Attainment Plans

“The SJVAB has severe ozone problems. The EPA has required the SJVAPCD 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 SJVAPCD 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 SJVAPCD, 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 SJVAPCD has submitted all of the required severe area plan requirements 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 Air District's 2004 Extreme Ozone Attainment Demonstration Plan for 1-hour Ozone.”²⁶

The planning requirements for the 1-hour plan remain in effect until replaced by a federal 8-hour ozone attainment plan. The EPA approved the 2004 Extreme Ozone Attainment Demonstration

²⁵ SJVAPCD. Core Values. Accessed September 2021 at: http://www.valleyair.org/General_info/aboutdist.htm#Core%20Values.

²⁶ Tulare County General Plan 2030 Update. RDEIR. Pages 3.3-1 to 3.3-2.

Draft Environmental Impact Report
Draft Cutler-Orosi Community Plan 2021 Update
SCH No. 2021040258

Plan, including revisions to the plan, on March 8, 2010, effective April 7, 2010. However, the Air Basin failed to attain the standard in 2010 and was subject to a \$29-million Clean Air Act penalty. The penalty is being collected through an additional \$12 motor vehicle registration surcharge for each passenger vehicle registered in the Air Basin that will be applied to pollution reduction programs in the region. The Air District also instituted a more robust ozone episodic program to reduce emissions on days with the potential to exceed the ozone standards.

Following litigation over approval of the 2004 Extreme Ozone Attainment Demonstration Plan, EPA withdrew its approval in November 2012, and the Air District and ARB withdrew the plan from consideration. The Air District adopted the 2013 Plan for the Revoked 1-Hour Ozone Standard on September 19, 2013. This plan demonstrated that the SJVAB will attain the revoked 1-hour ozone standard by 2017. On May 6, 2014, the Air District submitted a formal request that the EPA determine that the Valley has attained the federal 1-hour ozone standard and to eliminate the \$29 million Clean Air Act penalty. Per federal requirements, the Air District's submittal includes a clean data finding (2011-2013) and a finding that attainment is due to permanent and enforceable emissions reductions.

As part of the clean data finding, the Air District requested EPA concurrence that an exceedance at Fresno-Drummond on August 10, 2012 was due to an exceptional event. Alternatively, the Air District also provided compelling evidence that the Valley would attain the 1-hour ozone standard but for the influence of international air pollutant transport, allowing nonattainment penalties to be lifted under CAA 179B. On July 18, 2016, EPA determined that, effective August 17, 2016, the SJVAB has attained the revoked 1-hour standard.

EPA originally classified the Air Basin as serious nonattainment for the 1997 federal 8-hour ozone standard with an attainment date of 2013. On April 30, 2007, the District's Governing Board adopted the 2007 Ozone Plan, which contained analysis showing a 2013 attainment target to be infeasible. The 2007 Ozone Plan details the plan for achieving attainment on schedule with an "extreme nonattainment" deadline of 2024. At its adoption of the 2007 Ozone Plan, the District also requested a reclassification to extreme nonattainment. ARB approved the plan in June 2007, and EPA approved the request for reclassification to extreme nonattainment on April 15, 2010.

The 2007 Ozone Plan contains measures to reduce ozone and particulate matter precursor emissions to bring the Basin into attainment with the federal 8-hour ozone standard. The 2007 Ozone Plan calls for a 75-percent reduction of NOx and a 25-percent reduction of ROG. The plan, with innovative measures and a "dual path" strategy, assures expeditious attainment of the federal 8-hour ozone standard for all Basin residents. The Air District Governing Board adopted the 2007 Ozone Plan on April 30, 2007. The ARB approved the plan on June 14, 2007. The 2007 Ozone Plan requires yet to be determined "Advanced Technology" to achieve additional reductions after 2021 to attain the standard at all monitoring stations in the Basin by 2024 as allowed for areas designated extreme nonattainment by the federal CAA.

The EPA revised the federal 8-hour ozone standard in 2008. To address this standard on June 16, 2016, the Air District adopted the 2016 Ozone Plan for 2008 8-hour Ozone Standard, which the SJVAB must attain by 2031. This plan demonstrates that the Air District's attainment strategy

satisfies all federal CAA requirements and includes a “black box” provision to satisfy the contingency requirements under the federal CAA. The “black box” represents reductions that would be needed to attain the standard for which specific measures or technologies are not currently available. The strategy in this plan will reduce NOx emissions by over 60% between 2012 and 2031.

In October 2015, the EPA again revised and lowered the federal 8-hour ozone standard. Upon EPA’s publication of the implementation rule, the Air District will be required to prepare a new plan to address the 2015 standard.

Particulate Matter Attainment Plans

The SJVAB was designated nonattainment of state and federal health-based air quality standards for PM₁₀. However, as discussed below, the SJVAB has demonstrated attainment of the federal PM₁₀ standards and currently remains in nonattainment only for the state standards. The SJVAB is also designated nonattainment of state and federal standards for PM_{2.5}.

To meet CAA requirements for the PM₁₀ standard, the Air District adopted a PM₁₀ Attainment Demonstration Plan (Amended 2003 PM₁₀ Plan and 2006 PM₁₀ Plan), which had an attainment date of 2010. The Air District adopted the 2007 PM₁₀ Maintenance Plan in September 2007 to assure the San Joaquin Valley’s continued attainment of the EPA’s PM₁₀ standard. The EPA designated the San Joaquin Valley as an attainment/maintenance area for PM₁₀ on September 25, 2008. Although the San Joaquin Valley has exceeded the standard since then, those days were considered exceptional events that are not considered a violation of the standard for attainment purposes.

