

### 6.3.1 OVERVIEW AND SUMMARY

*Development of the proposed project would result in air pollutant emissions during construction and operation. The proposed project would result in significant but mitigable impacts during construction for reactive organic gases (ROC), oxides of nitrogen (NO<sub>x</sub>), carbon monoxide (CO), and oxides of sulfur (SO<sub>x</sub>), respirable particulate matter (PM<sub>10</sub>), and fine particulate matter (PM<sub>2.5</sub>). Implementation of the operational features and mitigation measures described in this section would reduce impacts to a less than significant level. The project would result in less than significant health impacts to nearby sensitive receptors and would not expose sensitive receptors to substantial sources of pollutants or odors. Project implementation would generate cumulative impacts for ROC and NO<sub>x</sub>; however, these impacts would be mitigated to a less than significant level.*

### 6.3.2 LITERATURE AND DATA REVIEW

#### Data Sources

The following sources were used and provided information contained within this section:

- DKA Planning, St. John's Seminary Air Quality and Greenhouse Gases, CalEEMod v2013.2.2, October 2016
- California Environmental Protection Agency, "Area Designation Maps," <https://www.arb.ca.gov/desig/adm/adm.htm>. Retrieved October 11, 2016.
- South Coast Air Quality Management District, "California Emissions Estimator Model," <http://www.caleemod.com/>. Retrieved October 10, 2016.
- United States Environmental Protection Agency, "EPA Region 9 Air Quality Maps and Geographic Information," <https://www3.epa.gov/region9/air/maps/index.html#cal>. Retrieved October 11, 2016.
- Ventura County Air Pollution Control District, *Ventura County Air Quality Assessment Guidelines*, County of Ventura, October 2003.

### 6.3.3 METHODOLOGY

The methodology used to evaluate the air quality impacts associated with construction and operation of the proposed project is based on the VCAPCD *Ventura County Air Quality Assessment Guidelines*<sup>1</sup>, the California Emissions Estimator Model (CalEEMod), and information provided in the CalEEMod User's

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<sup>1</sup> Ventura County Air Pollution Control District, *Air Quality Assessment Guidelines*, (2003). This document may be downloaded from the VCAPCD website: [http://www.vcapcd.org/environmental\\_review.htm](http://www.vcapcd.org/environmental_review.htm).

Guide.<sup>2</sup> Air quality impacts are also estimated based on information and estimated activity levels of the proposed project's construction and operation. Additionally, some elements of this analysis are based on data provided in other sections of this EIR; for example, trip generation rates are based on the traffic impact analysis prepared for this project (refer to **Section 6.16, Traffic and Transportation**).

A screening level health risk assessment was prepared in accordance with the Ventura County Air Pollution Control District's Guidelines. This assessed the potential health risks from construction related emissions and is available in **Appendix 6.3**.

#### **6.3.4 APPLICABLE REGULATIONS**

Air quality within the South Central Coast Air Basin (SCCAB) is addressed through the efforts of various federal, state, regional, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through legislation, regulations, planning, policy-making, education, and a variety of other programs. The agencies primarily responsible for improving the air quality within the SCCAB (Ventura County Area) include the United States Environmental Protection Agency (US EPA), California Air Resources Board (CARB), Southern California Association of Governments (SCAG), VCAPCD, and the City of Camarillo.

### **Federal Regulations**

#### ***US Environmental Protection Agency***

The US EPA is responsible for enforcing the federal Clean Air Act (CAA) and the National Ambient Air Quality Standards (NAAQS). These standards identify levels of air quality for seven criteria pollutants: ozone (O<sub>3</sub>), carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), respirable particulate matter (PM<sub>10</sub>), fine particulate matter (PM<sub>2.5</sub>), and lead. The prescribed levels are considered to be the maximum levels of ambient (background) air pollutants determined to be safe (with an adequate margin of safety) for the public health and welfare.

- Carbon Monoxide (CO) is a colorless and odorless gas formed by the incomplete combustion of fossil fuels. It is emitted almost exclusively from motor vehicles, power plants, refineries, industrial boilers, ships, aircraft, and trains. In urban areas, automobile exhaust accounts for the majority of emissions. CO is a non-reactive air pollutant that dissipates relatively quickly, so ambient concentrations generally follow the spatial and temporal distributions of vehicular traffic. Concentrations are influenced by local meteorological conditions, primarily wind speed,

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<sup>2</sup> South Coast Air Quality Management District, *California Emissions Estimator Model User's Guide*, (2011). This document may be downloaded from the following website: <http://www.caleemod.com>

topography, and atmospheric stability. CO from motor vehicle exhaust can become locally concentrated when surface-based temperature inversions are combined with calm atmospheric conditions, a typical situation at dusk in urban areas between November and February. Inversions are an atmospheric condition in which a layer of warm air traps cooler air near the surface of the earth, preventing the normal rising of surface air. The highest concentrations occur during the colder months of the year when inversion conditions are more frequent. CO is a health concern because it competes with oxygen, often replacing it in the blood and reducing the blood's ability to transport oxygen to vital organs. Excess CO exposure can lead to dizziness, fatigue, and impair central nervous system functions.

- Ozone (O<sub>3</sub>) is a colorless gas that is formed in the atmosphere when reactive organic compounds (ROC) and nitrogen oxides (NO<sub>x</sub>) react in the presence of ultraviolet sunlight. O<sub>3</sub> is not a primary pollutant; rather, it is a secondary pollutant formed by complex interactions of these two pollutants directly emitted into the atmosphere. The primary sources of ROC and NO<sub>x</sub>, the components of O<sub>3</sub>, are automobile exhaust and industrial sources. Meteorology and terrain play major roles in O<sub>3</sub> formation. Ideal conditions occur during summer and early autumn, on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. The greatest source of smog-producing gases is the automobile. Short-term exposure (lasting for a few hours) to O<sub>3</sub> at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes.
- Nitrogen Dioxide (NO<sub>2</sub>) like O<sub>3</sub>, is not directly emitted into the atmosphere but is formed by an atmospheric chemical reaction between nitric oxide (NO) and atmospheric oxygen. NO and NO<sub>2</sub> are collectively referred to as NO<sub>x</sub> and are major contributors to O<sub>3</sub> formation. NO<sub>2</sub> also contributes to the formation of PM<sub>10</sub>. High concentrations of NO<sub>2</sub> can cause breathing difficulties and result in a brownish-red cast to the atmosphere with reduced visibility. There is some indication of a relationship between NO<sub>2</sub> and chronic pulmonary fibrosis. Some increase of bronchitis in children (2-3 years old) has been observed at concentrations below 0.3 parts per million (ppm).
- Sulfur Dioxide (SO<sub>2</sub>) is a colorless, pungent gas formed primarily by the combustion of sulfur-containing fossil fuels. Main sources of SO<sub>2</sub> are coal and oil used in power plants and industries. Generally, the highest levels of SO<sub>2</sub> are found near large industrial complexes. In recent years, SO<sub>2</sub> concentrations have been reduced by the increasingly stringent controls placed on stationary source emissions of SO<sub>2</sub> and limits on the sulfur content of fuels. SO<sub>2</sub> is an irritant gas that attacks

the throat and lungs. It can cause acute respiratory symptoms and diminished ventilator function in children. SO<sub>2</sub> can also yellow plant leaves and erode iron and steel.

- Particulate Matter (PM) consists of small liquid and solid particles floating in the air, including smoke, soot, dust, salts, acids, and metals and can form when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. Fine particulate matter, or PM<sub>2.5</sub>, is roughly 1/28 the diameter of a human hair and results from fuel combustion (e.g. motor vehicles, power generation, industrial facilities), residential fireplaces, and wood stoves. In addition, PM<sub>2.5</sub> can be formed in the atmosphere from gases such as SO<sub>2</sub>, NO<sub>x</sub>, and ROC. Inhalable particulate matter, or PM<sub>10</sub>, is about 1/7 the thickness of a human hair. Major sources of PM<sub>10</sub> include crushing or grinding operations; dust stirred up by vehicles traveling on roads; wood burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions.

PM<sub>2.5</sub> and PM<sub>10</sub> pose a greater health risk than larger-size particles. When inhaled, they can penetrate the human respiratory system's natural defenses and damage the respiratory tract. PM<sub>2.5</sub> and PM<sub>10</sub> can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. Very small particles of substances, such as lead, sulfates, and nitrates can cause lung damage directly. These substances can be absorbed into the blood stream and cause damage elsewhere in the body. These substances can transport absorbed gases, such as chlorides or ammonium, into the lungs and cause injury. Whereas PM<sub>10</sub> tends to collect in the upper portion of the respiratory system, PM<sub>2.5</sub> is so tiny that it can penetrate deeper into the lungs and damage lung tissues. Suspended particulates also damage and discolor surfaces on which they settle, as well as produce haze and reduce regional visibility.

