SECTION 4.0

4.3 AIR QUALITY

4.3 AIR QUALITY

This Draft Environmental Impact Report (Draft EIR) section considers the potential for the North Canyon Ranch residential project and the Required Island Annexations (together forming the whole project for purposes of this Draft EIR) to result in impacts to aesthetic resources and identifies opportunities to avoid, reduce, or otherwise mitigate potential significant impacts to air quality, where warranted.

This analysis consists of a description of the existing conditions at the proposed project site and surrounding area, a summary of the regulatory framework that guides the decision-making process, thresholds for determining if the proposed project would result in significant impacts, anticipated impacts (direct, indirect, and cumulative), mitigation measures, and residual impacts (i.e., level of significance after mitigation). The significance of project impacts has been determined in accordance with Appendix G of the California Environmental Quality Act (CEQA) Guidelines, and other applicable law. Sources used in the analysis are cited where relevant to the analysis; comprehensive list of references is provided Section 7.0, Organizations and Persons Consulted and References, of this EIR. Emissions generated by the project during construction and operations were estimated using the California Emissions Estimator Model (CalEEMod), Version 2022.1.1.21. The CalEEMod output data sheets for the project are included in **Appendix C, Air Quality and Greenhouse Gas Emissions**.

4.3.1 Existing Conditions

The environmental setting and regulatory setting, below, establish existing conditions relevant to the project. The analysis of project impacts is based upon these baseline conditions.

Environmental Setting

The environmental setting is a description of the physical environmental conditions on and in the vicinity of the project site.

North Canyon Ranch

The proposed North Canyon Ranch residential development project site is located within an approximately 160-acre undeveloped property in unincorporated Ventura County, adjacent to the City of Simi Valley boundary of the northwestern portion of the City. The project site property is located within the City's Sphere of Influence (SOI) area, and the project is requesting that the project site be annexed into the City boundary. The proposed residential development would be clustered in the southern portion of the property, with a disturbance area of approximately 90.96 acres, while the rest of the property would be retained as open space. Existing land uses adjacent to the proposed development area consist of multi-family residences and "big box" stores associated with the Simi Valley Town Center Mall to the south, single-family residences to the east, and open space to the north and west. The southwestern corner of the development area is located at the northern terminus of First Street, and the eastern side of the development area is located at the western terminus of Falcon Street, which the project would extend westerly through the project site to connect with First Street.

The proposed residential development would consist of 157 single-family residences, 50 multi-family condominium/townhouse units, and a paved roadway circulation network in addition to the extension of Falcon Street. Previously, 159 single-family residences were proposed, which is the number of units evaluated in the air quality analysis. The analysis is therefore slightly conservative (i.e., slightly overstates project emissions). Construction of the project would require grading of the site to create level building pads, creation of debris basins at various locations throughout the development, and remedial grading for hillside stability. All cut and fill grading quantities would be balanced onsite, and no substantial offsite soil

export/import hauling is proposed. Construction of the project would also include installation of utility infrastructure and landscaping.

Required Island Annexations

The project would include the annexation of nine unincorporated Island Annexation Areas from the County of Ventura to the City. The annexation properties are located within the City limits boundary, although currently they are excluded from the City's jurisdiction, and consist of parcels that are mostly developed for residential use (consisting of single-family homes and several duplexes). A total of five undeveloped lots within these unincorporated areas, which are located adjacent to existing development, could potentially be developed with five dwelling units. For the purposes of CEQA, the only action for this part of the project is for the Ventura County Local Agency Formation Commission (LAFCO) to approve annexation of the Island properties to the City, and no physical changes in land use or infrastructure within these properties is proposed as part of this project.

Local Climate and Meteorology

California's weather is heavily influenced by a semi-permanent high-pressure system west of the Pacific coast. The Mediterranean climate of the region and the coastal influence produce moderate temperatures year round, with rainfall concentrated in the winter months. The sea breeze, which is the predominant wind, is a primary factor in creating this climate and typically flows from the west-southwest in a day-night cycle with speeds generally ranging from 5 to 15 miles per hour.

The project site is located in the South Central Coast Air Basin (or "the Basin") and is under the jurisdiction of the Ventura County Air Pollution Control District (VCAPCD). Air quality in the Basin is affected by the emission sources located in the region, as well as by three natural factors:

- A natural terrain barrier to emission dispersion north and east of the metropolitan Los Angeles area.
- A dominant on-shore flow transports and disperses air pollution by driving air pollution originating in industrial areas along the coast toward the natural terrain barrier, limiting horizontal dispersion. The effect of this onshore flow is a gradual degradation of air quality from coastal to inland areas.
- Atmospheric inversions limit dispersion of air pollution on a vertical scale. Temperature typically decreases with altitude. However, under inversion conditions temperature begins to increase at some height above the ground. The temperature increase continues through an unspecified layer after which the temperature change with height returns to standard conditions. The inversion layer is typically very stable and acts as a cap to the vertical dispersions of pollutants.

Air Quality Health Effects

The criteria pollutants for which federal and state standards have been promulgated and that are most relevant to air quality planning and regulation in the Basin are ozone, and fine suspended particulate matter (PM). These and other common criteria air pollutants are briefly described below.

- Ozone (O_3) is a gas that is formed when volatile organic compounds (VOCs)[1] and nitrogen oxides (NO_X), both byproducts of internal combustion engine exhaust, undergo slow photochemical reactions in the presence of sunlight. Ozone concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant. Individuals exercising outdoors, children, and people with preexisting lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the

[1] The Ventura County Air Quality Assessment Guidelines (October 2003) states that VOC is synonymous with reactive organic gases (ROG) and reactive organic compounds (ROC). These terms may be used interchangeably in this evaluation. http://www.vcapcd.org/pubs/Planning/VCAQGuidelines.pdf

subgroups most susceptible to O_3 effects. Short-term exposures (lasting for a few hours) to O_3 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.