On April 30, 2008, the Air District adopted the 2008 PM_{2.5} Plan satisfying federal implementation requirements for the 1997 federal PM_{2.5} standard. However, on the verge of the demonstration of attainment with the standard the SJVAB was plagued with extreme drought, stagnation, strong inversions, and historically dry conditions and could not achieve attainment by the 2015 deadlines. The 2015 Plan for the 1997 PM_{2.5} Standard (2015 PM_{2.5} Plan) was adopted by the Air District on April 16, 2015, and is a continuation of the Air District’s strategy to improve the air quality in the SJVAB. The 2015 PM_{2.5} Plan contains most stringent measures, best available control measures, additional enforceable commitments for further reductions in emissions, and ensures attainment of the 1997 federal 24-hour standard by 2018 and the annual standard by 2020.

In December 2012, the Air District adopted the 2012 PM_{2.5} Plan to bring the San Joaquin Valley into attainment of the EPA’s 2006 24-hour PM_{2.5} standard. The ARB approved the Air District’s 2012 PM_{2.5} Plan for the 2006 standard at a public hearing on January 24, 2013. This plan seeks to bring the San Joaquin Valley into attainment with the standard by 2019, with the expectation that most areas will achieve attainment before that time.

EPA lowered the annual PM_{2.5} standard in 2012 and in response the Air District adopted the 2016 Moderate Area Plan for the PM_{2.5} Standard. This plan demonstrates that the SJVAB attainment of the revised annual standard by 2021 is not practical and seeks to bring the SJVAB into

attainment by 2025. The plan also includes a request for reclassification of the SJVAB from “moderate nonattainment” to “serious nonattainment”.

The Air District is currently in the process of developing an attainment strategy to address multiple PM_{2.5} standards (including the 1997 24-hour standard of 65 µg/m³ and annual standard of 15 µg/m³; the 2006 24-hour standard of 35 µg/m³; and the 2012 annual standard of 12 µg/m³) as well as a plan to demonstrate maintenance of the 1987 PM₁₀ standard as required under the federal Clean Air Act. The proposed attainment strategy will include the preparation of the 2017 PM_{2.5} Plan; 2017 PM₁₀ Maintenance Plan; and 5 Percent Plan for the 1997 PM_{2.5} Standard. The Air District continues to work with EPA on issues surrounding these plans, including EPA implementation updates.

Criteria Pollutants

Although all criteria pollutants are to be evaluated, the primary pollutants of concern during project construction and operation are ROG, NO_x, PM₁₀, and PM_{2.5}. Ozone is a secondary pollutant that is formed in the atmosphere sometimes miles away from the source of emissions through reactions of ROG and NO_x emissions in the presence of sunlight. Therefore, ROG and NO_x are termed ozone precursors. As demonstrated in **Table 3.3-2**, the SJVAB often exceeds the state and national ozone standards. Therefore, if the project emits a substantial quantity of ozone precursors, the project may contribute to an exceedance of the ozone standard. The SJVAB also exceeds air quality standards for PM₁₀, and PM_{2.5}; therefore, substantial project emissions may contribute to an exceedance for these pollutants.

To assess air quality impacts, the Air District has established significance thresholds to assist Lead Agencies in determining whether a project may have a significant air quality impact.²⁷ The Air District’s thresholds of significance for criteria pollutants, which are based on Air District Rule 2201 New Source Review offset thresholds, are provided below in **Table 3.3-4**.

As shown in **Table 3.3-4**, the Air District has three sets of significance thresholds for each pollutant based on the source of the emissions. According to the GAMAQI, “The District identifies thresholds that separate a project’s short-term emissions from its long-term emissions. The short-term emissions are mainly related to the construction phase of a project and are recognized to be short in duration. The long-term emissions are mainly related to the activities that will occur indefinitely as a result of project operations.”²⁸

²⁷ SJVAPCD, GAMAQI, page 74.

²⁸ Ibid. 75.

Table 3.3-4 Criteria Pollutant Emission Significance Thresholds			
Pollutant / Precursor	Construction Emissions	Operational Emissions	
		Permitted Equipment and Activities	Non- Permitted Equipment and Activities
	Emissions (tpy)	Emissions (tpy)	Emissions (tpy)
CO	100	100	100
NO_x	10	10	10
ROG	10	10	10
SO_x	27	27	27
PM₁₀	15	15	15
PM_{2.5}	15	15	15

Source: Air District. GAMAQI. Table 2. Page 80.

Operational emissions are further separated into permitted and non-permitted equipment and activities. Stationary (permitted) sources that comply or will comply with Air District rules and regulations are generally not considered to have a significant air quality impact. Specifically, the GAMAQI states, “District Regulation II ensures that stationary source emissions will be reduced or mitigated to below the District’s significance thresholds. However, the Lead Agency can, and should, make an exception to this determination if special circumstances suggest that the emissions from any permitted or exempt source may cause a significant air quality impact. For example, if a source may emit objectionable odors, then odor impacts on nearby receptors should be considered a potentially significant air quality impact. District implementation of New Source Review (NSR) ensures that there is no net increase in emissions above specified thresholds from New and Modified Stationary Sources for all nonattainment pollutants and their precursors. Furthermore, in general, permitted sources emitting more than the NSR Offset Thresholds for any criteria pollutant must offset all emission increases in excess of the thresholds. However, under certain circumstances, the District may be precluded by state law or other District rule requirements from requiring a stationary source to offset emissions increases.”²⁹

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:

²⁹ Op. Cit. 76.

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- Probability of contracting cancer for the Maximally Exposed Individual³⁰ exceeds 20 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.”³¹

Tulare County Board of Supervisors

“The County continues to evaluate and consider a variety of Federal, State, and SJVAPCD 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.”³²

“**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.”³³

“**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

³⁰ 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.

³¹ Tulare County General Plan 2030 Update. RDEIR. Pages 3.3-15 to 3.3-16.

³² Ibid. 3.3-13.

³³ Op. Cit.

Draft Environmental Impact Report
Draft Cutler-Orosi Community Plan 2021 Update
SCH No. 2021040258

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.”³⁴

The County continues to evaluate and consider Federal, State, and Air District programs in order to respond to the non-attainment designation for state PM10 standards that the SJVAB has received. “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 SJVAPCD 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.”³⁵

Tulare County General Plan Policies

The Tulare County General Plan has a number of policies that apply to projects within the County of Tulare.³⁶ The following General Plan policies apply to the proposed Project:

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 SJVAPCD,

³⁴ Op. Cit.

