4.2 AIR QUALITY

4.2.1 Introduction

The section evaluates potential air quality impacts that could result from the Project. The air quality analysis consists of a summary of the existing conditions in the City of Newport Beach and its Sphere of Influence (City) within the South Coast Air Basin (SCAB), the air quality regulatory framework, a discussion of the potential air quality impacts from future development on housing sites, and identification of mitigation that may minimize construction and operational air quality impacts, as needed. Information presented in this EIR section is based on resource information obtained from available public resources including, but not limited to, the *City of Newport Beach General Plan* (General Plan), the Southern California Association of Governments (SCAG) *2020-2045 Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS), the South Coast Air Quality Management District (SCAQMD) Air Quality Management Plan (AQMP), the California Air Resources Board (CARB), and U.S. Environmental Protection Agency (U.S. EPA). Air quality modeling data is included in **Appendix C**.

4.2.2 Regulatory Setting

The federal and state governments have been empowered by the Federal Clean Air Act (FCAA) and the California Clean Air Act (CCAA), respectively, to regulate the emission of airborne pollutants and have established ambient air quality standards for the protection of public health. The U.S. Environmental Protection Agency (U.S. EPA) is the federal agency designated to administer air quality regulation, while CARB is the State equivalent. Local control in air quality management is provided by the California Air Resources Control Board (CARB) through county-level or regional (multi-county) air pollution control districts. CARB establishes air quality standards and is responsible for control of mobile emission sources, while the local air pollution control districts are responsible for enforcing standards and regulating stationary sources. CARB has established 14 air basins statewide.

Federal

U.S. Environmental Protection Agency

The U.S. EPA is responsible for setting and enforcing the National Ambient Air Quality Standards (NAAQS) for atmospheric pollutants. It regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain locomotives. The U.S. EPA also maintains jurisdiction over emissions sources outside state waters (outer continental shelf) and establishes various emissions standards for vehicles sold in states other than California.

As part of its enforcement responsibilities, the U.S. EPA requires each state with federal nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the NAAQS. The SIP must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution, using a combination of performance standards and market-based programs within the timeframe identified in the SIP.

Federal Clean Air Act

The Federal Clean Air Act (FCAA), passed in 1970 and last amended in 1990, is the basis for national air pollution control. The U.S. EPA is responsible for implementing most aspects of the Clean Air Act, including setting NAAQS for major air pollutants; setting hazardous air pollutants (HAPs) standards; approving state attainment plans; setting motor vehicle emission standards; issuing stationary source emission standards

and permits; and establishing acid rain control measures, stratospheric ozone (O_3) protection measures, and enforcement provisions. The 1990 FCAA amendments represent the latest in a series of federal efforts to regulate the protection of air quality in the United States. The FCAA allows states to adopt more stringent standards or to include other pollution species.

National Ambient Air Quality Standards

The FCAA requires the U.S. EPA to establish primary and secondary NAAQS for a number of criteria air pollutants. The air pollutants for which standards have been established are considered the most prevalent air pollutants that are known to be hazardous to human health. NAAQS have been established for the following pollutants: O_3, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter less than or equal to 10 microns in diameter (PM_{10}), particulate matter less than or equal to 2.5 microns in diameter ($PM_{2.5}$), and lead.

Title III of the Federal Clean Air Act

As discussed above, Hazardous Air Pollutants (HAPs) are the air contaminants identified by the U.S. EPA as known or suspected to cause cancer, other serious illnesses, birth defects, or death. The FCAA requires the U.S. EPA to set standards for these pollutants and reduce emissions of controlled chemicals. Specifically, Title III of the FCAA requires the U.S. EPA to promulgate National Emissions Standards for Hazardous Air Pollutants (NESHAP) for certain categories of sources that emit one or more pollutants that are identified as HAPs. The FCAA also requires the U.S. EPA to set standards to control emissions of HAPs through mobile source control programs. These include programs that reformulated gasoline, national low emissions vehicle standards, Tier 2 motor vehicle emission standards, gasoline sulfur control requirements, and heavy-duty engine standards.

HAPs tend to be localized and are found in relatively low concentrations in ambient air. However, they can result in adverse chronic health effects if exposure to low concentrations occurs for long periods. Many HAPs originate from human activities, such as fuel combustion and solvent use. Emission standards may differ between "major sources" and "area sources" of the HAPs/Toxic Air Contaminants (TACs). Under the FCAA, major sources are defined as stationary sources with the potential to emit more than 10 tons per year (tpy) of any one HAP or more than 25 tpy of any combination of HAPs; all other sources are considered area sources. Mobile source air toxics (MSATs) are a subset of the 188 HAPs. Of the 21 HAPs identified by the U.S. EPA as MSATs, a priority list of six HAPs was identified that include: diesel exhaust, benzene, formaldehyde, acetaldehyde, acrolein, and 1, 3-butadiene. While vehicle miles traveled (VMT) in the United States are expected to increase by 31 percent over the period 2020 to 2060, a combined reduction of 76 percent in the total annual emissions for the priority MSAT is projected for the same time period.[1]

State

California Air Resources Board

CARB, a part of the California Environmental Protection Agency (CalEPA), is responsible for the coordination and administration of both federal and State air pollution control programs within California. In this capacity, CARB conducts research, sets California Ambient Air Quality Standards (CAAQS), compiles

[1] Federal Highway Administration. (2023). *Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents*. https://www.fhwa.dot.gov/environMent/air_quality/air_toxics/policy_and_guidance/msat//fhwa_nepa_msat_memorandum_2023.pdf. Accessed December 2023.

emission inventories, develops suggested control measures, provides oversight of local programs, and prepares the SIP. CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hair spray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions.

California Clean Air Act

The California Clean Air Act (CCAA), signed into law in 1988, requires all areas of the State to achieve and maintain the California Ambient Air Quality Standards (CAAQS) by the earliest practical date. CARB is the State air pollution control agency and is a part of CalEPA. CARB is the agency responsible for coordination and oversight of State and local air pollution control programs in the State, and for implementing the requirements of the CCAA. CARB overseas local district compliance with State and federal laws, approves local air quality plans, submits the SIPs to U.S. EPA, monitors air quality, determines and updates area designations and maps, and sets emissions standards for new mobile sources, consumer products, small utility engines, off-road vehicles, and fuels.

California Ambient Air Quality Standards

The CCAA requires CARB to establish CAAQS. Similar to the NAAQS, CAAQS have been established for the following pollutants: O_3, CO, NO_2, SO_2, $PM_{2.5}$, lead, vinyl chloride, hydrogen sulfide, sulfates, and visibility-reducing particulates. In most cases, the CAAQS are more stringent than the NAAQS. The CCAA requires that all local air districts in the State endeavor to achieve and maintain the CAAQS by the earliest practical date. The CCAA specifies that local air districts should focus particular attention on reducing the emissions from transportation and area-wide emission sources and provides districts with the authority to regulate indirect sources. The CAAQS and NAAQS are presented in **Table 4.2-1: California and National Ambient Air Quality Standards.**

Tanner Air Toxics Act and Air Toxics Hot Spots Information and Assessment Act

TACs in California primarily are regulated through the Tanner Air Toxics Act (AB 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588, also known as the Hot Spots Act). As discussed above, HAPs/TACs are a broad class of compounds known to cause morbidity or mortality (i.e., cancer risk). HAPs/TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., dry cleaners). Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, State, and federal level.

AB 1807 sets forth a formal procedure for CARB to designate substances as TACs. Research, public participation, and scientific peer review are necessary before CARB can designate a substance as a TAC. To date, CARB has identified more than 21 TACs and adopted the U.S. EPA's list of HAPs as TACs. In 1998, diesel particulate matter (DPM) was added to CARB's TACs list. Once a TAC is identified, CARB adopts an Airborne Toxic Control Measure for sources that emit that particular TAC. If a safe threshold exists at which no toxic effect occurs from a substance, the control measure must reduce exposure below that threshold. If no safe threshold exists, the measure must incorporate Best Available Control Technology (BACT) to minimize emissions. The Hot Spots Act requires existing facilities that emit toxic substances above a specified level to prepare a toxic emissions inventory and a risk assessment if the emissions are significant, notify the public of significant risk levels, and prepare and implement risk reduction measures.

Table 4.2-1: California and National Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards	Federal Standards	
			Primary[2]	Secondary[3]
O_3	1 Hour	0.09 ppm (180 μg/m³)	–	–
	8 Hour	0.070 ppm (137 μm/m³)	0.070 ppm (137 μg/m³)	Same as Primary
PM_{10}	24 Hour	50 μg/m³	150 μg/m³	Same as Primary
	Annual Average	20 μg/m³	–	–
$PM_{2.5}$	24 Hour	–	35 μg/m³	Same as Primary
	Annual Average	12 μg/m³	12.0 μg/m³	15.0 μg/m³
CO	1 Hour	20 ppm (23 mg/m³)	35 ppm (50 mg/m³)	–
	8 Hour	9.0 ppm (10 mg/m³)	9 ppm (10 mg/m³)	–
NO_2	1 Hour	0.18 ppm (339 μg/m³)	0.100 ppm (188 μg/m³)	–
	Annual Average	0.030 ppm (57 μg/m³)	0.053 ppm (100 μg/m³)	Same as Primary
SO_2	1 Hour	0.25 ppm (655 μg/m³)	0.075 ppm (196 μg/m³)	–
	3 Hour	–	–	0.5 ppm (1,300 μg/m³)
	24 Hour	0.04 ppm (105 μg/m³)	0.14 ppm (365 μg/m³)	–
	Annual Average	–	0.030 ppm (80 μg/m³)	
Lead	30-day Avg.	1.5 μg/m³	–	–
	Calendar Quarter	–	1.5 μg/m³	Same as Primary
	Rolling 3-month Avg.	–	0.15 μg/m³	
Visibility Reducing Particles	8 Hour	Extinction coefficient of 0.23 per km – visibility ≥ 10 miles	No Federal Standards	
Sulfates	24 Hour	24 μg/m³		
Hydrogen Sulfide (H_2S)	1 Hour	0.03 ppm (42 μg/m³)		
Vinyl Chloride	24 Hour	0.01 ppm (26 μg/m³)		

ppm = parts per million; μg/m³ = micrograms per cubic meter; mg/m³ = milligrams per cubic meter; – = no information available.