- Particulate Matter PM-10 and PM-2.5 consists of extremely small, suspended particles or droplets 10 microns and 2.5 microns or smaller in diameter, respectively, that can lodge in the lungs when inhaled. Some sources of particulate matter, like pollen and windstorms, are naturally occurring. However, in populated areas, most particulate matter is caused by road dust, diesel soot, combustion products, abrasion of tires and brakes, and construction activities. Inhaled particulate matter can contribute to respiratory problems and can cause permanent lung damage. Inhalable particulates can also have a damaging effect on health by interfering with the body's mechanism for clearing the respiratory tract or by acting as a carrier of an absorbed toxic substance.

- Carbon Monoxide (CO) is a colorless, odorless gas produced by the incomplete combustion of fuels. CO concentrations tend to be the highest during the winter morning, with little to no wind, when surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike ozone, motor vehicles operating at slow speeds are the primary source of CO in the Basin. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections. 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. Hence, conditions with an increased demand for oxygen supply can be adversely affected by exposure to CO. Individuals most at risk include patients with diseases involving heart and blood vessels, fetuses, and patients with chronic hypoxemia (oxygen deficiency) as seen in high altitudes.

- Nitrogen dioxide (NO_2) is a nitrogen dioxide compound that is produced by the combustion of fossil fuels, such as in internal combustion engines (both gasoline and diesel powered), as well as point sources, especially power plants. The principal form of nitrogen oxide produced by combustion is nitric oxide (NO), but NO reacts quickly to form NO_2, creating the mixture of NO and NO_2 commonly called NO_X, a major contributor to O_3 formation. NO_2 also contributes to the formation of PM-10. High concentrations of NO_2 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_2 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).

Table 4.3-1, Criteria Pollutant Sources and Health Effects provides a summary of these major criteria pollutants of concern and their effects on public health.

Table 4.3-1
Criteria Pollutant Sources and Health Effects

Pollutants	Sources	Primary Health Effects
Ozone (O_3)	• Motor vehicles • Industrial emissions, • Consumer products Note: These sources emit precursors, NOx and Reactive Organic Gasses (ROG), that react with sunlight to form ozone in the atmosphere.	• Respiratory symptoms • Worsening of lung disease leading to premature death • Damage to lung tissue
Particulate Matter (PM-10)	• Cars and trucks (especially diesels) • Fireplaces, woodstoves • Windblown dust from roadways, agriculture, and construction	• Premature death & hospitalization, primarily for worsening of respiratory disease
Particulate Matter (PM-2.5)	• Cars and trucks (especially diesels) • Fireplaces, woodstoves • Windblown dust from roadways, agriculture, and construction	• Premature death • Hospitalization for worsening of cardiovascular disease • Hospitalization for respiratory disease • Asthma-related emergency room visits, increased symptoms, increased inhaler usage
Carbon Monoxide (CO)	• Any source that burns fuel such as cars, trucks, construction and farming equipment, and residential heaters and stoves	• Chest pain in patients with heart disease • Headache • Light-headedness • Reduced mental alertness
Nitrogen Dioxide (NO_2)	• See carbon monoxide sources.	• Lung irritation • Enhanced allergic responses
Sources: California Air Resources Board, Sources of Air Pollution, https://ww2.arb.ca.gov/resources/sources-air-pollution, and Common Air Pollutants https://ww2.arb.ca.gov/resources/common-air-pollutants.		

Ambient Air Quality Standards

National and State ambient air quality standards (AAQS)[2] are the air quality levels for common criteria pollutants that are considered safe, with an adequate margin of safety, to protect the public health and welfare of "sensitive receptors," which include the elderly, young children, the acutely and chronically ill (e.g., those with cardio-respiratory disease, including asthma), and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed. Recent research has shown, however, that chronic exposure to ozone (O_3), the primary ingredient in photochemical smog, may lead to adverse respiratory health, even at concentrations close to the ambient standard. **Table 4.3-2, Federal and State Ambient Air Quality Standards**, lists the current federal and state standards for regulated criteria air pollutants.

[2] California Air Resources Board, California and National Ambient Air Quality Standards, Accessed on January 12, 2024 at: https://www.arb.ca.gov/research/aaqs/aaqs2.pdf?_ga=2.111850244.1417595818.1550763932-1724706578.1550763932.

Table 4.3-2
Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	Federal Standards	California Standards
Ozone (O_3)	1 Hour	-	0.09 ppm
	8 Hour	0.07 ppm	0.07 ppm
Carbon Monoxide (CO)	8 Hour	9.0 ppm	9.0 ppm
	1 Hour	35 ppm	20 ppm
Nitrogen Dioxide (NO_2)	Annual	0.053 ppm	0.030 ppm
	1 Hour	0.10 ppm	0.18 ppm
Sulfur Dioxide (SO_2)	Annual	-	-
	24 Hour	0.14 ppm	0.04 ppm
	1 Hour	0.075 ppm	0.25 ppm
Particulate Matter (PM-10)	Annual	-	20 $\mu g/m^3$
	24 Hour	150 $\mu g/m^3$	50 $\mu g/m^3$
Fine Particulate Matter (PM-2.5)	Annual	12 $\mu g/m^3$	12 $\mu g/m^3$
	24 Hour	35 $\mu g/m^3$	–
Lead (Pb)	30-Day average	–	1.5 $\mu g/m^3$
	3-Month Average	0.15 $\mu g/m^3$	–

ppm = parts per million
$\mu g/m^3$ = micrograms per cubic meter
Source: California Air Resources Board, 2016.