³⁵ Op. Cit. 3.3-14

³⁶ Tulare County General Plan 2030 Update. Part 1 – Goals and Policies Report.

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 reasonable mitigated when feasible.

AQ-2.1 Transportation Demand Management Programs - The County shall coordinate and provide support for County Transportation Demand Management programs with other public and private agencies, including programs developed by the TCAG and the SJVAPCD.

AQ-2.2 Indirect Source Review - The County shall require major development projects, as defined by the SJVAPCD, to reasonably mitigate air quality impacts associated with the project. The County shall notify developers of SJVAPCD Rule 9510 – Indirect Source Review requirements and work with SJVAPCD to determine mitigations, as feasible, that may include, but are not limited to the following:

1. Providing bicycle access and parking facilities,
2. Increasing density,
3. Encouraging mixed use developments,
4. Providing walkable and pedestrian-oriented neighborhoods,
5. Providing increased access to public transportation,
6. Providing preferential parking for high-occupancy vehicles, car pools, or alternative fuels vehicles, and
7. Establishing telecommuting programs or satellite work centers.

AQ-2.3 Transportation and Air Quality - When developing the regional transportation system, the County shall work with TCAG to comprehensively study methods of transportation which may

contribute to a reduction in air pollution in Tulare County. Some possible alternatives that should be studied are:

1. Commuter trains (Light Rail, Amtrak, or High Speed Rail) connecting with Sacramento, Los Angeles, and San Francisco, with attractive services scheduled up and down the Valley,
2. Public transportation such as buses and light rail, to serve between communities of the Valley, publicly subsidized if feasible,
3. Intermodal public transit such as buses provided with bicycle racks, bicycle parking at bus stations, bus service to train stations and airports, and park and ride facilities, and
4. Community transportation systems supportive of alternative transportation modes, such as cycling or walking trails, with particular attention to high-density areas.

AQ-2.4 Transportation Management Associations - The County shall encourage commercial, retail, and residential developments to participate in or create Transportation Management Associations (TMAs) that may assist in the reduction of pollutants through strategies that support carpooling or other alternative transportation modes.

AQ-2.5 Ridesharing - The County shall continue to encourage ridesharing programs such as employer-based rideshare programs.

AQ-3.1 Location of Support Services - The County shall encourage the location of ancillary employee services (including, but not limited to, child care, restaurants, banking facilities, convenience markets) near major employment centers for the purpose of reducing midday vehicle trips.

AQ-3.2 Infill near Employment - The County shall identify opportunities for infill development projects near employment areas within all unincorporated communities and hamlets to reduce vehicle trips.

AQ-3.3 Street Design - The County shall promote street design that provides an environment which encourages transit use, biking, and pedestrian movements.

AQ-3.4 Landscape - The County shall encourage the use of ecologically based landscape design principles that can improve local air quality by absorbing CO₂, producing oxygen, providing shade that reduces energy required for cooling, and filtering particulates. These principles include, but are not limited to, the incorporation of parks, landscaped medians, and landscaping within development.

AQ-3.5 Alternative Energy Design - The County shall encourage all new development, including rehabilitation, renovation, and redevelopment, to incorporate energy conservation and green building practices to maximum extent feasible. Such practices include, but are not limited to: building orientation and shading, landscaping, and the use of active and passive solar heating and water systems.

AQ-3.6 Mixed Land Uses - The County shall encourage the clustering of land uses that generate high trip volumes, especially when such uses can be mixed with support services and where they can be served by public transportation.

AQ-4.1 Air Pollution Control Technology - The County shall utilize the BACM and RACM as adopted by the County to support SJVAPCD air quality attainment plans to achieve and maintain healthful air quality and high visibility standards. These measures shall be applied to new development approvals and permit modifications as appropriate.

AQ-4.2 Dust Suppression Measures - The County shall require developers to implement dust suppression measures during excavation, grading, and site preparation activities consistent with SJVAPCD Regulation VIII – Fugitive Dust Prohibitions. Techniques may include, but are not limited to, the following:

1. Site watering or application of dust suppressants,
2. Phasing or extension of grading operations,
3. Covering of stockpiles,
4. Suspension of grading activities during high wind periods (typically winds greater than 25 miles per hour), and
5. Re-vegetation of graded areas.

AQ-4.3 Paving or Treatment of Roadways for Reduced Air Emissions - The County shall require that all new roads be paved or treated to reduce dust generation where feasible as required by SJVAPCD Regulation VIII, Rule 8061- Paved and Unpaved Roads. For new projects with unpaved roads, funding for roadway maintenance shall be adequately addressed and secured.

AQ-4.4 Wood Burning Devices - The County shall require the use of natural gas where service is available or the installation of low-emission, EPA-certified fireplace inserts in all open hearth fireplaces in new homes as required under the SJVAPCD Rule 4901 – Wood Burning Fireplaces and Wood Burning Heaters. The County shall promote the use of natural gas over wood products in space heating devices and fireplaces in all existing and new homes.

AQ-4.5 Public Awareness - The County shall promote public awareness of the seriousness and extent of the existing air quality problems.

AQ-4.6 Asbestos Airborne Toxic Control and Dust Protection - Asbestos is of concern to Tulare County because it occurs naturally in surface deposits of several types of ultramafic materials (materials that contain magnesium and iron and a very small amount of silica). Asbestos emissions can result from the sale or use of asbestos-containing materials, road surfacing with such materials, grading activities, and surface mining.

LU-1.1 Smart Growth and Healthy Communities - The County shall promote the principles of smart growth and healthy communities in UDBs and HDBs, including: 1) creating walkable

neighborhoods; 2) providing a mix of residential densities; 3) creating a strong sense of place; 4) mixing land uses; 5) directing growth toward existing communities; 6) building compactly; 7) discouraging sprawl; 8) encouraging infill; 9) preserving open space; 10) creating a range of housing opportunities and choices; 11) utilizing planned community zoning to provide for the orderly pre-planning and long term development of large tracks of land which may contain a variety of land uses, but are under unified ownership or development control; and 12) encouraging connectivity between new and existing development.

