Section 3.2
Air Quality

3.2.1 Introduction

This section describes the regulatory and environmental setting for air quality, discusses local and regional air quality impacts that would result from the *2020 LA River Master Plan* and its elements, determines if there are significant impacts, and provides mitigation measures that would avoid or reduce these impacts to less-than-significant levels, where feasible. The project area (51 miles long and 2 miles wide on each side of the LA River) is the study area for air quality. Please refer to Section 3.7, *Greenhouse Gas Emissions*, for a discussion of greenhouse gas (GHG) emissions.

The analysis in this section includes impact determinations under CEQA for the *2020 LA River Master Plan* that are applicable to all 18 jurisdictions in the study area, including the County and non-County jurisdictions (17 cities). Except for significant and unavoidable impacts, all identified significant environmental effects of the proposed *2020 LA River Master Plan* can be avoided or reduced to a less-than-significant level if the mitigation measures identified in this PEIR are implemented. These mitigation measures will be implemented for subsequent projects that are carried out by the County. Because some later activities under the *2020 LA River Master Plan* would not be carried out by the County, the County cannot enforce or guarantee that the mitigation measures would be incorporated. Therefore, where this PEIR concludes a less-than-significant impact for later activities carried out by the County, the impact would be significant and unavoidable when these activities are not carried out by the County.

3.2.2 Setting

The federal Clean Air Act (CAA) and its subsequent amendments form the basis for the nation's air pollution control effort. The U.S. Environmental Protection Agency (EPA) is responsible for implementing most aspects of the CAA. A key element of the CAA is the National Ambient Air Quality Standards (NAAQS) for criteria pollutants. The CAA delegates enforcement of the NAAQS to the states. In California, the California Air Resources Board (CARB) is responsible for enforcing air pollution regulations and ensuring the NAAQS and California Ambient Air Quality Standards (CAAQS) are met. CARB, in turn, delegates regulatory authority for stationary sources and other air quality management responsibilities to local air agencies. The South Coast Air Quality Management District (SCAQMD) is the local air agency within the project area, which is in the South Coast Air Basin (Basin). The following sections provide more detailed information on federal, State, and local air quality regulations that apply to the Project.

3.2.2.1 Geographic

Description of Relevant Air Pollutants

Air pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and State law. These regulated air pollutants, which are known as *criteria air pollutants*, are categorized as primary and secondary pollutants. Primary air pollutants are those that are emitted directly from sources. Carbon monoxide (CO), volatile organic compounds (VOCs), nitrogen oxides (NO_X), sulfur dioxide (SO_2), and most particulate matter (PM) (PM 10 microns or less in diameter [PM_{10}] and 2.5 microns or less in diameter [$PM_{2.5}$]), lead [Pb], and fugitive dust, are primary air pollutants. Of these, CO, SO_2, PM_{10}, and $PM_{2.5}$ are criteria air pollutants. VOCs and NO_X are criteria pollutant precursors that form secondary pollutants through chemical and photochemical reactions in the atmosphere. NO_X reacts with other chemicals to form PM and ozone (O_3). Ozone and nitrogen dioxide (NO_2) are the principal secondary pollutants and are criteria air pollutants. The following descriptions of each criteria air pollutant and its health effects are based on information provided by SCAQMD (2017).

Ozone (O_3)

Ozone is a photochemical oxidant that is formed when VOC and NO_X (both by-products of the internal combustion engine) react with sunlight.

- **VOCs**. VOCs are compounds made up primarily of hydrogen and carbon atoms (hydrocarbons). Internal combustion associated with motor vehicle usage is the major source of hydrocarbons. Other sources of VOC are emissions associated with the use of paints and solvents, the application of asphalt paving, and the use of household consumer products such as aerosols.
- **NO_X**. The two major forms of NO_X are nitric oxide (NO) and NO_2. NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure. NO_2 is a reddish-brown, irritating gas formed by the combination of NO and oxygen. In addition to serving as an integral participant in ozone formation, NO_X also directly acts as an acute respiratory irritant and increases susceptibility to respiratory pathogens.

Ground-level ozone, the main pollutant in smog, poses a higher risk to those who already suffer from respiratory diseases (e.g., asthma), children, older adults, and people who are active outdoors. Exposure to ozone at certain concentrations can make breathing more difficult, cause shortness of breath and coughing, inflame and damage the airways, aggregate lung diseases, increase the frequency of asthma attacks, and cause chronic obstructive pulmonary disease. Studies show associations between short-term ozone exposure and non-accidental mortality, including deaths from respiratory issues. Studies also suggest long-term exposure to ozone may increase the risk of respiratory-related deaths (EPA 2019). The concentration of ozone at which health effects are observed depends on an individual's sensitivity, level of exertion (i.e., breathing rate), and duration of exposure. Studies show large individual differences in the intensity of symptomatic responses, with one study finding no symptoms in the least responsive individual after a 2-hour exposure to 400 parts per billion of ozone and a 50 percent reduction in forced airway volume in the most

responsive individual. Although the results vary, evidence suggests that sensitive populations (e.g., people who suffer from asthma) may be affected on days when the 8-hour maximum ozone concentration reaches 80 parts per billion (EPA 2016).

In addition to its deleterious human health effects, ozone has been tied to crop damage, typically in the form of stunted growth, leaf discoloration, cell damage, and premature death. Ozone can also act as a corrosive and oxidant, resulting in property damage, such as the degradation of rubber products and other materials.

Carbon Monoxide (CO)

CO, a colorless, odorless, relatively inert gas, is a trace constituent in the unpolluted troposphere produced by natural processes and human activities. In remote areas far from human habitation, CO occurs in the atmosphere at an average background concentration of 0.04 part per million (ppm), primarily as a result of natural processes, such as forest fires and the oxidation of methane. Global atmospheric mixing of CO from urban and industrial sources creates higher background concentrations (up to 0.20 ppm) near urban areas. The major source of CO in urban areas is incomplete combustion of carbon-containing fuels, mainly gasoline.

Individuals with a deficient blood supply to the heart are the most susceptible to the adverse effects of CO exposure. The effects observed include earlier onset of chest pain with exercise and electrocardiograph changes indicative of worsening oxygen supply to the heart. Inhaled CO has no direct toxic effect on the lungs, but exerts its effect on tissues by interfering with oxygen transport by competing with oxygen to combine with hemoglobin present in the blood to form carboxyhemoglobin. Hence, conditions with an increased demand for oxygen supply can be adversely affected by exposure to CO. Individuals most at risk include those with diseases involving heart and blood vessels, fetuses, and people with chronic hypoxemia (oxygen deficiency) as seen in high altitudes. Exposure to CO at high concentrations can also cause fatigue, headaches, confusion, dizziness, and chest pain. Ambient CO has no ecological or environmental effects (CARB 2020a).

Sulfur Dioxide (SO_2)

SO_2 is a colorless gas with a sharp odor. It reacts in air to form sulfuric acid, which contributes to acid precipitation, and sulfates, which are components of PM. Main sources of SO_2 include coal and oil used in power plants and industries. Exposure of a few minutes to low levels of SO_2 can result in airway constriction in some asthmatics, the vast majority of whom are sensitive to the effects of SO_2. In asthmatics, increase in resistance to airflow, as well as reduction in breathing capacity leading to severe breathing difficulties, is observed after acute higher exposure to SO_2. In contrast, healthy individuals do not exhibit similar acute responses, even after exposure to higher concentrations of SO_2.