Notes:

1.California standards for O3, carbon monoxide (except Lake Tahoe), sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, suspended particulate matter - PM10, and visibility reducing particles are values that are not to be exceeded. The standards for sulfates, Lake Tahoe carbon monoxide, lead, hydrogen sulfide, and vinyl chloride are not to be equaled or exceeded. If the standard is for a 1-hour, 8-hour or 24-hour average (i.e., all standards except for lead and the PM10 annual standard), then some measurements may be excluded. Measurements are excluded that CARB determines would occur less than once per year on the average. The Lake Tahoe carbon monoxide standard is 6.0 ppm, a level one-half the national standard and two-thirds the State standard.

2.National standards shown are the "primary standards" designed to protect public health. National standards other than for O3, particulates and those based on annual averages are not to be exceeded more than once a year. The 1-hour O3 standard is attained if, during the most recent three-year period, the average number of days per year with maximum hourly concentrations above the standard is equal to or less than one. The 8-hour O3 standard is attained when the 3-year average of the 4th highest daily concentrations is 0.070 ppm or less. The 24-hour PM10 standard is attained when the 3-year average of the 99th percentile of monitored concentrations is less than 150 μg/m3. The 24-hour PM2.5 standard is attained when the 3-year average of 98th percentiles is less than 35 μg/m3.

3. Except for the national particulate standards, annual standards are met if the annual average falls below the standard at every site. The national annual particulate standard for PM10 is met if the 3-year average falls below the standard at every site. The annual PM2.5 standard is met if the 3-year average of annual averages spatially-averaged across officially designed clusters of sites falls below the standard. NAAQS are set by the EPA at levels determined to be protective of public health with an adequate margin of safety.

4.On October 1, 2015, the national 8-hour O3 primary and secondary standards were lowered from 0.075 to 0.070 ppm. An area will meet the standard if the fourth-highest maximum daily 8-hour O3 concentration per year, averaged over three years, is equal to or less than 0.070 ppm. EPA will make recommendations on attainment designations by October 1, 2016, and issue final designations October 1, 2017. Nonattainment areas will have until 2020 to late 2037 to meet the health standard, with attainment dates varying based on the O3 level in the area.

5.The national 1-hour O3 standard was revoked by the EPA on June 15, 2005.

6.In June 2002, CARB established new annual standards for PM2.5 and PM10.

7.The 8-hour California O3 standard was approved by the CARB on April 28, 2005 and became effective on May 17, 2006.

8.On June 2, 2010, the EPA established a new 1-hour SO2 standard, effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. The existing 0.030 ppm annual and 0.14 ppm 24-hour SO2 NAAQS however must continue to be used until one year following EPA initial designations of the new 1-hour SO2 NAAQS.

9.In December 2012, EPA strengthened the annual PM2.5 NAAQS from 15.0 to 12.0 µg/m3. In December 2014, the EPA issued final area designations for the 2012 primary annual PM2.5 NAAQS. Areas designated "unclassifiable/attainment" must continue to take steps to prevent their air quality from deteriorating to unhealthy levels. The effective date of this standard is April 15, 2015.

10.CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure below which there are no adverse health effects determined.

11.National lead standards, rolling 3-month average: final rule signed October 15, 2008. Final designations effective December 31, 2011.

Sources:
South Coast Air Quality Management District. (2017). Air Quality Management Plan, 2016.Retrieved from: https://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf. Accessed December 2023.
California Air Resources Board.(2016). Ambient Air Quality Standards. Retrieved from: https://ww2.arb.ca.gov/sites/default/files/2020-07/aaqs2.pdf. Accessed December 2023.

CARB Air Quality and Land Use Handbook

In April 2005, CARB released the final version of its *Air Quality and Land Use Handbook: A Community Health Perspective* (Air Quality and Land Use Handbook). This guidance document is intended to encourage local land use agencies to consider the risks from air pollution before they approve the siting of sensitive land uses (e.g., residences) near sources of air pollution, particularly TACs (e.g., freeway and high traffic roads, commercial distribution centers, rail yards, ports, refineries, dry cleaners, gasoline stations, and industrial facilities). These advisory recommendations include general setbacks or buffers from air pollution sources. However, unlike industrial or stationary sources of air pollution, the siting of new sensitive land use does not require air quality permits or approval by air districts, and as noted above, the CARB handbook provides guidance only rather than binding regulations.

CAPCOA Health Risk Assessments for Proposed Land Use Projects

The California Air Pollution Control Officer's Association (CAPCOA), which is a consortium of air district managers throughout the State, provides guidance material to addressing air quality issues in the State. As a follow up to CARB's 2005 Air Quality and Land Use Handbook, CAPCOA prepared the Health Risk Assessments for Proposed Land Use Projects. CAPCOA released this guidance document to ensure that the health risk of projects be identified, assessed, and avoid or mitigated, if feasible, through the CEQA process. The CAPCOA guidance document provides recommended methodologies for evaluating health risk impacts for development projects.

Assembly Bill 117

AB 117 allows local governments to form Community Choice Energy (CCE), also known as Community Choice Aggregation (CCA), programs that offer an alternative electric power option to constituents (i.e., customers) currently served electric power by investor-owned utilities (IOUs), such as Southern California Edison (SCE). Under the CCE model, local governments purchase and manage their community's electric

power supply by sourcing power from a preferred mix of traditional and renewable generation sources, while the incumbent IOU (SCE) continues to provide distribution service. This gives CCEs the opportunity to design and potentially reduce retail rates for their constituents, provide customer choice, promote local economic development, and offer a cleaner power supply. Please refer to **Section 4.5: Energy**, for a further discussion of AB 117 and potential energy impacts.

California Public Utilities Code Section 366.2

The State Public Utilities Code Section 366.2, or CCA Program, requires an ordinance from participating member agencies authorizing the implementation of a CCA Program for the respective jurisdiction. See **Section 4.5** for a further discussion of the CCA program.

Regional and Local

Southern California Association of Governments

SCAG is the regional planning agency for Orange, Los Angeles, Ventura, Riverside, San Bernardino and Imperial counties, and serves as a forum for regional issues relating to transportation, the economy, community development, and the environment. With respect to air quality planning, SCAG has prepared the Regional Comprehensive Plan and Guide for the region, which includes Growth Management and Regional Mobility chapters that form the basis for the land use and transportation control portions of the 2022 South Coast Air Quality Management District (SCAQMD) Air Quality Management Plan. SCAG is responsible under the CCAA for determining transportation conformity of projects, plans, and programs with the SCAQMD.

South Coast Air Quality Management District

The SCAQMD is one of 35 air districts in California and is the agency principally responsible for comprehensive air pollution control in the SCAB. To that end, the SCAQMD, a regional agency, works directly with SCAG, county transportation commissions and local governments, and cooperates actively with all federal and State government agencies.

The SCAQMD develops rules and regulations, establishes permitting requirements, inspects emissions sources, and enforces such measures through educational programs or fines, when necessary. The SCAQMD is also the lead agency in charge of developing the AQMP, with input from SCAG and CARB. The AQMP is a comprehensive plan that includes control strategies for stationary and area sources, as well as for on-road and off-road mobile sources. SCAG has the primary responsibility for providing future growth projections and the development and implementation of transportation control measures. CARB, in coordination with federal agencies, provides the control element for mobile sources.

The purpose of the AQMP is to set forth a comprehensive and integrated program that would lead the SCAG into compliance with the federal 24-hour $PM_{2.5}$ air quality standard, and to provide an update to the SCAQMD's commitments towards meeting the federal 8-hour O_3 standards. The AQMP incorporates the latest scientific and technological information and planning assumptions, including the RTP/SCS and updated emission inventory methodologies for various source categories. As part of its air quality planning, SCAG has prepared the Regional Comprehensive Plan and Guide and the Connect SoCal – The 2020-2045 RTP/SCS. The 2020-2045 RTP/SCS was determined to conform to the federally mandated SIP for the attainment and maintenance of the NAAQS. Both the Regional Comprehensive Plan and AQMP are based, in part, on projections originating with county and city general plans.

The SCAQMD is required, pursuant to the Clean Air Act, to reduce emissions of criteria pollutants for which the SCAB is in nonattainment of the NAAQS (e.g., O_3 and $PM_{2.5}$). On October 1, 2015, the U.S. EPA strengthened the NAAQS for ground-level O_3. The 2022 AQMP, adopted by the SCAQMD Governing Board on December 2, 2022, was developed to address the requirements for meeting the 2015 8-hour O_3 standard. The 2022 AQMP builds upon measures already in place from previous AQMPs. It also includes a variety of additional strategies such as regulation, accelerated deployment of available cleaner technologies (e.g., zero emissions technologies, when cost-effective and feasible, and low NO_X technologies in other applications), best management practices, co-benefits from existing programs (e.g., climate and energy efficiency), incentives, and other FCAA measures to achieve the 2015 8-hour ozone standard. The 2022 AQMP incorporates the latest scientific and technological information and planning assumptions, including the 2020-2045 RTP/SCS and updated emission inventory methodologies for various source categories. In addition to the 2022 AQMP, and SCAQMD rules and regulations, the SCAQMD published the CEQA Air Quality Handbook, which provides guidance to assist local government agencies and consultants in developing the environmental documents required by CEQA.

The State and federal attainment status designations for the SCAB are summarized in **Table 4.2-2: South Coast Air Basin Attainment Status**. The SCAB is currently designated as a nonattainment area with respect to the State O_3, PM_{10}, and $PM_{2.5}$ standards, as well as the national 8-hour O_3 and $PM_{2.5}$ standards. The SCAB is designated as attainment or unclassified for the remaining CAAQS and NAAQS.