Local Air Quality Monitoring

The monitoring station located closest to Simi Valley and most representative of air quality at the project site is the Simi Valley Station on the Simi Valley High School campus at 5400 Cochran Street[3] approximately five miles southeast of the project site. **Table 4.3-3, Ambient Air Quality**, summarizes the air quality data measurements for the years 2018-2022 in the local airshed for the criteria pollutants of greatest concern in Ventura County.

As shown in Table 4.3-3, the ozone concentrations at the Simi Valley Monitoring Station exceeded the one-hour state standard for a combined 11 days for the five-year period of 2018 through 2022. The PM-10 concentrations did not exceed federal standards for any days during the five-year period of 2018 through 2022 and the number of days that State PM-10 standards were exceeded ranged from zero to six days within any of those five years. Information regarding CO concentrations is not available from any of the monitoring stations in the County as monitoring ceased in 2004 due to the low levels of CO recorded.

[3] California Air Resources Board, Air Monitoring Sites - Interactive Map, Accessed January 12, 2024 at: https://ww2.arb.ca.gov/applications/air-monitoring-sites-interactive-map

Table 4.3-3
Ambient Air Quality

Pollutant/Standard	2018	2019	2020	2021	2022
Ozone					
Number of Days Standards Exceeded					
1-Hour > 0.09 ppm (S)	2	0	5	0	0
8-Hour > 0.07 ppm (S)	14	9	25	8	11
Maximum Observed Concentration					
Max. 1-Hour Conc. (ppm)	0.101	0.089	0.108	0.090	0.094
Max. 8-Hour Conc. (ppm)	0.093	0.079	0.095	0.078	0.083
Nitrogen Dioxide					
Number of Days Standards Exceeded					
1-Hour > 0.18 ppm (S)	0	0	0	0	0
Maximum Observed Concentration					
Max. 1-Hour Conc. (ppm)	0.043	0.045	0.042	0.035	0.046
Inhalable Particulates (PM-10)					
Number of Days Standards Exceeded					
24-Hour > 50 µg/m^3 (S)	6	4	*	3	0
24-Hour > 150 µg/m^3 (F)	0	0	0	0	0
Maximum Observed Concentration					
Max. 24-Hr. Conc. (µg/m^3)	107.6	124.3	90.1	101.5	44.1
Ultra-Fine Particulates (PM-2.5)					
24-Hour > 35 µg/m^3 (F)	0	0	0	0	0
Max. 24-Hr. Conc. (µg/m^3)	29.6	19.4	34.9	32.9	22.7

Source: California Air Resources Board, iADAM: Air Quality Data Statistics, Accessed at: https://www.arb.ca.gov/adam/index.html
Notes: S = State; F = Federal; µg/m^3 = micrograms per cubic meter of air
* insufficient data

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.

The VCAPCD indicates that the likelihood that the Valley Fever fungus may be present or be of concern increases with the number of factors listed below that would apply to any given site or project:

- 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).

VCAPCD Guidelines provide recommendations for a lead agency to consider if a project is determined to represent a significant risk of causing Valley Fever. These VCAPCD recommendations focus on construction worker protections to prevent respiration of spores if present.

Regulatory Setting

Federal

National Ambient Air Quality Standards (AAQS)

Ambient air quality standards (AAQS) define clean air and are established to protect the health of the most sensitive groups in our communities (referred to as "sensitive receptors"). These standards identify levels of air quality for six "criteria" pollutants: ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter (both respirable particulate matter [PM-10] and fine particulate matter [PM-2.5]), and lead (Pb).[4] The standards are considered to be the maximum concentration of ambient (background) air pollutants determined safe (within an adequate margin of safety) to protect the public health and welfare.

An air quality standard defines the maximum amount of a pollutant averaged over a specified period of time that can be present in outdoor air without any harmful effects on people or the environment. California ambient air quality standards (CAAQS) mandated by State law are often more stringent than national standards.[5]

Federal Clean Air Act

The Federal Clean Air Act (CAA) requires areas that are not attaining the National Ambient Air Quality Standards (NAAQS) to develop and implement a State Implementation Plan (SIP) emission reduction strategy demonstrating compliance with a series of CAA requirements to bring the area into attainment in a timely manner. The State of California also requires all feasible measures towards achievement of State of California ambient air quality standards (CAAQS or State standards) at the earliest practicable date.[6]

State

California Clean Air Act

The California Air Resources Board (CARB), a branch of the California Environmental Protection Agency, oversees air quality planning and control throughout California. It is primarily responsible for implementation of the California Clean Air Act (CCAA), responding to the federal CAA requirements, and for regulating emissions from motor vehicles and consumer products within the state.[7] CARB also sets health-based air quality standards and control measures for toxic air contaminants (TACs). California, in coordination with the federal government, has established health-based air quality standards for six federal criteria air pollutants. Known as the California Ambient Air Quality Standards (CAAQS), the standards are more stringent than the NAAQS, and in the case of PM-10 and SO_2, far more stringent. These standards

[4] California Air Resources Board, National Ambient Air Quality Standards, accessed January 12, 2024, at: https://ww2.arb.ca.gov/resources/national-ambient-air-quality-standards.
[5] California Air Resources Board, California Ambient Air Quality Standards (CAAQS), accessed January 12, 2024 at https://www.arb.ca.gov/research/aaqs/caaqs/caaqs.htm
[6] South Coast Air Quality Management District, 2022 Air Quality Management Plan, Adopted December 2, 2022
[7] California Health and Safety Code Sections 39607, *et seq*. and 40001, *et seq*.

protect sensitive receptors with a margin of safety from adverse health impacts due to exposure to air pollution. CARB has also established CAAQS for sulfates, visibility-reducing particles, hydrogen sulfide, and vinyl chloride. Enacted in 1988, the CCAA established a legal mandate for air basins to achieve CAAQS by the earliest practical date.

