

4.3 AIR QUALITY

This section provides an overview of air quality levels in the CPAs and evaluates the construction and operational impacts associated with the Proposed Plans. Supporting data and calculations are included in Appendix F of this Draft EIR. Topics addressed include short-term construction and long-term operational pollutant emissions. The California Health and Safety Code (HSC) defines air pollution as any discharge, release, or other propagation into the atmosphere, and includes but is not limited to, smoke, charred paper, dust, soot, grime, carbon, fumes, gases, odors, particulate matter, acids, or any combination thereof. Air quality impacts may occur during the construction or operation phase of new development, and may come from stationary, mobile, or area sources. [Refer to Appendix F of this Draft EIR for background information on pollutants.]

EXISTING SETTING

AIR POLLUTION CLIMATOLOGY¹

The topography and climate of Southern California combine to make the South Coast Air Basin (Basin) an area of high air pollution potential. The CPAs are wholly contained within Basin. During the summer months, a warm air mass frequently descends over the cool, moist marine layer produced by the interaction between the ocean's surface and the lowest layer of the atmosphere. The warm upper layer forms a cap over the cooler surface layer which inhibits the pollutants from dispersing upward. Light winds during the summer further limit circulation. Additionally, abundant sunlight triggers the photochemical reactions which produce ozone and the majority of particulate matter. The region experiences more days of sunlight than any other major urban area in the nation except Phoenix, Arizona.

LOCAL CLIMATE

The mountains and hills within the Basin contribute to the variation of rainfall, temperature, and winds throughout the region. Within the CPAs and their vicinity, the average wind speed, as recorded at the Lennox Wind Monitoring Station, is approximately four miles per hour, with calm winds occurring approximately 13 percent of the time. Wind in the vicinity of the CPAs predominately blows from the west.²

The annual average temperature in the vicinity of the CPAs is 65 degrees Fahrenheit (°F) with an average winter temperature of approximately 58°F and an average summer temperature of approximately 72°F.³ Total precipitation in the project area averages approximately 15 inches annually. Precipitation occurs mostly during the winter and relatively infrequently during the summer. Precipitation averages approximately nine inches during the winter, approximately four inches during the spring, approximately two inches during the fall, and less than one inch during the summer.⁴

AIR MONITORING DATA

The South Coast Air Quality Management District (SCAQMD) monitors air quality conditions at 37 locations throughout the Basin. Each monitoring station measures concentrations of air pollutants that are considered representative of the air quality in the respective subregion of the Basin, referred to as the Source Receptor Area (SRA). The CPAs span portions of the SCAQMD Central Los Angeles County (SRA 1), the Southwest Coastal Los Angeles County (SRA 3), and the South Central Los Angeles County (SRA 12) monitoring

¹SCAQMD, *2012 Air Quality Management Plan*, February 2013.

²SCAQMD, *Meteorological Data*, <http://www.aqmd.gov/home/library/air-quality-data-studies/meteorological-data/data-for-aermod>, accessed on May 25, 2016.

³Western Regional Climate Center, *Historical Climate Information*, <http://www.wrcc.dri.edu/summary/Climsmsca.html>, accessed on May 25, 2016.

⁴*Ibid.*

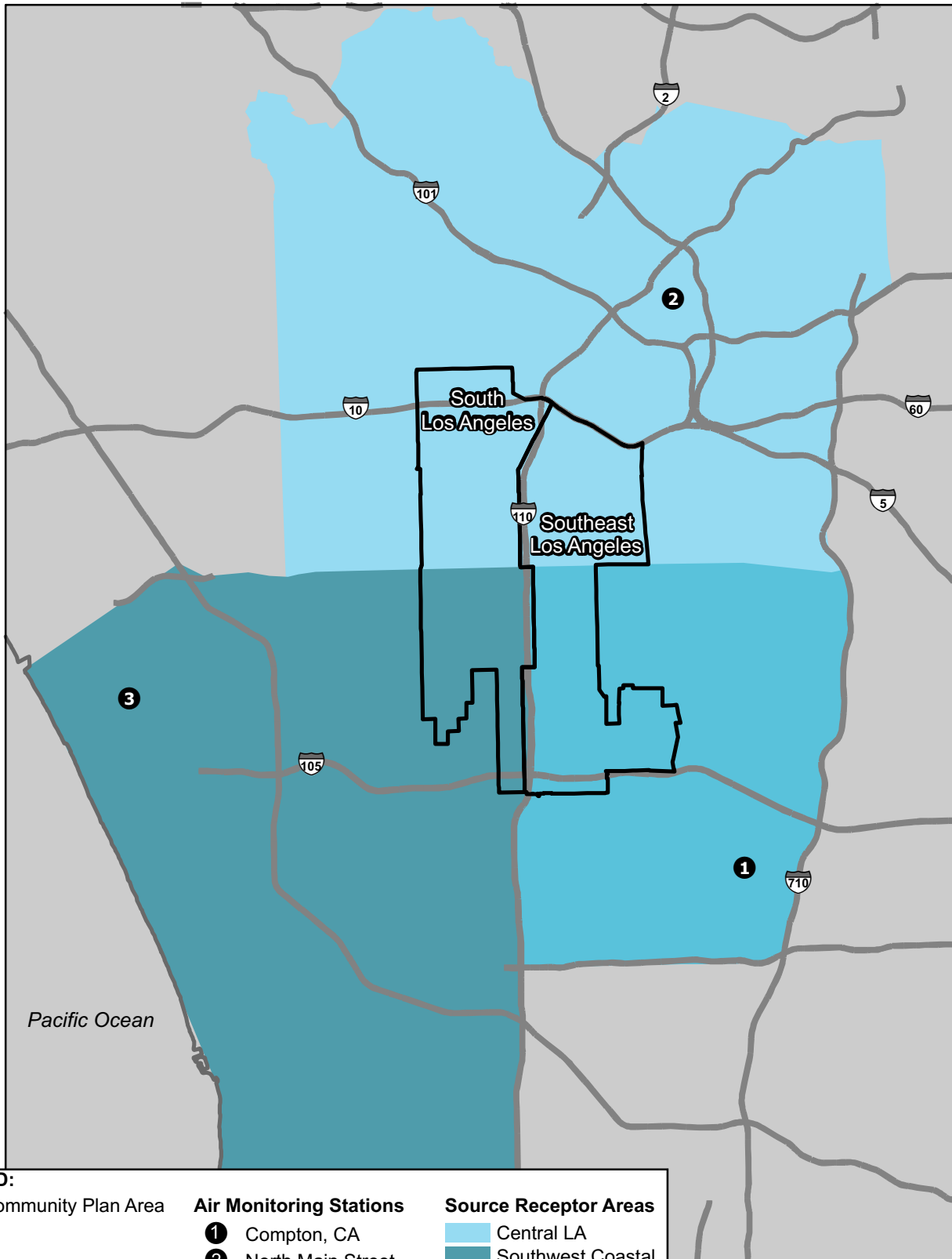
areas. The monitoring stations that collect ambient air quality data in SRAs 1, 3, and 12 are the Los Angeles North Main Street Monitoring Station, the Los Angeles International Airport (LAX) Hastings Monitoring Station, and the Compton Monitoring Station, respectively. The locations of these monitoring stations are depicted on **Figure 4.3-1**. Based on the local topography and climate patterns within and surrounding the CPAs, the most representative ambient air quality data is collected at the Compton Monitoring Station. The Compton Monitoring Station measures ambient concentrations of ozone (O₃), nitrogen dioxide (NO₂), and fine particulate matter (PM_{2.5}). As the Compton Monitoring Station does not measure concentrations of respirable particulate matter (PM₁₀), data from the Los Angeles North Main Street Monitoring Station were supplemented. Historical data from the Compton and the Los Angeles North Main Street Monitoring Stations were used to characterize existing air quality conditions within the CPAs.

Table 4.3-1 shows pollutant levels, the state and federal standards, and the frequency of concentrations recorded above the standards at the Compton and Los Angeles North Main Street Monitoring Stations during the three-year period from 2013 to 2015.⁵ The SCAQMD has suspended monitoring of carbon monoxide (CO) and sulfur dioxide (SO₂) in the Basin due to continued demonstration of attainment status in recent years. Criteria pollutant NO₂ did not exceed the California Ambient Air Quality Standards (CAAQS) or the National Ambient Air Quality Standards (NAAQS) during the 2013 to 2015 period. The 1-hour O₃ state standard for O₃ was not exceeded over the three-year period. The 8-hour O₃ state standard was exceeded once in 2013, four times in 2014, and once in 2015. The state standards for 24-hour PM₁₀ and annual PM_{2.5} were exceeded each year from 2013 to 2015.