Particulate Matter (PM_{10} and $PM_{2.5}$)

PM consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. Two forms of particulates are now generally considered: inhalable coarse particles 10 microns or less in diameter, or PM_{10}, and inhalable fine particles 2.5 microns or less in diameter, or $PM_{2.5}$. Particulate discharge into the atmosphere results primarily from

industrial, agricultural, construction, and transportation activities. However, wind on arid landscapes also contributes substantially to local particulate loading.

Particulate pollution can be transported over long distances and may adversely affect humans, especially people who are naturally sensitive or susceptible to breathing problems. Numerous studies have linked PM exposure to premature death in people with preexisting heart or lung disease. Other symptoms of exposure may include nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms (SCAQMD 2017). Depending on its composition, both PM_{10} and $PM_{2.5}$ can also affect water quality and acidity, deplete soil nutrients, damage sensitive forests and crops, affect ecosystem diversity, and contribute to acid rain (EPA 2018a).

Lead (Pb)

Pb in the atmosphere is present as a mixture of a number of lead compounds. Leaded gasoline and lead smelters have been the main sources of Pb emitted into the air, but due to the phasing out of leaded gasoline, there has been a dramatic reduction in atmospheric Pb over the past three decades. Exposure to low levels of Pb can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. Fetuses, infants, and children are more sensitive than others to the adverse effects of Pb exposure. In adults, increased Pb levels are associated with increased blood pressure. Pb poisoning can also cause anemia, lethargy, seizures, and death; there is no evidence to suggest that Pb has direct effects on the respiratory system.

Toxic Air Contaminants

Toxic air contaminants (TAC) are generally defined as those contaminants that are known or suspected to cause serious health problems, but do not have a corresponding ambient air quality standard. TACs are also defined as air pollutants that may increase a person's risk of developing cancer and/or other serious health effects not automatically create a health hazard. TACs are emitted by a variety of industrial processes, including petroleum refining, electric utility and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust; TACs may exist as PM_{10} and $PM_{2.5}$ or as vapors (gases). To date, CARB has identified 21 TACs and adopted EPA's list of hazardous air pollutants as TACs. In August 1998, CARB identified diesel particulate matter (DPM) emissions as a TAC (CARB 1998). In September 2000, CARB approved a comprehensive diesel risk reduction plan to reduce emissions from both new and existing diesel-fueled engines and vehicles. The goal of the plan was to reduce DPM emissions and the associated health risk by 75 percent by 2010 and by 85 percent by 2020 (CARB 2000).

TACs include metals, other particles, gases absorbed by particles, and certain vapors from fuels and other sources. According to the 2013 *California Almanac of Emissions and Air Quality,* the majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being DPM, which differs from other TACs in that it is a complex mixture of hundreds of substances, rather than a single substance (CARB 2013). DPM is composed of two phases, gas and particle, and both phases contribute to health risks. The gas phase is composed of many of the urban hazardous air pollutants, such as acetaldehyde, acrolein, benzene, 1,3-butadiene, formaldehyde, and polycyclic aromatic

hydrocarbons. The particle phase is also composed of many different types of particles by size or composition. Fine and ultra-fine PM is of the greatest health concern and may be composed of elemental carbon with adsorbed compounds, such as organic compounds, SO_2, nitrates, metals, and other trace elements. DPM is emitted from a broad range of diesel engines: the on-road diesel engines of trucks, buses, and cars and the off-road diesel engines that include locomotives, marine vessels, and heavy-duty equipment. Although DPM is emitted by diesel-fueled internal combustion engines, the composition of the emissions varies depending on engine type, operating conditions, fuel composition, lubricating oil, and presence of an emission control system.

Acute exposure to diesel exhaust may cause irritation to the eyes, nose, throat, and lungs, and has some neurological effects, such as lightheadedness. Acute exposure may also elicit a cough or nausea, as well as exacerbate asthma. Chronic exposure to DPM 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 DPM is a likely carcinogen. Human epidemiological studies have demonstrated an association between DPM exposure and increased lung cancer rates in occupational settings.

Regional Setting

The project area is within the Basin, an area covering approximately 6,745 square miles and bounded by the Pacific Ocean to the west and south and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the San Gorgonio Pass area in Riverside County. The terrain and geographical location determine the distinctive climate of the Basin, which is a coastal plain with connecting broad valleys and low hills.

The Southern California region lies in the semi-permanent high-pressure zone of the eastern Pacific. As a result, the climate is mild and tempered by cool sea breezes. The usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. The extent and severity of the air pollution problem in the Basin is a function of the area's natural physical characteristics (i.e., weather and topography) as well as human-made influences (i.e., development patterns and lifestyle). Factors such as wind, sunlight, temperature, humidity, rainfall, and topography all affect the accumulation and dispersion of pollutants throughout the Basin, making it an area of high pollution potential.

The greatest air pollution impacts in the Basin occur from June through September and are generally attributed to the large amount of pollutant emissions, light winds, and shallow vertical atmospheric mixing. These conditions frequently reduce pollutant dispersion, thereby causing elevated air pollution levels. Pollutant concentrations in the Basin vary with location, season, and time of day; ozone concentrations, for example, tend to be lower along the coast, higher in the near-inland valleys, and lower in the far-inland areas of the Basin and adjacent desert.

SCAQMD completed ambient air monitoring, and its evaluation studies in the Basin are compiled in the regularly updated Multiple Air Toxics Exposure Study (MATES), the most

recent of which is the MATES IV study; the final draft was released to the public in May 2015. The MATES IV study estimated that the average carcinogenic risk throughout the Basin attributed to TACs is approximately 1,023 in 1 million. Approximately 80 percent of all risk is attributed to DPM emissions, but the MATES IV study showed a 70 percent reduction in DPM compared to MATES III (SCAQMD 2015a). MATES V is currently being conducted and will include a fixed site monitoring program with 10 stations, an updated emissions inventory of TACs, and a modeling effort to characterize cancer risk across the Basin.

Local Climate

Data from three climate monitoring stations, Long Beach (COOP 045082), Los Angeles Downtown (COOP 045115), and Woodland Hills Pierce College (COOP 041484), across the project area were used to characterize the Project's varied climate conditions. These three climate monitoring stations are at the southern (Frame 1), central (Frame 5), and northern (Frame 9) portions of the project area, respectively.

At the Long Beach climate monitoring station (Frame 1) between 1906 and 1969, the average summer (August) high and low temperatures were 80.7 degrees Fahrenheit (°F) and 62.1°F, respectively. The average winter (January) high and low temperatures were 65.2°F and 44.8°F, respectively. Rainfall varies widely from year to year, with an annual average of 12.72 inches with an average of 35 days with measurable rainfall (greater than or equal to 0.01 inch) (WRCC 2020a).

At the Los Angeles Downtown University of Southern California campus (Frame 5) between 1877 and 2016, the average summer (August) high and low temperatures were 83.1°F and 63.8°F, respectively. The average winter (January) high and low temperatures were 66.4°F and 48.3°F, respectively. Rainfall varies widely from year to year with an annual average of 14.77 inches with an average of 36 days with measurable rainfall (greater than or equal to 0.01 inch) (WRCC 2020b).