- Lead (Pb) in the atmosphere occurs as particulate matter. Sources of lead include leaded gasoline; the manufacturers of batteries, paint, ink, ceramics, and ammunition; and secondary lead smelters. Prior to 1978, mobile emissions were the primary source of atmospheric lead. Between 1978 and 1987, the phase-out of leaded gasoline reduced the inventory of airborne lead by nearly 95 percent. With the phase-out of leaded gasoline, secondary lead smelters, battery recycling, and manufacturing facilities have become emission sources of greater concern.

Prolonged exposure to atmospheric lead poses a serious threat to human health. Health effects associated with exposure to lead include gastrointestinal disturbances, anemia, kidney disease, and in severe cases, neuromuscular and neurological dysfunction. Of particular concern are low-

level lead exposures during infancy and childhood. Such exposures are associated with decrements in neurobehavioral performance, including intelligence quotient performance, psychomotor performance, reaction time, and growth.

- Toxic Air Contaminants (TAC) are airborne pollutants that may increase a person's risk of developing cancer or other serious health effects. TACs include over 700 chemical compounds that are identified by State and federal agencies based on a review of available scientific evidence. In California, TACs are identified through a two-step process established in 1983 that includes risk identification and risk management.

The 1990 CAA Amendments were enacted to better protect the public's health and create more efficient methods of lowering pollutant emissions. The major areas of improvement addressed in the amendments include air basin designations, automobile/heavy-duty engine emissions, and toxic air pollutants. The US EPA designates air basins as being in attainment or nonattainment for each of the seven criteria pollutants. Nonattainment air basins are ranked (marginal, moderate, serious, severe, or extreme) according to the degree of nonattainment. An air basin in nonattainment is then required to submit a State Implementation Plan (SIP) that describes how the state will achieve federal standards by specified dates. The Ventura County portion of the SIP consists of the Ventura County *Air Quality Management Plan* (discussed later in this EIR section) and the Ventura County *Air Pollution Control District Rules and Regulations*. The extent of a given SIP depends on the severity of the air quality condition within the state or specific air basin. The Ventura County portion of the SCCAB is classified by the US EPA as a serious nonattainment area with respect to the 8-hour O<sub>3</sub> standard and as attainment/unclassifiable for the other criteria pollutants.<sup>3</sup>

The status of the Ventura County portion of the SCCAB with respect to attainment with the NAAQS is summarized in **Table 6.3-1, National Ambient Air Quality Standard Designations – South Central Coast Air Basin (Ventura County)**.

**Table 6.3-1  
National Ambient Air Quality Standard Designations  
South Central Coast Air Basin (Ventura County)**

<b>Pollutant</b>	<b>Averaging Time</b>	<b>Designation/Classification</b>
Ozone (O <sub>3</sub> )	8 hour	Nonattainment/Serious
Carbon Monoxide (CO)	N/A	Unclassifiable/Attainment
Nitrogen Dioxide (NO <sub>2</sub> )	Annual Arithmetic Mean	Unclassified
Sulfur Dioxide (SO <sub>2</sub> )	24 hour, Annual Arithmetic Mean	Unclassified

<sup>3</sup> U.S. Environmental Protection Agency, "EPA Region 9 Air Quality Maps and Geographic Information," <https://www3.epa.gov/region9/air/maps/index.html#cal>, 2016

Pollutant	Averaging Time	Designation/Classification
Respirable Particulate Matter (PM10)	24 hour	Unclassifiable/Attainment
Fine Particulate Matter (PM2.5)	24 hour, Annual Arithmetic Mean	Unclassifiable/Attainment
Lead (Pb)	Calendar Qtr., Rolling 3-Month Avg.	Unclassifiable/Attainment

Source: U.S. Environmental Protection Agency, "EPA Region 9 Air Quality Maps and Geographic Information," <https://www3.epa.gov/region9/air/maps/index.html#cal>, 2016

In response to rapid population growth and the associated rise in motor vehicle operations, the 1990 CAA Amendments addressed tailpipe emissions from automobiles, heavy-duty engines, and diesel fuel engines. The amendments established more stringent standards for hydrocarbons, nitrogen oxides (NO<sub>x</sub>), and CO emissions in order to reduce the ozone and carbon monoxide levels in heavily populated areas. Under the 1990 Amendments, new fuels were required to be less volatile, contain less sulfur (regarding diesel fuels), and have higher levels of oxygenates (oxygen-containing substances to improve fuel combustion). The US EPA also has regulatory and enforcement jurisdiction over emission sources beyond state waters (outer continental shelf), and those that are under the exclusive authority of the federal government, such as aircraft, locomotives, and interstate trucking. Due to the lack of a substantial reduction in toxic emissions under the 1977 CAA, the 1990 CAA Amendments listed 189 hazardous air pollutants (HAPs), which are carcinogenic, mutagenic, and/or reproductive toxicants, to be reduced. This program (the 1990 CAA Amendments) involves locating all major (greater than 10 tons/year) and area emission sources implementing Maximum Achievable Control Technology (MACT) to reduce HAP emissions and their associated health impacts.

## State Regulations

### *California Air Resources Board*

The California Air Resources Board (CARB), a branch of the California Environmental Protection Agency (Cal/EPA), oversees air quality planning and control throughout California. It is primarily responsible for ensuring the implementation of the California Clean Air Act (CCAA), responding to federal CAA requirements, and regulating emissions from motor vehicles and consumer products within the state. In addition, CARB also sets health-based air quality standards and control measures for toxic air contaminants (TACs). However, the focus of most of the board's research goes toward automobile emissions, as they are the largest contributor to air pollution in California. CARB establishes new standards for vehicles sold in California and for various types of equipment available commercially. It also sets fuel specifications to further reduce vehicular emissions.

The CCAA established a legal mandate for air basins to achieve the California ambient air quality standards by the earliest practicable date. These standards apply to the same seven criteria pollutants as the federal CAA and also include sulfates, visibility-reducing particles, hydrogen sulfide, and vinyl chloride. State standards are more stringent than the federal standards, and in the case of PM10 and SO<sub>2</sub>, far more stringent.

CARB supervises and supports the regulatory activities of local air quality districts, as well as monitors ambient air quality itself. Health and Safety Code Section 39607(e) requires CARB to establish and periodically review area designation criteria. These designation criteria provide the basis for CARB to designate areas of the state as “attainment,” “nonattainment,” or “unclassified” according to state standards. In addition, Health and Safety Code Section 39608 requires CARB to use the designation criteria to classify areas of California and to annually review those area designations. CARB makes area designations for 10 criteria pollutants: O<sub>3</sub>, CO, NO<sub>2</sub>, SO<sub>2</sub>, PM10, PM2.5, sulfates, lead, hydrogen sulfide, and visibility-reducing particles. The status of the SCCAB with respect to attainment under the California Ambient Air Quality Standards (CAAQS) is summarized in **Table 6.3-2, California Ambient Air Quality Standard Designations – South Central Coast Air Basin (Ventura County)**. Ventura County is classified as a nonattainment area for the state ozone and PM10 standards.

**Table 6.3-2  
California Ambient Air Quality Standard Designations  
South Central Coast Air Basin (Ventura County)**

<b>Pollutant</b>	<b>Averaging Time</b>	<b>Designation/Classification</b>
Ozone (O <sub>3</sub> )	1 hour, 8 hour	Nonattainment <sup>1</sup>
Carbon Monoxide (CO)	1 hour, 8 hour	Attainment
Nitrogen Dioxide (NO <sub>2</sub> )	1 hour	Attainment
Sulfur Dioxide (SO <sub>2</sub> )	1 hour, 24 hour	Attainment
Respirable Particulate Matter (PM10)	24 hour, Annual Arithmetic Mean	Nonattainment
Fine Particulate Matter (PM2.5)	Annual Arithmetic Mean	Attainment
Lead (Pb) <sup>2</sup>	30 Day Average	Attainment
Sulfates (SO <sub>4</sub> )	24 hour	Attainment
Hydrogen Sulfide (H <sub>2</sub> S)	1 hour	Unclassified
Visibility-reducing Particles	8 hour (10:00 AM – 6:00 PM)	Unclassified

Source: California Air Resources Board, “Area Designations Map/State and National,” <http://www.arb.ca.gov/design/adm/adm.htm>. 2011.

<sup>1</sup> CARB has not issued area classifications based on the new state 8-hour standard. The previous classification for the 1-hour ozone standard was Severe.