The focus of most of CARB's research goes toward automobile emissions, the largest public concern regarding air pollution in California. CARB establishes new standards for vehicles sold in California and for various types of equipment available commercially. CARB also sets fuel specifications to further reduce vehicular emissions.

Future development within the project area would be subject to compliance with federal and state air quality regulations during construction and operational phases.

California Health and Safety Code

CARB supervises and supports the regulatory activities of local air quality districts as well as monitors air quality itself. The Health and Safety Code 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. CARB will designate an area as nonattainment for a pollutant if monitoring data show that a CAAQS for a particular pollutant was violated at least once during the previous three years. The Health and Safety Code requires CARB to use the designation criteria to designate areas of California and to review designations annually.

CARB establishes policy and statewide standards and administers the state's mobile source emissions control program. In addition, CARB oversees air quality programs established by state statute. CARB makes area designations for the following pollutants: O_3, CO, NO_2, SO_2, PM-10, PM-2.5, sulfates, lead, hydrogen sulfide, and visibility-reducing particles.

Regional and Local

Southern California Association of Governments

The Southern California Association of Governments (SCAG) functions as the Metropolitan Planning Organization (MPO) for six counties including Ventura County wherein the project area is located.[8] As the designated MPO, SCAG is federally mandated to research and plan for transportation, growth management, hazardous waste management, and air quality. Although SCAG is not an air quality management agency, it is responsible for several air quality planning issues. Specifically, as the designated MPO for the Southern California region, it is responsible, pursuant to Section 176(c) of the 1990 amendments to the Clean Air Act, for providing current population, employment, travel, and congestion projections for regional air quality planning efforts. With respect to air quality, SCAG has prepared the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) as the basis for the transportation components of the VCAPCD AQMP that are utilized in the preparation of air quality forecasts and the consistency analysis included in the AQMP.

Ventura County Air Pollution Control District

In California, regional air pollution control districts have been established to oversee the attainment of air quality standards within air basins, as defined by the state. The districts have permitting authority over all stationary sources of air pollutants within their district boundaries, and act as the primary reviewer of environmental documents associated with air quality issues. The VCAPCD is the local air quality

[8] Southern California Association of Governments, About Us, accessed January 12, 2024 at: http://www.scag.ca.gov/about/Pages/Home.aspx.

management agency. The local air quality management agency is required to monitor air pollutant levels to ensure that applicable air quality standards are met and, if they are not met, to develop strategies to meet the standards.

2022 Ventura County Air Quality Management Plan

The Ventura County Air Pollution Control Board adopted the 2022 Ventura County Air Quality Management Plan (AQMP) on December 13, 2022. The mission of the VCAPCD is to protect public health and agriculture from the adverse effects of air pollution by identifying air pollution problems and developing a comprehensive program to achieve and maintain state and federal air quality standards. To that end, pursuant to the federal Clean Air Act Amendments of 1990, the 2022 AQMP presents Ventura County's: 1) strategy to attain the 2015 federal 8-hour ozone standard; 2) attainment demonstration for the federal 8-hour ozone standard; and 3) reasonable further progress demonstration for the federal 8-hour ozone standard. The AQMP states that Ventura County's air quality has come a long way since the District was first created in 1968. However, the VCAPCD recognizes there is more work to do to alleviate the detrimental health effects of air pollution. The 2022 AQMP identifies a path forward to ensure clean air for County residents.

The AQMP presents Ventura County's strategy (including related mandated elements) to attain the 2008 federal 8-hour ozone standard by 2027, the attainment date for serious ozone nonattainment areas. In addition to showing attainment of the federal 8-hour ozone standard by 2027, the 2022 AQMP also must show steady progress (i.e., Reasonable Further Progress) towards attaining the 2015 federal 8-hour ozone standard by that date.[9]

4.3.2 Thresholds of Significance

Air quality impacts are considered significant if they cause clean air standards to be violated where they are currently met, or if they measurably contribute to an existing violation of standards. Substantial emissions of air contaminants for which there is no safe exposure, or nuisance emissions such as dust or odors, would also be considered a significant impact. Two sources were consulted during the development of thresholds of significance to evaluate the proposed project's potential impacts to air quality: Appendix G, Environmental Checklist Form, of the CEQA Guidelines, and the VCAPCD's Ventura County Air Quality Assessment Guidelines.[10]

CEQA Guidelines Significance Thresholds

The potential for the proposed project to result in impacts related to air quality has been analyzed in relation to the thresholds below, as established in the State CEQA Guidelines Appendix G Checklist. The proposed project would be considered to have a significant impact to air quality when the proposed project has potential to (short title for impact headings shown in parentheses):

- Conflict with or obstruct implementation of the applicable air quality plan. ***(Conflict with Air Quality Management Plan)***
- 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. ***(Emissions of Criteria Pollutants)***
- Expose sensitive receptors to substantial pollutant concentrations. (Sensitive Receptors)

[9] Ventura County Air Pollution Control District, 2022 Ventura County Air Quality Management Plan, Accessed November 15, 2023, at: http://www.vcapcd.org/pubs/Planning/AQMP/2022/Final-2022-AQMP-with-appendices-20221130.pdf.
[10] Ventura County Air Pollution Control District, Ventura County Air Quality Assessment Guidelines, October 2003.

- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. ***(Other Emissions/Odors)***

VCAPCD Significance Thresholds

In evaluating the project impacts against the CEQA thresholds above, the following Ventura County Air Quality Assessment Guidelines suggested threshold criteria are considered:

- Generate daily emissions exceeding 25 pounds of reactive organic compounds (ROG) or nitrogen oxides (NO_X).
- Cause an exceedance or make a substantial contribution to an exceedance of an ambient air quality standard.
- Be inconsistent with goals and policies of the Ventura County AQMP.
- Directly or indirectly cause population growth that would exceed population forecasts in the most recently adopted AQMP.
- Generate fugitive dust emissions in such quantities as to cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public.
- Create a human health hazard by exposing sensitive receptors to toxic air emissions.
- Create objectionable odors affecting a substantial number of people.