LU-1.2 Innovative Development - The County shall promote flexibility and innovation through the use of planned unit developments, development agreements, specific plans, Mixed Use projects, and other innovative development and planning techniques.

LU-1.3 Prevent Incompatible Uses - The County shall discourage the intrusion into existing urban areas of new incompatible land uses that produce significant noise, odors, or fumes.

LU-1.4 Compact Development - The County shall actively support the development of compact mixed use projects that reduce travel distances.

LU-1.8 Encourage Infill Development - The County shall encourage and provide incentives for infill development in order to maximize the use of land within existing urban areas, minimize the conversion of existing agricultural land, and minimize environmental concerns associated with new development.

LU-3.2 Cluster Development - The County shall encourage proposed residential development to be clustered onto portions of the site that are more suitable to accommodating the development, and shall require access either directly onto a public road or via a privately-maintained road designed to meet County road standards.

LU-3.3 High-Density Residential Locations - The County shall encourage high-density residential development (greater than 14 dwelling units per gross acre) to locate along collector roadways and transit routes, and near public facilities (e.g., schools, parks), shopping, recreation, and entertainment.

TC-5.1 Bicycle/Pedestrian Trail System - The County shall coordinate with TCAG and other agencies to develop a Countywide integrated multi-purpose trail system that provides a linked network with access to recreational, cultural, and employment facilities, as well as offering a recreational experience apart from that available at neighborhood and community parks.

TC-5.2 Consider Non-Motorized Modes in Planning and Development - The County shall consider incorporating facilities for non-motorized users, such as bike routes, sidewalks, and trails when constructing or improving transportation facilities and when reviewing new development proposals. For developments with 50 or more dwelling units or non-residential projects with an equivalent travel demand, the feasibility of such facilities shall be evaluated.

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 Notice of Preparation (NOP) of the Draft Environmental Impact Report (DEIR) for the Cutler-Orosi Community Plan Update was released for comment between April 9 through May 9, 2021. At that time no specific development projects had been identified within the Community Plan Update Planning Area. An Air Quality and Greenhouse Gas Assessment Technical Memorandum (AQ/GHG Memorandum, included in Appendix “A” of this Draft EIR) for the Community Plan Update was prepared in September 2021. Estimates of future development were based on the County’s 1.3% annual growth rate consistent with the General Plan. The future development mix was assumed to be similar to what was already present in the communities of Cutler-Orosi.

The land use growth assumptions and the associated emissions evaluated in the AQ/GHG Memorandum are consistent with the proposed Community Plan Update. As previously noted, there are no development projects proposed with the Community Plan Update; however, to ensure potential impacts from future buildout within the scope of the Community Plan Update are adequately evaluated it was determined that emissions analysis was needed for anticipated future land use developments.

The Complete Streets and Road Maintenance Programs are components of the Community Plan Update. As such, it was determined that analysis was required to evaluate potential impacts resulting from implementation of the Complete Streets and Road Maintenance Programs. To ensure that implementation of the Complete Streets and Road Maintenance Programs are adequately evaluated and addressed in the DEIR, the emissions associated with these programs have been quantified and evaluated in the AQ/GHG Memorandum.

Contribution to Air Quality Violations

The CEQA Guidelines indicate that a significant impact would occur if the proposed project would conflict with or obstruct implementation of the applicable Air Quality Plan (AQP). AQPs are plans for reaching attainment of air quality standards. The assumptions, inputs, and control measures are analyzed to determine if the SJVAB can reach attainment for the ambient air quality standards. In order to show attainment of the standards, the Air District analyzes the growth projections in the San Joaquin Valley, contributing factors in air pollutant emissions and formations, and existing and future emissions controls. The Air District then formulates a control strategy to reach attainment.

The Air District’s GAMAQI provides the following guidance on analyzing conformity with the applicable AQPs, “As presented in Chapter 8 [of the GAMAQI], the District has established thresholds of significance for criteria pollutant emissions, which are based on District New Source Review (NSR) offset requirements for stationary sources. Stationary sources in the District are subject to some of the toughest regulatory requirements in the nation. Emission reductions achieved through implementation of District offset requirements are a major component of the District’s air quality plans. Thus, projects with emission below the thresholds of significance for criteria pollutants would be determined to "Not conflict or obstruct implementation of the District’s air quality plan.”³⁷

Construction-related and operations-related emissions associated with the projected buildout of the Cutler-Orosi Community Plan Update Planning Area, including the Complete Streets and Road Maintenance Programs as well as anticipated future development projects, are identified in **Table 3.3-5** and **Table 3.3-6**, respectively.

Table 3.3-5. Total Annual Average Construction-Related Emissions (Development Projects Plus Road Improvements)						
	ROG	NOx	CO	SOx	PM ₁₀	PM _{2.5}
Projected Future Developments						
Total Construction (2022-2037)	36.9209	53.3535	56.3027	0.2152	12.4848	4.4179
<i>Average Annual Emissions (2022-2030)</i>	4.6151	6.6692	7.0378	0.0269	1.5606	0.5522
Road Improvements						
Total Construction (2022-2037)	0.8097	4.1262	3.5479	0.0074	0.8188	0.4718
<i>Average Annual Emissions (2022-2030)</i>	0.1012	0.5158	0.4435	0.0009	0.1023	0.0590
Total Average Annual Construction Emissions	4.7163	7.1850	7.4813	0.0278	1.7829	0.6694
Significance Thresholds	10	10	100	27	15	15
Exceed Threshold – Significant?	No	No	No	No	No	No
<i>Source: See Air Quality and Greenhouse Gas Analyses Technical Memorandum prepared September 2021.</i>						

As demonstrated in **Table 3.3-5**, the average annual construction-related emission resulting from implementation of the Community Plan Update, including the Complete Streets and Road Maintenance Programs and projected future developments, do not exceed the Air District’s thresholds of significance. Therefore, construction-related emissions resulting from the implementation of the Community Plan Update will not cause a significant contribution to air quality violations.