TABLE 4.3-1: AMBIENT AIR QUALITY DATA - MAXIMUM CONCENTRATIONS FOR CRITERIA POLLUTANTS				
Pollutant	Pollutant Concentration & Standards	2013	2014	2015
Ozone (O ₃)	Maximum 1-hr Concentration (ppm)	0.090	0.094	0.091
	Days > 0.09 ppm (State 1-hr standard)	0	0	0
	Maximum 8-hr Concentration (ppm)	0.080	0.082	0.073
	Days > 0.070 ppm (State 8-hr standard)	1	4	1
	Days > 0.070 ppm (National 8-hr standard)	1	2	1
Nitrogen Dioxide (NO ₂)	Maximum 1-hr Concentration (ppm)	0.070	0.068	0.074
	Days > 0.18 ppm (State 1-hr standard)	0	0	0
	Days > 0.100 ppm (National 1-hr standard)	0	0	0
Respirable Particulate Matter (PM ₁₀)	Maximum 24-hr Concentration (µg/m ³)	74.5	86.8	72.0
	Days > 50 µg/m ³ (State 24-hr standard)	20	38	2
	Days > 150 µg/m ³ (Federal 24-hr standard)	0	0	0
	Annual Concentration (µg/m ³)	35.3	30.6	30.8
	Exceed State Annual Standard (20 µg/m ³)	Yes	Yes	Yes
Fine Particulate Matter (PM _{2.5})	Maximum 24-hr Concentration (µg/m ³)	52.1	35.8	41.3
	Days > 35 µg/m ³ (National 24-hr standard)	1	1	3
	Annual Concentration (µg/m ³)	11.9	--	11.7
	Exceed State Annual Standard (12 µg/m ³)	No	--	No
	Exceed Federal Annual Standard (12.0 µg/m ³)	No	--	No

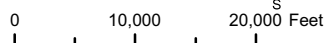
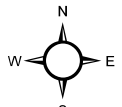
SOURCE: CARB, *Air Quality Data Statistics, Top 4 Summary*, <http://www.arb.ca.gov/adam/topfour/topfour1.php>, accessed on May 24, 2016.

⁵CARB, *Air Quality Data Statistics, Top 4 Summary*, website, <http://www.arb.ca.gov/adam/topfour/topfour1.php>, accessed on May 24, 2016.



LEGEND:

Community Plan Area	Air Monitoring Stations	Source Receptor Areas
	① Compton, CA	Central LA
	② North Main Street	Southwest Coastal
	③ LAX	South Central LA



SOURCE: South Coast Air Quality Management District, TAHA, 2016.

FIGURE 4.3-1
SCAQMD AIR MONITORING STATIONS
AND SOURCE RECEPTOR AREAS

The SCAQMD also operates and maintains an air monitoring network for toxic air contaminants (TACs). The Multiple Air Toxics Exposure Study (MATES-IV) program measured concentrations of more than 30 air pollutants, including both gases and particulates, at 10 fixed sites throughout the Basin.⁶ The monitoring study was accompanied by a computer modeling exercise in which the SCAQMD estimated the risk of cancer from breathing toxic air pollution throughout the region based on emissions and weather data. MATES-IV found that the annual average carcinogenic risk in the Basin declined from 1,194 in a million in 2005 to 418 in a million in 2012. The highest carcinogenic risk of about 1,000 in a million was found near the Ports of Los Angeles and Long Beach. The carcinogenic risk near central Los Angeles is slightly over 700 in a million.

SENSITIVE RECEPTORS

According to the SCAQMD, sensitive receptors include residences, schools, playgrounds, child care centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes.⁷ The CPAs contain numerous sensitive receptors, including residential uses as well as institutional uses like schools, religious facilities, and medical facilities. The predominant current land use in the CPAs is residential. The residential land use patterns within the existing CPAs are largely a result of the historic conditions in the Angelus Vista, Adams-Normandie, University Park, Exposition Park, Vermont Square, Vermont-Slauson, Manchester Square, Vermont Knolls, Gramercy Park, Vermont Vista, Central, Avalon, Watts, and Green Meadows neighborhoods. Low residential (single-family) land uses are predominantly concentrated in the southern portion of the CPAs. Multi-family land uses are located throughout the CPAs. Industrial areas in the South Los Angeles CPA are located at Western and Slauson Ave, and along Washington Blvd. In the Southeast Los Angeles CPA, industrial areas are located around the industrial northern periphery, within the Alameda Corridor, and within the South Los Angeles Industrial Tract (SLAIT) north of Slauson Ave to Florence Ave. Refer to Sections 4.10 Land Use and Planning and 4.14 Public Services and Recreation for a detailed discussion of residential and institutional land uses in the CPAs.

REGULATORY FRAMEWORK

The Federal Clean Air Act (CAA) governs air quality in the United States. In addition to being subject to the requirements of CAA, air quality in California is also governed by more stringent regulations under the California Clean Air Act (CCAA). At the federal level, CAA is administered by the United States Environmental Protection Agency (USEPA). In California, the CCAA is administered by the California Air Resources Board (CARB) at the state level and by the air quality management districts and air pollution control districts at the regional and local levels.

FEDERAL

United States Environmental Protection Agency (USEPA). USEPA regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain types of locomotives. USEPA has jurisdiction over emission sources outside State waters (i.e., beyond the outer continental shelf) and establishes various emission standards, including those for vehicles sold in states other than California. Automobiles sold in California must meet stricter emission standards established by the CARB.

As required by the CAA, the NAAQS have been established for seven major air pollutants: CO, NO₂, O₃, PM_{2.5}, PM₁₀, SO₂, and Pb (lead). The CAA requires USEPA to designate areas as attainment, nonattainment, or maintenance for each criteria pollutant based on whether the NAAQS have been achieved. A maintenance designation means that the region was previously designated as nonattainment and recently achieved

⁶SCAQMD, *MATES-IV Final Report, Multiple Air Toxics Exposure Study in the South Coast Air Basin*, May 2015.

⁷SCAQMD, *CEQA Air Quality Handbook*, 1993.

attainment status through reduction of monitored air pollutant concentrations. The federal ambient air quality standards are summarized in **Table 4.3-2**. The USEPA has classified the Basin as a nonattainment area for O₃, PM_{2.5}, and Pb.

TABLE 4.3-2: STATE AND NATIONAL AMBIENT AIR QUALITY STANDARDS AND ATTAINMENT STATUS FOR THE SOUTH COAST AIR BASIN					
Pollutant	Averaging Period	California		Federal	
		Standards	Attainment Status	Standards	Attainment Status
Ozone (O ₃)	1-hour	0.09 ppm (180 µg/m ³)	Nonattainment	--	--
	8-hour	0.070 ppm (137 µg/m ³)	Pending	0.070 ppm (137 µg/m ³)	Nonattainment
Respirable Particulate Matter (PM ₁₀)	24-hour	50 µg/m ³	Nonattainment	150 µg/m ³	Maintenance
	Annual Arithmetic Mean	20 µg/m ³	Nonattainment	--	--
Fine Particulate Matter (PM _{2.5})	24-hour	--	--	35 µg/m ³	Nonattainment
	Annual Arithmetic Mean	12 µg/m ³	Nonattainment	12.0 µg/m ³	Nonattainment
Carbon Monoxide (CO)	1-hour	20 ppm (23 mg/m ³)	Attainment	35 ppm (40 mg/m ³)	Maintenance
	8-hour	9.0 ppm (10 mg/m ³)	Attainment	9 ppm (10 mg/m ³)	Maintenance
Nitrogen Dioxide (NO ₂)	1-hour	0.18 ppm (339 µg/m ³)	Attainment	100 ppb (188 µg/m ³)	Maintenance
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)	Attainment	53 ppb (100 µg/m ³)	Maintenance
Sulfur Dioxide (SO ₂)	1-hour	0.25 ppm (655 µg/m ³)	Attainment	75 ppb (196 µg/m ³)	Attainment
	24-hour	0.04 ppm (105 µg/m ³)	Attainment	--	--
Lead (Pb)	30-day average	1.5 µg/m ³	Attainment	--	--
	Calendar Quarter	--	--	0.15 µg/m ³	Nonattainment (Los Angeles County Only)

SOURCE: CARB, *Ambient Air Quality Standards, and Attainment Status*, May 5, 2016.

In addition to the criteria pollutants, the air toxics provisions of the CAA require USEPA to develop and enforce regulations to protect the public from exposure to airborne contaminants that are known to be hazardous to human health.⁸ In accordance with Section 112 of the CAA, USEPA establishes National Emission Standards for Hazardous Air Pollutants. There is no significant difference between Hazardous Air Pollutants and TACs as they relate to the proposed project.

The USEPA regulates exhaust emissions from nonroad diesel engines. These include excavators and other construction equipment, farm tractors and other agricultural equipment, heavy forklifts, airport ground service equipment, and utility equipment such as generators, pumps, and compressors. USEPA adopted a comprehensive national program to reduce emissions from nonroad diesel engines by integrating engine and fuel controls as a system to gain the greatest emission reductions. To meet these Tier 4 emission standards, engine manufacturers have produced new engines with advanced emission control technologies similar to those already expected for highway trucks and buses. Exhaust emissions from the Tier 4 engines are decreased by more than 90 percent. Because the emission control devices can be damaged by sulfur, USEPA also adopted requirements for in-use diesel fuel to decrease sulfur levels by more than 99 percent. The resulting Ultra Low Sulfur Diesel Fuel has a maximum sulfur concentration of 15 parts per million.

⁸USEPA, Clean Air Act, Section 112.

STATE

California Air Resources Board (CARB). In addition to being subject to the requirements of CAA, air quality in California is also governed by the CCAA. In California, the CCAA is administered by CARB at the state level and by the air quality management districts and air pollution control districts at the regional and local levels. CARB, which became part of the California Environmental Protection Agency in 1991, is responsible for meeting the state requirements of the CAA, administering the CCAA, and establishing the CAAQS. The CCAA, as amended in 1992, requires all air districts in the State to endeavor to achieve and maintain the CAAQS. As shown in **Table 4.3-2**, above, CAAQS are generally more stringent than the corresponding federal standards and incorporate additional standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles.