According to the VAPCD Guidelines, projects that generate more than 25 pounds per day of ROG and NO_X may jeopardize attainment of the federal and State ozone standard, resulting in significant impact on air quality. The 25 pounds per day threshold for ROG and NO_X are not intended to be applied to construction emissions since such emissions are temporary. The VCAPCD has not established quantitative thresholds for particulate matter, which includes fugitive dust) for either operation or construction.

There is no VCAPCD recommended threshold to indicate if a project would result in a significant San Joaquin Valley Fever impact; however, the lead agency should consider the risk factors noted by VCAPCD that may be applicable to the project or the project site to determine if project activities may create a significant Valley Fever impact. VCAPCD Guidelines provide recommendations for a lead agency to consider if a project is determined to represent a significant risk of causing Valley Fever. These VCAPCD recommendations focus on construction worker protections to prevent respiration of spores if present, some of which would be required for compliance with VCAPCD Rule 55 for dust suppression during construction.[11]

4.3.3 Project Impacts and Mitigation Measures

The following analysis is based in part on the project's emissions of criteria pollutants as estimated using CalEEMod.

4.3.3.1 Conflict with Air Quality Management Plan

A significant impact may occur if the proposed project would conflict with or obstruct implementation of the Ventura County AQMP. According to the VCAPCD Guidelines, Project consistency with the AQMP can be determined by comparing the actual population growth in the county with the projected growth rates used in the AQMP.

[11] Ventura County Air Pollution Control District, Rule 55 – Fugitive Dust (Adopted 6/1-0/08), accessed January 12, 2024, at: http://vcapcd.org/Rulebook/Reg4/RULE%2055.pdf.

North Canyon Ranch

The projected growth rates used in the AQMP indicate that the population within the VCAPCD is anticipated to increase from 861,000 in 2018 to 934,000 in 2040, which would be an increase of 73,000. As evaluated in Section 4.11, Population and Housing of this EIR, the average household size would be 2.98 persons per residential unit, using the higher City General Plan average household size for owner-occupied units. Therefore, 157 single-family units and 50 multi-family units would result in an estimated population of 617 people. Although the average household size for renter-occupied units is lower, the owner-occupied average was used for a conservative projection. By adding 617 people, the project would represent less than 0.9 percent of the projected growth estimates used in the AQMP. Based on the updated project, the impact would be slightly reduced.

Based on City-specific population projections at five year increments from the Demographic Growth Forecast Appendix to the Southern California Council of Governments 2020-2045 RTP/SCS,[12] the (interpolated) population of Simi Valley for the project buildout year (2028) is projected to be approximately 131,197 (increased population of approximately 341.4 persons per year). The approximate population of Simi Valley based the SCAG 2020-2045 RTP/SCS for 2022 is 129,148. [13] Thus, with the forecasted growth per year, the projected 2028 population increase would be 2,048. The proposed project's addition of approximately 617 residents would represent less than 0.5 percent of the 2028 projected population for the City. Therefore, the proposed North Canyon Ranch development would not generate growth exceeding the projected population growth forecast for the City and would not be in conflict with the AQMP. As a result, impacts would be less than significant.

Required Island Annexations

These unincorporated areas are located within existing developments and include parcels that are mostly developed for residential use with single-family homes or duplexes. A total of five undeveloped lots within these unincorporated areas could potentially be developed with five dwelling units. For the purposes of CEQA, the only action for this part of the project is for the City to annex these properties, and no physical changes in land use or infrastructure within these properties is proposed. The project would not cause substantial development or population growth due to the Island Annexations. Additionally, the five vacant lots within these areas could potentially be developed with five homes in the future with or without implementation of the rest of this project if they remained within County jurisdiction. Therefore, the City's annexation of the Islands would not contribute to substantial growth not anticipated within the AQMP, and the potential impacts of the Islands Annexations regarding consistency with the AQMP would be less than significant.

Mitigation Measures

No mitigation measures are required.

Residual Impacts

Impacts would be less than significant before mitigation as the project would not exceed population growth estimates used in developing the AQMP.

[12] Southern California Council of Governments (SCAG) 2020-2045 Regional Transportation Plan and Sustainable Communities Strategy, Demographics and Growth Forecast Appendix.

[13] Population data for the year 2022 (the baseline year) within the City is calculated based on a linear interpolation of the 2016 to 2045 projections in SCAG's 2020-2045 RTP/SCS. Note: Notice of Preparation of this EIR was prepared in 2022, i.e., the baseline for the EIR.

4.3.3.2 Emissions of Criteria Pollutants

The proposed project could have a significant impact if it would 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. The following evaluation is primarily based on the project's emissions of air pollutants as estimated using CalEEMod, which is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. The model was developed for the California Air Pollution Officers Association (CAPCOA) in collaboration with the California Air Districts and quantifies direct emissions from construction and operation activities (including vehicle use), as well as indirect emissions, such as from energy use, solid waste disposal, vegetation planting and/or removal, and water use. The CalEEMod output data sheets for the project are provided in Appendix C of this Draft EIR.

North Canyon Ranch

Construction Emissions

Construction of the project would generate temporary air pollutant emissions associated with fugitive dust (PM-10 and PM-2.5) from soil disturbance, exhaust emissions from heavy-duty construction vehicles and material delivery trucks, and ROG emissions released primarily during application of architectural coatings. Construction phases would generally consist of site preparation, grading, building construction, paving, and architectural coating. **Table 4.3-4, Conceptual Construction Equipment Fleet and Duration**, shows the anticipated duration of each construction activity phase and corresponding equipment type and quantity.