<sup>2</sup> CARB has identified lead and vinyl chloride as “toxic air contaminants” with no threshold level of exposure for adverse health effects determined.

### ***Southern California Association of Governments***

SCAG is a council of governments for the Counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. As a regional planning agency, SCAG serves as a forum for regional issues relating to transportation, the economy, community development, and the environment. SCAG also serves as the regional clearinghouse for projects requiring environmental documentation under federal and state law. In this role, SCAG reviews projects to analyze their impacts on SCAG's regional planning efforts.

Although SCAG is not an air quality management agency, it is responsible for several air quality planning issues. Specifically, as the designated Metropolitan Planning Organization (MPO) for the Southern California region, it is responsible, pursuant to Section 176(c) of the 1990 CAA Amendments, for providing current population, employment, travel, and congestion projections for regional air quality planning efforts and for determining conformity with the applicable air quality management plan. It is required to quantify and document the demographic and employment factors influencing expected transportation demand, including land use forecasts. Pursuant to California Health and Safety Code Section 40460(b), SCAG is also responsible for preparing and approving portions of the basin's air quality management plans relating to demographic projections, and integrated regional land use, housing, employment, and transportation programs, measures, and strategies. The most recent population, housing, and transportation measures and strategies are contained in the 2016-2040 Regional Transportation Plan (RTP). This includes the preparation of a Sustainable Communities Strategy (SCS) that responds to planning requirements of SB 375 and demonstrates the region's ability to attain greenhouse gas reduction targets set forth in State law.

### **Local Regulations**

Local governments, such as the City of Camarillo, have the authority and responsibility to reduce air pollution through their police power and land use decision-making authority. Specifically, local governments are responsible for the mitigation of emissions resulting from land use decisions and for the implementation of transportation control measures as outlined in the Air Quality Management Plan (AQMP). The AQMP assigns local governments certain responsibilities to assist the VCAPCD in meeting air quality goals and policies. In general, a first step toward implementation of a local government's responsibility is accomplished by identifying air quality goals, policies, and implementation measures in its General Plan. Through capital improvement programs, local governments can fund infrastructure that contributes to improved air quality by requiring such improvements as bus turnouts, energy-efficient streetlights, and synchronized traffic signals. In accordance with California Environmental Quality Act (CEQA) requirements and the CEQA review process, local governments assess air quality impacts,

require mitigation of potential air quality impacts by conditioning discretionary permits, and monitor and enforce implementation of such mitigation.

### ***Ventura County Air Pollution Control District***

The management of air quality in Ventura County is the responsibility of the Ventura County Air Pollution Control District (VCAPCD). The VCAPCD is responsible for bringing air quality in the County into conformity with federal and state air quality standards. Specifically, the VCAPCD has the responsibility to monitor ambient air pollutant levels throughout the County and to develop and implement attainment strategies to ensure that future emissions will be within federal and state standards. These attainment strategies form the basis for the AQMP, which is continuously updated to reflect changes in control strategies mandated by updates of the federal and state clean air acts.

To implement these strategies, the VCAPCD Board has adopted specific rules and regulations to limit emissions from stationary and mobile sources and activities within the County. These rules and regulations identify specific pollution-reduction measures, which must be implemented in association with various uses and activities. These rules not only regulate the emissions of criteria pollutants, but also emissions of TACs and HAPs. The rules and regulations are also subject to ongoing refinement by the VCAPCD. Enforcement of these rules and regulations is carried out through a permitting process that monitors emissions generated by stationary sources, such as power plants, manufacturing operations, and large and small businesses that use products that release into the atmosphere ozone-forming precursors or TACs. The proposed project would be subject to the VCAPCD rules and regulations to reduce project-related emissions and minimize potential air quality impacts.

In addition to permitting stationary sources, the VCAPCD Air Quality Planning and Evaluation Section administers the CEQA program for Ventura County, which is used to review and comment on the adequacy of environmental documents such as this EIR. It recommends thresholds for determining whether projects would have significant adverse environmental impacts, identifies methodologies for predicting project emissions and impacts, and identifies measures that can be used to avoid or reduce air quality impacts. The *Ventura County Air Quality Assessment Guidelines*, adopted in October 2003, is the most up-to-date document that local government agencies and consultants use to prepare environmental documents for projects subject to CEQA. This document describes the criteria and methods required to mitigate construction and operational emissions from planned developments to ensure compliance with the VCAPCD AQMP.

The VCAPCD is responsible for limiting the amount of emissions that can be generated throughout Ventura County by various stationary and area sources. Specific rules and regulations have been adopted

by the VCAPCD that limit the emissions that can be generated by various uses and activities, and that identify specific pollution-reduction measures that must be implemented for various uses and activities.<sup>4</sup>

Stationary emission sources subject to these rules are generally regulated through VCAPCD's permitting process. Some of the activities associated with the project may be subject to VCAPCD rules and regulations. The following rules may apply to operations associated with the development of the proposed project:

- **Rule 50 (Opacity):** This rule sets opacity standards on the discharge from sources of air contaminants. This rule would apply during construction of the proposed project, specifically grading activities.
- **Rule 51 (Nuisance):** This rule prohibits any person from discharging air contaminants or any other material from a source that would cause injury, detriment, nuisance, or annoyance to any considerable number of persons or the public or which endangers the comfort, health, safety, or repose to any considerable number of persons or the public. The rule would apply during construction activities. The proposed project would consist of residential and open space land uses; therefore, this rule would not be a concern following buildout of the proposed project.
- **Rule 55 (Fugitive Dust):** This rule requires fugitive dust generators to implement control measures to limit the amount of dust from vehicle track-out, earth moving, bulk material handling, and truck hauling activities.
- **Rule 55.1 (Paved Roads and Public Unpaved Roads):** This rule requires fugitive dust generators to begin the removal of visible roadway accumulation within 72 hours of any written notification from the VCAPCD. The use of blowers is expressly prohibited under any circumstances. This rule also requires controls to limit the amount of dust from any construction activity or any earthmoving activity on a public unpaved road.
- **Rule 55.2 (Street Sweeping Equipment):** This rule requires the use of PM10 efficient street sweepers for routine street sweeping and for removing vehicle track-out pursuant to Rule 55.
- **Rule 74.2 (Architectural Coatings):** This rule sets limits on the volatile organic compound (VOC) content of architectural coatings manufactured, blended, sold, or offered for sale within the district's jurisdiction. The rule also sets container-labeling requirements for businesses or individuals manufacturing or supplying architectural coatings. Architectural coating products used for the proposed project are required to comply with the standards set forth in this rule.
- **Rule 74.4 (Cutback Asphalt):** This rule sets limits on the type of application and VOC content of cutback and emulsified asphalt. The proposed project is required to comply with the type of application and VOC content standards set forth in this rule for cutback and emulsified asphalt.
- **Rule 74.11 (Natural Gas-Fired Residential Water Heaters – Control of NO<sub>x</sub>):** This rule sets a NO<sub>x</sub> emission limit (40 nanograms of NO<sub>x</sub> per joule of heat output) for natural gas-fired residential water heaters. Residential water heaters must also comply with certification and compliance report

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<sup>4</sup> Ventura County Air Pollution Control District, Rules and Regulations.

requirements specified in this rule. Residential water heaters that do not comply with these standards are not to be sold, offered for sale, or installed within Ventura County. Any natural-gas-fired residential water heaters would comply with the requirements of this rule.

### **Ventura County Air Quality Management Plan**

As discussed previously, the federal and state CAAs require preparation of plans to reduce air pollution to acceptable levels. The VCAPCD has responded to this requirement by preparing a series of Air Quality Management Plan (AQMPs). The primary objective of the Ventura County Air Quality Management Plan is to provide continuous air pollutant emission reductions over time, with the goal of attaining the federal and state standards for ozone. The most recent 2007 AQMP complies with federal and State Clean Air Acts and amendments to accommodate growth, reduce the pollutant in the Basin, meet federal and state air quality standards, and minimize the fiscal impact that pollution control measures have on the local economy.

The district adopted the 2007 Ventura County Air Quality Management Plan on May 13, 2008.<sup>5</sup> The 2007 AQMP aimed to achieve the federal 8-hour ozone standard by June 15, 2013. Ventura County was previously designated a moderate nonattainment area for the 8-hour ozone standard. Typically, moderate nonattainment areas are required to achieve attainment by June 15, 2010; however, VCAPCD and CARB requested that the County be redesignated a “serious” nonattainment area in order to receive a new attainment date of June 15, 2013. Accordingly, the US EPA redesignated Ventura County as a “serious” nonattainment area in May 2012. Although serious nonattainment areas are required to implement more stringent control measures than a moderate nonattainment area, the 2007 AQMP was prepared to satisfy the CAA planning requirements for serious federal 8-hour nonattainment areas. As of the writing of this document, it is unknown if the federal 8-hour standard has been achieved. Control programs to achieve the federal 8-hour ozone standard described in the 2007 AQMP focus on mobile sources, consumer products, and pesticides.