CARB regulates mobile air pollution sources, such as motor vehicles. CARB is responsible for setting emission standards for vehicles sold in California and for other emission sources, such as consumer products and certain off-road equipment. CARB oversees the functions of local air pollution control districts and air quality management districts, which, in turn, administer air quality activities at the regional and county levels. The state standards are summarized in **Table 4.3-2**. The CCAA requires CARB to designate areas within California as either attainment or nonattainment for each criteria pollutant based on whether the CAAQS have been achieved. Under the CCAA, areas are designated as nonattainment for a pollutant if air quality data shows that a State standard for the pollutant was violated at least once during the previous three calendar years. Exceedances that are affected by highly irregular or infrequent events are not considered violations of a state standard and are not used as a basis for designating areas as nonattainment. Under the CCAA, the Los Angeles County portion of the Basin is designated as a nonattainment area for O₃, PM_{2.5}, and PM₁₀.⁹

The CARB's *Air Quality and Land Use Handbook: A Community Health Perspective* serves as a guide for considering impacts to sensitive receptors from facilities that emit TAC emissions.¹⁰ The Handbook provides information to protect sensitive receptors (e.g., schools, hospitals, daycare facilities, etc.) from exposure to TAC emissions. The document highlights recent studies that have shown that public exposure to air pollution can be substantially elevated near freeways, distribution centers, rail yards, ports, refineries, chrome platers, dry cleaners that use perchloroethylene, and gasoline dispensing facilities. Studies have also shown that the health risk is reduced with increased distance from the source to the receptor. The Handbook provides recommendations for appropriate distances between sources of air pollution and sensitive land uses.

Toxic Air Contaminants (TACs). The public's exposure to TACs is a significant public health issue in California. The Air Toxics "Hotspots" Information and Assessment Act is a state law requiring facilities to report emissions of TACs to air districts. The program is designed to quantify the amounts of potentially hazardous air pollutants released, the location of the release, the concentrations to which the public is exposed, and the resulting health risks. CARB's statewide comprehensive air toxics program was established in the early 1980s. The Toxic Air Contaminant Identification and Control Act created California's program to reduce exposure to air toxics. Under the Toxic Air Contaminant Identification and Control Act, CARB is required to use certain criteria in the prioritization for the identification and control of air toxics. In selecting substances for review, CARB must consider criteria relating to "the risk of harm to public health, amount or potential amount of emissions, manner of, and exposure to, usage of the substance in California, persistence in the atmosphere, and ambient concentrations in the community" [Health and Safety Code Section 39666(f)].

In addition, California Public Resources Code Section 21151.8 requires assessment of hazardous pollutants within 0.25 miles of new elementary or secondary schools.

⁹CARB, *Area Designation Maps*, <http://www.arb.ca.gov/desig/adm/adm.htm>, accessed on May 25, 2016.

¹⁰CARB, *Air Quality and Land Use Handbook: A Community Health Perspective*, April 2005.

California Building Standards Commission (CBSC). The California Building Standards Code Title 24 is published by the CBSC and it applies to all building occupancies throughout the State of California. CBSC is responsible for overseeing the adoption and publication of the provisions in Title 24 of the CCR. Title 24 applies to all building occupancies and related features and equipment throughout the State, contains requirements to the structural, mechanical, electrical, and plumbing systems, and requires measures for energy conservation, green design, construction and maintenance, fire and life safety, and accessibility. Relevant rules and standard conditions include the following:

- Building Energy Efficiency Standards (Title 24, Part 6)
- California Green Building Code (Title 24, Part 11)

REGIONAL

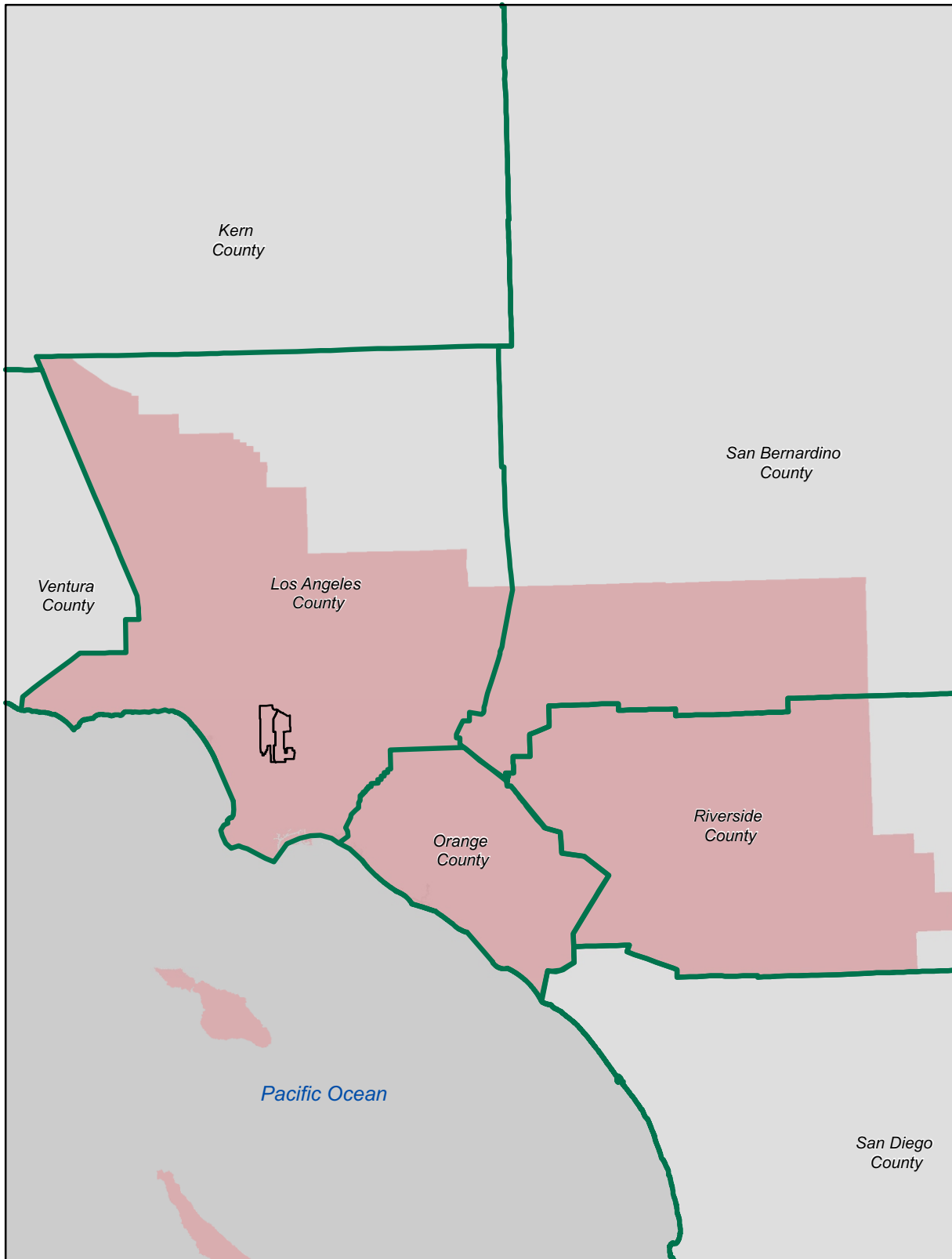
South Coast Air Quality Management District (SCAQMD). The 1977 Lewis Air Quality Management Act created the SCAQMD to coordinate air quality planning efforts throughout Southern California. This Act merged four county air pollution control agencies into one regional district to better address the issue of improving air quality in Southern California. Under the Act, renamed the Lewis-Presley Air Quality Management Act in 1988, the SCAQMD is the agency principally responsible for comprehensive air pollution control in the region. Specifically, the SCAQMD is responsible for monitoring air quality, as well as planning, implementing, and enforcing programs designed to attain and maintain state and federal ambient air quality standards in the district. Programs that were developed include air quality rules and regulations that regulate stationary sources, area sources, point sources, and certain mobile source emissions. For example, the SCAQMD's Rule 403 Fugitive Dust is a control requirement for preventing, mitigating and controlling the release of airborne particulate matter (dust) emissions from earth moving activities undertaken within the Basin. The SCAQMD is also responsible for establishing stationary source permitting requirements and for ensuring that new, modified, or relocated stationary sources do not create net emission increases.

The SCAQMD has jurisdiction over an area of 10,743 square miles, consisting of the South Coast Air Basin and portions of the Salton Sea Air Basin and Mojave Desert Air Basin. The South Coast Air Basin (Basin) covers an area of 6,745 square miles. The Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. The Basin is bounded by the Pacific Ocean to the west; the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east; and the San Diego County line to the south (**Figure 4.3-2**).

The SCAQMD is responsible for preparing the regional Air Quality Management Plan (AQMP). The AQMP is the SCAQMD plan for improving regional air quality. It addresses CAA and CCAA requirements and demonstrates attainment with state and federal ambient air quality standards. The AQMP is prepared by SCAQMD and the Southern California Association of Governments (SCAG). The AQMP provides policies and control measures that reduce emissions to attain both state and federal ambient air quality standards by their applicable deadlines. Environmental review of individual projects within the Basin must demonstrate that daily construction and operational emissions thresholds, as established by the SCAQMD, would not be exceeded. The environmental review must also demonstrate that individual projects would not increase the number or severity of existing air quality violations.

The most recent iteration of the AQMP was published and adopted in December 2012, and continues the regional progression toward clean air and compliance with federal and state air quality standards.¹¹ It includes a comprehensive strategy aimed at controlling pollution from all sources, including stationary sources, on- and off-road mobile sources and area sources.

¹¹SCAQMD, *2012 Air Quality Management Plan*, February 2013.

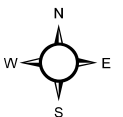


LEGEND:

- Community Plan Areas (CPAs)
- South Coast Air Basin
- County Boundaries

SOURCE: South Coast Air Quality Management District, TAHA, 2016.