At Woodland Hills Pierce College (Frame 9) between 1949 and 2011, the average summer (August) high and low temperatures were 95.4°F and 57.3°F, respectively. The average winter (January) high and low temperatures were 67.9°F and 39.3°F, respectively. Rainfall varies widely from year to year with an annual average of 16.86 inches with an average of 34 days with measurable rainfall (greater than or equal to 0.01 inch) (WRCC 2020c).

The closest wind monitoring station, approximately 2 miles east of the project area (Frame 2), is the Long Beach Airport wind monitoring station. Wind patterns in the project vicinity arise primarily from the northwest with seasonal and diurnal variations resulting during Santa Ana wind events and winter storms. Average wind speeds at the Long Beach Airport average 6.3 miles per hour (WRCC 2020d).

Local Air Quality

There are several monitoring stations within the project area that monitor air quality within the County. As the project area spans across nine frames, monitoring data from three monitoring stations across the project area over the last 3 years were reviewed. These three monitoring stations are at the southern (Frame 1), central (Frame 5), and northern (Frame 9) portions of the project area. Table 3.2-1 presents monitoring data from Long Beach

(Webster Street, Frame 1), Los Angeles (1630 Main Street, Frame 5), and Reseda (18330 Gault Street, Frame 9). $PM_{2.5}$ monitoring data were unavailable at the Long Beach monitoring location; therefore, monitoring data from the next closest monitoring station at 3648 North Long Beach Boulevard (Frame 2) were reviewed and presented. PM_{10} monitoring data were unavailable at the Reseda monitoring location and there was no alternative monitoring station in an adjacent frame. The monitoring station nearest Frame 9 that collects PM_{10} data is the Los Angeles station (Frame 5).

Table 3.2-1. Ambient Air Quality Data in Los Angeles County (2016–2018)

Pollutant Standards	Long Beach – Webster Street (Frame 1) and North Long Beach Boulevard (Frame 2)			Los Angeles – North Main Street (Frame 5)			Reseda – Gault Street (Frame 9)[h]		
	2016	2017	2018	2016	2017	2018	2016	2017	2018
Ozone (O_3)									
Maximum 1-hour concentration (ppm)	0.079	0.082	0.074	0.103	0.116	0.098	0.122	0.140	0.120
Maximum 8-hour concentration (ppm)	0.059	0.068	0.063	0.078	0.086	0.074	0.098	0.114	0.101
Number of days standard exceeded[a]									
CAAQS 1-hour (>0.09 ppm)	0	0	0	2	6	2	9	26	14
CAAQS 8-hour (>0.070 ppm)	0	0	0	4	16	4	23	67	50
NAAQS 8-hour (>0.070 ppm)	0	0	0	4	14	4	23	64	49
Carbon Monoxide (CO)									
Maximum 8-hour concentration (ppm)	2.2	2.6	2.1	1.3	1.8	1.6	1.9	2.5	2.1
Maximum 1-hour concentration (ppm)	3.3	3.9	4.7	1.8	2.0	1.9	2.4	3.0	3.4
Number of days standard exceeded[a]									
NAAQS 8-hour (≥9 ppm)	0	0	0	0	0	0	0	0	0
CAAQS 8-hour (≥9.0 ppm)	0	0	0	0	0	0	0	0	0
NAAQS 1-hour (≥35 ppm)	0	0	0	0	0	0	0	0	0
CAAQS 1-hour (≥20 ppm)	0	0	0	0	0	0	0	0	0
Nitrogen Dioxide (NO_2)									
State maximum 1-hour concentration (ppb)	75	89	85	64	80	70	55	62	57
State second-highest 1-hour concentration (ppb)	73	88	82	63	80	69	54	62	55
Annual average concentration (ppb)	18	18	17	20	20	18	13	13	12
Number of days standard exceeded[a]									
CAAQS 1-hour (180 ppb)	0	0	0	0	0	0	0	0	0
Particulate Matter (PM_{10})									
National[b] maximum 24-hour concentration (µg/m^3)	75.0	79.0	84.0	64.0	64.6	68.2	-	-	-
National[b] second-highest 24-hour concentration (µg/m^3)	58.0	73.0	67.0	57.0	47.8	66.1	-	-	-

Pollutant Standards	Long Beach – Webster Street (Frame 1) and North Long Beach Boulevard (Frame 2)			Los Angeles – North Main Street (Frame 5)			Reseda – Gault Street (Frame 9)[h]		
	2016	2017	2018	2016	2017	2018	2016	2017	2018
State[c] maximum 24-hour concentration (µg/m³)	75.3	79.0	83.0	74.6	96.2	81.2	-	-	-
State[c] second-highest 24-hour concentration (µg/m³)	58.5	73.0	67.0	67.6	76.5	76.2	-	-	-
National annual average concentration (µg/m³)	31.9	33.5	32.7	25.8	25.7	30.2	-	-	-
State annual average concentration (µg/m³)[d]	31	31	33	*	*	34	-	-	-
Number of days standard exceeded[a,e]									
NAAQS 24-hour (>150 µg/m³)	0	0	0	0	0	0	-	-	-
CAAQS 24-hour (>50 µg/m³)	8	10	4	21	40	31	-	-	-
Particulate Matter ($PM_{2.5}$)									
National[f] maximum 24-hour concentration (µg/m³)	29.3	55.3	79.6	44.3	54.9	61.4	30.0	35.2	38.9
National[f] second-highest 24-hour concentration (µg/m³)	28.9	54.7	46.4	39.8	49.2	43.8	26.4	31.2	31.0
State[g] maximum 24-hour concentration (µg/m³)	-	-	-	49.4	61.7	65.3	41.5	61.3	63.7
State[g] second-highest 24-hour concentration (µg/m³)	-	-	-	49.1	54.9	48.7	37.4	57.5	42.1
National annual average concentration (µg/m³)	10.3	10.9	11.5	11.7	12.0	12.8	9.1	9.7	*
State annual average concentration (µg/m³)	-	-	-	12.0	16.3	16.0	16.9	16.8	15.8
Measured number of days standard exceeded[a]									
NAAQS 24-hour (>35 µg/m³)	0	-	-	2	6	6	0	0	*

Source: EPA 2018b, CARB 2020b.

Notes:

ppb = parts per billion; µg/m³ = micrograms per cubic meter; * = insufficient data available to determine the value; - = data not available.

[a] An exceedance is not necessarily related to a violation of the standard

[b] National statistics are based on standard conditions data. In addition, national statistics are based on samplers using federal reference or equivalent methods.

[c] State statistics are based on approved local samplers and local conditions data.

[d] State criteria for ensuring that data are sufficiently complete for calculating valid annual averages are more stringent than the national criteria.

[e] Measurements usually are collected every 6 days.

[f] National statistics are based on samplers using federal reference or equivalent methods.

[g] State statistics are based on local approved samplers.

[h] The monitoring station nearest Frame 9 that collects PM_{10} data is the Los Angeles station (Frame 5).

The monitoring data show the following trends for pollutant concentrations:

- The 1-hour ozone State standard as well as the 8-hour ozone State and federal standards were exceeded in each of the most recent years at the Los Angeles and Long Beach monitoring stations for which data are available.
- The 24-hour PM_{10} State standard was exceeded in each of the most recent years at the Los Angeles and Long Beach monitoring stations for which data are available.
- The 24-hour $PM_{2.5}$ federal standard was exceeded in each of the most recent years at the Los Angeles monitoring station for which data are available.
- No exceedances of the 1-hour NO_2, 1-hour CO, 8-hour CO, PM_{10} federal, or $PM_{2.5}$ State standards occurred during the most recent 3-year period.