³⁷ Air District. GAMAQI. Page 65.

Table 3.3-6. Total Annual Operations-Related Emissions at 2030 Buildout (Development Projects Only)						
	ROG	NO_x	CO	SO_x	PM₁₀	PM_{2.5}
Total Operational Emissions	14.5037	34.6950	58.8887	0.2170	15.9359	4.4820
Total Annual Emissions (through 2030)	1.8130	4.3369	7.3611	0.0271	1.9920	0.5603
Significance Thresholds	10	10	100	27	15	15
Exceed Threshold – Significant?	No	No	No	No	No	No
<i>Source: See Air Quality and Greenhouse Gas Analyses Technical Memorandum prepared September 2021.</i>						

As the Complete Streets and Road Maintenance Programs are road improvement projects, their implementation includes construction-related emissions only and will not add to the operations-related emissions provided in the AQ/GHG Memorandum. **Table 3.3-6** presents the operations-related emissions resulting from projected future development through Year 2030, as provided in the AQ/GHG Memo. As demonstrated in **Table 3.3-6**, implementation of the Community Plan Update, will not exceed the Air District’s thresholds of significance for operations. Therefore, implementation of the Community Plan Update will not cause a significant contribution to air quality violations. As such, ***Less Than Significant Project-specific Impacts*** related to this Checklist Item will occur.

Consistency with Assumptions in AQPs

The primary way of determining consistency with the AQP’s assumptions is determining consistency with the applicable General Plan to ensure that a project’s population density and land uses are consistent with the growth assumptions used in the AQPs for the SJVAB. Projects requiring a General Plan Amendment might not be accounted for in the AQP growth forecast; however, the addition of vacant or agricultural land to the existing UDB land area, and thus to the AQP’s emission inventory, may not result in an increase in the actual amount of land developed by the AQP’s attainment year.

The annual growth forecasts for Tulare County included in the applicable AQPs are:³⁸

- 2004 Extreme Ozone Attainment Demonstration Plan – 1.87%
- 2007 Ozone Plan – 1.94%
- 2013 Plan for the Revoked 1-Hour Ozone Standard – 1.92%
- 2016 Plan for the 2008 8-Hour Ozone Standard – 1.44%
- 2008 PM2.5 Plan – 3.3%
- 2015 Plan for the 1997 PM2.5 Standard – 1.92%
- 2016 Moderate Area Plan for the 2012 PM2.5 Standard – 1.44%
- 2018 Plan for the 1997, 2006, and 2012 PM2.5 Standards – 1.02%

³⁸ Applicable Air Quality Plans can be found on the Air District website at: http://valleyair.org/Air_Quality_Plans/air-quality-plans.htm.

The proposed UDB expansion would add approximately ± 712 acres to the existing Cutler-Orosi UDB. The expansion to the UDB has been proposed to provide location flexibility for developers to respond to local market demands to accommodate projected future growth through the Year 2030 Planning horizon. The addition of the ± 712 -acre land area to the UDB would not result in an increase in the total amount (i.e., acreage) of land actually developed by the AQP's attainment year. The additional land area is necessary to place the UDB boundary lines along logical alignments, such as property lines and roadways. The UDB expansion is an administrative reallocation of land intended to provide opportunities to stimulate economic development to meet the needs of the existing and future community and nearby residents. As no specific development projects are currently proposed and an unknown number of proposals may occur within the UDB during the lifetime of the Community Plan Update, the proposed Community Plan is intended only to direct the density, intensity, and types of growth within the community. Projected growth is consistent with the County's General Plan at an annual growth rate of 1.3% per year. The County's growth rate is lower than the growth rates applied in the applicable AQPs; therefore, the emissions resulting from the buildout of the Community Plan, including the UDB expansion area, has been included in the AQPs forecasts. As such, the project would not conflict with the assumptions made in the AQPs. ***Less Than Significant Project-specific Impacts*** related to this Checklist Item will occur.

Control Measures

The Air District's AQPs contain a number of control measures which are enforceable requirements through the adoption of Air District rules and regulations. Future development projects, as well as construction activities associated with the Complete Streets and Road Maintenance Programs, will be required to comply with all applicable Air District rules and regulations, including Regulation VIII (PM10 Prohibitions) and Rule 9510 (Indirect Source Review). Furthermore, the Tulare County General Plan includes Policies AQ-1.1, AQ-1.2, AQ-2.1 through AQ-2.3, and AQ-4.1 through AQ-4.6, which were specifically designed to ensure cooperation with the Air District and TCAG in effective planning of the County's future growth and development, and to ensure compliance with Air District rules and regulations included in the AQPs. These policies would be implemented for future development projects within the Community Plan Update Planning Area. Therefore, buildout of the Community Plan would not conflict with or obstruct implementation of the applicable AQPs.

Other than the Complete Streets and Road Maintenance Programs, there are no specific development projects (such as residential, commercial, or industrial uses) associated with the Cutler-Orosi Community Plan Update. The Community Plan Update establishes the planning guidelines for the anticipated growth of the community through the horizon Year 2030. As previously discussed, the Community Plan Update growth projections and emissions inventory are consistent with the applicable AQPs. Future developments will comply with all applicable General Plan policies, Cutler-Orosi Community Plan policies, and Air District rules and regulations. Therefore, buildout of the Community Plan Update would not conflict with or obstruct implementation of the applicable AQPs. As such, ***Less Than Significant Project-specific Impacts*** related to this Checklist Item will occur.