0 10 20 Miles



The 2012 AQMP presents demonstration of attainment of the federal 24-hour PM_{2.5} standard by 2014 in the Basin through adoption of all feasible measures while incorporating current scientific information and meteorological air quality models. It also updates the USEPA approved 8-hour O₃ control plan with new commitments for short-term NO_x and VOC reductions. The 2012 AQMP also addresses several state and federal planning requirements.

All projects in the SCAQMD jurisdiction are subject to SCAQMD rules and regulations. All individual projects within the CPAs would comply with the following rules:

- Rule 401, Visible Emissions, prohibits an air discharge that results in a plume that is as dark or darker than what is designated as No. 1 Ringelmann Chart by the United States Bureau of Mines for an aggregate of three minutes in any one hour; and
- Rule 402, Nuisance, prohibits the discharge of “such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of people or 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;” and
- Rule 403, Fugitive Dust, requires that future projects reduces the amount of particulate matter entrained in the ambient air as a result of fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions from any active operation, open storage pile, or disturbed surface area; and
- Rule 1113, Architectural Coatings, limits the volatile organic content (VOC) of architectural coatings used in the SCAQMD. These limits are application-specific and are updated as availability of low-VOC products expands; and
- Rule 1168, Adhesive and Sealant Applications, reduces emissions of VOCs and eliminates emissions of chloroform, ethylene dichloride, methylene chloride, perchloroethylene, and trichloroethylene from the application of adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers, or any other primers.

SCAG 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). While Southern California is a leader in reducing emissions, and ambient levels of air pollutants are improving, the SCAG region continues to have the worst air quality in the nation. SCAG completed the 2016-2040 RTP/SCS, which includes a strong commitment to reduce emissions from transportation sources to comply with SB 375. Goals and policies included in the 2016-2040 RTP/SCS to reduce air pollution consist of adding density in proximity to transit stations, mixed-use development, and encouraging active transportation (i.e., non-motorized transportation such as bicycling). SCAG promotes the following policies and actions related to active transportation to help the region confront congestion and mobility issues and consequently improve air quality:

- Implement Transportation Demand Management (TDM) strategies including integrating bicycling through folding bikes on buses programs, triple racks on buses, and dedicated racks on light and heavy rail vehicles;
- Encourage and support local jurisdictions to develop "Active Transportation Plans" for their jurisdiction if they do not already have one;
- Expand Compass Blueprint program to support member cities in the development of bicycle plans;
- Expand the Toolbox Tuesday's program to encourage local jurisdictions to direct enforcement agencies to focus on bicycling and walking safety to reduce multimodal conflicts;
- Support local advocacy groups and bicycle-related businesses to provide bicycle-safety curricula to the general public;
- Encourage children, including those with disabilities, to walk and bicycle to school;
- Encourage local jurisdictions to adopt and implement the proposed SCAG Regional Bikeway Network; and
- Support local jurisdictions to connect all of the cities within the SCAG region via bicycle facilities.

LOCAL

City of Los Angeles General Plan Air Quality Element. The principal objective of the Air Quality Element of the General Plan is to aid the region in attaining the state and federal ambient air quality standards while continuing economic growth and improvement in the quality of life afforded to City residents.¹² The Air Quality Element also documents how the City will implement local programs contained in the General Plan. Goals, objectives, and policies of the Air Quality Element applicable to the Proposed Plans are listed in **Table 4.3-3**.

TABLE 4.3-3: RELEVANT GENERAL PLAN AIR QUALITY GOALS, OBJECTIVES, AND POLICIES	
Goal/Objective/Policy	Goal/Objective/Policy Description
AIR QUALITY ELEMENT	
Goal 1	Good air quality and mobility in an environment of continued population growth and healthy economic structure.
Objective 1.1	It is the objective of the City of Los Angeles to reduce air pollutants consistent with the Regional Air Quality Management Plan (AQMP), increase traffic mobility, and sustain economic growth.
Objective 1.3	It is the objective of the City of Los Angeles to reduce particulate air pollutants emanating from unpaved areas, parking lots, and construction sites.
Policy 1.3.1	Minimize particulate matter emissions from construction sites.
Goal 3	Efficient management of transportation facilities and system infrastructure using cost effective system management and innovative demand management techniques.
Objective 3.2	It is the objective of the City of Los Angeles to reduce vehicular traffic during peak periods.
Policy 3.2.1	Manage traffic congestion during peak periods.
Objective 3.3	It is the objective of the City of Los Angeles to install Automated Traffic Surveillance and Control Systems, utilize channelization of streets and other capital programs commensurate with the City's portion of regional goals.
Policy 3.3.1	Implement best available system management techniques and transportation management and mobility action plans to improve the efficiency of existing transportation facilities, subject to availability of funding.
Goal 4	Minimal impact of existing land use patterns and future land use development on air quality by addressing the relationship between land use, transportation, and air quality.
Objective 4.1	It is the objective of the City of Los Angeles to include the regional attainment of ambient air quality standards as a primary consideration in land use planning.
Policy 4.1.1	Coordinate with all appropriate regional agencies the implementation of strategies for the integration of land use, transportation, and air quality policies.
Policy 4.1.2	Ensure that project level review and approval of land use development remain at the local level.
Policy 4.2.1	Revise the City's General Plan/Community Plans to achieve a more compact, efficient urban form and to promote more transit-orientated development and mixed-use development.
Objective 4.2	It is the objective of the City of Los Angeles to reduce vehicle trips and vehicle miles traveled associated with land use patterns.
Policy 4.2.2	Improve accessibility for the City's residents to places of employment, shopping centers and other establishments.
Policy 4.2.3	Ensure that new development is compatible with pedestrians, bicycles, transit, and alternative fuel vehicles.
Policy 4.2.4	Require that air quality impacts be a consideration in the review and approval of all discretionary projects.
Policy 4.2.5	Emphasize trip reduction, alternative transit and congestion management measures for discretionary projects.
Objective 4.3	It is the objective of the City of Los Angeles to ensure that land use plans separate major sources of air pollution from sensitive receptors such as schools, hospitals, and parks.
Policy 4.3.1	Revise the City's General Plan/Community Plans to ensure that new or relocated sensitive receptors are located to minimize significant health risks posed by air pollution sources.
Policy 4.3.2	Revise the City's General Plan/Community Plans to ensure that new or relocated major air pollution sources are located to minimize significant health risks posed by air pollution sources.
SOURCE: City of Los Angeles, <i>General Plan Air Quality Element</i> , November 24, 1992.	

¹²City of Los Angeles General Plan, *Air Quality Element*, 1992.

City of Los Angeles Clean Up Green Up (CUGU) Ordinance / Los Angeles Municipal Code (LAMC).

The City of Los Angeles Department of City Planning adopted a Clean Up Green Up Ordinance (Ordinance Number 184,245) on April 13, 2016 related to ventilation system filter efficiency in mechanically ventilated buildings.¹³ CUGU added Sections 95.314.3 and 99.04.504.6 to the LAMC and amended Section 99.05.504.5.3 to implement building standards and requirements to address cumulative health impacts resulting from incompatible land use patterns. Section 99.04.504.6, effective June 4, 2016, mandates that regularly occupied areas in mechanically ventilated buildings within 1,000 feet of a freeway be provided with air filtration media for outside and return air that meet a Minimum Efficiency Report Value (MERV) of 13. The Ordinance requires that these filters be installed prior to occupancy, and recommendations for maintenance with filters of the same value shall be included in the operation and maintenance manual. An exception is provided for existing mechanical equipment. Additionally, Section 99.05.504.3 defines unacceptable locations for obtaining outside or return air for heating or cooling air systems (e.g., a closet, bathroom, toilet room, or kitchen). Section 99.05.504.5.3 also requires MERV 8 filters for mechanically ventilated buildings located further than 1,000 feet from freeways. An exception is provided for existing mechanical equipment and for new ventilation units meeting certain 2013 California Energy Code requirements.

THRESHOLDS OF SIGNIFICANCE

In accordance with Appendix G of the State CEQA Guidelines, implementation of the Proposed Plans would have a significant impact related to air quality if they would:

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

The following quantitative thresholds are considered under the thresholds above, as appropriate. The Thresholds Guide refers to the SCAQMD CEQA Air Quality Handbook for appropriate thresholds.^{14,15}

- The proposed project causes or contributes to an exceedance of the California 1-hour or 8-hour CO standards of 20 or 9.0 ppm, respectively;
- The proposed project would generate significant emissions of TACs that exceed a Maximum Incremental Cancer Risk of 10 in a million, a Cancer Burden of 0.5 excess cancer cases, or a Chronic or Acute Hazard Index of 1.0; and/or
- The proposed project creates an objectionable odor at the nearest sensitive receptor.

The SCAQMD has developed specific CEQA regional and Localized Significance Thresholds (LSTs) to assess air quality impacts associated with individual development projects.¹⁶ The regional emissions thresholds and LSTs were determined based on air quality modeling, and are designed to prevent regional

¹³City of Los Angeles Department of City Planning, *Ordinance Number 184,245 Clean Up Green Up*, Council File No. 15-1026, adopted April 13, 2016.

¹⁴SCAQMD, *Air Quality Significance Thresholds*, March 2015.

¹⁵The Thresholds Guide has not been updated to reflect current SCAQMD significance thresholds. For example, Section B.2. of the Thresholds Guide references an operational significance threshold of 10 tons per year of volatile organic gases or 55 lbs. per day of Reactive Organic Gases. These thresholds have been superseded and are no longer supported by SCAQMD.