As discussed above, the CAAQS and NAAQS define clean air and represent the maximum amount of pollution that can be present in outdoor air without any harmful effects on people and the environment. Existing violations of the ozone and PM ambient air quality standards indicate that certain individuals exposed to this pollutant may experience certain health effects, including increased incidence of cardiovascular and respiratory ailments.

Local Health Risk

SCAQMD's inhalation cancer risk data (MATES IV) express the potential cancer risk for a given substance as the incremental number of potential cancer cases that could be developed per million people, assuming that the population is exposed to the substance at a constant annual average concentration over a presumed 70-year lifetime. According to MATES IV, the project area is within multiple cancer risk zones ranging from a risk estimate of 401 to 1,000 additional cancers per 1 million individuals in the northern portion of the project area (Frames 7, 8, and 9) to a risk greater than 1,200 in 1 million (Frames 1 through 6) (SCAQMD 2020). For comparison, the average cancer risk in the Basin is 1,023 in 1 million.

Sensitive Receptors and Locations

SCAQMD defines sensitive receptor locations as residential, commercial, and industrial land use areas, as well as other locations where sensitive populations may be located, such as residences, schools, hospitals, convalescent homes, daycare centers, and other locations where children, chronically ill individuals, or other sensitive persons could be exposed (SCAQMD 2012).

The project area (Frames 1 through 9) includes primarily urbanized areas (i.e., Cities of Bell, Bell Gardens, Burbank, Carson, Commerce, Compton, Cudahy, Downey, Glendale, Huntington Park, Long Beach, Los Angeles, Lynwood, Maywood, Paramount, South Gate, and Vernon, and unincorporated County areas) where residences, schools, hospitals, and daycare centers could be near or immediately adjacent to project activities (within 1,000 feet).

3.2.2.2 Regulatory

This section identifies laws, regulations, and ordinances that are relevant to the impact analysis of air quality in this PEIR.

Federal

Clean Air Act and National Ambient Air Quality Standards

The CAA was first enacted in 1963 and has been amended numerous times in subsequent years (1965, 1967, 1970, 1977, and 1990). The CAA establishes federal air quality standards, known as NAAQS, for six criteria air pollutants and specifies future dates for achieving compliance. The CAA also mandates that the states submit and implement a State Implementation Plan (SIP) for local areas not meeting those standards. The SIPs must include pollution control measures that demonstrate how the standards will be met.

The 1990 amendments to the CAA identify specific emission-reduction goals for areas not meeting the NAAQS. These amendments require both a demonstration of reasonable further progress toward attainment and incorporation of additional sanctions for failure to attain or meet interim milestones. **Table** 3.2-2 shows the NAAQS currently in effect for each criteria pollutant, as well as the CAAQS (discussed further below).

Table 3.2-2. Federal and State Ambient Air Quality Standards

Criteria Pollutant	Average Time	California Standards	National Standards[a]	
			Primary	Secondary
Ozone	1-hour	0.09 ppm	None[b]	None[b]
	8–hour	0.070 ppm	0.070 ppm	0.070 ppm
Particulate Matter (PM_{10})	24-hour	50 µg/m^3	150 µg/m^3	150 µg/m^3
	Annual mean	20 µg/m^3	None	None
Fine Particulate Matter ($PM_{2.5}$)	24-hour	None	35 µg/m^3	35 µg/m^3
	Annual mean	12 µg/m^3	12.0 µg/m^3	15 µg/m^3
Carbon Monoxide	8-hour	9.0 ppm	9 ppm	None
	1-hour	20 ppm	35 ppm	None
Nitrogen Dioxide	Annual mean	0.030 ppm	0.053 ppm	0.053 ppm
	1-hour	0.18 ppm	0.100 ppm	None
Sulfur Dioxide[c]	Annual mean	None	0.030 ppm	None
	24-hour	0.04 ppm	0.014 ppm	None
	3-hour	None	None	0.5 ppm
	1-hour	0.25 ppm	0.075 ppm	None
Lead	30-day Average	1.5 µg/m^3	None	None
	Calendar quarter	None	1.5 µg/m^3	1.5 µg/m^3
	3-month average	None	0.15 µg/m^3	0.15 µg/m^3
Sulfates	24-hour	25 µg/m^3	None	None
Visibility-reducing Particles	8-hour	-[d]	None	None
Hydrogen Sulfide	1-hour	0.03 ppm	None	None
Vinyl Chloride	24-hour	0.01 ppm	None	None

Source: CARB 2016.

[a] National standards are divided into primary and secondary standards. Primary standards are intended to protect public health, whereas secondary standards are intended to protect public welfare and the environment.

[b] The federal 1-hour standard of 12 parts per hundred million was in effect from 1979 through June 15, 2005. The revoked standard is referenced because it was employed for such a long period and is a benchmark for SIPs.

[c] The annual and 24-hour NAAQS for SO_2 only apply for 1 year after designation of the new 1-hour standard to those areas that were previously in nonattainment for 24-hour and annual NAAQS.
[d] CAAQS for visibility-reducing particles is defined by an extinction coefficient of 0.23 per kilometer – visibility of 10 miles or more due to particles when relative humidity is less than 70%.
$\mu g/m^3$ = micrograms per cubic meter

Non-road Diesel Rule

EPA has established a series of increasingly strict emission standards for new off-road diesel equipment, on-road diesel trucks, and locomotives. New equipment used within the project area, including heavy-duty trucks and off-road construction equipment, are required to comply with these emission standards.

Corporate Average Fuel Economy Standards

The Corporate Average Fuel Economy Standards were first enacted in 1975 to improve the average fuel economy of cars and light duty trucks. The National Highway Traffic Safety Administrative (NHTSA) sets the Corporate Average Fuel Economy standards, which are regularly updated to require additional improvements in fuel economy. The standards were last updated in October 2012 to apply to new passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2017 through 2025, and are equivalent to 54.5 miles per gallon.

However, on August 2, 2018, NHTSA and EPA proposed to amend the fuel efficiency standards for passenger cars and light trucks and establish new standards covering model years 2021 through 2026 by maintaining the current model year 2020 standards through 2026 (Safer Affordable Fuel-Efficient [SAFE] Vehicles Rule). On September 19, 2019, EPA and NHTSA issued a final action on the One National Program Rule, which is considered Part 1 of the SAFE Vehicles Rule and a precursor to the proposed fuel efficiency standards. The One National Program Rule enables EPA/NHTSA to provide nationwide uniform fuel economy and GHG vehicle standards, specifically by (1) clarifying that federal law preempts State and local tailpipe GHG standards, (2) affirming NHTSA's statutory authority to set nationally applicable fuel economy standards, and (3) withdrawing California's CAA preemption waiver to set State-specific standards.

EPA and NHTSA published their decisions to withdraw California's waiver and finalize regulatory text related to the preemption on September 27, 2019 (84 Fed. Reg. 51310). California, 22 other states, the District of Columbia, and two cities filed suit against the proposed One National Program Rule on September 20, 2019 (*California et al. v. United States Department of Transportation et al.*, 1:19-cv-02826, U.S. District Court for the District of Columbia). On October 28, 2019, the Union of Concerned Scientists, Environmental Defense Fund, and other groups filed a protective petition for review after the federal government sought to transfer the suit to the D.C. Circuit (*Union of Concerned Scientists v. National Highway Traffic Safety Administration*). Opening briefs for the petition are currently scheduled to be completed on November 23, 2020. The lawsuit filed by California and others is stayed pending resolution of the petition.