South Coast Air Quality Management District Rules and Regulations

All projects are subject to SCAQMD rules and regulations in effect at the time of construction. Specific rules that may be applicable include the following:

- Rule 401—Visible Emissions. A person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period or periods aggregating more than three minutes in any one hour which is as dark or darker in shade as that designated No. 1 on the Ringelmann Chart, as published by the U.S. Bureau of Mines, or of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subparagraph (b)(1)(A) of this rule.
- Rule 402—Nuisance. A person shall not discharge from any source whatsoever 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 the public, or which cause, or have a natural tendency to cause injury or damage to business or property. The provisions of this rule do not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.
- Rule 403—Fugitive Dust. This rule is intended to reduce the amount of particulate matter entrained in the ambient air as a result of man-made fugitive dust sources by requiring actions to prevent, reduce or mitigate fugitive dust emissions. Rule 403 applies to any activity or man-made condition capable of generating fugitive dust.

Table 4.2-2: South Coast Air Basin Attainment Status

Pollutant	State	Federal
Ozone (O_3) (1 Hour Standard)	Non-Attainment	Non-Attainment (Extreme)
Ozone (O_3) (8 Hour Standard)	Non-Attainment	Non-Attainment (Extreme)
Particulate Matter ($PM_{2.5}$) (24 Hour Standard)	–	Non-Attainment (Serious)
Particulate Matter ($PM_{2.5}$) (Annual Standard)	Non-Attainment	Non-Attainment (Moderate)
Particulate Matter (PM_{10}) (24 Hour Standard)	Non-Attainment	Attainment (Maintenance)
Particulate Matter (PM_{10}) (Annual Standard)	Non-Attainment	–
Carbon Monoxide (CO) (1 Hour Standard)	Attainment	Attainment (Maintenance)
Carbon Monoxide (CO) (8 Hour Standard)	Attainment	Attainment (Maintenance)
Nitrogen Dioxide (NO_2) (1 Hour Standard)	Attainment	Unclassifiable/Attainment
Nitrogen Dioxide (NO_2) (Annual Standard)	Attainment	Attainment (Maintenance)
Sulfur Dioxide (SO_2) (1 Hour Standard)	Attainment	Unclassifiable/Attainment
Sulfur Dioxide (SO_2) (24 Hour Standard)	Attainment	–
Lead (Pb) (30 Day Standard)	–	Unclassifiable/Attainment
Lead (Pb) (3 Month Standard)	Attainment	–
Sulfates (SO_{4-2}) (24 Hour Standard)	Attainment	–
Hydrogen Sulfide (H_2S) (1 Hour Standard)	Unclassified	–

Sources:
South Coast Air Quality Management District. (2017). Air Quality Management Plan, 2016. Retrieved from: https://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf. Accessed December 2023.
U.S. EPA. (2023).*Nonattainment Areas for Criteria Pollutants (Green Book)*. Retrieved from: https://www.epa.gov/green-book. Accessed December 2023.

- Rule 445—Wood-Burning Devices. This rule prohibits permanently installed wood burning devices in any new development. A wood burning device means any fireplace, wood burning heater, or pellet-fueled wood heater, or any similarly enclosed, permanently installed, indoor or outdoor device burning any solid fuel for aesthetic or space-heating purposes, which has a heat input of less than one million British thermal units per hour.

- Rule 1113—Architectural Coatings. No person shall apply or solicit the application of any architectural coating within SCAQMD, with VOC content in excess of the values specified in a table incorporated in the Rule.
- Rule 1120—Asphalt Pavement Heaters. A person shall not operate an asphalt pavement surface heater or an asphalt heater-remixer for the purpose of maintaining, reconditioning, reconstructing or removing asphalt pavement unless certain criteria are met.
- Rule 1143—Consumer Paint Thinners and Multi-Purpose Solvents. This rule is intended to reduce emissions of volatile organic compounds from the use, storage, and disposal of consumer paint thinners and multi-purpose solvents commonly used in thinning of coating materials, cleaning of coating equipment, and other solvent cleaning operations by limiting their VOC content.

In addition to the rules listed above, SCAQMD has developed an air quality guidance document with suggested measures to reduce the amount of fugitive dust that is re-entrained into the atmosphere from unpaved areas, parking lots, and construction sites.[2]

City of Newport Beach General Plan

The *City of Newport Beach General Plan 2006 Update* (General Plan) provides policies that are aimed to reduce emissions within the City. These policies are located within the Circulation Element and Land Use Element of the City's General Plan, to support residents, businesses, and visitors. These goals and policies serve to encourage the use of transit, reduce the number of vehicle trips and miles traveled, and create further opportunities for residents and employees to walk and bike to work or to shop, thereby reducing emissions into the air.

The following list includes General Plan goals and policies that have been adopted by the City for the purpose of avoiding or mitigating an environmental effect are applicable to future development projects associated with the proposed Project.

Natural Resources Element - Air Quality

Goal NR 6 **Reduced mobile source emissions**

Policy NR 6.1 **Walkable Neighborhoods.** Provide for walkable neighborhoods to reduce vehicle trips by siting amenities such as services, parks, and schools in close proximity to residential areas.

Policy NR 6.3 **Vehicle-Trip Reduction Measures.** Support measures to reduce vehicle-trip generation such as at-work day care facilities, and on-site automated banking machines.

Goal NR 7 **Reduced air pollutant emissions from stationary sources.**

Policy NR 7.1 **Fuel Efficient Equipment.** Support the use of fuel efficient heating equipment and other appliances.

Policy NR 7.2 **Source Emission Reduction Best Management Practices.** Require the use of Best Management Practices (BMP) to minimize pollution and to reduce source emissions.

[2] South Coast Air Quality Management District. (2005). *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*.https://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf. Accessed December 2023.

Goal NR 8 **Reduced air pollutant emissions from construction activities.**

Policy NR 8.1 Require developers to use and operate construction equipment, use building materials and paints, and control dust created by construction activities to minimize air pollutants.

Land Use Element

Goal LU 6.14 **A successful mixed-use district that integrates economic and commercial centers serving the needs of Newport Beach residents and the subregion, with expanded opportunities for residents to live close to jobs, commerce, entertainment, and recreation, and is supported by a pedestrian-friendly environment.**

Goal LU 6.15 **A mixed-use community that provides jobs, residential, and supporting services in close proximity, with pedestrian-oriented amenities that facilitate walking and enhance livability.**

City of Newport Beach Municipal Code

Title 15, Chapter 15.19 Electric Vehicle Charging Stations.[3] Newport Beach Municipal Code (Municipal Code) Chapter 15.19 aims to encourage the use of electric vehicle charging stations by removing unreasonable barriers, minimizing costs to property owners and the City, and expanding the ability of property owners to install electric vehicle charging stations. Pursuant to Municipal Code Section 15.19.060, applications to install electric vehicle charging stations through issuance of a building permit or similar nondiscretionary permit will be administratively reviewed and approved by the Building Division.

4.2.3 Existing Conditions

Criteria Air Pollutants

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. The NAAQS and CAAQS have been set, with an adequate margin of safety, at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons from illness or discomfort. Pollutants of concern include O_3, NO_2, CO, SO_2, PM_{10}, $PM_{2.5}$, and lead. These pollutants, as well as TACs, are discussed in the following paragraphs. In California, sulfates, vinyl chloride, hydrogen sulfide, and visibility-reducing particles are also regulated as criteria air pollutants.

Ozone. O_3 is a strong-smelling, pale blue, reactive, toxic chemical gas consisting of three oxygen atoms. It is a secondary pollutant formed in the atmosphere by a photochemical process involving the sun's energy and O_3 precursors. These precursors are mainly oxides of nitrogen (NO_X) and volatile organic compounds (VOCs). The maximum effects of precursor emissions on O_3 concentrations usually occur several hours after they are emitted and many miles from the source. Meteorology and terrain play major roles in O_3 formation, and ideal conditions occur during summer and early autumn on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. Ozone exists in the upper atmosphere (stratospheric O_3) and at the Earth's surface in the troposphere. The U.S. EPA and CARB regulate ground-

[3] City of Newport Beach.(2021). *Newport Beach Municipal Code Chapter 15.19 – Electric Vehicle Charging Stations. https://www.codepublishing.com/CA/NewportBeach/#!/NewportBeach15/NewportBeach1519.html#15.19.* Accessed October 2023.

level (tropospheric) O_3, which occurs where people live, exercise, and breathe (as opposed to stratospheric O_3) .

Ground-level O_3 is a harmful air pollutant that causes numerous adverse health effects and is thus considered "bad" O_3. Stratospheric, or "good," O_3 occurs naturally in the upper atmosphere, where it reduces the amount of ultraviolet light (i.e., solar radiation) entering the Earth's atmosphere. Without the protection of the beneficial stratospheric O_3 layer, plant and animal life would be seriously harmed.

O_3 in the troposphere causes numerous adverse health 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. These health problems are particularly acute in sensitive receptors such as the sick, the elderly, and young children.

Nitrogen Dioxide. NO_2 is a brownish, highly reactive gas that is present in all urban atmospheres. The major mechanism for the formation of NO_2 in the atmosphere is the oxidation of the primary air pollutant nitric oxide, which is a colorless, odorless gas. NO_X plays a major role, together with VOCs, in the atmospheric reactions that produce O_3. NO_2 is formed from fuel combustion under high temperature or pressure. In addition, NO_2 is an important precursor to acid rain and may affect both terrestrial and aquatic ecosystems. The two major emissions sources are transportation and stationary fuel combustion sources such as electric utility and industrial boilers. NO_2 can irritate the lungs, cause bronchitis and pneumonia, and lower resistance to respiratory infections.

Carbon Monoxide. CO is a colorless, odorless gas formed by the incomplete combustion of hydrocarbon, or fossil fuels. CO is emitted almost exclusively from motor vehicles, power plants, refineries, industrial boilers, ships, aircraft, and trains. In urbanized areas, such as the majority of the City, automobile exhaust accounts for the majority of CO emissions. CO is a nonreactive air pollutant that dissipates relatively quickly; therefore, ambient CO concentrations generally follow the spatial and temporal distributions of vehicular traffic. CO concentrations are influenced by local meteorological conditions—primarily wind speed, topography, and atmospheric stability. CO from motor vehicle exhaust can become locally concentrated when surface-based temperature inversions are combined with calm atmospheric conditions, which is a typical situation at dusk in urban areas from November to February. The highest levels of CO typically occur during the colder months of the year, when inversion conditions are more frequent.

In terms of adverse health effects, CO competes with oxygen, often replacing it in the blood, reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can include dizziness, fatigue, and impairment of central nervous system functions.