¹⁶SCAQMD, *Final Localized Significance Threshold Methodology*, <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds>, accessed May 25, 2016.

and localized concentrations of air pollutants from exceeding the concentrations listed above. LSTs vary depending on the air monitoring area, or SRA, in which a development project is located.¹⁷ The CPAs span portions of three SCAQMD SRAs, as discussed previously: Central Los Angeles County (1), Southwest Coastal Los Angeles County (3), and South Central Los Angeles County (12) as shown on **Figure 4.3-1**. Within the CPAs, the area north of Slauson Avenue is located within the Central Los Angeles County (1) SRA. The area south of Slauson Avenue and west of Interstate 110 is within the Southwest Coastal Los Angeles County (3) SRA. The area south of Slauson Avenue and east of Interstate 110 is within the South Central Los Angeles County (12) SRA. The regional construction significance thresholds for individual projects within the CPAs are shown in **Table 4.3-4**. The construction LST values for emissions from on-site sources are shown in **Table 4.3-5** for each of the three SRAs. The regional operational significance thresholds for individual projects are shown in **Table 4.3-6**. An individual project within the CPAs would result in a significant air quality impact if maximum daily emissions exceeded any of these values.

TABLE 4.3-4: SCAQMD DAILY REGIONAL CONSTRUCTION EMISSIONS THRESHOLDS	
Criteria Pollutant	Mass Daily Threshold (Pounds Per Day)
Volatile Organic Compounds (VOC)	75
Nitrogen Oxides (NO _x)	100
Carbon Monoxide (CO)	550
Sulfur Oxides (SO _x)	150
Particulates (PM ₁₀)	150
Fine Particulates (PM _{2.5})	55
/a/ Localized significance thresholds are based on a 25 meter receptor distance because the Southeast Los Angeles CPA is densely developed.	
/b/ Project sites larger than five acres require AERMOD dispersion modeling with comparison to California Ambient Air Quality Standards.	
SOURCE: South Coast Air Quality Management District, 2016.	

TABLE 4.3-5: SCAQMD DAILY LOCALIZED CONSTRUCTION EMISSIONS THRESHOLDS									
Criteria Pollutant	Localized Significance Threshold (Pounds Per Day) /a,b/								
	Central LA Source Receptor Area (1)			Southwest Coastal LA Source Receptor Area (3)			South Central LA Source Receptor Area (12)		
	1-Acre	2-Acre	5-Acre	1-Acre	2-Acre	5-Acre	1-Acre	2-Acre	5-Acre
Nitrogen Oxides (NO _x)	74	108	161	91	131	197	46	65	98
Carbon Monoxide (CO)	680	1,048	1,861	664	967	1,796	231	346	630
Particulates (PM ₁₀)	5	8	16	5	8	15	4	7	13
Fine Particulates (PM _{2.5})	3	5	8	3	5	8	3	4	7
/a/ Localized significance thresholds are based on a 25 meter receptor distance because the Southeast Los Angeles CPA is densely developed.									
/b/ Project sites larger than five acres require AERMOD dispersion modeling with comparison to California Ambient Air Quality Standards.									
SOURCE: South Coast Air Quality Management District, 2009.									

¹⁷ SCAQMD, *Final Localized Significance Threshold Methodology Appendix C – Mass Rate LST Look-up Tables*, revised October 2009.

TABLE 4.3-6: SCAQMD DAILY REGIONAL OPERATIONAL EMISSIONS THRESHOLDS	
Criteria Pollutant	Mass Daily Threshold (Pounds Per Day)
Volatile Organic Compounds (VOC)	55
Nitrogen Oxides (NO _x)	55
Carbon Monoxide (CO)	550
Sulfur Oxides (SO _x)	150
Particulates (PM ₁₀)	150
Fine Particulates (PM _{2.5})	55
SOURCE: South Coast Air Quality Management District, 2016.	

METHODOLOGY

The terminology and methodology used to evaluate the significance of potential impacts to air quality in the CPAs resulting from the implementation of the Proposed Plans are described below. As air quality is evaluated on a regional basis, the following analysis addresses the CPAs as they pertain to the region.

Air quality impacts resulting from implementation of the Proposed Plans are assessed at the programmatic level. The SCAQMD *CEQA Air Quality Handbook* states that the air quality assessment should be as comprehensive as possible at a programmatic level. In the absence of SCAQMD programmatic thresholds, the EIR scrutinizes broad air quality implications of the Proposed Plans and examines project consistency with the 2012 AQMP. Consistency with this plan would ensure that the Proposed Plans would comply with regional and local air quality goals. The analysis also broadly examines short-term construction emissions, long-term operational emissions, localized pollutant concentrations, TACs, and odors. Common sources of construction emissions include heavy-duty off-road construction equipment exhaust, fugitive dust, and architectural coatings. Sources of operational emissions include the use of consumer products, motor vehicle trips attracted to or generated by a land use, and on-site combustion of natural gas. Typically, when assessing construction impacts at the programmatic level, specific information on construction activity may not be available. As such, a best-effort approach to disclose all reasonably foreseeable impacts based on available information is used consistent with the requirements of CEQA. To this end, the analysis of construction impacts is based on estimated construction scenarios, as described below.

Construction emissions were estimated for equipment exhaust emissions and truck trips for a number of example individual construction projects. Equipment emission factors were obtained from off-road mobile source emission factors provided by SCAQMD and based on CARB data.¹⁸ Equipment was assumed to operate for eight hours per day. Truck emission factors were obtained using EMFAC2014 and trucks were assumed to travel 40 miles per day, with a one-way distance of 20 miles to the disposal site. Fugitive dust and architectural coating emissions are qualitatively discussed because it would be speculative to quantify lot acreage and the size of buildings to be coated. The example scenarios for equipment and trucks included:

- Two (2) pieces of heavy-duty equipment and 25 truck trips per day;
- Four (4) pieces of heavy-duty equipment and 50 truck trips per day;
- Eight (8) pieces of heavy-duty equipment and 100 truck trips per day; and
- Ten (10) pieces of heavy-duty equipment and 150 truck trips per day.

These equipment inventories and truck volumes are representative of a reasonable range of construction activity intensity for individual projects based on previous development in the City of Los Angeles. Maximum daily regional and localized emissions were quantified for these construction scenarios and assessed in the context of the SCAQMD thresholds of significance pertaining to air quality.

¹⁸SCAQMD, *Off-road Mobile Source Emission Factors*, <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/off-road-mobile-source-emission-factors>, accessed on May 25, 2016.

The implementation of the Proposed Plans would generate mobile source emissions and area source emissions associated with increased development. Mobile source emissions were estimated using vehicle miles traveled (VMT) data provided in the traffic and transportation studies prepared for the Proposed Plans and vehicle emission rates from the EMFAC2014 model. The VMT data included speed information, which allowed the analysis to account for changes in traffic flow under the build scenarios. Additional sources of air pollutant emissions associated with land use development include natural gas, electricity, and water use, and VOCs from consumer products and cleaning supplies. These emissions were estimated based on the methodology used in the California Emissions Estimator Model (CalEEMod) and data presented in Section 4.16 Utilities and Service Systems.

IMPACTS

Impact 4.3-1 Would implementation of the Proposed Plans conflict with or obstruct implementation of the applicable air quality plan? This impact is less than significant.

The air quality plans applicable to the Proposed Plans are the 2016-2040 RTP/SCS and the 2012 AQMP.¹⁹ As mentioned in the Regulatory Framework, the primary objectives of the RTP/SCS that are aimed at reducing air pollution consist of adding density in proximity to transit stations, and encouraging mixed-use development and active transportation. A detailed review of the Proposed Plans' consistency with the RTP/SCS is provided in Section 4.10 Land Use and Planning. The AQMP was prepared to accommodate growth, to reduce the high levels of pollutants within areas under the jurisdiction of SCAQMD, to return clean air to the region, and to minimize the impact on the economy.

Criteria for determining consistency with the AQMP are defined in the SCAQMD CEQA Air Quality Handbook. Consistency with the AQMP can be assessed by determining how a project accommodates increases in population or employment. The population and employment assumptions used by the SCAQMD to estimate regional emissions in the AQMP are obtained from SCAG projections for cities and unincorporated areas within the SCAMQD's jurisdiction. As discussed in Chapter 3, the Department of City Planning (DCP) also uses SCAG projections as a benchmark when updating the community plans. The Proposed Plans would not exceed the SCAG 2035 population or employment projections for the City as a whole. Refer to Section 4.13 Population, Housing, and Employment for a detailed discussion of why the DCP projections are consistent with the SCAG projections and therefore the AQMP. Therefore, the Proposed Plans would not exceed the assumptions in the AQMP.

The overall control strategy for the AQMP is designed to meet applicable federal and state requirements, including attainment of ambient air quality standards.²⁰ The focus of the AQMP is to demonstrate attainment of the federal 2006 24-hour PM_{2.5} ambient air quality standard by the 2014 attainment date, as well as an update to further define measures to meet the federal and state 8-hour O₃ standards. The attainment demonstration for the recent 8-hour O₃ standard (75 ppb) will be addressed in the 2016 update to the AQMP. The AQMP provides base year emissions and future baseline emission projections that provide a snapshot of future air quality conditions, including the effects from already adopted rules and regulations. In doing so, the AQMP relies upon the most recent planning assumptions and the best available information including, CARB's mobile source emission factors for the on-road mobile source emissions inventory; CARB's in-use fleet inventory for the off-road mobile source emission inventory; the latest point source inventory; updated area source inventories; and SCAG's forecast growth assumptions based on the RTP/SCS.

The Proposed Plans would incentivize new development near transit, while respecting surrounding residential communities. This objective is consistent with the RTP/SCS and the AQMP, as well as the City's adopted General Plan Framework Element. The Proposed Plans focus on mobility, urban design, public

¹⁹The 2012 AQMP relied upon growth projections presented in the superseded 2012-2035 RTP.