Cumulative Impact Analysis: *Less Than Significant Impact*

The geographic area of this cumulative analysis is San Joaquin Air Basin. Annual construction-related emissions do not exceed the Air District's annual significance thresholds for construction, nor do the annual operation-related emissions exceed the Air District's annual significance thresholds for operations. Buildout of the Community Plan Update at an annual growth rate of 1.3% is lower than, and therefore consistent with, the growth forecasts included in the applicable Air District AQPs. Future developments will be required to implement all applicable Tulare County General Plan policies, Cutler-Orosi Community Plan policies, and all applicable Air District rules and regulations. Therefore, *Less Than Significant Cumulative Impacts* related to this Checklist Item will occur.

Mitigation Measure(s): *None Required.*

Conclusion: *Less Than Significant Impact*

As noted earlier, the Cutler-Orosi Community Plan Update is a planning document intended to direct the density, intensity, and types of growth within the community. Projected growth of the community is below, and therefore consistent with, the assumptions and emissions inventories of the applicable AQPs. Future developments will be evaluated on a project-by-project basis. Consultation with the Air District, and implementation of County policies and compliance with Air District rules and regulations would reduce potential impacts of future development. Therefore, *Less Than Significant Project-specific and Cumulative Impacts* related to this Checklist Item will occur.

b) 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?

Project Impact Analysis: *Less Than Significant Impact*

As discussed in the AQ/GHG Memorandum, implementation of the Community Plan Update would have a cumulatively significant impact if: (1) emissions of nonattainment pollutants exceed the Air District's project-level significance thresholds; (2) the Community Plan is not consistent with the applicable AQPs; or (3) implementation of the Community Plan would result in significant cumulative health effects.

Emissions Analysis

The SJVAB is in nonattainment for federal and state ozone standards, nonattainment for federal and state PM_{2.5} standards, and nonattainment for state PM₁₀ standards. The Air District's significance thresholds for ROG and NO_x (ozone precursors) and for PM₁₀ and PM_{2.5} are presented in **Table 3.3-4**. Operations-related emissions that exceed these significance thresholds would be considered significant at the project level, as well as cumulatively significant. Operations-related emissions anticipated by the buildout of the Community Plan

are presented in **Table 3.3-6**. As discussed in Checklist Item a), operations-related emissions at full buildout would not exceed the Air District's annual thresholds of significance. As such, the implementation and buildout of the Community Plan would be considered to have ***Less Than Significant Cumulative Impacts*** related to this Checklist Item.

Consistency with AQPs

As discussed in the AQ/GHG Memorandum and Checklist Item a) above, the Community Plan Update growth projections and emissions inventory are consistent with the assumptions and emissions inventories in the applicable AQPs. Future developments will comply with all applicable General Plan policies, Cutler-Orosi Community Plan policies, and all applicable Air District rules and regulations. Therefore, buildout of the Community Plan Update Planning Area would not conflict with or obstruct implementation of the applicable AQPs. As such, the Community Plan Update would have a ***Less Than Significant Cumulative Impact*** related to this Checklist Item.

Health Impacts

As discussed in the AQA Report, significance thresholds for ROG and NO_x are not designed to be indicators of health effects from ROG and NO_x individually. However, it is possible that someone could infer that a project could result in a cumulative contribution to the existing health impacts of ozone and/or secondary particulate matter if the thresholds are exceeded. The impacts are not considered a project-specific impact because project emissions of ROG and NO_x emissions from a single project would not result in a measurable change in ozone or particulate concentrations; however, the combined effects of many projects dispersed throughout the region could potentially increase concentrations or slow progress toward achieving the air quality standards. The combination of project-related emissions with pollutants from other sources within the SJVAB could cumulatively contribute to a significant impact.

As presented in **Table 3.3-6**, operations-related criteria pollutant emissions at projected buildout would not exceed the Air District's significance thresholds and would therefore, not exceed AAQS that would result in significant health risks. Furthermore, as previously discussed in Checklist Item a), the County will implement all applicable General Plan and Cutler-Orosi Community Plan policies and will consult with the Air District on a project-by-project basis to identify and mitigate, if necessary, any potential impacts on air quality. Therefore, the Community Plan Update would not significantly contribute to violation of any AAQS or increased health risks. The Community Plan Update would have a ***Less Than Significant Cumulative Impact*** related to this Checklist Item.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

As previously noted, criteria pollutant emissions resulting from implementation of the Community Plan fall below the Air District's annual significance thresholds for both construction-related and operations-related emissions. Future developments will be required to implement all applicable Tulare County General Plan and Cutler-Orosi Community Plan policies and to comply with all Air District rules and regulations. Therefore, the Community Plan Update would have a ***Less Than Significant Cumulative Impact*** related to this Checklist Item.

c) Expose sensitive receptors to substantial pollutant concentrations?

Project Impact Analysis: ***Less Than Significant Impact***

As discussed in the AQ/GHG Memorandum, there is potential for exposure to pollutants resulting from the implementation of the Community Plan Update. Potential health risks can arise from exposure to a variety of sources including fugitive dust emissions during construction-related activities and emissions of hazardous air pollutant (HAPs)/toxic air contaminants (TACs) during both construction-related and operations-related activities.

HAP/TAC Emissions

As discussed in the AQ/GHG Memorandum, potential health risks from HAPs/TACs could occur during construction-related and operations-related activities. Construction-related activities are short-term and would cease upon completion of a project. Operations-related activities occur throughout the life of a project. Other than the four previously approved development projects, which included project-specific review, and the Complete Streets and Road Maintenance Programs, there are no other specific development projects proposed within the Community Plan Update Planning Area that would trigger a health risk analysis at this time. As specific land use developments, their locations, and timing is not known, localized impacts from HAP/TAC emissions cannot be determined at this time and to do so would be speculative. The Tulare County General Plan includes Policies AQ-1.1 through AQ-1.4, AQ-3.1 through AQ-3.6, LU-1.1 through LU-1.4, and LU-1.8, which were specifically designed to address potential impacts from siting incompatible uses in close proximity to each other. In order to ensure that development within the Community Plan Update Planning Area does not expose sensitive receptors to significant impacts from HAP/TAC emissions, Tulare County will review individual projects on a project-by-project basis. Development projects would implement all applicable General Plan and Cutler-Orosi Community Plan policies that would reduce potential risks from inappropriate siting of incompatible uses. The County would also use the Air Resources Board (ARB) guidance document *Air Quality Land Use Handbook* to determine if ARB-recommended screening criteria are exceeded and will follow applicable recommendations in the California Air Pollution Control Officers Association (CAPCOA) guidance document *Health Risk Assessments for Proposed Land Use Projects*. The County will also consult with the Air District on a project-by-project basis during the CEQA process to determine whether additional health risk screening or modeling would be required to identify, and mitigate, if necessary, potentially significant health risk impacts. The Air District would perform a Risk Management Review (RMR) for stationary source projects subject to