Sulfur Dioxide. SO_2 is a colorless, pungent gas formed primarily from incomplete combustion of sulfur containing fossil fuels. The main sources of SO_2 are coal and oil used in power plants and industries; as such, the highest levels of SO_2 are generally found near large industrial complexes. In recent years, SO_2 concentrations have been reduced by the increasingly stringent controls placed on stationary source emissions of SO_2 and limits on the sulfur content of fuels.

SO_2 is an irritant gas that attacks the throat and lungs and can cause acute respiratory symptoms and diminished ventilator function in children. When combined with particulate matter, SO_2 can injure lung

tissue and reduce visibility and the level of sunlight. SO_2 can also yellow plant leaves and erode iron and steel.

Particulate Matter. Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter can form when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. PM_{10} and $PM_{2.5}$ and represent fractions of particulate matter. PM_{10} consists of particulate matter that is 10 microns or less in diameter, which is about one-seventh the diameter of a human hair. Major sources of PM_{10} 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. Fine particulate matter ($PM_{2.5}$) consists of particulate matter that is 2.5 microns or less in diameter, which is roughly $1/28^{th}$ the diameter of a human hair. $PM_{2.5}$ results from fuel combustion (e.g., from motor vehicles and power generation and industrial facilities), residential fireplaces, and woodstoves. In addition, $PM_{2.5}$ can be formed in the atmosphere from gases such as SO_X, NO_X, and VOCs.

$PM_{2.5}$ and PM_{10} pose a greater health risk than larger-size particles. When inhaled, these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. $PM_{2.5}$ and PM_{10} 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 or be absorbed into the bloodstream, causing damage elsewhere in the body. Additionally, these substances can transport adsorbed gases such as chlorides or ammonium into the lungs, also causing injury. Whereas PM_{10} tends to collect in the upper portion of the respiratory system, $PM_{2.5}$ is so tiny that it can penetrate deeper into the lungs and damage lung tissue. Suspended particulates also damage and discolor surfaces on which they settle and produce haze and reduce regional visibility.

People with influenza, people with chronic respiratory and cardiovascular diseases, and the elderly may suffer worsening illness and premature death as a result of breathing particulate matter. People with bronchitis can expect aggravated symptoms from breathing in particulate matter. Children may experience a decline in lung function due to breathing in PM_{10} and $PM_{2.5}$.

Lead. Lead in the atmosphere occurs as particulate matter. Sources of lead include leaded gasoline; the manufacturing of batteries, paints, 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 overall inventory of airborne lead by nearly 95 percent. With the phase-out of leaded gasoline, secondary lead smelters, battery recycling, and manufacturing facilities are becoming lead-emissions 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. Children are highly susceptible to the effects of lead.

Volatile Organic Compounds. Hydrocarbons are organic gases that are formed from hydrogen and carbon and sometimes other elements. Hydrocarbons that contribute to formation of O_3 are referred to and regulated as VOCs (also referred to as reactive organic gases [ROG]). There are several subsets of organic gases including ROGs and VOCs. Combustion engine exhaust, oil refineries, and fossil-fueled power plants are the primary sources of hydrocarbons. Other sources include evaporation from petroleum fuels, solvents, dry cleaning solutions, and paint.

The primary health effects of VOCs result from the formation of O_3 and its related health effects. High levels of VOCs in the atmosphere can interfere with oxygen intake by reducing the amount of available oxygen through displacement. Carcinogenic (i.e., cancer-causing) forms of hydrocarbons, such as benzene, are considered toxic air contaminants (TACs). There are no separate health standards for VOCs as a group.

Non-Criteria Air Pollutants

Toxic Air Contaminants. A substance is considered toxic if it has the potential to cause adverse health effects in humans, including increasing the risk of cancer upon exposure, or acute and/or chronic noncancer health effects. A toxic substance released into the air is considered a toxic air contaminant (TAC). TACs are identified by federal and state agencies based on a review of available scientific evidence. In California, TACs are identified through a two-step process that was established in 1983 under the Toxic Air Contaminant Identification and Control Act. This two-step process of risk identification and risk management and reduction was designed to protect residents from the health effects of toxic substances in the air. In addition, the California Air Toxics "Hot Spots" Information and Assessment Act, Assembly Bill (AB) 2588, was enacted by the legislature in 1987 to address public concern over the release of TACs into the atmosphere. The law requires facilities emitting toxic substances to provide local air pollution control districts with information that will allow an assessment of the air toxics problem, identification of air toxics emissions sources, location of resulting hotspots, notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to the public over five years.

Examples include certain aromatic and chlorinated hydrocarbons, certain metals, and asbestos. TACs are generated by a number of sources, including stationary sources, such as dry cleaners, gas stations, combustion sources, and laboratories; mobile sources, such as automobiles; and area sources, such as landfills. Adverse health effects associated with exposure to TACs may include carcinogenic and noncarcinogenic effects. Noncarcinogenic effects typically affect one or more target organ systems and may be experienced on either short-term (acute) or long-term (chronic) exposure to a given TAC.

Diesel Particulate Matter. DPM is part of a complex mixture that makes up diesel exhaust. Diesel exhaust is composed of two phases, gas and particle, both of which contribute to health risks. More than 90 percent of DPM is less than 1 micrometer in diameter (about $1/70^{th}$ the diameter of a human hair), and thus is a subset of $PM_{2.5}$.[4] DPM is typically composed of carbon particles ("soot," also called black carbon, or BC) and numerous organic compounds, including over 40 known cancer-causing organic substances. Examples of these chemicals include polycyclic aromatic hydrocarbons, benzene, formaldehyde, acetaldehyde, acrolein, and 1,3-butadiene. The CARB classified "particulate emissions from diesel-fueled engines" (i.e., DPM; California Code of Regulations [CCR] Title 17, Section 93000) as a TAC in August 1998. DPM is emitted from a broad range of diesel engines: on-road diesel engines of trucks, buses, and cars

[4] California Air Resources Board. (2023). *Overview: Diesel Exhaust & Health*. https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health#:~:text=The%20solid%20material%20in%20diesel,5. Accessed November 2023.

and off-road diesel engines including locomotives, marine vessels, and heavy-duty construction equipment, among others. Approximately 70 percent of all airborne cancer risk in California is associated with DPM.

To reduce the cancer risk associated with DPM, CARB adopted a diesel risk reduction plan in 2000. Because it is part of $PM_{2.5}$, DPM also contributes to the same non-cancer health effects as $PM_{2.5}$ exposure. These effects include premature death; hospitalizations and emergency department visits for exacerbated chronic heart and lung disease, including asthma, increased respiratory symptoms, and decreased lung function in children. Several studies suggest that exposure to DPM may also facilitate development of new allergies. Those most vulnerable to non-cancer health effects are children whose lungs are still developing and the elderly who often have chronic health problems.

Odorous Compounds. Odors are generally regarded as an annoyance rather than a health hazard. Manifestations of a person's reaction to odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). The ability to detect odors varies considerably among the population and overall is quite subjective. People may have different reactions to the same odor. For instance, an odor that is offensive to one person may be perfectly acceptable to another (e.g., coffee roaster). An unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. Known as odor fatigue, a person can become desensitized to almost any odor, and recognition may only occur with an alteration in the intensity. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors.

Local Ambient Air Quality

The primary sources of short-term emissions of various air pollutants in urban areas includes those from temporary construction-related activities including VOC and NO_X (ozone precursors), PM_{10}, and $PM_{2.5}$, which are emitted by construction equipment during various activities that may include but are not limited to grading, excavation, building construction, or demolition. Additionally, soil disturbance during construction activities emits fugitive dust, a fraction of which is comprised of PM_{10} and $PM_{2.5}$.

Long-term air pollutant emission impacts are those associated with mobile sources (e.g., vehicle trips), energy sources (e.g., electricity and natural gas), and area sources (e.g., architectural coatings and the use of landscape maintenance equipment). Additionally, a variety of industrial and commercial processes (e.g., food processing plants, glass manufacturers, gas stations, dry cleaning) also emit criteria pollutant emissions.

To monitor the various concentrations of air pollutants throughout the SCAB, the SCAQMD operates 35 permanent monitoring stations and 2 single-pollutant source impact Pb air monitoring sites in the SCAB and a portion of the Salton Sea Air Basin in Coachella Valley (i.e., Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties). The SCAQMD has divided the region into 38 source receptor areas (SRAs). The City is located within SRA 18, which covers a portion of the coastal area of Orange County. Local air quality data from 2020 to 2022 are provided in **Table 4.2-3: Air Quality Monitoring Data**, which lists the monitored maximum concentrations and number of exceedances of State or federal air quality standards for each year.

Table 4.2-3: Air Quality Monitoring Data			
Pollutant Standards – Monitoring Station	**2020**	**2021**	**2022**
Ozone (O_3) – Central Orange County			
Maximum concentration 1-hour period (ppm)	0.14	0.09	0.10
Maximum concentration 8-hour period (ppm)	0.09	0.07	0.08
Days above 1-hour CAAQS (>0.09 ppm)	6	0	1
Days above 8-hour CAAQS/NAAQS (>0.070 ppm)	15	0	1
Nitrogen Dioxide (NO_2) – Central Orange County			
Maximum 1-hour concentration (ppb)	70.90	67.10	53.00
98th Percentile Concentration 1-hour (ppb)	52.10	53.20	47.80
Annual Average Concentration (ppb)	13.30	12.40	11.80
Carbon Monoxide (CO) – Central Orange County			
Maximum concentration 1-hour period (ppm)	2.30	2.10	2.50
Maximum concentration 8-hour period (ppm)	1.70	1.50	1.40
Suspended Particulates (PM_{10}) – Central Orange County			
Maximum 24-hour concentration ($\mu g/m^3$)	120	115	90
Days above CAAQS (>50 $\mu g/m^3$)	13	12	7
Days above NAAQS (>150 $\mu g/m^3$)	0	0	0
Suspended Particulates ($PM_{2.5}$) – Central Orange County			
Maximum 24-hour concentration ($\mu g/m^3$)	41.40	54.4	33.1
Days above NAAQS (>35 $\mu g/m^3$)	1	9	0

Source: South Coast Air Quality Management District. (ND). *Historical Data By Year, Air Quality Tables for 2020, 2021, 2022*.https://www.aqmd.gov/home/air-quality/historical-air-quality-data/historical-data-by-year. Accessed December 2023.