EPA and NHTSA published final rules to amend and establish national CO_2 and fuel economy standards on April 30, 2020 (Part 2 of the SAFE Vehicles Rule) (85 Fed. Reg. 24174). The revised rule changes the national fuel economy standards for light-duty vehicles from 50.4 miles per gallon to 40.5 miles per gallon in future years. California, 22 other states, and the District of Columbia filed a petition for review of the final rule on May 27, 2020. The fate of the SAFE Vehicles Rule remains uncertain in the face of pending legal deliberations.

State

California Clean Air Act and California Ambient Air Quality Standards

In 1988, the State legislature adopted the California Clean Air Act (CCAA), which established a statewide air pollution control program. The CCAA requires all air districts in the State to endeavor to meet the CAAQS by the earliest practical date. Unlike the CAA, the CCAA does not set precise attainment deadlines. Instead, the CCAA establishes increasingly stringent requirements for areas that will require more time to achieve the standards. CAAQS are generally more stringent than NAAQS and incorporate additional standards for sulfates, hydrogen sulfide, visibility-reducing particles, and vinyl chloride. The CAAQS and NAAQS are shown in **Table** 3.2-2. Table 3.2-3 provides the Los Angeles County portion of the Basin's attainment status with respect to NAAQS and CAAQS.

Table 3.2-3. Federal and State Attainment Status for the Los Angeles County Portion of the South Coast Air Basin

Criteria Pollutant	Federal Designation	State Designation
O_3 (8-hour)	Nonattainment (extreme)	Nonattainment
CO	Attainment	Attainment
PM_{10}	Maintenance (serious)	Nonattainment
$PM_{2.5}$	Nonattainment (moderate)	Nonattainment
NO_2	Maintenance	Attainment
SO_2	Attainment	Attainment
Lead	Nonattainment	Attainment
Sulfates	(No federal standard)	Attainment
Hydrogen Sulfide	(No federal standard)	Unclassified
Visibility-Reducing Particles	(No federal standard)	Unclassified

Source: EPA 2020; CARB 2020c.

CARB and local air districts bear responsibility for meeting the CAAQS, which are to be achieved through district-level air quality management plans (AQMPs) incorporated into the SIP. In California, EPA has delegated authority to prepare SIPs to CARB, which, in turn, has delegated that authority to individual air districts. CARB traditionally has established State air quality standards, maintaining oversight authority in air quality planning, developing programs for reducing emissions from motor vehicles, developing air emission inventories, collecting air quality and meteorological data, and approving SIPs.

The CCAA substantially adds to the authority and responsibilities of air districts. The CCAA designates air districts as lead air quality planning agencies, requires air districts to prepare air quality plans, and grants air districts authority to implement transportation control measures. The CCAA also emphasizes the control of "indirect and area-wide sources" of air pollutant emissions. The CCAA gives local air pollution control districts explicit authority to regulate indirect sources of air pollution and to establish traffic control measures.

Statewide Truck and Bus Regulation

Originally adopted in 2005, the on-road truck and bus regulation requires heavy trucks to be retrofitted with PM filters. The regulation applies to privately and federally owned diesel-fueled

trucks with a gross vehicle weight rating greater than 14,000 pounds. Compliance with the regulation can be reached through one of two paths: (1) vehicle retrofits according to engine year or (2) phase-in schedule. Compliance paths ensure that by January 2023, nearly all trucks and buses will have 2010 model year engines or newer.

State Tailpipe Emission Standards

Like EPA at the federal level, CARB has established a series of increasingly strict emission standards for new off-road diesel equipment, on-road diesel trucks, and harbor craft operating in California. New equipment used during construction of project activities would be required to comply with the standards.

Carl Moyer Memorial Air Quality Standards Attainment Program

The Carl Moyer Memorial Air Quality Standards Attainment Program is a voluntary program that offers grants to owners of heavy-duty vehicles and equipment. The program is a partnership between CARB and the local air districts throughout the State to reduce air pollution emissions from heavy-duty engines. Locally, the air districts administer the program. The program is available for on-road projects that include public agency and utility vehicles, among other vehicle types.

Toxic Air Contaminant Regulations

California regulates TACs primarily through the Toxic Air Contaminant Identification and Control Act (Tanner Act) and the Air Toxics "Hot Spots" Information and Assessment Act of 1987 ("Hot Spots" Act). In the early 1980s, CARB established a statewide comprehensive air toxics program to reduce exposure to air toxics. The Tanner Act created California's program to reduce exposure to air toxics. The "Hot Spots" Act supplements the Tanner Act by requiring a statewide air toxics inventory, notification of people exposed to a significant health risk, and facility plans to reduce these risks.

CARB has identified DPM as a TAC and has approved a comprehensive diesel risk reduction plan (CARB 2000) to reduce emissions from both new and existing diesel-fueled engines and vehicles. The goal of the plan is to reduce DPM emissions and the associated health risk by 75 percent by 2010 and by 85 percent by 2020. The plan identifies 14 measures that CARB will implement to reduce DPM. The Project would be required to comply with any applicable diesel control measures from the diesel risk reduction plan.

Regional

South Coast Air Quality Management District

The project area lies within the Los Angeles County portion of the Basin, which is under the jurisdiction of SCAQMD. SCAQMD has jurisdiction over an area of approximately 10,743 square miles, including all of Orange County, Los Angeles County (except for the Antelope Valley), the non-desert portion of western San Bernardino County, and the western and Coachella Valley portions of Riverside County. The Basin is a sub-region of SCAQMD's jurisdiction. Although air quality in this area has improved, the Basin requires continued diligence to meet air quality standards.

SCAQMD has adopted a series of AQMPs to meet the CAAQS and NAAQS. These plans require, among other emissions-reducing activities, control technology for existing sources, control programs for

area sources and indirect sources, an SCAQMD permitting system that allows no net increase in emissions from any new or modified (i.e., previously permitted) emissions sources, and transportation control measures. The most recent publication is the 2016 AQMP, which is intended to serve as a regional blueprint for achieving the federal air quality standards for healthful air.

The 2016 AQMP represents a thorough analysis of existing and potential regulatory control options and includes available, proven, and cost-effective strategies to pursue multiple goals in promoting reductions in GHG emissions and toxic risk, as well as efficiencies in energy use, transportation, and goods movement. The 2016 AQMP focuses on demonstrating NAAQS attainment dates for the 2008 8-hour ozone standard, the 2012 annual $PM_{2.5}$ standard, and the 2006 24-hour $PM_{2.5}$ standard. The 2016 AQMP includes both stationary- and mobile-source strategies to ensure that rapidly approaching attainment deadlines are met, that public health is protected to the maximum extent feasible, and that the region is not faced with burdensome sanctions if the NAAQS are not met by the established date (SCAQMD 2017).