²⁰SCAQMD, *2012 Air Quality Management Plan*, February 2013.

safety, and healthy, sustainable communities. A vision of concentrated, mixed-use development adjacent to transit corridors is promoted in order to conserve resources, protect existing residential neighborhoods, and improve air quality by reducing the use of cars. The Proposed Plans would establish transit-oriented development (TOD) plans in areas located adjacent to transit. These TODs would have increased capacity and development potential in order to create vibrant and pedestrian-friendly transit neighborhoods that provide a mix of uses, including jobs, housing, and retail. The Proposed Plans would encourage transit use and the use of non-motorized transportation, such as bicycling and walking. This would protect the environment and health of residents by improving air quality and encouraging active transportation. TODs are defined as being within an easy walk of transit stops, comprising a wide mix of uses, and being designed for pedestrians and bicyclists while still accommodating cars. Therefore, impacts related to conflicting with or obstructing implementation of the applicable air quality plans under the Proposed Plans would be *less than significant*.

Mitigation Measures

No mitigation measures are required.

Level of Significance of Impacts after Mitigation

Less than significant without mitigation.

Impact 4.3-2 Would implementation of the Proposed Plans violate an air quality standard or contribute substantially to an existing or projected air quality violation? This impact is significant and unavoidable for construction-related emissions and less than significant for operational emissions.

Construction Emissions

Construction activity has the potential to create air quality impacts through the use of heavy-duty construction equipment and through vehicle trips generated by construction workers traveling to and from the project site. Fugitive dust emissions would primarily result from demolition and site preparation (e.g., grading) activities. NO_x emissions would primarily result from the use of construction equipment. During the finishing phase, paving operations and the application of architectural coatings (e.g., paints) and other building materials would release VOC. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation and, for dust, the prevailing weather conditions.

As mentioned in the Regulatory Framework section, SCAQMD's Rule 403 Fugitive Dust is a control requirement for preventing, mitigating and controlling the release of airborne particulate matter (dust) emissions from earth moving activities. It is mandatory for all construction projects in the Basin to comply with Rule 403 or face violations that would incur fines. Specific Rule 403 control requirements include, but are not limited to, applying water in sufficient quantities to prevent the generation of visible dust plumes, applying soil binders to uncovered areas, reestablishing ground cover as quickly as possible, utilizing a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the project site, and maintaining effective cover over exposed areas. Compliance with Rule 403 would reduce PM_{2.5} and PM₁₀ emissions associated with construction activities by approximately 61 percent.²¹ New construction is subject to VOC emission limits for architectural coatings, adhesives and sealants in the City's 2014 Los Angeles Green Building Code. In addition, SCAQMD Rules 1113 and 1168 establish VOC limits to control emissions from the application of architectural coatings, adhesives, and sealants.

²¹SCAQMD, *Overview – Fugitive Dust Mitigation Measure Tables*, April 2007.

Table 4.3-7 shows the estimated maximum daily construction emissions associated with four sample construction activity scenarios that include different equipment use and truck trips. These scenarios are representative of reasonable construction activity intensities for future development projects within the Proposed Plans. Projects of greater scale will require more equipment and hauling of demolished or displaced material, which would result in higher emissions on a daily basis. The SCAQMD air quality thresholds of significance were established for mass daily emissions, and **Table 4.3-7** compares the emissions from these hypothetical construction scenarios to the applicable SCAQMD regional thresholds of significance. Results of the emissions modeling demonstrate that daily emissions of NO_x from heavy-duty diesel equipment and trucks during construction activities could exceed the SCAQMD regional thresholds under reasonably expected circumstances for large projects. In addition, although the table shows that VOC resulting from the operation of construction equipment would not exceed the SCAQMD regional threshold of significance, it is possible that future development projects could generate unmitigated emissions that would exceed the regional threshold for VOC due to the application of architectural coatings. Therefore, without mitigation, implementation of the Proposed Plans would result in a *significant impact* related to regional construction emissions.

TABLE 4.3-7: ESTIMATED AVERAGE DAILY CONSTRUCTION EMISSIONS						
Example Scenarios - Daily Activity /a/	Pounds Per Day					
	VOC	NO_x	CO	SO_x	PM₁₀	PM_{2.5}
2 Heavy-Duty Equipment, 25 Truck Trips	3	28	11	<1	1	1
4 Heavy-Duty Equipment, 50 Truck Trips	5	55	23	<1	2	1
8 Heavy-Duty Equipment, 100 Truck Trips	10	110	46	<1	3	3
10 Heavy-Duty Equipment, 150 Truck Trips	12	149	58	<1	4	4
Regional Significance Threshold	75	100	550	150	55	150

/a/ Equipment exhaust was estimated using OFFROAD and 8 hour per day of operation. Truck emissions were estimated using EMFAC and a trip length of 20 miles.
SOURCE: TAHA, 2016.

The significant construction emissions identified above could result in degradation of air quality and adverse health effects to sensitive receptors. For example, high concentrations of NO₂, which has been assessed as NO_x, can cause breathing difficulties.²² Health effects of VOCs may include eye, nose, throat irritation, headaches, loss of coordination, nausea, damage to liver, kidney, and central nervous system.

In addition to regional thresholds, the SCAQMD has developed specific CEQA LSTs to assess construction and operational air quality impacts associated with individual development projects. The LST values are specific to the SRA in which the individual project is located and based on proximity to the nearest sensitive receptor(s). A localized construction analysis would be speculative given the lack of a construction location and construction activities under the Proposed Plans. However, it is reasonable to assume that some individual projects within the CPAs would involve construction activity adjacent to sensitive receptors (e.g., residences and schools). As a conservative exercise, maximum daily emissions from on-site sources during construction activities were quantified and compared to the lowest applicable LST values for individual projects within the CPAs. Under certain circumstances, unmitigated equipment emissions combined with fugitive dust emissions associated with the construction of future development occurring under the Proposed Plans could potentially exceed the LSTs for NO_x, PM_{2.5}, and PM₁₀ (**Table 4.3-8**). Fugitive dust emissions would be reduced by compliance with SCAQMD Rule 403 for activities requiring earthwork and material movement, such as demolition, grading, and excavation. Nonetheless, without mitigation, implementation of the Proposed Plans could result in a *significant impact* related to localized construction emissions.

²²USEPA, *Six Common Pollutants – Carbon Monoxide*, website, <https://www3.epa.gov/airquality/nitrogenoxides/>, accessed on May 25, 2016.

TABLE 4.3-8: ESTIMATED MAXIMUM DAILY ON-SITE CONSTRUCTION EMISSIONS				
Example Scenarios - Daily Activity /a/	Pounds Per Day			
	NO _x	CO	PM ₁₀	PM _{2.5}
2 Heavy-Duty Equipment	17	10	1	1
4 Heavy-Duty Equipment	34	21	1	1
8 Heavy-Duty Equipment	68	42	3	3
10 Heavy-Duty Equipment	86	52	>4	>3
Minimum LST Value – South & Southeast	43	231	4	3
/a/ Equipment exhaust was estimated using OFFROAD and 8 hour per day of operation. Truck emissions were estimated using EMFAC and a trip length of 20 miles. SOURCE: TAHA, 2016.				

Operational Emissions

Under the Proposed Plans, long-term emissions would be generated by mobile sources and area sources, such as natural gas combustion. **Table 4.3-9** shows regional emissions comparisons between existing conditions and the Proposed Plans. Existing conditions are the baseline for the air quality analysis. When compared to existing conditions, the Proposed Plans would not generate emissions that exceed the SCAQMD regional significance thresholds.

TABLE 4.3-9: ESTIMATED OPERATIONAL EMISSIONS						
Scenario	Pounds per Day					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
EXISTING CONDITIONS						
<i>South Los Angeles CPA</i>						
Mobile Sources	445	775	9,235	15	138	65
Area Sources	2,780	53	191	3	36	36
<i>Total</i>	3,225	828	9,426	18	174	101
<i>Southeast Los Angeles CPA</i>						
Mobile Sources	436	911	10,508	16	170	78
Area Sources	2,933	63	226	3	43	43
<i>Total</i>	3,369	974	10,734	19	213	121
PROPOSED PLANS (2035)						
<i>South Los Angeles CPA</i>						
Mobile Sources	29	76	1,273	8	125	52
Area Sources	3,119	55	198	3	38	38
<i>Total</i>	3,148	131	1,471	11	163	90
Change from Existing/a/	(-77)	(-697)	(-7,955)	(-7)	(-11)	(-11)
<i>Southeast Los Angeles CPA</i>						
Mobile Sources	27	88	1,490	8	158	65
Area Sources	3,295	67	238	4	45	45
<i>Total</i>	3,322	155	1,728	12	203	110
Change from Existing/a/	(-47)	(-819)	(-9,006)	(-7)	(-10)	(-11)
REGIONAL SIGNIFICANCE THRESHOLD						
Exceed Threshold?	No	No	No	No	No	No
/a/ Net emissions refer to the difference between Proposed Plan emissions and emissions in existing conditions; Negative values expressed in parentheses. SOURCE: TAHA, 2016.						