the Air District's permitting process; permits would be issued only if it can be demonstrated that the facility would not have a significant health risk. As such, ***Less Than Significant Project-specific Impacts*** related to this Checklist Item will occur.

Valley Fever

The SJVAB is considered an endemic area for valley fever *Coccidioides immitis* (*C. immitis*). Distribution of valley fever is not uniform within endemic areas and are dependent upon physical, chemical, and biological conditions of the soils. In areas with soils that contain *C. immitis* spores, exposure to valley fever occurs when earthmoving construction-related activities, such as grading and trenching, cause windblown dust. As discussed in the AQA Report, the Cutler-Orosi Community Plan Update Planning Area is in an area with a long history of cultivation where fertilizers have been applied, and soil moisture has been maintained through irrigation. These factors would lead to a low probability of having *C. immitis* growth sites and exposure from disturbed soil. However, construction-related activities associated with the development of the Community Plan Update Planning Area would generate fugitive dust that could contain *C. immitis* spores. The Tulare County General Plan includes Policies AQ-4.2 and AQ-1.3, which were specifically designed to address impacts from the generation of dust emitted into the air, and will be implemented for future development projects. Future development projects are subject to Air District Regulation VIII (PM10 Prohibition) requirements. Road improvements and construction of future development projects would incorporate design features and/or mitigation measures (such as compliance with the Air District's Regulation VIII, Dust Control Plans, or other control techniques) that minimize the generation of fugitive dust during construction-related activities. Therefore, implementation of General Plan and Cutler-Orosi Community Plan policies and compliance with applicable Air District rules and regulations would reduce the chance of exposure to valley fever during construction-related activities. As such, ***Less Than Significant Project-specific Impacts*** related to this Checklist Item will occur.

Asbestos

In areas containing naturally occurring asbestos, earthmoving construction-related activities, such as grading and trenching, could expose receptors to windblown asbestos. Demolition and remodeling activities could expose receptors through accidental release of asbestos-containing building materials. As discussed in the AQA Report, according to the United States Geological Soil Survey map of areas where naturally occurring asbestos in California are likely to occur, there are no such areas within the Cutler-Orosi Community Plan Update Planning Area. Therefore, construction-related activities during development of the Community Plan Update is not anticipated to expose receptors to naturally occurring asbestos.

Future development and road improvement projects would not be constructed with materials containing asbestos and as such, would pose no threat of exposure. However, some of the older housing units and non-residential facilities within the community could have asbestos containing materials and could expose residents if these buildings were to be remodeled or demolished. Remodeling and demolition projects are subject to Air District Rule 4002

(National Emission Standards for Hazardous Air Pollutants, or NESHAPs) and require notification to the Air District if the disturbed areas exceed certain parameters and require special handling and disposal of asbestos-containing materials. Compliance with California and County building codes and compliance with Air District regulation would reduce risks of exposure to asbestos. As such, ***Less Than Significant Project-specific Impacts*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is SJVAB. The Cutler-Orosi Community Plan Update is a planning document intended to direct the density, intensity, and types of growth within the community. Future developments will be evaluated on a project-by-project basis and will not expose the public to substantial pollutant concentrations. The Tulare County General Plan includes Policies AQ-1.1 through AQ-1.4, AQ-3.1 through AQ-3.6, LU-1.1 through LU-1.4, and LU-1.8, which were specifically designed to address potential impacts from siting incompatible uses in close proximity to each other. These policies would be implemented for future development projects. The County will consult with the Air District on a project-by-project to determine whether screening or modeling would be required to identify potential health risks. Compliance with applicable District rules and regulations would reduce potential impacts from exposure to pollutants. As such, the development of the Community Plan Update Planning Area would not expose the public to substantial pollutant concentrations. Therefore, a ***Less Than Significant Cumulative Impact*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

The Cutler-Orosi Community Plan Update is a planning document intended to direct the density, intensity, and types of growth within the community. Implementation of General Plan and Community Plan policies and compliance with applicable Air District rules and regulations designed to address potential impacts associated with the inappropriate siting of incompatible uses would reduce potential impacts. To ensure that sensitive receptors would not be exposed to substantial pollutant concentrations Tulare County will consult with the Air District on a project-by-project basis to identify and mitigate, if necessary, potential health risks. Therefore, ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item will occur.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Project - Impact Analysis: ***Less Than Significant Impact***

Odor impacts on residential areas and other sensitive receptors, such as hospitals, day-care centers, schools, etc., warrant the closest scrutiny, but consideration should also be given to

other land uses where people may congregate, such as recreational facilities, worksites, and commercial areas.

Two situations create a potential for odor impact. The first occurs when a new odor source is located near an existing sensitive receptor. The second occurs when a new sensitive receptor locates near an existing source of odor. According to the Air District's GAMAQI, analysis of potential odor impacts should be conducted for either of the following two situations:

- **Generators:** projects that would potentially generate odorous emissions proposed to locate near existing sensitive receptors or other land uses where people may congregate, and
- **Receivers:** residential or other sensitive receptor projects or other projects built for the intent of attracting people locating near existing odor sources.

For a project locating near an existing source of odors, the project should be identified as having a potentially significant odor impact if it is proposed for a site that is closer to an existing odor source than any location where there have been:

- More than one *confirmed* complaint per year averaged over a three-year period, or
- Three *unconfirmed* complaints per year averaged over a three-year period.