### ***City of Camarillo***

The City of Camarillo considers air quality to be an important resource to conserve. On January 1, 1989, the CCAA took effect establishing the California Ambient Air Quality Standards (CAAQS), which were generally more stringent than the NAAQS. In 2005, the CARB approved the nation’s most health-

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<sup>5</sup> Ventura County Air Pollution Control District, “Final 2007 Air Quality Management Plan” <http://www.vcapcd.org/Final2007AQMP.htm>. The VCAPCD has prepared an update to the 2007 AQMP, however it has not yet been adopted. The Draft 2016 Ventura County Air Quality Management Plan is now available for public review and comment online at: <http://www.vcapcd.org/AQMP-2016.htm>. The 2016 AQMP presents Ventura County’s strategy (including related mandated elements) to attain the 2008 federal 8-hour ozone standard, as required by the federal Clean Air Act Amendments of 1990.

protective ozone standard in response to special concern for children's health. Through compliance with these standards has been difficult, and despite an increasing California population, positive strides have been made in improving state air quality.

The City of Camarillo is within the VCAPCD. The VCAPCD works in coordination with other federal, state, and regional control efforts to achieve air quality standards as established by federal and state agencies. Ventura County's air exceeds both the state and the federal air quality standards for ozone and the state standard for particulate matter, including carbon monoxide, sulfur dioxide, and nitrogen dioxide. However, the County's air has improved dramatically over time, with the number of days per year exceeding the state and federal standards steadily decreasing.

During the smog season (typically May through October in the City of Camarillo), certain atmospheric conditions exist to increase smog-producing chemicals like ozone and nitrogen oxide, as well as other pollutants. In Camarillo's warm weather months, westerly winds sometimes bring a layer of warm air that creates an inversion, which acts as a lid that prevents the polluted air from rising and dissipating. Inversion layers typically occur at elevations of 800 to 1,000 feet above sea level, but may occur as low as 200 feet.

While air quality is continually challenged by increasing urbanization, traffic, and smog-holding weather conditions, Ventura County is continuing to improve its overall air quality. The City of Camarillo's goal is to continue to support the County's adopted AQMP strategies and methods and implement measures to maintain acceptable air quality on its own. These measures include proper land use planning, transportation planning, the environmental review process, and implementing the goals and policies of the *City of Camarillo General Plan*. Air quality issues in the City are governed by the General Plan's Open Space & Conservation Element. The Element includes Policy #11 that calls on the City to "...actively pursue programs in cooperation with the federal, state, regional, county and special district agencies." It further includes a Goal C (Health) to "...encourage land uses which will minimize the degradation of air quality." It ultimately recommends that the City's goal is to continue to support the AQMP by promoting "proper land use planning, transportation planning, the environmental review process, and implementing the goals and policies of the city's General plan."

By these measures, the City of Camarillo hopes to achieve a jobs-housing balance, reduce average trip lengths, promote alternative forms of transportation and increased ridership, thereby maintaining or improving air quality in accordance with federal and local standards.

The air quality-related goals, objectives, and policies of the City of Camarillo's General Plan that are applicable to the proposed project are discussed and analyzed in **subsection 6.3.9** below.

## 6.3.5 EXISTING CONDITIONS

### Climate and Meteorology

Southern California lies in a semi-permanent high-pressure zone of the Eastern Pacific region. Summertime weather is dominated by the movement and intensity of the semi-permanent high-pressure system that is normally centered several hundred miles southwest of California. In the spring, summer, and fall, the climate is heavily influenced by marine air. Light winds in the region allow marine air to regulate temperatures and airflow during these periods. In the winter, low-pressure weather systems originating in the northern Pacific Ocean bring clouds, wind, and rain into Southern California. Santa Ana winds, caused by high pressure in the high plateau region located northeast of California, occur intermittently during winter and fall.

The Southern California area is divided into several geographical air basins. The County of Ventura is located within the SCCAB, which consists of Ventura, Santa Barbara, and San Luis Obispo Counties. The project site is located within the Oxnard Plain airshed, a subarea of the basin. The Oxnard Plain experiences the mild, Mediterranean climate typical of Southern California. Average temperatures in the Oxnard area are a high of 70.7 degrees Fahrenheit (°F), a low of 49.9°F, and an overall mean temperature of 60.3°F. Precipitation averages 14.45 inches per year, with the majority of rainfall occurring from November through March. Prevailing winds along the Ventura coast and Oxnard Plain are from the west and northwest. During the fall, Santa Ana winds reverse the prevailing airflow and bring dry, hot gusts that often have greater air movement.

The air pollutants within the SCCAB are generated by both stationary and mobile sources. Stationary sources are known as “point sources,” which have one or more emission sources at a single facility. Area sources, which are widely distributed, produce many small emissions. Point sources are usually associated with manufacturing and industrial uses and include sources that produce electricity or process heat, such as refinery boilers or combustion equipment. Examples of area sources include residential water heaters, painting operations, lawnmowers, agricultural fields, landfills, and consumer products such as barbecue lighter fluid or hair spray. Mobile sources refer to exhaust and evaporative emissions from motor vehicles.

### Regional Setting

Air emissions are generated by a variety of sources in the Ventura County. Motor vehicles traveling along local roadways are a major source. Agricultural activities such as diesel- and gasoline-powered equipment (i.e., tractors, trucks) and pesticide spraying also emit air pollutants. Finally, the residential land uses in proximity to the site also emit air pollutants in the form of household products and cleaners.

The topography and climate of Ventura County combine to make it an area of significant smog potential. Temperature inversions occur frequently at approximately 800 to 1,000 feet above mean sea level in Ventura County, and are most persistent during late summer and early fall. Temperature inversions occur when a warm air mass descends over a lower, cooler, moist marine air layer. The warm upper layer forms a cap over the marine layer and inhibits the air pollutants generated near the ground from dispersing upward. Light summer winds and the surrounding mountains further limit the horizontal dispersal of pollutants. Concentrating volumes of pollutants in this manner allows the summer sunlight to generate high levels of photochemical smog. In the winter, cool ground temperatures and very light winds can cause extremely low inversions and air stagnation, trapping pollutants during the late night and early morning hours.

The determination of whether a region's air quality is healthful or unhealthful is made by comparing contaminant levels in ambient air samples to national and state standards. California and the federal government have established health-based air quality standards for the following criteria air pollutants: O<sub>3</sub>, CO, NO<sub>2</sub>, SO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, and lead. These standards were established to protect sensitive receptors with a margin of safety from adverse health impacts due to exposure to air pollution. The California standards are more stringent than the federal standards, and in the case of PM<sub>10</sub> and SO<sub>2</sub>, much more stringent. California has also established standards for sulfates, visibility-reducing particles, hydrogen sulfide, and vinyl chloride. The state and national ambient air quality standards for each of the monitored pollutants and their effects on health are summarized in **Table 6.3-3, Ambient Air Quality Standards**.

Generally, the sources for hydrogen sulfide emissions include decomposition of human and animal wastes and industrial activities, such as food processing, coke ovens, kraft paper mills, tanneries, and petroleum refineries. There are no such uses or sources associated with the proposed project. Similarly, the sources for vinyl chloride emissions include manufacturing of plastic products, hazardous waste sites, and landfills; and there are no such uses or sources associated with the proposed project. As a result, there is no need for any further evaluation of the hydrogen sulfide or vinyl chloride emissions associated with this project. Motor vehicles and paints used to be a source of lead; however, unleaded fuel and unleaded paints have virtually eliminated lead emissions from residential and commercial land use projects. As a result, there is no need for any further evaluation of lead emissions with respect to the proposed project.