Sensitive Receptors

Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. People most likely to be affected by air pollution include children, the elderly, athletes, and people with cardiovascular and chronic respiratory diseases. Facilities and structures where people sensitive to air pollution live or spend considerable amounts of time are known as sensitive receptors. Places where air pollution-sensitive individuals are most likely to spend time include schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities (collectively referred to as sensitive receptors).

4.2.4 Thresholds of Significance

The City uses the thresholds of significance specified in the *State CEQA Guidelines, Appendix G*. Impacts concerning air quality would be significant if the Project would:

- Conflict with or obstruct implementation of the applicable air quality plan.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is in nonattainment under an applicable State or federal ambient air quality standard.
- Expose sensitive receptors to substantial pollutant concentrations.
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

4.2.5 Methodology

SCAQMD Thresholds

This analysis considers the *State CEQA Guidelines Appendix G* thresholds, as described above, in determining whether implementation of the Project would result in the direct or indirect impacts on air quality. The evaluation was based on a review of regulations and determining their applicability to the Project.

The City is under the jurisdiction of the SCAQMD which is principally responsible for comprehensive air pollution control in the SCAB. SCAQMD recommends that projects be evaluated in terms of air pollution control thresholds established by SCAQMD and published in the CEQA Air Quality Handbook. The City utilizes SCAQMD's thresholds to assess the significant of quantifiable impacts. The following thresholds shown in **Table 4.2-4: South Coast Air Quality Management District Emissions Thresholds**, are recommended by SCAQMD were used to determine the significance of air quality impacts associated with the Project.

Table 4.2-4: South Coast Air Quality Management District Emissions Thresholds

Criteria Air Pollutants and Precursors	Construction-Related (maximum pounds per day)	Operational-Related (maximum pounds per day)
Volatile Organic Compounds (VOC)[1]	75	55
Carbon Monoxide (CO)	550	550
Nitrogen Oxides (NO_X)	100	55
Sulfur Oxides (SO_X)	150	150
Particulate Matter 10 microns in diameter or greater (PM_{10})	150	150
Particulate Matter 2.5 microns in diameter or greater ($PM_{2.5}$)	55	55

Notes:
1.ROGs and VOCs are subsets of organic gases. Note that the SCAQMD significance threshold is in terms of VOC while CalEEMod calculates ROG emissions. For purposes of this analysis, VOC and ROG are used interchangeably since ROG represents approximately 99.9 percent of VOC emissions.

Source: South Coast Air Quality Management District. (2023). *CEQA Air Quality Significance Thresholds.* south-coast-aqmd-air-quality-significance-thresholds.pdf. Accessed December 2023.

Construction and Operational Emissions

This air quality impact analysis considers Project construction and operational impacts. Where criteria air pollutant quantification was required, emissions were modeled using the California Emissions Estimator Model version 2022 (CalEEMod). CalEEMod is a Statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. Air quality impacts were assessed according to methodologies recommended by CARB and the SCAQMD.

Construction equipment, trucks, worker vehicles, and ground-disturbing activities associated with Project construction would generate emissions of criteria air pollutants and precursors. Daily regional construction emissions are estimated by assuming construction occurs at the earliest feasible date (i.e., a conservative estimate of construction activities) and applying off-road, fugitive dust, and on-road emissions factors in CalEEMod.

Project operations would result in emissions of area sources (consumer products, architectural coating, and landscape equipment), energy sources (natural gas usage), mobile sources (motor vehicles from Project generated vehicle trips), and off-road equipment. Project-generated increases in operational emissions would be predominantly associated with motor vehicle use.

As discussed above, the SCAQMD provides significance thresholds for emissions associated with proposed Project construction and operations. The proposed Project's construction and operational emissions are compared to the daily criteria pollutant emissions significance thresholds in order to determine the significance of a Project's impact on regional air quality. It should be noted that SCAQMD significance thresholds for criteria pollutants do not distinguish between project-level EIRs (e.g., for an individual development) and program-level EIRs (e.g., for a long-range plan). The proposed Project addresses the development of residential uses on identified housing sites on a programmatic level. Therefore, the application of the SCAQMD thresholds for individual project-level impacts to a City-wide land use plan within a program-level EIR is highly conservative.

Localized Significance Thresholds

In addition to the daily thresholds listed in **Table 4.2-4**, future housing development associated with the Project would be subject to SCAQMD's Localized Significance Thresholds (LSTs) for emissions of NO_2, CO, PM_{10}, and $PM_{2.5}$ generated at the future development sites. LSTs represent the maximum emissions that can be generated at a project site without expecting to cause or substantially contribute to an exceedance of the most stringent CAAQS or NAAQS. LSTs are based on the ambient concentrations of that pollutant within the Project source receptor area (SRA), as demarcated by the SCAQMD, and the distance to the nearest sensitive receptor. LST analysis for construction is applicable for all projects that disturb 5 acres or less on a single day. Since this Project would not directly result in the development of housing, future housing development projects would need to demonstrate compliance with air quality standards.

Toxic Air Contaminants

There is currently no federal or State threshold for air toxic emissions or concentrations. However, the California Air Resources Board (CARB) *Air Quality and Land Use Handbook: A Community Health Perspective* offers advisory recommendations for locating sensitive receptors near uses associated with TACs, such as freeways and high traffic roads, commercial distribution centers, rail yards, ports, refineries, chrome platers, dry cleaners, gasoline stations, and other industrial facilities, to reduce exposure of sensitive populations.[5]

Diesel exhaust is the dominant type of TAC emission associated with operational trips related to development under the proposed Project, and diesel emissions would be emitted in closest proximity to receptors. The primary TAC of concern associated with combustion of diesel fuel is DPM. The Office of Environmental Health Hazard Assessment (OEHHA) guidance indicates that PM_{10} be used as a surrogate for the TAC DPM when evaluating health risks associated with DPM.[6]

[5] California Air Resources Board.(2005). *Air Quality and Land Use Handbook.* http://www.aqmd.gov/docs/default-source/ceqa/handbook/california-air-resources-board-air-quality-and-land-use-handbook-a-community-health-perspective.pdf. Accessed December 2023.

[6] Office of Environmental Health Hazard Assessment. (2015). *Air Toxic Hot Spots Program Risk Assessment Guidelines*. https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf. Accessed December 2023.

4.2.6 Project Impacts and Mitigation

Threshold 4.2-1	Would the Project conflict with or obstruct implementation of the applicable air quality plan?

As discussed previously, SCAQMD Governing Board adopted the 2022 AQMP. The AQMP establishes a program of rules and regulations directed at reducing air pollutant emissions and achieving State (California) and national air quality standards. The AQMP is a regional and multi-agency effort including the SCAQMD, the CARB, the SCAG, and the U.S. EPA. The AQMP pollutant control strategies are based on the latest scientific and technical information and planning assumptions, including SCAG's RTP/SCS, updated emission inventory methodologies for various source categories, and SCAG's latest growth forecasts. SCAG's latest growth forecasts were defined in consultation with local governments and with reference to local general plans.

The Project is subject to the 2022 AQMP. Criteria for determining consistency with the AQMP are defined in the SCAQMD CEQA Handbook, Chapter 12, Section 12.2, and Section 12.3. The criteria are discussed below:

Consistency Criterion 1

With respect to the first criterion, SCAQMD methodologies require that an air quality analysis for a project include forecasts of project emissions in relation to contributing to air quality violations and delay of attainment.

a) Would the project result in an increase in the frequency or severity of existing air quality violations?

Since the consistency criteria identified under the first criterion pertain to pollutant concentrations, rather than to total regional emissions, an analysis of a project's pollutant emissions relative to localized pollutant concentrations is used as the basis for evaluating project consistency.

The Project proposes to accommodate the City's 6th Cycle RHNA allocation of 4,845 housing units, including 1,456 very low-income units and 930 low-income units, which would be accomplished through the development of residential uses on the 247 housing sites. State law requires that the City accommodate their RHNA "fair share" of the region's housing needs, which cannot be achieved without future residential development. As discussed below under Impact Threshold 4.2-2, the proposed Project would be subject to compliance with applicable SCAQMD impact significance thresholds/methodologies and emission reduction measures, and the applicable General Plan air quality goals and policies. However, operational emissions would exceed the SCAQMD's daily emissions thresholds for ROG, NO_X, and CO under the "500 DU, 5-Acre" and "600 DU, 12-Acre" scenarios. Therefore, the proposed Project could result in an increase in the frequency or severity of the existing air quality violations for O_3, PM_{10}, and $PM_{2.5}$ in the SCAB.

b) Would the project cause or contribute to new air quality violations?

As discussed below, long-term operational ROG, NO_X, and CO emissions would exceed the SCAQMD thresholds under the "500 DU, 5-Acre" and" 600 DU, 12-Acre" scenarios. Therefore, the Project would have the potential to cause or affect a violation of the ambient air quality standards.

c) Would the project delay timely attainment of air quality standards or the interim emissions reductions specified in the AQMP?

The proposed Project may result in significant impacts concerning emissions during long long-term operations. As such, the proposed Project could delay the timely attainment of air quality standards or 2022 AQMP emissions reductions.

Consistency Criterion 2

With respect to the second criterion for determining consistency with SCAQMD and SCAG air quality policies, it is important to recognize that the SCAB's air quality planning focuses on attainment of ambient air quality standards at the earliest feasible date. Projections for achieving air quality goals are based on assumptions regarding population, housing, and growth trends. Therefore, the SCAQMD's second criterion for determining Project consistency focuses on whether or not the proposed Project exceeds the assumptions used in preparing the forecasts presented in the 2022 AQMP. Determining whether or not a project exceeds the 2022 AQMP assumptions involves evaluation of the three criteria outlined below. The following discussion provides an analysis of each of these criteria.

a) Would the project exceed the assumptions in the AQMP or increments based on the years of the project build-out phase?