Implementation of the Proposed Plans would increase daily VMT during the peak hour in the South Los Angeles CPA from 1,192,727 in existing conditions to 1,205,169 in 2035 as a result of reasonably expected population growth. Vehicles hours traveled in the South Los Angeles CPA during the peak hour are expected to increase from 62,719 under existing conditions to 68,335 in 2035 with implementation of the

Proposed Plans. Implementation of the Proposed Plans would increase daily VMT during the peak hour in the Southeast Los Angeles CPA from 1,344,482 under existing conditions to 1,362,226 in 2035. Vehicle hours traveled in the Southeast Los Angeles CPA during the peak hour are expected to increase from 64,075 under existing conditions to 67,963 in 2035. However, as shown in **Table 4.3-9**, future daily mobile emissions under implementation of the Proposed Plans are generally expected to decrease from existing emissions. This is largely a result of improvements in vehicular engine efficiency technologies and fuel pollutant concentrations that are projected to occur between existing conditions and 2035.²³ Historically, mobile source-related CO concentrations at high-volume (e.g. congested intersections) have health concerns according to the USEPA and SCAQMD. According to the *2004 Revision to the California State Implementation Plan for Carbon Monoxide*, requirements for cleaner vehicles, equipment, and fuels have cut peak CO levels in half since 1980 despite growth.

A Federal Attainment Plan for Carbon Monoxide (CO Plan) was approved by the District Governing Board on November 12, 1992 and submitted to the USEPA.²⁴ The CO Plan was designed to demonstrate the attainment of the NAAQS by 2000. In 2001, the Basin met both the federal and state 8-hour CO standards for the first time at all monitoring stations. CO attainment was also demonstrated in the 2003 AQMP. The busiest intersection evaluated was that at Wilshire Boulevard and Veteran Avenue (located outside the CPAs), which has a daily traffic volume of approximately 100,000 vehicles per day. The 2003 1-hour concentration for this intersection was 4.6 ppm, which indicates that the most stringent 1-hour CO standard (20.0 ppm) would likely not be exceeded until the daily traffic at the intersection exceeded more than 400,000 vehicles per day.²⁵ The CPAs do not include intersections that exceed 10,000 vehicles per hour.^{26,27} There is no potential for the Proposed Plans to generate significant localized CO concentrations at intersections within the CPAs. Furthermore, the Proposed Plans would not violate an air quality standard or contribute substantially to an existing or projected air quality violation. Therefore, impacts related to regional operational emissions under the Proposed Plans would be *less than significant*.

Mitigation Measures

AQ1 Any approval of a project located within a CPIO Subarea (except for Residential Subareas M, N, and O) shall ensure that all contractors include the following best management practices in contract specifications:

- Contractors shall enforce the idling limit of five minutes as set forth in the California Code of Regulations.
- Use diesel-fueled construction equipment to be retrofitted with after treatment products (e.g. engine catalysts) to the extent they are readily available and feasible.
- Use heavy duty diesel-fueled equipment that uses low NO_x diesel fuel to the extent it is readily available and feasible.
- Use construction equipment that uses low polluting fuels (i.e. compressed natural gas, liquid petroleum gas, and unleaded gasoline) to the extent available and feasible.
- All off-road diesel-powered construction equipment greater than 50 horsepower shall meet the Tier 4 emission standards, where available. In addition, all construction equipment shall be outfitted with BACT devices certified by California Air Resources Board (CARB). Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.
- Construction contractors shall use electricity from power poles rather than temporary gasoline or diesel power generators, as feasible, or solar where available.

²³CARB, EMFAC2014.

²⁴SCAQMD, *Federal Attainment Plan for Carbon Monoxide*, 1992.

²⁵City of Los Angeles, *7500 Sunset Boulevard Project Draft Environmental Report*, July 2016.

²⁶Iteris, Inc., *South Los Angeles Community Plan Transportation Improvement and Mitigation Programs*, 2016.

²⁷Iteris, Inc., *Southeast Los Angeles Community Plan Transportation Improvement and Mitigation Programs*, 2016.

- Use building materials, paints, sealants, mechanical equipment, and other materials that yield low air pollutants and are nontoxic.
- Construction contractors shall utilize super-compliant or pre-fabricated architectural coatings as defined by the South Coast Air Quality Management District (VOC standard of less than ten grams per liter).
- Construction contractors shall use pre-painted construction materials, as feasible.
- Construction contractors shall provide temporary traffic controls such as a flag person, during all phases of construction to maintain smooth traffic flow.
- Construction contractors shall provide dedicated turn lanes for movement of construction trucks and equipment on- and off-site, as feasible.
- Construction contractors shall reroute construction trucks away from congested streets or sensitive receptor areas, as feasible.
- Construction contractors shall appoint a construction relations officer to act as a community liaison concerning on-site construction activity including resolution of issues related to PM₁₀ generation.

Level of Significance of Impacts after Mitigation

Impacts related to operational emissions were determined to be *less than significant* without mitigation. Mitigation Measure **AQ1** would reduce regional and local emissions generated by various construction activities, including equipment operation, truck trips, and painting. A reduction in emissions below the SCAQMD significance thresholds cannot be demonstrated in the absence of specific project details to assess. It is reasonable to assume that a construction project within the project area could generate emissions that would exceed the significance thresholds despite Mitigation Measure **AQ1**. Therefore, the Proposed Plans are considered to result in a *significant and unavoidable* regional and localized construction impact related to violating an air quality standard and/or contributing substantially to an existing or projected air quality violation.

Impact 4.3-3 **Would implementation of the Proposed Plans result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? This impact is significant and unavoidable.**

As shown in **Table 4.3-2**, the Basin is currently designated nonattainment for multiple criteria pollutants. Emissions generated by the Proposed Plans combined with past, present, and reasonably probable future projects could impede attainment efforts or result in locally significant pollutant concentrations. Therefore, the Proposed Plans combined with past, present, and reasonably probable future projects could result in a cumulative impact. The SCAQMD has not established quantitative cumulative thresholds for emissions of criteria pollutants. For both construction and operational activities, if a project exceeds the identified project-level significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions.

As indicated under Impact 4.3-2, the Proposed Plans would not generate regional operational emissions that exceed the SCAQMD significance thresholds. Therefore, the Proposed Plans would not make a cumulatively considerable contribution to regional operational emissions.

As shown above, implementation of the Proposed Plans would result in significant regional and local construction emissions. The Proposed Plans would accommodate the development of hundreds of thousands of square feet of commercial and residential uses. Continued development in the Los Angeles Subregion, in conjunction with developments in other communities in the City of Los Angeles and in the Basin, would increase pollutant emissions and degrade air quality. As the reasonably expected development of the

Proposed Plans could result in a regionally significant and unavoidable impact during construction, it is anticipated that continued development in the Los Angeles Subregion would also result in significant and unavoidable regional impacts. Therefore, without mitigation, implementation of the Proposed Plans would result in a **significant impact** related to a cumulatively considerable net increase of any criteria pollutant for which the project region is designated non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

The potential for cumulative impacts is addressed in more detail in the Cumulative Impacts section below.

Mitigation Measures

Refer to Mitigation Measure **AQ1**, above.

Level of Significance of Impacts after Mitigation

As discussed above, regional and localized construction emissions could exceed the significance thresholds after the implementation of Mitigation Measure **AQ1**. Therefore, the Proposed Plans are considered to result in a **significant and unavoidable** regional and localized construction impact.

Impact 4.3-4 Would implementation of the Proposed Plans expose sensitive receptors to substantial pollutant concentrations? This impact is significant and unavoidable.

The greatest potential for exposure to substantial pollutant concentrations and TAC emissions during construction would be diesel particulate emissions associated with heavy-duty equipment operations and truck traffic. Diesel exhaust causes health effects from both short-term or acute exposures, and long-term chronic exposures. The type and severity of health effects depends upon several factors including the amount of chemical exposure and the duration of exposure. Acute exposure to diesel exhaust may cause irritation to the eyes, nose, throat and lungs, and some neurological effects such as lightheadedness. Acute exposure may also elicit a cough or nausea as well as exacerbate asthma. Chronic exposure to diesel exhaust in experimental animal inhalation studies has shown a range of dose-dependent lung inflammation and cellular changes in the lung and immunological effects. Based upon human and laboratory studies, there is considerable evidence that diesel exhaust is a carcinogen. Human epidemiological studies demonstrate an association between diesel exhaust exposure and increased lung cancer rates in occupational settings.²⁸

Regarding health risks from existing emissions sources, in the California Supreme Court California Building Industry Association vs. Bay Area Air Quality Management District (December 17, 2015), the Court held that “agencies subject to CEQA generally are not required to analyze the impact of existing environmental conditions on a project’s future users or residents. But when a proposed project risks exacerbating those environmental hazards or conditions that already exist, an agency must analyze the potential impact of such hazards on future residents or users. In those specific instances, it is the project’s impact on the environment – and not the environment’s impact on the project – that compels an evaluation of how future residents or users could be affected by exacerbated conditions.” The Proposed Plans would not directly exacerbate an existing condition. Assessing health risks from existing land uses equates to assessing the environment’s impact on the project. The California Supreme Court ruled that this analysis would not be consistent with CEQA. In addition, new industrial sources of emissions are subject to SCAQMD Regulation XIII (New Source Review). Under this rule, hazardous facilities are legally subject to provisions that require public notice and modeling analysis to determine and, if necessary, mitigate, the downwind impact prior to permit issuance. Refer to Section 4.10, Land Use and Planning for additional discussion related to land use compatibility and existing conditions.