Table 4.3-4
Conceptual Construction Equipment Fleet and Duration

Construction Activity	Duration (workdays)	Equipment Type and Quantity
Site Preparation	60	4 Tractors/Loaders/Backhoes*
		3 Rubber Tire Dozers*
Grading	155	2 Excavators*
		1 Grader*
		2 Dozers*
		3 Scrapers*
		2 Tractors/Loaders/Backhoes*
		1 Water Truck
Construction	565	3 Forklifts
		1 Generator Set
		1 Rough Terrain Forklift
		2 Skid Steer Loaders
		3 Tractors/Loaders/Backhoes*
		1 Welder
Paving	110	2 Pavers
		2 Rollers
		2 Paving Equipment
Architectural Coating	155	1 Air Compressor

Source: CalEEMod 2022.1.1.21 default estimations as adjusted for project specific data provided via email and telephone communications with the City and project team in December 2020, and updated timeline telephone-mail communication with the City in March 2024.
* To minimize air quality construction emissions, the applicant is committed to utilizing Tier 4 diesel-rating construction off-road earthmoving equipment as a project design feature.

The applicant and the City have estimated the start of construction to occur in 2026, and completion of construction in 2030.[14] The project's maximum daily pollutant emissions from project construction activities as estimated by CalEEMod are summarized in **Table 4.3-5, Maximum Daily Emissions (Construction)**.

As stated in the Ventura County Air Quality Assessment Guidelines, construction-related emissions of ROG and NO_X are not counted towards VCAPCD significance thresholds since such emissions are temporary. The project's greatest emissions of fugitive dust would occur during the site preparation and grading phases, due to the use of earth-moving equipment. VCAPCD Rule 55 requires the implementation of fugitive dust control measures during construction to ensure construction emissions are not generated in such quantities as to cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which may endanger the comfort, repose, health, or safety of any such person or the public. Rule 55 dust reduction measures include actions such as securing tarps over truckloads of soil material, and watering exposed soil surfaces and bulk material stockpiles to minimize fugitive dust. Also, VCAPCD Rule 74.2 limits the VOC content for specific coating categories that may be used during construction. Therefore, impacts pertaining to temporary construction activities would be less than significant.

Table 4.3-5
Maximum Daily Emissions (Construction)

Construction Year	Maximum Daily Emissions (lbs./day) [a]			
	ROG	NOx	PM-10	PM-2.5
2026	1.5	14.2	8.0	4.1
2027	1.2	8.1	1.7	0.6
2028	1.2	7.8	1.7	0.5
2029	22.6	6.5	0.4	0.3
2030	22.6	0.9	0.3	0.1
Maximum	**22.6**	**14.2**	**8.0**	**4.1**

Source: CalEEMod output sheets in Appendix C.
[a] Summer or Winter season emissions, whichever is greater. Using grading equipment with Tier 4 emissions reduction technology, and watering of exposed soils twice daily.

To ensure use of Tier 4 earthmoving equipment during site preparation and grading as committed to by the applicant, the following Project Design Feature (PDF) is included.

PDF AQ-1: Tier 4 Grading Equipment
During site preparation and grading activities, all diesel-powered earthmoving equipment used on-site for excavation and grading shown with an asterisk in Table 4.3-4, Conceptual Construction Equipment Fleet and Duration, of the Draft EIR must meet U.S. Environmental Protection Agency Tier 4 emissions standards.

[14] CalEEMod was used to estimate project emissions assuming construction would commence in the first quarter of 2026, with construction being completed in the first quarter of 2030. Should approval of the project be delayed beyond these dates, project impacts would be less. This is because over time the Air Districts anticipate reduced emissions from vehicles (construction and operations). This would be due to multiple factors including advances in fuel economy and other emission reductions from internal combustion vehicles, an increase in electric and other cleaner vehicles on the roads and at construction sites, and during operations.

Operational Emissions

CalEEMod was also used to estimate the project's operational emissions. During operations, the project would result in generation of emissions from mobile sources (vehicle use), energy sources such as offsite electricity generation, and area sources. Mobile source emissions associated with operation of vehicles were calculated based on trip generation estimates provided in the project's traffic impact report. Emissions attributed to energy use include natural gas consumption for space and water heating. Area sources of emissions include use of landscape maintenance equipment, consumer products and architectural coating for repainting and maintenance. **Table 4.3-6, Project-Related Operational Emissions,** shows the estimated total operational emissions for the proposed new development. To determine whether a regional air quality impact would occur, the increase in emissions were compared to the VCAPD's recommended regional thresholds for operational emissions. As shown in Table 4.3-6, the project's total emissions would not exceed VCAPCD thresholds of significance, and impacts would be less than significant.

Table 4.3-6
Project-Related Operational Emissions

Emissions Sources	Emissions (lbs./day) [a]				
	ROG	**NOx**	**CO**	**PM-10**	**PM-2.5**
Mobile Sources	6.8	5.5	48.8	13.1	3.4
Area	13.3	0.1	12.3	0.0	0.0
Energy	0.1	2.1	0.9	0.2	0.2
Total	**20.2**	**7.7**	**61.9**	**13.3**	**3.6**
VCAPCD Threshold	*25*	*25*	*N/A*	*N/A*	*N/A*
Threshold Exceeded?	*No*	*No*	*N/A*	*N/A*	*N/A*

Source: CalEEMod output sheets in Appendix C
[a] Summer or Winter season emissions, whichever is greater
Note: Totals may appear not to sum due to rounding.

As stated in the Ventura County Air Quality Assessment Guidelines, the ROG and NOx thresholds shown in Table 4.3-6 apply to development projects for determining if a project would jeopardize attainment of air quality standards individually and cumulatively. As such, project's that do not exceed these thresholds would not have a significant adverse impact on air quality in Ventura County. As shown in the above analysis, the project would not exceed the relevant VCAPCD thresholds, and potential impacts would be less than significant.