The purpose of the 2022 AQMP is to set forth a comprehensive and integrated program that would lead the SCAB into compliance with the federal 24-hour $PM_{2.5}$ air quality standard, and to provide an update to the SCAQMD's commitments towards meeting the federal 8-hour O_3 standards. The AQMP incorporates the latest scientific and technological information and planning assumptions, including the RTP/SCS and updated emission inventory methodologies for various source categories. As part of its air quality planning, SCAG has prepared the Regional Comprehensive Plan and Guide and the Connect SoCal – The 2020-2045 RTP/SCS. The 2020-2045 RTP/SCS was determined to conform to the federally mandated SIP for the attainment and maintenance of the NAAQS. The 2020-2045 RTP/SCS will be incorporated into the forthcoming AQMP. Both the Regional Comprehensive Plan and AQMP are based, in part, on projections originating with county and city general plans.

The population, housing, and employment forecasts, which are adopted by SCAG's Regional Council, are based on local City plans and policies; these are used by SCAG in all phases of implementation and review. Additionally, the SCAQMD has incorporated these same projections into the 2022 AQMP. Therefore, future development would cause SCAG projections to be exceeded. As such, the Project would not meet this AQMP consistency criterion. It is however, noted, State law requires that the City accommodate their RHNA "fair share" of the region's housing needs, which cannot be achieved without the proposed rezoning and the future development.

The proposed Project would be subject to compliance with applicable SCAQMD impact significance thresholds/methodologies and emission reduction measures.

The determination of 2022 AQMP consistency is primarily concerned with the long-term influence of a project on air quality in the SCAB. The Project would result in a long-term impact on the region's ability to meet State and federal air quality standards. Further, the Project would conflict with the 2022 AQMP goals and policies. Implementation of proposed mitigation measures and compliance with SCAQMD rules would reduce conflicts and obstruction of the AQMP; however, the combined emissions from future development would exceed the SCAQMD significance thresholds for criteria pollutants. Exceeding these

thresholds has the potential to hinder the region's compliance with each AQMP. Therefore, this impact is considered significant and unavoidable after implementation of mitigation, and a Statement of Overriding Considerations would be required should the City choose to approve the Project.

The proposed Project would require each individual residential development to be consistent with existing City policies and regulations aimed at reducing criteria pollutant emissions, which are consistent with the pollution control strategies in the SCAQMD's 2022 AQMP. However, the threshold used for determining whether the proposed Project would conflict with or obstruct an applicable air quality plan is qualitative and is based on whether it would be consistent with the assumed growth, applicable control measures and air emission reduction policies as set forth in the AQMP.

As described in **Section 4.12: Population and Housing**, this Program EIR conservatively analyzes a total development capacity of 9,914 units including future development capacity of up to 9,649 units on 247 housing sites, 25 units associated with pipeline projects, and 240 accessory dwelling units (ADUs), which would increase the Newport Beach's population by approximately 21,811 persons based on the City's 2.17-person household size. The City's population would increase by 26.1 percent as a result. Population growth could lead to decreased air quality as a result of increased traffic, energy consumption, and air quality degrading activities. Future housing projects would adhere to the latest California Building Code Energy Standards and promote housing that would increase connectivity throughout the community. Nonetheless, the proposed Project would not be consistent with the land planning grown strategies set forth in the 2022 AQMP, and a significant and unavoidable impact would occur.

Impact Summary: **Significant and Unavoidable Impact.** The proposed Project would conflict with the growth assumptions in the AQMP and would exceed the SCAQMD daily emissions thresholds during long-term operations. There are no feasible mitigation measures to reduce this impact to a less than significant level. Therefore, the Project would result in a significant and unavoidable impact concerning air quality plan consistency.

Threshold 4.2-2	**Would the Project 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?**

The Project does not directly propose the development of additional housing units within the City. Instead, the Project involves regulatory modifications which could facilitate the development of additional housing in the future.

Short-Term Construction Emissions

Future development facilitated by the Project would result in air pollutant emissions generated during construction activities. Additional housing units would involve the burning of fossil fuels during construction and the generation of particulate matter through fugitive dust and fuel combustion. Construction vehicles such as hauling trucks, and ground moving machinery would contribute to temporarily increased pollutant emissions. Construction activities such as demolition, site grading, and road paving would also result in the generation of emissions.

Fugitive dust emissions may have a substantial, temporary impact on local air quality. In addition, fugitive dust may be a nuisance to those living and working in the vicinity of the individual construction site(s). Uncontrolled dust from construction can become a nuisance and potential health hazard to those living and working nearby.

Construction activities associated with future development would occur in incremental phases over time based upon numerous factors, including market demand, and economic and planning considerations. Construction activities could include grading, demolition, excavation, cut-and-fill, paving, building construction, and application of architectural coatings. In addition, construction worker vehicle trips, building material deliveries, soil hauling, etc. would occur during construction. Construction-related emissions are typically site specific and depend upon multiple variables. Quantifying individual future development's air emissions from short-term, temporary construction-related activities is not possible due to project-level variability and uncertainties concerning detailed site plans, construction schedules/ duration, equipment requirements, etc., among other factors, which are presently unknown. Since these parameters can vary so widely (and individual project-related construction activities would occur over time dependent upon numerous factors), quantifying precise construction-related emissions and impacts would be impractical and speculative.

Depending on how development proceeds, construction-related emissions associated with future development could exceed SCAQMD thresholds of significance. To provide a reference of the types of air quality emissions associated with representative individual construction activities, four hypothetical scenarios were modeled for different sizes of residential development that could occur under the proposed Project. Modeling was conducted for construction and operation of the following two residential development scenarios:

- 50 DU, 1 Acre: includes 50 low rise apartments and the project acreage is approximately 1 acre.
- 250 DU, 5 Acres: includes 250 low rise apartments and the project acreage is approximately 5 acres.
- 500 DU, 5 Acres: includes 500 low rise apartments and the project acreage is approximately 5 acres.
- 600 DU, 12 Acres: includes 600 low rise apartments and the project acreage is approximately 12 acres.

The construction emission estimates were based on a hypothetical construction duration of approximately 16 months for each development scenario. Default construction equipment was also included in CalEEMod. It is also noted, these scenarios are considered a reasonable assumption of the development that could occur at any given time in the future. **Table 4.2-5: Predicted Project Construction Emissions** presents the estimated daily short-term construction emissions for the four hypothetical scenarios. For the four modeled scenarios included in **Table 4.2-5**, emissions would result from on-site demolition, grading activities, transport of materials to and from the site, building construction, paving, and architectural coating associated with the individual developments.

Table 4.2-5: Predicted Project Construction Emissions

Emissions Source	Pollutant (pounds per day)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
50 DU, 1 Acre						
2024	1.91	17.3	20.4	0.03	3.48	1.87
2025	6.25	5.34	7.83	0.01	0.54	0.28
Total Emissions	**8.16**	**22.64**	**28.23**	**0.04**	**4.02**	**2.15**
SCAQMD Threshold	*75*	*100*	*550*	*150*	*150*	*55*
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
250 DU, 5 Acres						
2024	3.26	29.8	34.6	0.05	4.70	2.71
2025	5.31	8.41	12.3	0.02	0.65	0.41
Total Emissions	**8.57**	**38.21**	**46.9**	**0.07**	**5.35**	**3.12**
SCAQMD Threshold	*75*	*100*	*550*	*150*	*150*	*55*
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
500 DU, 5 Acres						
2024	4.53	32.8	55.4	0.06	9.48	3.85
2025	56.5	7.72	15.1	0.01	1.52	0.57
Total Emissions	**61.03**	**40.52**	**70.5**	**0.07**	**11.0**	**4.42**
SCAQMD Threshold	*75*	*100*	*550*	*150*	*150*	*55*
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
600 DU, 12 Acres						
2024	6.44	49.5	71.6	0.10	12.0	4.77
2025	67.6	8.69	16.8	0.02	1.7	0.66
Total Emissions	**74.04**	**58.19**	**88.4**	**0.12**	**13.7**	**5.43**
SCAQMD Threshold	*75*	*100*	*550*	*150*	*150*	*55*
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod version 2022.1.0. See **Appendix C** for model outputs.

The emissions assume compliance with SCAQMD Rule 403, which would reduce fugitive dust emissions generated at future construction sites by requiring dust abatement measures. Rule 403 is required for all development projects and stipulates that excessive fugitive dust emissions shall be controlled by regular watering or other dust prevention measures. In addition, SCAQMD Rule 402 is required for implementation of dust suppression techniques to prevent fugitive dust from creating an off-site nuisance, and after implementation would reduce short-term fugitive dust impacts on nearby sensitive receptors. Future development would similarly be subject to compliance with SCAQMD Rules 1113 and 1143 concerning architectural coatings and reducing VOCs in consumer paint thinners and multi-purpose solvents, respectively. Emissions would not violate the SCAQMD thresholds under any of the scenarios.

Future housing development facilitated by the Project would be subject to the City's development review process and would occur as market conditions allow and at the discretion of the individual property owners. This means that any future development on housing sites would be required to incorporate additional measures related to improving air quality (both directly and indirectly). In addition, SCAQMD

Rules 402 and 403 (e.g., prohibition of nuisances, watering of inactive and perimeter areas, track out requirements, etc.) would be applied to future developments on a project-by-project basis in order to minimize those potential negative air quality effects. Therefore, construction air quality impacts would be less than significant.

Long-Term Operational Emissions

Operational emissions are primarily associated with motor vehicle use, area sources (consumer products, architectural coatings, and landscape equipment), and energy sources (natural gas usage). Future development operational emissions would be associated with area sources, energy sources, and mobile sources (i.e., motor vehicle use). Each of these sources are described below.

- **Area Source Emissions.** Area source emissions would be generated due to household equipment, architectural coating, and landscaping that may be conducted on each future development site.
- **Energy Source Emissions.** Energy source emissions would be generated due to electricity and natural gas usage associated with the future development operations. Primary uses of electricity and natural gas by the Project would be for common household appliances and other powered items.
- **Mobile Source.** Mobile sources are emissions from motor vehicles, including tailpipe and evaporative emissions. Depending upon the pollutant being discussed, the potential air quality impact may be of either regional or local concern. For example, ROG, NO_X, PM_{10}, and $PM_{2.5}$ are all pollutants of regional concern. NO_X and VOC react with sunlight to form O_3, known as photochemical smog. Additionally, wind currents readily transport PM_{10}, and $PM_{2.5}$. However, CO tends to be a localized pollutant, dispersing rapidly at the source. Operations-generated vehicle emissions are based on the trip generations and would be incorporated into future studies and CalEEMod as recommended by the SCAQMD.