SCAQMD published the *CEQA Air Quality Handbook* in November 1993 to help local governments analyze and mitigate project-specific air quality impacts. This handbook provides standards, methodologies, and procedures for conducting air quality analyses as part of CEQA documents prepared within SCAQMD's jurisdiction. In addition, SCAQMD has several supplemental documents, including *Air Quality Significant Thresholds* (2019), *Final Localized Significance Threshold Methodology* (2003, revised 2008), and *Final Methodology to Calculate Particulate Matter (PM) 2.5 and PM 2.5 Significance Thresholds* (2008). These documents provide guidance for evaluating localized effects from mass emissions. Both were used in the preparation of this analysis (SCAQMD 2008a, 2008b, 2019).

The Project is also required to comply with all applicable SCAQMD rules and regulations pertaining to construction activities, including, but not limited to, the following:

- **SCAQMD Rule 402—Nuisance:** This rule prohibits the discharge of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; endanger the comfort, repose, health, or safety of any such persons or the public; or cause, or have a natural tendency to cause, injury or damage to business or property. Odors are regulated under this rule.
- **SCAQMD Rule 403—Fugitive Dust:** This rule prohibits emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area that remains visible beyond the property line of the emission's source. During construction, best available control measures identified in the rule would be required to minimize fugitive dust emissions from proposed earthmoving and grading activities. These measures would include site pre-watering and re-watering as necessary to maintain sufficient soil moisture content. Additional requirements apply to construction projects on properties with 50 or more acres of disturbed surface area or any earthmoving operation with a daily earthmoving or throughput volume of 5,000 cubic yards or more three times during the most recent 365-day period. These requirements include submittal of a dust control plan, maintenance of dust control records, and designation of an SCAQMD-certified dust control supervisor.
- **SCAQMD Rule 1108—Cutback Asphalt:** This rule specifies VOC content limits for cutback asphalt.
- **SCAQMD Rule 1113—Architectural Coatings:** This rule specifies VOC content limits for architectural coatings.

- **SCAQMD Rule 1403—Asbestos Emissions from Demolition/Renovation Activities:** This rule specifies work practices to limit asbestos emissions from building demolition and renovation activities including the removal and disturbance of asbestos-containing material (ACM). This rule is generally designed to protect uses surrounding demolition or renovation activity from exposure to asbestos emissions.
- **SCAQMD Rule 1470—Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines:** This rule specifies requirements for stationary diesel engines, including emergency standby generators. It requires owners or operators of emergency standby generators to keep monthly logs of usage, limits maintenance and testing to 20 hours per year, and requires emission rates to not exceed 0.40 gram per brake-horsepower hour.

Southern California Association of Governments

The Southern California Association of Governments (SCAG) is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties. SCAG addresses regional issues related to transportation, the economy, community development, and the environment and is the federally designated metropolitan planning organization for a majority of the region and the largest metropolitan planning organization in the nation. As required by federal and State law, SCAG develops plans pertaining to transportation, growth management, hazardous waste management, housing, and air quality. SCAG data are used in the preparation of air quality forecasts and the conformity analysis included in the AQMP.

Los Angeles County General Plan

Adopted in 2016, the *Los Angeles County General Plan*'s (Los Angeles County 2016) Air Quality Element summarizes air quality issues and outlines goals and policies that will improve air quality in unincorporated County areas. This includes protection from exposure to harmful air pollutants and reduction of air pollution and mobile-source emissions through coordinated transportation and air quality planning. Relevant policies are as follows:

- **Policy AQ 1.1:** Minimize health risks to people from industrial toxic or hazardous air pollutant emission with an emphasis on local hot spots, such as existing point sources affecting immediate sensitive receptors.
- **Policy AQ 1.2:** Encourage the use of low or no volatile organic compound emitting materials.
- **Policy AQ 1.3:** Reduce particulate inorganic and biological emission from construction, grading, excavation, and demolition to the maximum extent feasible.
- **Policy AQ 2.1:** Encourage the application of design and other appropriate measures when siting sensitive uses, such as residences, schools, senior centers, daycare centers, medical facilities, or parks with active recreational facilities within proximity to major sources of air pollution, such as freeways.
- **Policy AQ 2.3:** Support the conservation of natural resources and vegetation to reduce and mitigate air pollution impacts.

Los Angeles County Sustainability Plan

In July 2019, the County adopted the *OurCounty Los Angeles Countywide Sustainability Plan* (OurCounty Sustainability Plan) (Los Angeles County 2019). OurCounty Sustainability Plan includes 12 primary goals that have a total of 37 strategies, with a total of 159 actions. The plan identifies

lead County entities and partners for each goal. The plan is intended to help guide decision-making in unincorporated County areas and provide a model for decision-making in the 88 incorporated cities in the County. As a strategic plan, the OurCounty Sustainability Plan does not supersede land use plans that have been adopted by the Regional Planning Commission and Board of Supervisors, including the County's general plan and various community, neighborhood, and area plans. The following strategy and action are relevant to the proposed Project:

- **Strategy 1A:** Minimize the exposure of vulnerable populations to pollution and reduce health disparities.
    - **Action 1:** Limit siting of new sensitive uses, such as playgrounds, daycare centers, schools, residences, or medical facilities, at least 500 feet from freeways.

Local

Frame 1

City of Long Beach

City of Long Beach General Plan

Adopted in 1996, the Air Quality Element of the *City of Long Beach General Plan* aims to establish policy that will guide future land use and transportation decisions in the City of Long Beach, implement regional air quality plans, heighten awareness of air quality efforts and impacts in the community, and promote greater collaboration among all levels of governments to solve air quality problems (City of Long Beach 1996). Relevant policies are as follows:

- **Policy 2.1.1:** Reduce vehicle trips.
- **Policy 2.1.2:** Reduce vehicle miles traveled.
- **Policy 2.4.1:** Promote non-motorized transportation.
- **Policy 5.1:** Regulate land use and promote development in a manner that will support established transit services and reduce the need for the automobile
- **Policy 6.1:** Further reduce particulate emission from roads, parking lots, construction sites, unpaved alleys, and port operations and related uses.

City of Los Angeles

City of Los Angeles General Plan

Adopted in 1992, the Air Quality Element of the *City of Los Angeles General Plan* (City of Los Angeles 1992) includes goals to reduce particulate air pollutants emanating from unpaved areas, parking lots, and construction sites. Relevant policies are as follows:

- **Policy 1.3.1:** Minimize particulate emission from construction sites.
- **Policy 1.3.2:** Minimize particulate emissions from unpaved roads and parking lots which are associated with vehicle traffic.

In addition, the Air Quality Element includes goals that would support reduction of emissions. They include less reliance on single-occupant vehicles; efficient management of transportation facilities and system infrastructure; reduction of vehicle traffic during peak periods; addressing the relationship between land use, transportation, and air quality; and energy efficiency.

The *City of Los Angeles Sustainable City pLAn* also addresses criteria pollutant emissions. The plan is made up of short-term (by 2017) and longer-term (by 2025 and 2035) targets in 14 categories that will advance the City of Los Angeles's environment, economy, and equity. These topic areas include local water, local solar power, energy-efficient buildings, carbon and climate leadership, waste and landfills, housing and development, mobility and transit, prosperity and green jobs, preparedness and resiliency, air quality, environmental justice, urban ecosystem, livable neighborhoods, and leadership by example (City of Los Angeles 2015).