Potential odor sources from construction-related activities associated with future development projects and the Complete Streets and Road Maintenance Programs could originate from diesel exhaust from construction equipment and fumes from architectural coating and paving operations. However, these odors, if perceptible, would dissipate rapidly as they mix with the surrounding air and would be of very limited duration. As such, objectionable odors during construction would not affect a substantial number of people in the area.

Potential odor sources associated with future development projects could originate from diesel exhaust from delivery vehicles (e.g., heavy-duty trucks) and manufacturing processes once a projects becomes operational. However, these odors, if perceptible, would dissipate rapidly as they mix with the surrounding air and would be of very limited duration. As such, objectionable odors during operations would not affect a substantial number of people in the area.

Other than the Complete Streets and Road Maintenance Programs, there are no other specific development projects proposed within the Community Plan Update Planning Area that would trigger an odor assessment at this time. The Tulare County General Plan includes Policies AQ-1.1 through AQ-1.4, AQ-3.1 through AQ-3.6, LU-1.1 through LU-1.4, and LU-1.8, which were specifically designed to address potential impacts from siting incompatible uses in close proximity to each other. These policies would be implemented for future development projects. As these policies encourage infill developments and project design to reduce air impacts, future developments would be encouraged to be sited in areas distanced sufficiently to reduce potential impacts from existing sources. Furthermore, all projects (with the exception of agricultural operations) are subject to Air District Rule 4102 (Nuisance). To ensure potential impacts are addressed, if future developments were to result in sensitive receptors being

Draft Environmental Impact Report
Draft Cutler-Orosi Community Plan 2021 Update
SCH No. 2021040258

located within the Air District's recommended screening distances as identified in Table 6 of the GAMAQI, a more detailed analysis, would be recommended.³⁹ The detailed odor analysis would involve contacting the Air District's Compliance Division for information regarding odor complaints and evaluation of potential impacts taking into consideration the Air District's complaint record and the source(s) of the odors.

Implementation of the applicable General Plan and Community Plan policies and compliance with applicable District rules and regulations specifically designed to address air quality and odor impacts, would reduce potential odor impacts. Future development projects would be evaluated on a project-by-project basis. If a future development project may be a source of odors it will, if technically possible, mitigate any potential nuisance impacts. Therefore, ***Less Than Significant Project-specific Impacts*** related to this Checklist Item will occur.

Cumulative Impact Analysis: *Less Than Significant Impact*

The geographic area of this cumulative analysis is the SJVAB. The Cutler-Orosi Community Plan Update is a planning document intended to direct the density, intensity, and types of growth within the Cutler-Orosi UDB. Future developments will be evaluated on a project-by-project basis to identify potential odor sources in close proximity to the proposed development. New development projects are not anticipated to create new permanent sources of odor, nor are they anticipated to expose substantial numbers of people to existing sources of potential nuisance odors. Therefore, ***Less Than Significant Cumulate Impacts*** related to this Checklist Item will occur.

Mitigation Measure(s): *None Required.*

Conclusion: *Less Than Significant Impact*

Implementation of County policies and Air District regulation designed to address potential land use conflicts and nuisance odor issues associated with the inappropriate siting of incompatible uses would reduce potential odor impacts. Future development projects would be evaluated on a project-by-project basis and would mitigate, if necessary and technically possible, any nuisance impacts. Therefore, ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item will occur.

³⁹ Table 6 of the GAMAQI is located on page 103 or can be found on the Air District website at <http://www.valleyair.org/transportation/GAMAQI-2015/GAMAQI-Criteria-Pollutant-Thresholds-of-Odors.pdf>.

DEFINITIONS

Definitions

Air Quality Plan (AQP) - An air quality plan is a plan for reaching attainment of an air quality standard. The assumptions, inputs, and control measures are analyzed to determine if the air basin can reach attainment for the ambient air quality standard for the subject pollutant. In order to show attainment of the standard, the Air District analyzes the growth projections in the valley, contributing factors in air pollutant emissions and formations, and existing and future emissions controls. The Air District then formulates a control strategy to reach attainment.

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.

Best Available Control Measures (BACM) - A set of programs that identify and implement potentially best available control measures affecting local air quality issues.

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).

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 ($\mu\text{g}/\text{m}^3$) [measured as a quarterly average].

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 (PM_{2.5}) - The federal government has recently added standards for smaller dust particulates. PM_{2.5} 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 has 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 PM_{2.5} and PM₁₀ is comprised primarily of fugitive dust. The particles between PM₁₀ and PM_{2.5} 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. This is 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.

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 (including San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare, and Kern Counties).

San Joaquin Valley Unified Air Pollution Control District (Air District) - The Air District is the regulatory agency responsible for developing air quality plans (AQPs), 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 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 (AQPs).

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.

Abbreviations and Acronyms

Air District San Joaquin Valley Unified Air Pollution Control District

Draft Environmental Impact Report
Draft Cutler-Orosi Community Plan 2021 Update
SCH No. 2021040258

ARB	California Air Resources Board
BACM	Best Available Control Measures
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CARB	California Air Resources Board
CH ₄	Methane
CO	Carbon Monoxide
EPA	Environmental Protection Agency
GAMAQI	Guidance for Assessing and Mitigating Air Quality Impacts
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
O ₃	Ozone
Pb	Lead
PM _{2.5}	Particulate Matter 2.5 Micrometers
PM ₁₀	Particulate Matter 10 Micrometers
RACM	Reasonable Available Control Measures
ROG	Reactive Organic Gases
SIP	State Implementation Plan
SO ₂	Sulfur Dioxide
SJVAPCD	San Joaquin Valley Unified Air Pollution Control District
SJVAB	San Joaquin Valley Air Basin
TAC	Toxic Air Contaminants
TCAG	Tulare County Association of Governments
TCM	Transportation Control Measures
VOC	Volatile Organic Compound

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SCH No. 2021040258

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