In analyzing cumulative impacts for future housing development facilitated by the Project, an analysis must specifically evaluate a development's contribution to the cumulative increase in pollutants for which the CARB is designated as nonattainment for the CAAQS and NAAQS. The SCAB is designated as a federal nonattainment area for O_3, PM_{10}, and $PM_{2.5}$. The SCAB is designated as a State nonattainment area for O_3, $PM_{2.5}$, and lead (partial). The nonattainment status is the result of cumulative emissions from all sources of these air pollutants and their precursors within the SCAB. The nonattainment status of these and other criteria pollutants (see **Table 4.2-2**). Future housing developments would be required to demonstrate that VOC, NO_X, CO, SO_2, PM_{10}, or $PM_{2.5}$ emissions would be below the significance thresholds for both construction and operational activities.

Specific data for the types and amounts of future development were entered into CalEEMod to determine the pollutant emissions anticipated for each development scenario. This data includes dwelling units, nonresidential land use square-footage, average daily trips, vehicle miles traveled, and average trip lengths. Where project-specific data was not available, CalEEMod defaults were used. All four aforementioned scenarios were modelled for operation.

Mobile and stationary source operational emissions would result from normal daily activities at each respective development site after occupancy (i.e., increased concentrations of O_3, PM_{10}, and CO). Mobile source emissions would be generated by the motor vehicles traveling to and from their respective sites. Stationary area source emissions would be generated by natural gas consumption for space and water

heating devices, landscape maintenance equipment operations, and use of consumer products. Stationary energy emissions would result from energy consumption associated with the future development. The estimated operational emissions associated with each of these sources are presented in **Table 4.5-6: Operational Air Emissions**.

Table 4.2-6: Operational Air Emissions

Emissions Source	Pollutant (pounds per day)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
50 DU, 1 Acre						
Area	1.00	0.72	8.64	0.02	2.33	2.73
Energy	14.5	1.06	28.3	0.06	3.57	0.01
Mobile	0.01	0.21	0.09	0.00	0.02	0.01
Total Emissions	**15.51**	**1.99**	**37.03**	**0.08**	**5.92**	**4.13**
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
250 DU, 5 Acres						
Area	4.98	3.58	43.2	0.12	11.7	3.01
Energy	17.2	0.94	34.0	0.05	2.79	2.74
Mobile	0.01	0.16	0.07	0.00	0.01	0.01
Total Emissions	**22.2**	**4.69**	**77.3**	**0.17**	**2.87**	**5.76**
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
500 DU, 5 Acres						
Area	9.96	7.16	86.4	0.24	23.2	6.01
Energy	145	10.6	283	0.65	35.7	35.1
Mobile	0.12	2.06	0.88	0.01	0.17	0.17
Total Emissions	**155**	**19.9**	**370**	**0.90**	**59.2**	**35.3**
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Exceed Threshold?	**Yes**	**No**	**No**	**No**	**No**	**No**
600 DU, 12 Acres						
Area	12.0	8.60	104	0.28	28.0	7.22
Energy	174	12.8	339	0.78	42.9	42.1
Mobile	0.14	2.47	1.05	0.02	0.2	0.20
Total Emissions	**186**	**23.8**	**444**	**1.08**	**71.1**	**49.5**
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Exceed Threshold?	**Yes**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod version 2022.1.0. See **Appendix C** for model outputs.

As identified in **Table 4.2-6**, the long-term operational emissions for ROG under the 500 DU, 5-Acre and 600 DU, 12-Acre scenarios would exceed the SCAQMD's daily emissions thresholds. Because the Project would not exceed the SCAQMD thresholds for SCAB nonattainment pollutants (i.e., O_3, PM_{10}, and $PM_{2.5}$), the proposed Project would not result in substantial contributions of these pollutants during long-term operations.

It is important to note that the SCAQMD significance thresholds do not distinguish between project-level EIRs and program-level EIRs and therefore the application of the SCAQMD thresholds to the proposed Project within a programmatic EIR is highly conservative. Future development facilitated by the Project would occur as market conditions and economic factors allow and would be required to comply with the established thresholds of significance (**Table 4.2-4**). Additionally, future development would be required to analyze potential conflicts in development with SCAQMD's LSTs. These standards represent the maximum emissions that can be generated through the development and operation of a project without expecting to cause or substantially contribute to an exceedance of the most stringent State or federal ambient air quality standards. Nonetheless, future development on housing sites facilitated by the Project may result in a cumulatively considerable net increase of a criteria pollutant for which the CARB is in nonattainment under an applicable federal or State ambient air quality standard.

As addressed under **Section 4.2.2: Regulatory Setting**, the City employs goals and policies related to air quality that would help reduce the long-term operational emissions associated with the proposed Project. In addition, mobile emissions would gradually decline in the future with the expansion of electric vehicle infrastructure (see Municipal Code §15.19.060). However, due to the unknown nature of development activities under the proposed Project, long-term operational emissions from implementation of the Project could exceed the SCAQMD's regional significance thresholds. At a programmatic level of analysis, there are no feasible mitigation measures to reduce long-term emissions to levels below the SCAQMD's thresholds of significance. Therefore, a significant and unavoidable impact would occur.

Impact Summary: **Significant and Unavoidable Impact.** Buildout of the proposed Project would result in long-term operational emissions that would exceed the SCAQMD thresholds. There are no feasible mitigation measures to reduce this impact to a less than significant level. Therefore, the Project would result in a significant and unavoidable impact concerning long-term air quality emissions.

Threshold 4.2-3:	**Would the Project expose sensitive receptors to substantial pollutant concentrations?**

Localized Pollutant Concentrations

As the specific details (e.g., size, construction phasing, equipment, earthwork volumes, etc.) for individual future residential projects are unknown at this time, project-level analysis for localized pollutant concentrations impacts cannot be accurately determined using SCAQMD's localized significance thresholds (LST) analysis methodology. LSTs were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative (I-4). The SCAQMD provided the *Final Localized Significance Threshold Methodology* (dated June 2003 [revised July 2008]) for guidance. The LST methodology assists lead agencies in analyzing localized impacts associated with project-specific level proposed projects and are not applicable to regional projects such as general plans or other long-term planning documents. The SCAQMD provides the LST lookup tables based on distance from the project (meters) for one-, two-, and five-acre projects emitting CO, NO_X, $PM_{2.5}$, or PM_{10}. The LST methodology and associated mass rates are not designed to evaluate localized impacts from mobile sources traveling over the roadways. The SCAQMD recommends that any project over five acres perform air quality dispersion modeling to assess impacts to nearby sensitive receptors. The housing sites are located within Sensitive Receptor Area (SRA) 18, North Coastal Orange County.

As previously described, LSTs are applicable at the project-specific level and are not applicable to long-term planning documents such as Housing Elements. Depending on the size and location of each individual project, construction and operational emissions could exceed LSTs. Compliance with General Plan policies, Municipal Code requirements, SCAQMD rules and regulations, and supplemental mitigation measures (if required) would reduce air pollutant emissions. However, the potential emissions reductions from implementation of these measures cannot be quantified because specific details such as individual project size, construction scheduling, and earthwork quantities that would occur within the City is not available. Therefore, it is not feasible to conclude that air pollutant emissions from future development projects would be reduced to levels below the SCAQMD LST thresholds. Therefore, localized air quality impacts would be significant and unavoidable.

Toxic Air Contaminants

One of the highest public health priorities is the reduction of DPM generated by vehicles on California's freeways and highways, as it is one of the primary TACs with the most direct and common implications for respiratory health problems. Per CARB criteria, heavily traveled roadways where average daily traffic (ADT) volumes exceed 100,000 vehicles can be sources of DPM from diesel-fueled engines (e.g., heavy-duty trucks). As discussed above, the Project does not propose any development; however, it would facilitate future housing development consistent with State Housing laws. The housing sites were evaluated at a programmatic level, as discussed above. Future residential development projects will vary regarding construction intensity, duration, and location, and impacts of air quality will vary as well.

The SCAQMD conducted an in-depth analysis of the toxic air contaminants and their resulting health risks for all of Southern California. The Multiple Air Toxics Exposure Study in the SCAB (MATES V) shows that carcinogenic risk from air toxics in the SCAB, based on the average concentrations at the 10 monitoring sites, is approximately 40 percent lower than the monitored average in MATES IV and 84 percent lower than the average in MATES II.[7]

MATES V is the most comprehensive dataset documenting the ambient air toxic levels and health risks associated with the SCAB emissions. Therefore, MATES V study represents the baseline health risk for a cumulative analysis. MATES V estimates the average excess cancer risk level from exposure to TACs is 424 in one million basin-wide. In comparison, the MATES IV basin average risk was 897 per million. These model estimates were based on monitoring data collected at ten fixed sites within the SCAB. None of the fixed monitoring sites are near the project site. However, MATES V has extrapolated the excess cancer risk levels throughout the SCAB by modeling the specific grids. MATES V modeling predicted an excess cancer risk of 288 in one million for the Project area.[8] DPM is included in this cancer risk along with all other TAC sources. DPM accounts for approximately 60 to 70 percent of the total risk shown in MATES V in this area.

The CARB *Air Quality and Land Use Handbook* (April 2005) recommends avoiding siting new sensitive land uses within 500 feet of a freeway or urban road with 100,000 vehicles per day, and/or within 1,000 feet of a distribution center that accommodates more than 100 trucks per day. According to the Caltrans Traffic Census Program, State Route (SR-55) and SR-1 are urban freeways/highways that currently carry less than

[7] South Coast Air Quality Management District (ND). MATES V Multiple Air Toxics Exposure Study. https://www.aqmd.gov/home/air-quality/air-quality-studies/health-studies/mates-v. Accessed November 30, 2023.

[8] South Coast Air Quality Management District. (ND). *MATES V Estimated Risk*, https://experience.arcgis.com/experience/79d3b6304912414bb21ebdde80100b23/page/home/?data_id=dataSource_105-a5ba9580e3aa43508a793fac819a5a4d%3A403&print_preview=true&views=view_38%2Cview_1. Accessed November 2023.