**Table 6.3-3  
Ambient Air Quality Standards**

Air Pollutant	Concentration/Averaging Time		Most Relevant Health Effects
	State Standard	Federal Primary Standard	
Ozone	0.09 ppm, 1-hr. avg. 0.070 ppm, 8-hr. avg.	0.075 ppm, 8-hr. avg. (3-year average of annual 4 <sup>th</sup> -highest daily maximum)	(a) Pulmonary function decrements 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; and (f) Property damage
Nitrogen Dioxide <sup>1</sup>	0.18 ppm, 1-hr. avg. 0.030 ppm, annual arithmetic mean	0.100 ppm, 1-hr. avg. (three-year average of the 98 <sup>th</sup> percentile of the daily maximum 1-hour average) 0.053 ppm, annual arithmetic mean	(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) Risk to public health implied by pulmonary and extrapulmonary biochemical and cellular changes and pulmonary structural changes; and (c) Contribution to atmospheric discoloration
Carbon Monoxide	20 ppm, 1-hr. avg. 9.0 ppm, 8-hr. avg.	35 ppm, 1-hr. avg. (not to be exceeded more than once per year) 9 ppm, 8-hr. avg. (not to be exceeded more than once per year)	(a) Aggravation of angina pectoris 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; and (d) Possible increased risk to fetuses
Sulfur Dioxide <sup>2</sup>	0.25 ppm, 1-hr. avg. 0.04 ppm, 24-hr. avg.	0.075 ppm, 1-hr. avg. (three-year average of the 99 <sup>th</sup> percentile)	Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in person with asthma
Respirable Particulate Matter (PM10)	50 µg/3 <sup>M</sup> , 24-hr. avg. 20 µg/m <sup>3</sup> , annual arithmetic mean	150 µg/m <sup>3</sup> , 24-hr. avg. (not to be exceeded more than once per year on average over three years)	(a) Exacerbation of symptoms in sensitive patients with respiratory or cardiovascular disease; (b) Declines in pulmonary function growth in children; and (c) Increased risk of premature death from heart or lung diseases in the elderly

Air Pollutant	Concentration/Averaging Time		Most Relevant Health Effects
	State Standard	Federal Primary Standard	
Fine Particulate Matter (PM <sub>2.5</sub> )	12 µg/m <sup>3</sup> , annual arithmetic mean	35 µg/m <sup>3</sup> , 24-hr. avg. (3-year average of 98 <sup>th</sup> percentile) 15 µg/m <sup>3</sup> , annual arithmetic mean (3-year average)	(a) Exacerbation of symptoms in sensitive patients with respiratory or cardiovascular disease; (b) Declines in pulmonary function growth in children; and (c) Increased risk of premature death from heart or lung diseases in the elderly
Lead	1.5 µg/m <sup>3</sup> , 30-day avg.	1.5 µg/m <sup>3</sup> , calendar quarterly average 0.15 µg/m <sup>3</sup> , three month rolling average	(a) Increased body burden; and (b) Impairment of blood formation and nerve conduction
Visibility-Reducing Particles	Reduction of visual range to less than 10 miles at relative humidity less than 70%, 8-hour avg. (10:00 AM – 6:00 PM)	None	Visibility impairment on days when relative humidity is less than 70 percent
Sulfates	25 µg/m <sup>3</sup> , 24-hr. avg.	None	(a) Decrease in ventilatory function; (b) Aggravation of asthmatic symptoms; (c) Aggravation of cardiopulmonary disease; (d) Vegetation damage; (e) Degradation of visibility; and (f) Property damage
Hydrogen Sulfide	0.03 ppm, 1-hr. avg.	None	Odor annoyance
Vinyl Chloride <sup>3</sup>	0.01 ppm, 24-hr. avg.	None	Known carcinogen

µg/m<sup>3</sup> = microgram per cubic meter.

ppm = parts per million by volume.

Source: South Coast Air Quality Management District, Final Program Environmental Impact Report for the 2007 Air Quality Management Plan, (2007) Table 3.1-1, p. 3.1-3.

<sup>1</sup> On January 25, 2010, the US EPA promulgated a new 1-hour NO<sub>2</sub> standard. The new 1-hour standard is 0.100 parts per million (188 micrograms per cubic meter [µg/m<sup>3</sup>]) and became effective on April 12, 2010.

<sup>2</sup> On June 3, 2010, the US EPA issued a new 1-hour SO<sub>2</sub> standard. The new 1-hour standard is 0.075 parts per million (196 µg/m<sup>3</sup>). The US EPA also revoked the existing 24-hour and annual standards citing a lack of evidence of specific health impacts from long-term exposures. The new 1-hour standard became effective 60 days after publication in the Federal Register.

<sup>3</sup> CARB has identified lead and vinyl chloride as "toxic air contaminants" with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

## Local Setting

### Local Ambient Air Quality

The VCAPCD operates air-quality monitoring stations throughout Ventura County. These stations are located in Thousand Oaks, El Rio, Ventura, Piru, Ojai, and Simi Valley. The monitoring station located closest to the proposed project site, and most representative of air quality within the City, is the El Rio

station. This station presently monitors the emission levels of O<sub>3</sub>, CO, NO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>. **Table 6.3-4, Ambient Pollutant Concentrations – El Rio High School Air Monitoring Station**, lists the concentrations registered and the violations of state and federal standards that have occurred at the El Rio monitoring station from 2013 through 2015.<sup>6</sup>

Pollutant	Year		
	2013	2014	2015
<b>OZONE (O<sub>3</sub>)</b>			
Maximum 1-hour concentration (ppm)	0.067	0.112	0.070
Days > 0.09 ppm (State 1-hour standard)	0	1	0
Days > 0.075 ppm (Federal 8-hour standard)	0	1	0
<b>RESPIRABLE PARTICULATE MATTER (PM<sub>10</sub>)</b>			
Maximum 24-hour concentration (µg/m <sup>3</sup> )	183.4	115.3	92.0
Days > 50 µg/m <sup>3</sup> (State 24-hour standard)	0	7	6
<b>FINE PARTICULATE MATTER (PM<sub>2.5</sub>)</b>			
Maximum 24-hour concentration (µg/m <sup>3</sup> )	22.2	22.2	25.5
Annual average concentration (µg/m <sup>3</sup> )	0	0	0

*N/A = not available*

*Source: California Air Resources Board, "iADAM Air Quality Data Statistics," <http://www.arb.ca.gov/adam/>. 2011.*

## Local Vicinity Emissions

Residential development and industrial uses characterize the immediate vicinity of the proposed project site. Residential neighborhoods border the project site to the east and south. Additionally, the St. John's Seminary borders the proposed project on its western side, where active citrus orchards are currently located. The potential for local vicinity emissions to adversely impact the project site is generally low. The agricultural (e.g., citrus farming) activities that will continue to occur adjacent to the project site would involve intermittent use of farming equipment. Since the use of farming equipment would be intermittent, air pollutant emissions from such activities are not expected to cause adverse health impacts in the local area.

Localized areas where ambient CO concentrations exceed federal or state ambient air quality standards are termed CO "hotspots." Traffic-congested roadways and intersections have the potential to generate elevated localized CO levels within approximately 1,000 feet of a roadway. Intersections operating at a

<sup>6</sup> This is the most recent data available.

level of service (LOS) of E or F are considered to have the potential to create a CO hotspot.<sup>7</sup> The VCAPCD recommends the use of CALINE4, a dispersion model developed by Caltrans, for estimating CO concentrations near congested roadway intersections. The CALINE4 model adds roadway-specific CO emissions calculated from peak traffic volumes to the ambient (i.e., background) CO concentrations. According to traffic volume data from the traffic study, none of the studied intersections are currently operating at unacceptable levels of service (i.e., LOS E or F). Therefore, there are no existing CO hotspots that would impact sensitive receptors in the project area.

### 6.3.6 THRESHOLDS OF SIGNIFICANCE

#### CEQA Significance Thresholds

In accordance with CEQA and the *State CEQA Guidelines* (Appendix G) and as stated in the *VCAPCD Air Quality Assessment Guidelines*, the following significance threshold criteria should be used to evaluate the potential impacts of proposed projects within the City of Camarillo and Ventura County. The project would have a significant air quality impact if it would:

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

#### Project-level Significance Thresholds

##### *Criteria Pollutant Emissions*

The *State CEQA Guidelines* Section 15064.7 provides the significance criteria established by the applicable air quality management district or air pollution control district, when available, may be relied upon to make determinations of significance. The VCAPCD Guidelines establish criteria for determining the level of significance for project-specific developments within Ventura County. Projects exceeding any of the following criteria in the long term are considered to have significant impacts. The following are emissions

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<sup>7</sup> Institute of Transportation Studies, University of California, Davis, *Transportation Project-Level Carbon Monoxide Protocol*, (1997).

thresholds for reactive organic compounds (ROCs) and NO<sub>x</sub> that the VCAPCD has determined would individually and cumulatively jeopardize attainment of the federal ozone standards, which would result in a significant adverse impact on air quality in Ventura County:

- Reactive Organic Compounds (ROCs): 25 pounds per day;
- Nitrogen Oxides (NO<sub>x</sub>): 25 pounds per day; or
- A project which may cause an ambient air quality standards (state or federal) to be exceeded, or makes a substantial contribution to an already existing air quality standard. Substantial is defined as making measurably worse an existing or federal ambient air quality standard that is exceeded.