Required Island Annexations

These unincorporated areas are located adjacent to existing development and include parcels that are mostly developed for residential use with single-family homes or duplexes. A total of five undeveloped lots within these unincorporated areas could potentially be developed with five dwelling units. For the purposes of CEQA, the only action for this part of the project is for LAFCO to approve annexation of the Island properties to the City, and no physical changes in land use or infrastructure within these properties is proposed as part of this project. Therefore, the City's annexation of the Islands would not result in additional emissions of pollutants for which the project region is non-attainment under an applicable federal or state ambient air quality standard, and potential impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Residual Impacts

Impacts would be less than significant before mitigation as emissions would not exceed applicable thresholds of the VCAPCD.

4.3.3.3 Sensitive Receptors

The proposed project could have a significant impact if it would expose sensitive receptors to substantial pollutant concentrations. Sensitive receptors are those most susceptible to respiratory distress, such as children under 14, elderly over 65, persons engaged in strenuous work or exercise, and people with cardiovascular and chronic respiratory diseases. Sensitive receptors near the project site include single-family residences and multi-family residences adjacent to the project site boundary to the east and south, respectively.

North Canyon Ranch

The project would grade and construct a residential development with associated roadways on a currently undeveloped property, resulting in emissions of air pollutants during construction and operations.

Construction Emissions

As discussed above, during construction the project would be required to implement dust controls pursuant to VCAPCD Rule 55 to ensure construction emissions are not generated in such quantities as to cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which may endanger the comfort, repose, health, or safety of any such person or the public. Rule 55 dust reduction measures include actions such as securing tarps over truckloads of soil material, and watering exposed soil surfaces and bulk material stockpiles to minimize fugitive dust. All off-road grading equipment used on the site would meet Tier 4 emissions reduction standards. As evaluated in Section 4.3.3.2, the project would not exceed applicable VCAPCD significance thresholds for pollutant emissions. Additionally, although existing residences are located near the site boundary, construction activities and equipment use would be dispersed across the approximately 86-acre grading area, and thus a relatively small portion of the project's overall grading and construction emissions would occur near these existing uses. Therefore, the project's potential to expose sensitive receptors to substantial pollutant concentrations during temporary construction would be less than significant.

Freeway Impacts

The CARB currently recommends that local agencies avoid siting new sensitive land uses within 500 feet of freeways or high-volume roadways due to concerns regarding the long-term effect of diesel exhaust particulates, a toxic air contaminant. According to CARB, high-volume roadways are urban roads with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day.[15] The nearest high-volume roadway to the project site is the 118 Freeway, which is located approximately 1,380 feet south of the nearest proposed residential unit. Therefore, the project would not conflict with CARB guidance regarding siting of sensitive land uses in proximity to freeways. Additionally, daily trips generated by the proposed residential project would not be anticipated to consist of a substantial number of diesel trucks, as such truck trips are typically associated with industrial, manufacturing, or warehouse uses. As the majority of the project's daily trips would not be anticipated to be diesel powered vehicles, the project would not have a substantial contribution to diesel particulates from vehicle emissions that could adversely affect sensitive receptors, and impacts would be less than significant.

[15] California Air Resources Board, Air Quality and Land Use Handbook, 2005.

Carbon Monoxide (CO) Hotspots

Concentrations of CO emissions are a function of vehicle idling time, meteorological conditions, and traffic flow. Areas with high vehicle density have the potential to create high concentrations of CO, known as CO hotspots. Because traffic congestion is highest at intersections where vehicles queue and are subject to reduced speeds, CO hot spots are generally associated with severely congested intersections of high-volume roadways. A project's localized air quality impact is considered significant if CO emissions create a hotspot where either the California one-hour standard of 20 ppm or the federal and state eight-hour standard of 9.0 ppm is exceeded. This could occur at severely congested intersections of high-volume roadways, which would not be present in the project vicinity under project buildout conditions, due to the project location and relatively intensity of existing and proposed development. Traffic generated by the project would not result in a CO hotspot that would expose existing sensitive receptors to substantial pollutant concentrations, and the project's potential to expose sensitive receptors to substantial pollutant concentrations would be less than significant.

San Joaquin Valley Fever

There is no recommended threshold for a significant San Joaquin Valley Fever impact. As discussed above regarding construction emissions, the project would be required to reduce fugitive dust emissions during construction by spraying water on exposed soils and stabilizing access points for vehicles entering or exiting the site. However, as the project would grade undeveloped lands, the project does meet one of the risk factors for the potential presence of the Valley Fever fungus.

VCAPCD Guidelines provide recommendations for a lead agency to consider if a project is determined to represent a significant risk of causing Valley Fever, which focus on construction worker protections and dust control to prevent respiration of spores if present. The project would be required to implement dust controls pursuant to VCAPCD Rule 55 as discussed above in Impact 4.3.3.2, which would also reduce the risk of Valley Fever. As the project would be required to implement VCAPCD Rule 55 dust suppression measures, the project's potential to result in adverse environmental impacts regarding Valley Fever, should the potential exist, would be substantially reduced. While the presence of Valley Fever spores on the project site is not known, the VCAPCD Guidelines recommendations for reducing potential risks of Valley Fever are provided as Mitigation Measure AQ-1 to ensure potential environmental impacts would be reduced to less than significant with mitigation.

Required Island Annexations

These unincorporated areas are located adjacent to existing development and include parcels that are mostly developed for residential use with single-family homes or duplexes. A total of five undeveloped lots within these unincorporated areas could potentially be developed with five dwelling units. For the purposes of CEQA, the only action for this part of the project is for LAFCO to approve annexation of the Island properties to the City, and no physical changes in land use or infrastructure within these properties is proposed as part of this project. The five vacant lots within these unincorporated areas could potentially be developed with five homes in the future with or without implementation of the rest of the project and it is speculative to say if and when these parcels may be developed. Further, a single-family home is very unlikely to exceed VCAPCD thresholds, and regardless, any future development would be subject to City review for potential environmental analysis under CEQA. The City's annexation of the Islands would not result in additional emissions of pollutants that could expose sensitive receptors to substantial pollutant concentrations, and potential impacts would be less than significant.