It is important to discuss that the City recently added Sections 95.314.3 and 99.04.504.6 to the LAMC and amended Section 99.05.504.5.3 to implement building standards and requirements to address cumulative

²⁸USEPA, *Diesel Particulate Matter* available at <https://www3.epa.gov/region1/eco/airtox/diesel.html>, accessed May 25, 2016.

health impacts resulting from incompatible land use patterns. Section 95.314.3 defines unacceptable locations for obtaining outside or return air for heating or cooling air systems (e.g., a closet, bathroom, toilet room, or kitchen). Section 99.04.504.6 states that, "In mechanically ventilated buildings within 1,000 feet of a freeway, provide regularly occupied areas of the building with air filtration media for outside and return air that provides a MERV of 13. Filters shall be installed prior to occupancy, and recommendations for maintenance with filters of the same value shall be included in the operation and maintenance manual." An exception is provided for existing mechanical equipment. Section 99.05.504.5.3 requires MERV 8 filters for mechanically ventilated buildings located further than 1,000 feet from freeways. An exception is provided for existing mechanical equipment and for new ventilation units meeting certain 2013 California Energy Code requirements. In addition, California Public Resources Code Section 21151.8 requires assessment of hazardous pollutants within 0.25 miles of a new elementary or secondary schools. This legal requirement within the California Public Resources Code protects staff and students of new schools from significant health risks from exposure to TACs.

Because no construction is proposed by the Proposed Plans, the specific location of future construction activity within the CPAs was not known when the air quality analysis was completed. A construction health risk analysis would be speculative given the lack of a construction location and construction activities. However, it is reasonable to assume that some level of construction activity would occur adjacent to sensitive receptors (e.g., residences and schools). It is likely that intense construction projects (e.g., projects with a high volume of haul trucks) would exceed the health risk significance thresholds due to equipment and truck exhaust emissions. In response to the 2015 Health Risk Assessment (HRA) guidance issued by the California Office of Environmental Health Hazard Assessment (OEHHA), the SCAQMD conducted extensive research into the types of construction projects that could potentially pose significant air quality impacts associated with exposure of sensitive receptors to substantial pollutant concentrations as a result of DPM emissions.²⁹ Through exercises in modeling the effects of emissions from construction sites on local air quality, the SCAQMD determined that releasing one pound per day of DPM during six months of construction could result in an exposure to toxic air exceeding the applicable risk threshold of 10 excess cancers per million. The magnitude of construction activity that would generate one pound of DPM per day could be exemplified by the use of an excavator, a generator, a bulldozer, and a loader for 8 hours per day. This is considered a typical equipment inventory for in-fill construction projects, and therefore, without mitigation, implementation of the Proposed Plans would result in a *significant impact* related to substantial pollutant concentrations during construction activities.

Mitigation Measures

Refer to Mitigation Measure **AQ1**, above, related to the reduction of construction emissions.

Level of Significance of Impacts after Mitigation

Mitigation Measure **AQ1** would reduce TAC emissions generated by various construction activities, including equipment operation. For example, Tier 4 engines with horsepower ratings between 175 and 750 generate 90 percent less exhaust emissions, including particulate matter, than Tier 2 or 3 engines.³⁰ A reduction in emissions below the SCAQMD significance thresholds cannot be demonstrated in the absence of specific project details to assess. It is reasonable to assume that a construction project within the CPAs could generate emissions that would exceed the significance thresholds despite Mitigation Measure **AQ1**, resulting in a *significant and unavoidable* impact related to exposure of sensitive receptors to substantial pollution concentrations.

²⁹SCAQMD, *Special Meeting of the SCAQMD Governing Board, Agenda No. 8b Potential Impacts of New OEHHA Risk Guidelines on SCAQMD Programs*, <http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2014/may-specsess-8b.pdf?sfvrsn=4>, accessed on May 25, 2016.

³⁰USEPA, *Nonroad Diesel Engines General Information*, website, <https://www.epa.gov/vehicles-and-engines#info>, accessed on May 25, 2016.

Impact 4.3-5 Would implementation of the Proposed Plans create objectionable odors affecting a substantial number of people? This impact is less than significant.

According to the SCAQMD *CEQA Air Quality Handbook*, land uses and industrial operations that are associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies and fiberglass molding. The Proposed Plans do not designate new industrial areas nor do they incentivize the industrial uses and operations identified above that are associated with odor complaints. As such, the CPAs are not anticipated to be developed with uses that are typically associated with odor complaints. In addition, the proposed CPIO District includes the Compatible Industrial subarea that establishes use restrictions allowing only light industrial uses that are compatible with residential uses and prohibiting noxious uses that would emit odors. This subarea is applied to all parcels with an industrial land use designation that are located adjacent to residentially designated land uses. Therefore, impacts related to operational odors under the Proposed Plans would be *less than significant*.

Mitigation Measures

No mitigation measures are required.

Level of Significance of Impacts after Mitigation

Less than significant without mitigation.

CUMULATIVE IMPACTS

This discussion of cumulative impacts begins in part in Impact 4.3-3 above. Please refer to Impact 4.3-3 for a discussion of cumulative impacts with regard to the CEQA Appendix G Checklist guidelines.

A detailed AQMP consistency analysis has been provided in Impact 4.3-1. As discussed under Impact 4.3-1, the Proposed Plans would be consistent with the 2016-2040 RTP/SCS. Specifically, the Proposed Plans would encourage transit use and the use of non-motorized transportation, such as bicycling and walking. The AQMP was prepared to accommodate growth, to reduce the high levels of pollutants within areas under the jurisdiction of SCAQMD, to return clean air to the region, and to minimize the impact on the economy. Consistency with the AQMP can be assessed by determining how a project accommodates increases in population or employment. The population and employment assumptions used by the SCAQMD to estimate regional emissions in the AQMP are obtained from SCAG projections for cities and unincorporated areas within the SCAQMD's jurisdiction. The Proposed Plans would not exceed the SCAG population or employment projections for the City as a whole. Therefore, implementation of the Proposed Plans would be consistent with the AQMP.

In order to assess cumulative impacts of emissions, the SCAQMD recommends that projects be evaluated to determine whether they would be consistent with AQMP performance standards and project-specific emissions thresholds. In the case of the Proposed Plans, air pollutant emissions would be considered to be cumulatively considerable if the new sources of emissions exceed SCAQMD project-specific emissions thresholds. The cumulative context for consideration of most air quality impacts is the Basin; the context for localized significance thresholds is within 500 meters of the project site per SCAQMD LST guidance.

As shown in **Table 4.3-2**, the Basin is currently designated nonattainment for multiple criteria pollutants. Similarly, the CPAs experience above average levels of TAC concentrations. Emissions generated by the Proposed Plans combined with past, present, and reasonably probable future projects could impede attainment efforts or result in locally significant pollutant concentrations. Therefore, the Proposed Plans combined with past, present, and reasonably probable future projects could result in a cumulative impact. The SCAQMD has not established quantitative cumulative thresholds for emissions of pollutants. For both

construction and operational activities, if a project exceeds the identified project-level significance thresholds, its emissions would be cumulatively considerable resulting in significant adverse air quality impacts to the region's existing air quality conditions.

As discussed in Impacts 4.3-2 and 4.3-4, construction activities could result in significant impacts related to regional and localized emissions, along with TAC concentrations. Because construction activities are of limited duration and in a limited area, it is unlikely that construction being undertaken now would overlap with construction under the Proposed Plans. However, without a specific construction schedule, timing and emission levels cannot be accurately estimated. Therefore, future construction under the Proposed Plans is considered a potentially significant impact at the project level. Implementation of Mitigation Measure **AQ1** would reduce regional and local emissions generated by various construction activities, including equipment operation, truck trips, and painting. A reduction in emissions below the SCAQMD significance thresholds cannot be demonstrated in the absence of specific project details to assess. It is reasonable to assume that a construction project within the project area could generate emissions that would exceed the significance thresholds despite Mitigation Measure **AQ1**. Because the SCAQMD indicates that projects that are significant at a project level must also be determined to be significant at a cumulative level, this would result in a significant and unavoidable cumulative impact related to regional and localized emissions, along with TAC concentrations. Thus, impacts related to regional and localized emissions, along with TAC concentrations would be cumulatively considerable.

As shown above, implementation of the Proposed Plans would result in significant regional and local construction emissions. The Proposed Plans would accommodate the development of hundreds of thousands of square feet of commercial and residential uses. Continued development in the Los Angeles Subregion, in conjunction with developments in other communities in the City of Los Angeles and in the Basin, will increase pollutant emissions and degrade air quality. As the Proposed Plans could result in a regionally significant and unavoidable impact during construction, it is anticipated that continued development in the Los Angeles Subregion would also result in significant and unavoidable regional impacts. Therefore, without mitigation, implementation of the Proposed Plans would result in a significant impact related to a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

As indicated under Impact 4.2-3, the Proposed Plans would not generate regional operational emissions or localized CO concentrations that exceed the SCAQMD significance thresholds. In addition, The Proposed Plans would not directly exacerbate existing conditions related to TAC concentrations, and new industrial sources of emissions are subject to SCAQMD Regulation XIII (New Source Review). Under this rule, hazardous facilities are legally subject to provisions that require public notice and modeling analysis to determine and, if necessary, mitigate, the downwind impact prior to permit issuance. Permit issuance for these hazardous facilities under the Proposed Plans would be handled on a case-by-case basis, and the emissions modeling analysis would be project-specific. Each individual future project would be responsible for demonstrating compliance with the air quality thresholds of significance devised by the SCAQMD that are designed to protect public health and prevent exposures to substantial pollutant concentrations. Therefore, impacts related to operational emissions would not be cumulatively considerable.

The CPAs are not anticipated to be developed with uses that are typically associated with odor complaints, including new industrial areas as a result of the Proposed Plans. While construction activity can emit odors, construction activity has not been identified as a source of odor complaints. Accordingly, future development occurring under the Proposed Plans would not cause a construction-related odor nuisance. As discussed in Impact 4.3-5, the CPAs are not anticipated to be developed with land uses that are typically associated with odor complaints, including new industrial areas. On-site trash receptacles would have the potential to create adverse odors. Trash receptacles would be located and maintained in a manner that promotes odor control. Therefore, impacts related to objectionable odors would not be cumulatively considerable.

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