### ***Toxic Air Contaminants***

Additionally, the VCAPCD Guidelines include significance thresholds for evaluating the health effects of toxic air contaminants (TACs). The VCAPCD recommends the following thresholds in determining the significance of TACs from the construction and operation of proposed projects:

- If the proposed project would result in a lifetime probability of contracting cancer that is greater than 10 in 1 million ( $10 \times 10^{-6}$ ); or
- If the proposed project would cause a Health Hazard Index of 1 or greater when evaluating for non-carcinogenic effects of TACs.

### ***Odors***

The VCAPCD Guidelines recommend that a proposed project include an assessment of the potential to cause a public nuisance by subjecting surrounding land uses to objectionable odors. A public nuisance is defined by VCAPCD Rule 51 (Nuisance) as:

*such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or to the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.*<sup>8</sup>

The assessment should also evaluate the potential for a proposed project to be impacted by objectionable odors from nearby existing or proposed land uses. Any project that has the potential to create a public nuisance by subjecting members of the public to objectionable odors should be deemed to have a significant odor impact.

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<sup>8</sup> Ventura County Air Pollution Control District, *Ventura County Air Quality Assessment Guidelines*, (2003) 6-10.

### *San Joaquin Valley Fever*

San Joaquin Valley Fever (formally known as Coccidioidomycosis) is an infectious disease caused by the fungus *Coccidioides immitis*. Infection is caused by inhalation of *Coccidioides immitis* spores that have become airborne when dry, dusty soil or dirt is disturbed by wind, construction, farming, or other activities. The Valley Fever fungus tends to be found at the base of hillsides, in virgin, undisturbed soil and is found in the southwestern United States. In its primary form, symptoms appear as a mild upper respiratory infection, acute bronchitis, or pneumonia. The most common symptoms are fatigue, cough, chest pain, fever, rash, headache, and joint aches, although 60 percent of people infected are asymptomatic and do not seek medical attention. In the remaining 40 percent, symptoms range from mild to severe. There is no recommended threshold for a significant San Joaquin Valley Fever impact; however, the following factors may indicate a project's potential to create significant Valley Fever impacts:

- Disturbance of the top soil of undeveloped land (to a depth of about 12 inches)
- Dry, alkaline, sandy soils.
- Virgin, undisturbed, non-urban areas.
- Windy areas.
- Archaeological resources probable or known to exist in the area (Native American midden sites).
- Special events (fairs, concerts) and motorized activities (motocross track, All Terrain Vehicle activities) on unvegetated soil (non-grass).
- Non-native population (i.e., out-of-area construction workers).

The lead agency should consider the factors above that are applicable to the project or the project site. Based on these or other factors, if a lead agency determines that project activities may create a significant Valley Fever impact, the VCAPCD recommends that the lead agency consider the Valley Fever mitigation measures listed in the VCAPCD Guidelines. These mitigation measures focus on fugitive dust control to minimize fungal spore entrainment, as well as minimizing worker exposure.

### **Cumulative-level Significance Thresholds**

The VCAPCD Guidelines establishes the following criteria for determining the level of significance for cumulative project long-term impacts within Ventura County:

- Any individual general development project located outside the Ojai Valley Planning Area and Ventura 1 Non-Growth area capable of emissions of 25 pounds per day of ROC and NO<sub>x</sub> both individually and cumulatively have a significant impact on air quality in the County;
- Any cumulative project group which may cause an ambient air quality standard (state or federal) to be exceeded, or makes a substantial contribution to an already exceeded air quality standard;
- Any individual project with emissions greater than 2 pounds per day of ROC or 2 pounds per day of NO<sub>x</sub> that is found to be inconsistent with the AQMP will have a significant cumulative air quality impact; or
- Any General Plan Amendment or revision which would provide directly or indirectly for increased population growth above that forecasted in the most recently adopted AQMP will have a significant air quality impact.

### 6.3.7 ENVIRONMENTAL IMPACTS

The environmental impact analysis presented below is based on determinations made in the Notice of Preparation (NOP) for issues that were determined to be potentially significant with mitigation incorporated, or for issues identified by reviewing agencies, organizations, or individuals commenting on the NOP that made a reasonable argument that the issue was potentially significant (see **Responses to NOP, Appendix 2.0**).

#### **Conflict with or Obstruct Implementation of the Applicable Air Quality Plan.**

##### *Impacts*

##### **VCAPCD Air Quality Management Plan.**

The proposed residential land use will neither conflict with the VCAPCD's 2007 AQMP nor jeopardize the region's attainment of air quality standards. The AQMP focuses on achieving clean air standards while accommodating population growth forecasts by SCAG. Specifically, SCAG's growth forecasts from the 2012 Regional Transportation Plan (RTP)/Sustainable Communities Strategy (SCS) are largely built off local growth forecasts from local governments like the City of Camarillo. The 2012 RTP/SCS accommodates up to 72,200 persons; 27,500 households; and 37,800 jobs in the City of Camarillo by 2020.<sup>9,10</sup>

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<sup>9</sup> While SCAG adopted the 2016 RTP/SCS in April 2016, the updated RTP has not been formally included in the region's adopted 2007 AQMP.

<sup>10</sup> The VCAPCD's 2016 AQMD was not adopted until February 2017. The NOP for this St. John's Seminary Residential Community Draft EIR was submitted in July of 2016, which predates the adoption of the 2016 AQMD.

As shown in **Table 6.3-5**, the project would develop 300 residential units in the City of Camarillo. The proposed project could add 788 residents to the Plan area, based on the City's projected household density from SCAG's RTP. This would increase population in the South Central Coast Air Basin and represent about 10.2 percent of projected population growth in the City from 2008 to 2020 in the RTP and 9.7 percent of housing growth during that same period. The project site's zoning and designation in the General Plan would be amended to accommodate such growth. Per Chapter 20.01 of the City's Municipal Code, the proposed project would have to be consistent with the population growth assumptions by the City in order to receive building permits. The proposed phasing of development over the 38-month period is intended to ensure the project is consistent with the 2007 AQMP. As such, the project does not conflict with the growth assumptions in the regional air plan and this impact is considered less than significant.

**Table 6.3-5**  
**Project Consistency with Air Quality Management Plan's Growth Forecast**

Forecast Year	Population in City of Camarillo	Proposed Project	Total Population	Households in City of Camarillo	Proposed Project	Total Households	Employment in City of Camarillo	Proposed Project
2008	64,500		65,288	24,400		24,700	32,200	
2020	72,200	788	72,988	27,500	300	27,800	37,800	0
2035	76,700		77,488	29,700		30,000	40,600	

*Source: DKA Planning 2016 based on SCAG 2012 Regional Transportation Plan Growth Forecast. Assumes 2.63 persons per household per RTP forecast for 2020. Employment forecast based on SCAG "Employment Density Study", October 31, 2001.*

### **City of Camarillo General Plan Open Space and Conservation Element.**

The proposed project would be consistent with the City's General Plan in that it would address Policy #11's direction to "...actively pursue programs in cooperation with the federal, state, regional, county and special district agencies" by ensuring consistency with the APCD's AQMP and CEQA guidelines. It would further address Goal C (Health) by mitigating all environmental impacts below significance thresholds while meeting the City's goals for balanced growth over time. As such, the proposed project's impact on the City's General Plan would be considered less than significant.

### **Mitigation Measures**

None Required

## *Residual Impacts*

The air quality impacts of residential development on the project site are accommodated in the region's emissions inventory for the 2012 RTP/SCS and 2007 AQMP. The project is therefore not expected to conflict with or obstruct implementation of the AQMP, and any impact on the Plan would be considered less than significant. Similarly, the proposed project is consistent with the City's General Plan.

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

### *Impacts*

#### **Construction**

The VCAPCD's Air Quality Assessment Guidelines state that "construction-related emissions...of ROC and NO<sub>x</sub> are not counted toward the two significance thresholds, since these emissions are temporary." However, the Guidelines also indicate that construction-related emissions be mitigated if estimates of ROC and NO<sub>x</sub> emissions from the heavy-duty construction equipment exceed 25 pounds per day of ROC or NO<sub>x</sub> emissions.

Construction-related emissions were estimated using the South Coast Air Quality Management District's (SCAQMD's) CalEEMod 2013.2.2 model using assumptions from the project's developer, including the project's construction schedule of 38 months. The initial work on the "Major Land Development" phase would include existing building demolition, rough grading for the entire project site, utilities trenching, and construction of the Building & Rec Center, a roughly 18-month period. **Table 6.3-6** summarizes this initial construction schedule.