Mitigation Measures

MM AQ-1: **Valley Fever (Construction Only)**

To reduce the potential for exposure to Valley Fever impacts during construction, the project must to the extent feasible implement the following construction best management practices, which are based upon measures recommended in the VCAPCD's Air Quality Assessment Guidelines (2003):

- Offer construction employees coccidioidin skin tests (since those with positive tests can be considered immune to reinfection).
- Hire crews from local populations where possible, since it is more likely that they have been previously exposed to the fungus and are therefore more likely immune.
- Require crews to use respirators during project clearing, grading, and excavation operations in accordance with California Division of Occupational Safety and Health Regulations.
- Require that the cabs of all grading and construction equipment be air-conditioned.
- Require crews to work upwind from excavation sites where feasible.
- Pave construction roads.
- Where acceptable to the Ventura County Fire Protection District, control weed growth by mowing instead of disking, thereby leaving the ground undisturbed and with a mulch covering.
- During rough grading and construction, the access way into the project site from adjoining paved roadways should be paved or treated with environmentally safe dust control agents.

Residual Impacts

While it is unlikely the site would result in potential Valley Fever impacts, and VCAPCD Rule 55 would require dust suppression to reduce any potential, further VCAPCD precautions specified in MM AQ-1 would require best management practices at the construction site, to assure no significant impact after mitigation. All other areas of impact evaluation would be less than significant before without the need for mitigation. Thus, there would be no significant residual impacts.

4.3.3.4 Other Emissions/Odors

A significant impact may occur if the proposed project would result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. Odors can cause a variety of responses, depending on factors such as frequency (how often), intensity (strength), duration (in time), offensiveness (unpleasantness), location, and sensory perception.

North Canyon Ranch

The proposed project would construct a residential development on a currently undeveloped site that is bounded by open space to the north and west, residential uses to the east, and residential and commercial uses to the south. Land uses commonly associated with substantial odor impacts include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. Residential uses are generally not considered to generate objectionable odor impacts that affect a substantial number of people.

During construction, activities such as paving, and painting can generate odors that are typical of construction sites. Such construction odors would be localized, temporary and would be dispersed across

the approximately 86-acre development area. Therefore, temporary construction odors would not be a significant impact.

During operations, the project's proposed residential uses would have individual trash/recycling containers and regularly scheduled trash pick-up services typical of existing residential uses in the City, which would prevent nuisance odors from affecting offsite adjacent residential developments. Therefore, the project's potential to generate offensive odors that would affect a substantial number of people would be less than significant.

Required Island Annexations

These unincorporated areas are located adjacent to existing development and include parcels that are mostly developed for residential use with single-family homes or duplexes. A total of five undeveloped lots within these unincorporated areas could potentially be developed with five dwelling units. For the purposes of CEQA, the only action for this part of the project is for LAFCO to approve annexation of the Island properties to the City, and no physical changes in land use or infrastructure within these properties is proposed as part of this project. Additionally, the five vacant lots within these unincorporated areas could potentially be developed with five homes in the future without implementation of the rest of the project. Therefore, the City's annexation of the Islands would not result in additional emissions of pollutants that could expose sensitive receptors to substantial pollutant concentrations, and potential impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Residual Impacts

Impacts would be less than significant before mitigation as the project would not generate offensive odors that would affect a substantial number of people.

4.3.4 Cumulative Impacts

North Canyon Ranch

As discussed in Section 4.3.3.1, the project would be consistent with the projected growth in the City and thus would not conflict with the AQMP. As evaluated in Section 4.3.3.2, the project would not result in a cumulatively considerable increase in air pollutants for which the VCAPCD has adopted relevant thresholds of significance. As evaluated in Section 4.3.3.3, with mitigation measure AQ-1, significant Valley Fever impacts, though not known to be present, would be avoided and would not add a cumulatively considerable impact, since there are no related projects adjacent to the site that could in combination with the proposed project generate substantial concentrations of pollutants or odors affecting the sensitive receptors adjacent to the project's eastern and southern boundary. Therefore, the North Canyon Ranch residential development would not result in a cumulatively considerable contribution to air quality impacts, and cumulative impacts would be less than significant.

Required Island Annexations

These unincorporated areas are located adjacent to existing development include parcels that are mostly developed for residential use with single-family homes or duplexes. A total of five undeveloped lots within these unincorporated areas could potentially be developed with five dwelling units. For the purposes of CEQA, the only action for this part of the project is for LAFCO to approve annexation of the Island

properties to the City, and no physical changes in land use or infrastructure within these properties is proposed as part of this project. Additionally, the five vacant lots within these unincorporated areas could potentially be developed with five homes in the future without implementation of the rest of the project. As evaluated above, the annexation of the Island properties would not result in air quality plan conflicts, considerable net increases of criteria pollutants, impacts to sensitive receptors or odor impacts. Therefore, the City's annexation of the Islands would not result in a cumulatively considerable contribution to air quality impacts, and cumulative impacts would be less than significant.

Full Project

The construction and operations of the North Canyon Ranch project, as evaluated above, would not result in significant Air Quality impacts. The Island Annexation component areas could potentially have a very minimal amount of new development (five residential units) in the future, which is not proposed at this time and could occur regardless of the annexation. Therefore, the combined North Canyon Ranch development and the Island Annexations would not result in a cumulatively considerable contribution to air quality impacts, which would also be less than significant.