Frame 2

City of Carson

City of Carson General Plan

The *Carson General Plan* Air Quality Element (City of Carson 2004) contains policies that aim to improve air quality by reducing total air emissions, educating the public on pollution control measures, minimizing dust generation, and encouraging the use of best available technology. Relevant policies are as follows:

- **Policy AQ-1.1:** Continue to enforce ordinances which address dust generation and mandate the use of dust control measures to minimize particulate emissions from paved and unpaved surfaces during construction.
- **Policy AQ-1.2:** Promote the landscaping of undeveloped and abandoned properties to prevent soil erosion and reduce dust generation.
- **Policy AQ-2.2:** Utilize incentives, regulations and implement the Transportation Demand Management requirements in cooperation with other jurisdictions to eliminate vehicle trips which would otherwise be made and to reduce vehicle miles traveled for automobile trips which still need to be made.
- **Policy AQ-2.3:** Cooperate and participate in regional air quality management plans, programs and enforcement measures.
- **Policy AQ-2.4:** Continue to work to relieve congestion on major arterials and thereby reduce emissions.
- **Policy AQ-2.5:** Continue to improve existing sidewalks, bicycle trails, and parkways, and require sidewalk and bicycle trail improvements and parkways for new developments.
- **Policy AQ-2.6:** Encourage in-fill development near activity centers and along transportation routes.
- **Policy AQ-2.7:** Reduce air pollutant emissions by mitigating air quality impacts associated with development projects to the greatest extent possible.
- **Policy AQ-3.1:** Continue to promote the use of alternative clean fueled vehicles for personal and business use. To this end, consider the use of electric, fuel cell or other non-polluting fuels for Carson Circuit buses and other City vehicles.

City of Compton

City of Compton General Plan

The *Draft Compton General Plan 2030*'s Air Quality Element identifies the City of Compton's goals from 2010 through 2030 for improving air quality. Local initiatives include environmentally sensitive land use planning, transportation planning, trip reduction strategies, and control of localized emissions sources (City of Compton 2011). Relevant policies are as follows:

- **Air Quality Element Policy 1.3:** The City of Compton will ensure that new large-scale developments incorporate features that facilitate alternate forms of transportation.
- **Air Quality Element Policy 4.3:** The City of Compton will support recycling programs which reduce emissions associated with manufacturing and waste disposal.
- **Air Quality Element Policy 5.1:** The City of Compton will support the use of low polluting construction materials and coatings.
- **Air Quality Element Policy 5.2:** The City of Compton will provide, to the maximum extent feasible, for the separation of sensitive receptors, such as schools and hospitals, from sources of toxic emissions.
- **Air Quality Element Policy 5.4:** The City of Compton will standardize air quality review procedures for all new developments.
- **Air Quality Element Policy 5.5:** The City of Compton will reduce the exposure of sensitive receptors to dust and odors to the extent feasible.

City of Long Beach

Applicable regulations for the City of Long Beach are described above in Frame 1.

Unincorporated County

Applicable regulations for unincorporated County areas are described above in the *Regional* regulatory section.

Frame 3

City of Compton

Applicable regulations for Compton are described above in Frame 2.

City of Cudahy

City of Cudahy General Plan

The *Cudahy 2040 General Plan* (City of Cudahy 2018) incorporates land use and mobility strategies into the Air Quality Element. Relevant policies are as follows:

- **Policy OSCE-1.15:** Improve air quality in Cudahy by limiting the types of land uses permitted that produce particulate matter. Encourage uses and practices that make mobility more efficient, reducing the necessity of, and pollution caused by, motor vehicles.
- **Policy AQE 1.2:** Avoid siting new housing or sensitive receptor uses near existing land uses known to emit harmful contaminants.
- **Policy AQE 1.3:** Encourage the development and/or implementation of new technologies addressing or mitigating pollutant emissions at transportation facilities and industrial use locations.
- **Policy AQE 1.4:** Require the development of any sensitive receptor project includes design features and equipment as necessary, to mitigate any significant negative air quality impact on project occupants from the existing environment.
- **Policy AQE 1.5:** Pursue more active/effective enforcement of existing air quality regulations applicable to air polluters in Cudahy

- **Policy AQE 5.1:** Require projects generating potentially significant levels of air pollutants to incorporate the most effective air quality mitigation into project design as necessary to fully mitigate any negative impacts.

City of Downey

City of Downey General Plan

The *Downey Vision 2025 General Plan*'s Conservation Element (City of Downey 2005) contains policies related to air quality that aim to pursue every available means and opportunities to reduce air particulate and pollutants within the City of Downey and the region and to improve air quality through land use decisions. Relevant policies are as follows:

- **Program 4.5.1.4:** Encourage alternative modes of travel, such as walking and cycling, to vehicle use and alternative modes of employment, such as telecommuting and home-based businesses, to reduce emissions associated with vehicle use.
- **Program 4.5.1.5:** Promote the use of alternative fuel vehicles, including clean diesel, compressed natural gas, hydrogen, that result in reduced emissions, including in instances involving City operations.
- **Program 4.5.1.7:** Pursue means to prohibit unnecessary operation of engines.
- **Program 4.5.2.1:** Discourage the placement of air sensitive uses close proximity to areas with concentrations of pollutants, such as congested traffic intersections.

City of Lynwood

City of Lynwood General Plan

The *City of Lynwood General Plan* was adopted in 2003 and includes an Air Quality section, which details how the City of Lynwood would improve air quality in conformance with State and federal standards. Implementation measures are primarily aimed at sustainable land use and transportation development and include actions such as establishing local shuttle services and providing alternative modes of transportation (City of Lynwood 2003). Relevant implementation measures are as follows:

1.0: Where possible the City will incorporate the following mitigation measures into residential projects:

- Establish shuttle service from neighborhoods to commercial centers
- Construct bus turnouts, passenger benches and shelters
- Provide shuttles to the major transportation centers
- Synchronize traffic signals
- Construct, contribute and dedicate land for the provision of bicycle trails linking users to commuting routes
- Energy conservation measures

City of Paramount

City of Paramount General Plan

Adopted in 2007, the *Paramount General Plan* primarily focuses on the need to continue cooperation with agencies charged with improving air quality in the region and ensure that development mitigates potential air quality impacts (City of Paramount 2007). None of the policies in the *Paramount General Plan* directly address air quality.

City of South Gate

City of South Gate General Plan

A guiding principle of the *South Gate General Plan 2035* (City of South Gate 2009) is to reduce air pollution to improve public health. Relevant air quality policies are as follows:

- **HC 2.1 Policy 1:** The City should make land use and urban design decisions that promote physical activity, promote access to nutritious foods, and reduce air pollution.
- **HC 7.1 Policy 1:** Strategies in the Community Design Element that reduce driving rates and improve air quality through land use and urban design will be implemented by the City and other responsible parties. These strategies include transit-oriented development, compact development, an appropriate mix of land uses, a jobs/housing balance, transit-oriented development, and walkable streets.
- **HC 7.2 Policy 1:** The City will implement strategies in the Mobility Element that improve air quality through transportation. These include multi-modal transit, reduction of VMT through transportation demand management and improved bicycle and pedestrian facilities
- **HC 7.5 Policy 1:** City will ensure that construction activities follow existing SCAQMD rules and regulations.
- **HC 7.5 Policy 2:** All construction equipment for public and private projects will also comply with CARB's vehicle standards. For projects that may exceed daily construction emissions established by SCAQMD, Best Available Control Measures will be incorporated to reduce construction emissions to below daily emission standards established by SCAQMD.
- **HC 7.5 Policy 3:** Project proponents will be required to prepare and implement a Construction Management Plan which will include Best Available Control Measures among others. Appropriate control measures will be determined on a project by project basis, and should be specific to the pollutant for which the daily threshold is exceeded.