<b>Phase</b>	<b>Duration</b>	<b>Notes</b>
Sire Preparation	6/27/18-8/28/18	Balanced earthmoving
Rough Grading	8/29/18-2/5/19	Balanced earthmoving
Utility Trenching	2/6/19-7/23/19	
Fine Grading	7/24/19-8/13/19	Balanced earthmoving
Building Construction	8/14/19-12/17/19	
Paving	8/14/19-9/24/19	
Architectural Coatings	12/18/19-12/31/19	

Source: DKA Planning 2016

After this initial work, the project's 300 residences would be built over 20 phases. Each phase would involve construction of 15 dwelling units and would generally involve the same phases of utility work, fine grading, building construction, paving, and architectural coatings. **Table 6.3-7** summarizes the "typical" construction schedule for each of the 20 phases that was modeled for air quality impacts. Each phase of housing development runs about 5.5 months from the start of utility connections to the utilities stubs to completion of each phase until the conclusion of construction in late 2021. As such, each new phase would overlap partially with up to six previous phases. As a result, the analysis of each phase accounts for this constant transition of construction from one phase to the next.

**Table 6.3-7**  
**Proposed Construction Schedule for Typical Homebuilding Phase**

Phase	Duration	Notes
Utility Connections	10 working days	Overlaps with fine grading from previous phase
Fine Grading	15 working days	Balanced earthmoving. Overlaps with building construction from previous phase
Building Construction	90 working days	Overlaps with other phases of previous and later phases
Paving	10 working days	
Architectural Coatings	10 working days	

*Source: DKA Planning 2016*

As shown in **Table 6.3-8** the construction of the proposed project will produce ROC and NO<sub>x</sub> emissions that exceed the VCAPCD's thresholds of significance throughout the duration of construction activities, in part because of the phased nature of the construction plan. However, it should be noted that the VCAPCD states that construction-related emissions are not evaluated against any numeric threshold for significance, since such emissions are temporary.

There are up to seven homebuilding phases that could occur simultaneously throughout the project site that could contribute to ozone precursor emissions. As a result, construction of the proposed project would contribute substantially to an existing violation of air quality standards for regional pollutants (e.g., ozone). This impact is considered significant but mitigable.

**Table 6.3-8  
Proposed Construction Schedule for Typical Homebuilding Phase**

Construction Phase Year	Pounds Per Day					
	ROC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
2018	10	110	75	<1	21	12
2019	22	203	189	<1	48	27
2020	86	179	181	<1	44	24
2021	86	179	181	<1	44	24
Maximum Regional Total	86	203	189	<1	48	27
Regional Significance Threshold	25*	25*	N/A	N/A	N/A	N/A
Exceed Threshold?	<b>Yes</b>	<b>Yes</b>	N/A	N/A	N/A	N/A

\* VCAPCD's Air Quality Assessment Guidelines state that these operational thresholds of significance (25 lb/day) are not applicable for construction-related emissions because such emissions are temporary. However, the Guidelines state that emissions should be mitigated if they exceed these thresholds. There are no thresholds provided for CO, SO<sub>x</sub>, PM<sub>10</sub>, or PM<sub>2.5</sub>

Source: DKA Planning, 2016 based on CalEEMod 2013.2.2 model runs.

**Mitigation Measures 6.3-1 and 6.3-2** call for the use of readily-available construction equipment that uses EPA-certified Tier 4 engines to reduce combustion-related ROC and NO<sub>x</sub> emissions. Regulatory Compliance Measure **RCM 6.3-1** addresses fugitive dust emissions of PM<sub>10</sub> and PM<sub>2.5</sub> that would be regulated by VCAPCD Rule 55, which calls for Best Available Control Measures (BACM) that include watering portions of the site that are disturbed during grading activities and minimizing tracking of dirt onto local streets. It should be noted that **Table 6.3-8** conservatively does not assume the application of BACMs to control fugitive dust.

### **Mitigation Measures**

- 6.3-1** All off-road construction equipment greater than 50 hp shall meet U.S. EPA Tier 4 emission standards, where available, to reduce ROC, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> emissions at the project site. In addition, all construction equipment shall be outfitted with Best Available Control Technology devices certified by CARB to the maximum feasible extent. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations. At the time of mobilization of each applicable unit of equipment, a copy of each unit's certified tier specification, BACT documentation, and CARB or VCAPCD operating permit shall be provided.
- 6.3-2** Where possible, require the use of 2010 and newer diesel haul trucks (e.g., material delivery trucks and soil import/export) and if the Lead Agency determines that 2010 model year or newer

diesel trucks cannot be obtained, the Lead Agency shall require trucks that meet U.S. EPA 2007 model year NO<sub>x</sub> emissions requirements.

### *Regulatory Compliance Measures*

**RCM 6.3-1** Construction activities shall comply with VCAPCD Rule 55, including the following measures:

- Apply water to disturbed areas of the site three times a day
- Require the use of a gravel apron or other equivalent methods to reduce mud and dirt trackout onto truck exit routes
- Appoint a construction relations officer to act as a community liaison concerning on-site construction activity including resolution of issues related to PM generation.
- Limit soil disturbance to the amounts analyzed in this air quality analysis.
- All materials transported off-site shall be securely covered.
- Apply non-toxic soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for ten days or more).
- Traffic speeds on all unpaved roads to be reduced to 15 mph or less.

### *Residual Impacts*

#### **Construction**

As shown in **Table 6.3-9**, implementation of **Mitigation Measures 6.3-1 and 6.3-2**, combined with Measure **RCM 6.3-1**, would reduce on-site ROC, NO<sub>x</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> emissions during the construction process. Pursuant to VCAPCD guidance, implementation of all feasible mitigation measures during the construction process is required for projects that exceed the thresholds of significance for ozone precursor emissions. As noted earlier, the VCAPCD states that construction-related emissions are not evaluated against any numeric threshold for significance, since such emissions are temporary.<sup>11</sup> Instead, application of feasible mitigation measures is required. Since this analysis identifies all such feasible measures, construction of the proposed project would result in temporary impacts to ozone levels that are considered less than significant after mitigation.

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<sup>11</sup> Ventura County Air Pollution Control District, "Ventura County Air Quality Assessment Guidelines," Page 5-3. October 2003.

**Table 6.3-9  
Estimated Daily Construction Emissions – Mitigated**

Construction Phase Year	Pounds Per Day					
	ROC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
2018	1	6	59	<1	7	4
2019	8	39	171	<1	16	7
2020	80	36	168	<1	16	7
2021	80	36	168	<1	16	7
Maximum Regional Total	80	39	171	<1	16	7
Regional Significance Threshold	25*	25*	N/A	N/A	N/A	N/A
Exceed Threshold?	Yes	Yes	N/A	N/A	N/A	N/A

\* VCAPCD's Air Quality Assessment Guidelines state that these operational thresholds of significance (25 lb/day) are not applicable for construction-related emissions because such emissions are temporary. However, the Guidelines state that emissions should be mitigated if they exceed these thresholds. There are no thresholds provided for CO, SO<sub>x</sub>, PM<sub>10</sub>, or PM<sub>2.5</sub>.  
Source: DKA Planning, 2016 based on CalEEMod 2013.2.2 model runs.

## Operation

The project will also produce long-term air quality impacts to the region primarily from motor vehicles that access the project site. The project could add up to 2,080 net vehicle trips to and from the project site on a peak weekday at the start of operations in 2021.<sup>12</sup> Operational emissions would not exceed VCAPCD's significance thresholds for ROC and NO<sub>x</sub> (Table 6.3-10). As a result, the project's operational impacts on air quality are considered **less than significant**.

**Table 6.3-10  
Estimated Daily Operation Emissions – Unmitigated**

Emission Source	Pounds Per Day					
	ROC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Area Sources	18	<1	25	<1	<1	<1
Energy Sources	<1	2	<1	<1	<1	<1
Mobile Sources	5	11	50	<1	12	3
Total	23	13	76	<1	12	3
Regional Significance Threshold	25	25	N/A	N/A	N/A	N/A
Exceed Threshold?	No	No	N/A	N/A	N/A	N/A

Source: DKA Planning, 2016 based on CalEEMod 2013.2.2 model runs.

<sup>12</sup> Stantec, "St. John's Seminary Residential Project Traffic and Circulation Study", July 21, 2016.

**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.**

### *Impacts*

#### **Construction**

A project's construction impacts could be considered cumulative considerable if it substantially contributes to cumulative air quality violations when considering other projects that may undertake concurrent construction activities.

Construction of the proposed project would contribute significantly to cumulative emissions of ozone precursors. For regional ozone precursors, the project would exceed VCAPCD mass emission thresholds for ozone precursors during construction. Therefore, construction emissions impacts on regional criteria pollutant emissions would be considered significant.