100,000 vehicles per day.[9] However, SR-73 (east and west of Jamboree Road) carries between approximately 112,500 and 119,200 vehicles per day. Implementation of housing development could include new sensitive land uses (i.e., residential uses) that could be located within 500 feet of SR-73. Therefore, implementation of the Project could expose sensitive receptors to substantial pollutant concentrations associated with DPM emissions from heavy trucks which could result in health effects. Eight housing sites are located within the CARB specified buffer distances for freeways; see **Figure 4.2-1: Housing Sites Proximate to Potential TAC Sources** and **Table 4.2-7: Housing Sites Proximate to Potential SR-73 TAC Sources**. The housing sites identified in **Table 4.2-7** would require a more detailed site-specific analysis of TAC impacts, as required by proposed **MM AQ-1**.

Table 4.2-7: Housing Sites Proximate to Potential SR-73 TAC Sources

Candidate Housing Site			Approximate Distance to SR-73 (feet) [1]
ID	APN	Address	
63	427-332-02	1400 N Bristol St.	120
64	427-332-04	1401 Quail St.	385
65	427-332-03	1451 Quail St.	380
68	427-241-13	895 Dove St.	430
84	427-342-02	1301 Quail St.	140
85	427-342-01	3600 Spruce Ave.	140
131	120-571-12	Open Space South of SR-73	110
336	478-031-56	20402 Newport Coast Dr.	160

Notes:
1. Distance measured using Google Earth, 2023.

As noted above, the proximity of housing sites to SR-73 poses a concern for potential exposure of future development to TACs from these sources. Therefore, a project-specific Health Risk Assessment (HRA) shall be required for residential uses that could be located within 500 feet of SR-73 in compliance with **MM AQ-1**. With implementation of this mitigation measure, air toxic impacts would be less than significant.

Impact Summary: **Significant and Unavoidable Impact.** LSTs are applicable at the project-specific level and depending on the size and location of each individual project, construction and operational emissions could exceed LSTs. There are no feasible measures to reduce this impact to a less than significant level. Therefore, the Project would result in a significant and unavoidable impact concerning localized air quality impacts.

In addition, buildout of the proposed Project may expose residents at future housing sites to TAC concentrations in exceedance of established health standards. However, **MM AQ-1** would reduce this impact to a less than significant level. Impacts related to substantial pollutant concentrations would be less than significant.

[9] California Department of Transportation.(ND). *Traffic Census Program*. https://dot.ca.gov/programs/traffic-operations/census. Accessed November 2023.

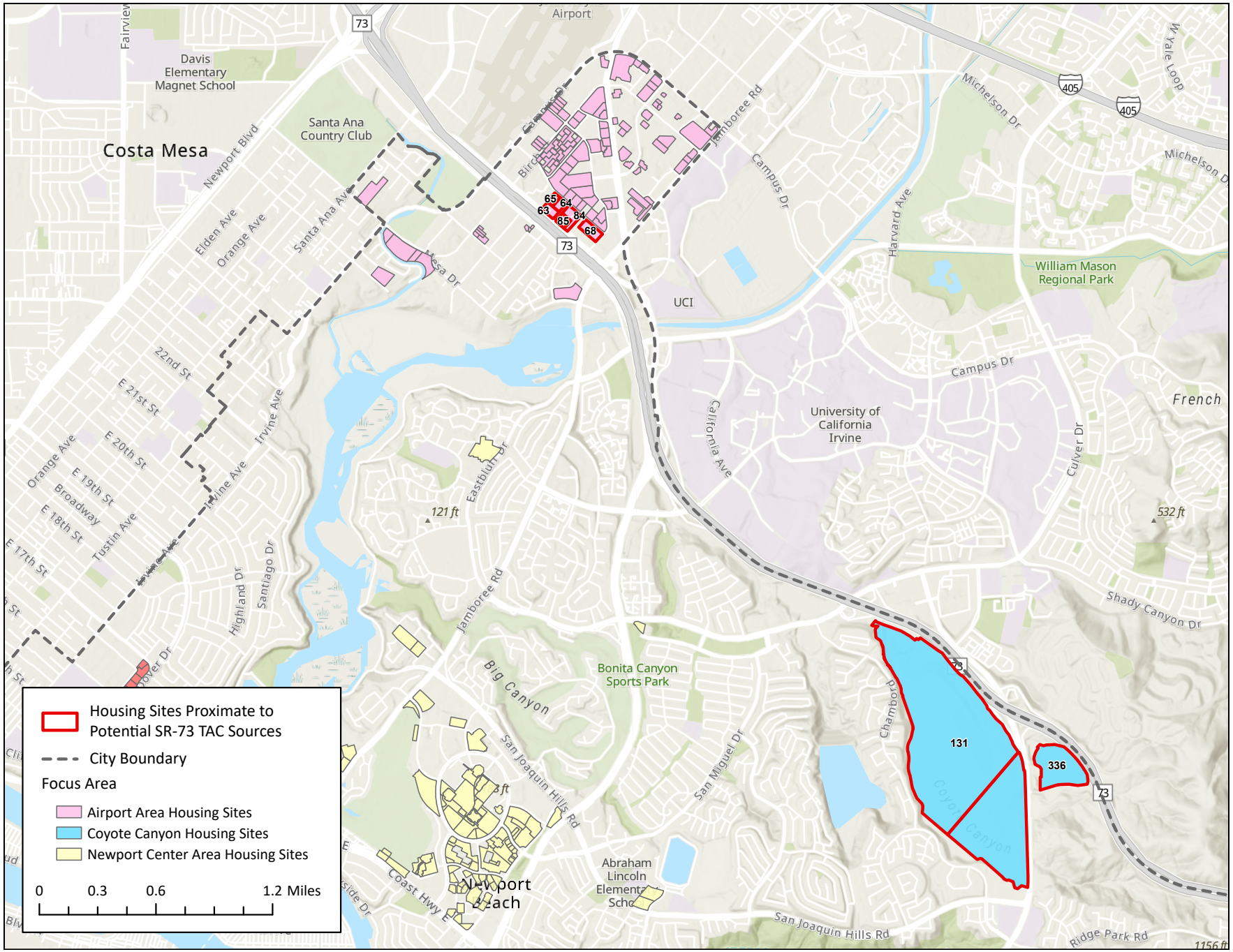

Figure 4.2-1: Housing Sites Proximate to Potential TAC Sources
City of Newport Beach General Plan Housing Implementation
Program Environmental Impact Report

Not to Scale

Threshold 4.2-4	**Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?**

The SCAQMD CEQA Air Quality Handbook identifies certain land uses as sources of odors. These land uses include agriculture (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding. The Project would not include any of the land uses that have been identified by the SCAQMD as odor sources.

However, future housing development facilitated by the Project could result in odors generated from vehicles and/or equipment exhaust emissions during construction. These odors are a temporary short-term impact that is typical of construction projects and would disperse rapidly. The Project would not include any of the land uses that have been identified by the SCAQMD as odor sources. Therefore, the Project would not create objectionable odors and a less than significant impact would occur.

Impact Summary: **Less Than Significant Impact.** Buildout of the proposed Project would not include long-term sources of odors or other emissions (such as those leading to odors). Therefore, impacts would be less than significant and no mitigation is required.

4.2.7 Cumulative Impacts

As discussed above, future housing development under the proposed Project would result in long-term operational emissions of ROG would exceed the SCAQMD's thresholds. In addition, localized construction emissions were determined to be significant. Despite compliance with General Plan and Municipal Code policies and regulations, and applicable SCAQMD rules and regulations, long-term operational, and localized pollutant concentration emissions would remain significant and unavoidable due to the scope and scale of the Project, and overall buildout projections. As the proposed Project would result in significant and unavoidable impacts for air quality plan consistency, long-term air emissions, and pollutant concentrations, the Project would have a cumulatively considerable impact concerning air quality. A significant and unavoidable impact would occur despite implementation of proposed mitigation and a Statement of Overriding Considerations would be required.

4.2.8 Mitigation Program

As noted, all future housing development facilitated by the Project would be subject to the City's development review process, which may include review pursuant to CEQA, and would be assessed on a case-by-case basis for potential effects concerning potential air quality impacts. Future housing development would be subject to compliance with relevant federal, State, and local requirements including requirements set forth in the Newport Beach General Plan and Newport Beach Municipal Code.

General Plan Policies

See **Section 4.2.2: Regulatory Setting** for complete policy text.

- Policy NR 6.1
- Policy NR 6.2
- Policy NR 6.3
- Policy NR 6.4
- Policy NR 6.8
- Policy NR 6.9
- Policy NR 7.1
- Policy NR 7.2
- Policy NR 7.3
- Policy NR 8.1

Mitigation Measures

Due to potential for TACs to exceed LST, the following mitigation measure would be applied to minimize the impact of the proposed Project in compliance with General Plan policies and SCAQMD Rules.

MM AQ-1: A project-specific Health Risk Assessment shall be conducted for future residential development proposed within 500 feet of the State Route 73 right-of-way, pursuant to the recommendations set forth in the California Air Resources Board (CARB) *Air Quality and Land Use Handbook*. The Health Risk Assessment shall evaluate a project per the following South Coast Air Quality Management District (SCAQMD) thresholds:

- **Cancer Risk:** Emit carcinogenic or toxic contaminants that exceed the maximum individual cancer risk of 10 in one million.
- **Non-Cancer Risk:** Emit toxic contaminants that exceed the maximum hazard quotient of one in one million.

The SCAQMD has also established non-carcinogenic risk parameters for use in HRAs. Noncarcinogenic risks are quantified by calculating a "hazard index," expressed as the ratio between the ambient pollutant concentration and its toxicity or Reference Exposure Level (REL). An REL is a concentration at or below which health effects are not likely to occur. A hazard index less of than one (1.0) means that adverse health effects are not expected. If projects are found to exceed the SCAQMD's Health Risk Assessment thresholds, mitigation shall be incorporated to reduce impacts to below SCAQMD thresholds.

4.2.9 Level of Significance After Mitigation

Despite implementation of the mitigation program, potential air quality impacts would remain significant and unavoidable.

4.2.10 References

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