#### **Operation**

As for cumulative operational impacts, the proposed land use will not produce cumulatively considerable emissions of nonattainment pollutants at the regional or local level. Because the project's air quality impacts would not exceed the VCAPCD's operational thresholds of significance as noted in **Table 6.3-10**, the project's impacts on cumulative emissions of non-attainment pollutants is considered less than significant.

### *Mitigation Measures*

**Mitigation Measure 6.3-1** would require the use of cleaner off-road construction equipment. **Regulatory Compliance Measure 6.3-1** calls for good housekeeping measures that reduce ROC and NO<sub>x</sub> emissions during on-site construction activities. These could similarly be implemented at other construction sites for any related projects.

### *Residual Impacts*

Impacts would be less than significant.

## Expose sensitive receptors to substantial pollutant concentrations?

### *Impacts*

#### **Construction**

Construction of the proposed project could produce air emissions that impact several existing sensitive receptors near the project site, including:

- St. John's Pleasant Valley Hospital: medical care facilities located 3,500 feet west of the project site.
- Castillo de Rosas Residences: single-family residential land uses located up to approximately 100 feet east of the project site along Castillo de Rosas.
- Woodcreek Road Residences: single-family residential land uses located up to approximately 200 feet east of the project site along Woodcreek Road.
- Plata Rosa Court Residences: single-family residential land uses located up to approximately 100 feet east of the project site along Plata Rosa Court.
- Padre Serra Parish: a church and related uses located up to approximately 150 feet southeast of the project site along Upland Road.
- Via Secoya Residences: single-family residential land uses located up to approximately 700 feet southwest of the project site along Via Secoya.
- Via Arandana Residences: single-family residential land uses located up to approximately 650 west of the project site along Via Arandana.

These nearby receptors could be exposed to substantial concentrations of localized pollutants PM10 and PM2.5 from construction of the proposed project. Specifically, construction activities could exceed ambient air quality standards and represent a significant but mitigable impact, particularly residences on Castillo de Rosas, Woodcreek Road, and Plata Rosa Court.

#### **Operation**

The proposed project would generate long-term emissions on-site from area and energy sources that would generate negligible pollutant concentrations of ozone precursor emissions at nearby sensitive receptors. While long-term operations of the project would generate traffic that produces off-site emissions, these would not result in exceedances of CO air quality standards at roadways in the area due to three key factors. First, CO hotspots are extremely rare and only occur in the presence of unusual atmospheric conditions and extremely cold conditions, neither of which applies to this project area. Second, auto-related emissions of CO continue to decline because of advances in fuel combustion

technology in the vehicle fleet. Finally, the project would not contribute to the levels of congestion that would be needed to produce the amount of emissions needed to trigger a potential CO hotspot.<sup>13</sup> Specifically, traffic levels of service at 12 intersections studied in the vicinity of the project would not be significantly impacted by traffic volumes from the development under existing or 2021 horizon scenarios.<sup>14</sup>

Finally, the project would not result in any substantial emissions of TACs during the construction or operations phase. During the construction phase, the primary air quality impacts would be associated with the combustion of diesel fuels, which produce exhaust-related particulate matter that is considered a toxic air contaminant by CARB based on chronic exposure to these emissions.<sup>15</sup> However, construction activities would not produce chronic, long-term exposure to diesel particulate matter. During long-term project operations, the project does not include typical sources of acutely and chronically hazardous TACs such as industrial manufacturing processes and automotive repair facilities. As a result, the project would not create substantial concentrations of TACs. Based on the limited activity of TAC sources, the project would not warrant the need for a health risk assessment associated with on-site activities. Therefore, project operation impacts related to TACs would be less than significant.

### ***Mitigation Measures***

**Mitigation Measure 6.3-1** would require the use of cleaner off-road construction equipment. Further, **RCM 6.3-1** calls for good housekeeping measures mandated under VCAPCD Rule 55 that substantially reduces criteria pollutant emissions during on-site construction activities.

### ***Residual Impacts***

Impacts would be less than significant.

### **Create objectionable odors affecting a substantial number of people?**

The proposed project would introduce residential land uses to the area but would not result in activities that create objectionable odors. It would not include any land uses typically associated with unpleasant odors and local nuisances (e.g., rendering facilities, dry cleaners). VCAPCD regulations and complaint programs that govern nuisances would regulate any occasional odors associated with on-site uses. As a result, any odor impacts from the project would be considered less than significant.

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<sup>13</sup> Caltrans, Transportation Project-Level Carbon Monoxide Protocol, updated October 13, 2010.

<sup>14</sup> Stantec, "St. John's Seminary Residential Project Traffic and Circulation Study", July 21, 2016.

<sup>15</sup> California Office of Environmental Health Hazard Assessment. *Health Effects of Diesel Exhaust*. [http://oehha.ca.gov/public\\_info/facts/dieselfacts.html](http://oehha.ca.gov/public_info/facts/dieselfacts.html)

### *Mitigation Measures*

None required

### *Residual Impacts*

Impacts would be less than significant.

## 6.3.8 CUMULATIVE ANALYSIS

### *Impacts*

#### **Regional Emissions**

As indicated in **Table 6.3-8** and **Table 6.3-9**, the increase in emissions generated would exceed the VCAPCD's 25-pounds-per-day threshold for ROC and NO<sub>x</sub>. Because the basin is in nonattainment for the state and federal O<sub>3</sub> standards, a project that creates individually significant air quality impacts would also contribute to cumulatively significant air impacts. Therefore, the proposed project would have cumulatively significant impacts with respect to ROC and NO<sub>x</sub> emissions. Mitigation measures have been recommended to reduce significant impacts to a less than significant level to the extent feasible. With the implementation of the proposed mitigation measures, project operational air quality impacts would be considered reduced to a cumulatively less than significant impact, in accordance with the *Ventura County Air Quality Assessment Guidelines*.<sup>16</sup>

#### **CO Concentrations at Study Intersections**

As discussed earlier in this section, the proposed project would not cause any of the studied intersections to fall below accepted operational levels of service. The buildout traffic analysis conducted for the proposed project was based on the City of Camarillo's Traffic Model (CTAM). The Traffic Model's *Future Year Volumes* (Year 2030) includes traffic growth associated with buildout of the City of Camarillo's General Plan Land Use Element and anticipated regional growth. The buildout traffic forecasts also incorporate the expected roadway network development within the proposed project area in addition to the approved and pending projects contained in the current City of Camarillo's *Cumulative Developments* list. Hence, the project-specific CO discussion conducted earlier in this section applies equally to the cumulative condition. As indicated above, of the 12 intersections evaluated in the traffic impact analysis

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<sup>16</sup> Ventura County Air Pollution Control District, *Ventura County Air Quality Assessment Guidelines*, County of Ventura, October 2003.

for the proposed project, none would operate at or below LOS E or F.<sup>17</sup> Therefore, since all of the study intersections will perform at LOS D and above for existing traffic conditions plus proposed project and existing traffic conditions plus buildout plus proposed project, according to the VCAPCD Guidelines, none of the intersections qualified for a CO-hotspot screening analysis. It is expected that the proposed project would not result in an increase in CO levels equal to or greater than 20 ppm (parts per million) for the 1-hour state standard, or 9.0 ppm (parts per million) for the 8-hour state standard at the edge of the roadway or beyond. Impacts would be considered less than significant.

### ***Mitigation Measures***

None required.

### ***Residual Impacts***

Cumulative impacts would be less than significant.

## **6.3.9 CONSISTENCY WITH GENERAL PLAN**

The *City of Camarillo General Plan* provides the following goals and policies for air quality that apply to the proposed project. An analysis of the consistency of the proposed project site with each of the General Plan goals, objectives, and policies is provided below:

### **Open Space and Conservation Element**

**C. Health Goal:** To enhance the physical, emotional and mental well-being of individuals in the City by providing for urban residents to relate to natural open space; to protect water quality; to provide sites for waste treatment and disposal, and to encourage land uses which will minimize the degradation of air quality.

**Analysis:** The proposed project would produce emissions of ROC and NO<sub>x</sub> that exceed the Ventura County Air Pollution Control District threshold of 25 pounds (each) of ROC and NO<sub>x</sub> per day. As discussed, implementation of **Mitigation Measures 6.3-1** and **6.3-2** and **RCM 6.3-1** would decrease the impact to less than significant levels. Thus, the proposed project would be consistent with this policy.

### **Consistency Analysis Summary**

The proposed project is consistent with the City's General Plan.

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<sup>17</sup> Stantec, *St. John's Seminary Residential Project*, October 3, 2016.