Unincorporated County

Applicable regulations for unincorporated County areas are described above in the *Regional* regulatory section.

Frame 4

City of Bell

City of Bell General Plan

The Resource Management Element of the *City of Bell 2030 General Plan* includes policies that aim to promote the conservation and preservation of important natural resources, including air quality. Provisions primarily include cooperation with regional air quality agencies in the undertaking of any air quality studies and implementing of common regional resource management goals, plans, and programs (City of Bell 2018). None of the policies in the *City of Bell 2030 General Plan* directly address air quality.

City of Bell Gardens

City of Bell Gardens General Plan

Adopted in 1995, the *City of Bell Gardens General Plan 2010* describes existing air quality conditions in the City of Bell Gardens and describes the applicable AQMP and air district regulations. Local actions that would be required or recommended by the AQMP include trip reduction plans,

promotion of alternative modes of transportation, and sustainable development standards (City of Bell Gardens 1995). None of the policies in the *City of Bell Gardens General Plan 2010* directly address air quality.

City of Commerce

City of Commerce General Plan

Adopted in 2008, the Air Quality Element of the *City of Commerce 2020 General Plan* addresses air quality for the City of Commerce. The City of Commerce aims to reduce emissions from stationary and point sources within the city, implement existing regulations concerning emissions from mobile sources, and promote programs and strategies that will be effective in reducing mobile emissions (City of Commerce 2008). Relevant policies are as follows:

- **Air Quality Policy 1.2:** The city of Commerce will encourage the applicants for sensitive land uses (e.g., residences, schools, daycare centers, playgrounds and medical facilities) to incorporate design features (e.g., pollution prevention, pollution reduction, barriers, landscaping, ventilation systems, or other measures) in the planning process to minimize the potential impacts of air pollution on sensitive receptors.
- **Air Quality Policy 1.3:** The city of Commerce will promote and support mixed-use land patterns that allow the integration of retail, office, institutional and residential uses. Consult with the air quality management district when siting new facilities with dust, odors or TAC emissions to avoid siting those facilities near sensitive receptors and avoid siting sensitive receptors near sources of air pollution.
- **Air Quality Policy 1.4:** The city of Commerce will facilitate communication among residents, businesses and the AQMD to quickly resolve air pollution nuisance complaints. Distribute information to advise residents on how to register a complaint with the SCAQMD.
- **Air Quality Policy 1.5:** The city of Commerce will require that owners of new developments that have the potential to emit air pollutants that would impact sensitive receptors to notify residents and businesses adjacent to the proposed site prior to starting construction.
- **Air Quality Policy 1.6:** The city of Commerce will consider all feasible alternatives to minimize emissions from diesel equipment (e.g., trucks, construction equipment, and generators).
- **Air Quality Policy 2.6:** The city of Commerce will design safe and efficient vehicle access to commercial land uses from arterial streets to ensure efficient vehicular ingress and egress.
- **Air Quality Policy 2.12:** The city of Commerce will identify and develop non-motorized transportation corridors (e.g., bicycling and pedestrian trails and lanes).
- **Air Quality Policy 3.2:** The city of Commerce will support the development of alternative fuel infrastructure that is publicly accessible.
- **Air Quality Policy 5.1:** The city of Commerce will ensure that all future public facilities and improvements do not have a significant adverse air quality impact on the community and that any such impacts must be mitigated to the fullest extent possible.
- **Air Quality Policy 5.2:** The city of Commerce will oppose the over-concentration of polluting public facilities and improvements.

City of Huntington Park

City of Huntington Park General Plan

The draft *City of Huntington Park 2030 General Plan*'s Resource Management Element includes policies that aim to address air pollution in the City of Huntington Park. Policies include endorsing

regional and local air quality transportation plans and encouraging improvements of existing and development of new transportation systems that reduce vehicle trips and air pollution (City of Huntington Park 2017). Relevant policies are as follows:

- **Resource Management Element Policy 3:** The City of Huntington Park shall encourage the improvement of existing, and the development of new, shuttle, and transit systems to reduce vehicular trips and air pollution.
- **Resource Management Element Policy 4:** The City of Huntington Park shall encourage the use of energy conservation devices in project design and construction to increase energy efficiency and decrease pollution emissions from energy production and use.

City of Maywood

City of Maywood General Plan

The *City of Maywood General Plan*'s Conservation Element identified the need to cooperate regionally on improving the environment and air quality in the region. Policies are primarily focused on resource management (City of Maywood 2008). Relevant policies are as follows:

- **Policy 1.2:** Require the lowest pollutant emissions from the city's own vehicle pool and equipment used for government purposes.
- **Policy 3.1:** Development and enforce local criteria of air and water quality so that the city may reduce its share of these regional problems

City of Vernon

City of Vernon General Plan

Amended in 2014, the *City of Vernon General Plan* includes policies that would contribute to the continued gradual improvement of air quality in the air basin. Policies are primarily geared at coordinating with the local air district and metropolitan planning organization and reducing emissions associated with vehicle uses (City of Vernon 2015). Relevant policies are as follows:

- **Policy R-2.2:** Encourage and facilitate the use of public transportation to reduce emissions associated with automobile use.

Unincorporated County

Applicable regulations for unincorporated County areas are described above in the *Regional* regulatory section.

Frame 5

City of Los Angeles

Applicable regulations for the City of Los Angeles are described above in Frame 1.

Frame 6

City of Los Angeles

Applicable regulations for the City of Los Angeles are described above in Frame 1.

Glendale

City of Glendale General Plan

Published in 1994, the City of Glendale's Air Quality Element of its general plan identifies ways in which the City of Glendale can reduce its emissions of air pollutants, including through various policies and programs, to comply with the region's AQMP. The overall goal of the Air Quality Element is to assist other government agencies in the attainment of healthful air for the City of Glendale, including those sensitive to air pollution (City of Glendale 1994). Relevant objectives are as follows:

- **Objective 1.a:** Reduce Glendale's contribution to regional emissions in a manner both efficient and equitable to residents and businesses, since emissions generated within Glendale affect regional air quality.
- **Objective 4.b:** Promote the use of public transportation and non-polluting transportation in standards for new construction.
- **Objective 4.e:** Coordinate non-automobile transportation systems with surrounding jurisdictions

Frame 7

City of Los Angeles

Applicable regulations for the City of Los Angeles are described above in Frame 1.

Burbank

City of Burbank General Plan

The *Burbank2035 General Plan*'s Air Quality and Climate Change Element contains policies that aim to reduce air pollution, protect people and places from TACs, and reduce odors (City of Burbank 2013). Relevant policies to the Project are as follows:

- **Policy 1.1:** Coordinate air quality planning efforts with local, regional, state, and federal agencies, and evaluate the air quality effects of proposed plans and development projects.
- **Policy 1.2:** Seek to attain or exceed the more stringent of federal or state ambient air quality standards for each criteria air pollutant.
- **Policy 1.3:** Continue to participate in the Cities for Climate Protection Program, SCAQMD's Flag Program, SCAQMD's Transportation Programs (i.e., Rule 2202, Employee Rideshare Program), and applicable state and federal air quality and climate change programs.
- **Policy 1.4:** Cooperate with the EPA, CARB, and SCAQMD to measure air quality at emission sources (including transportation corridors), and enforce the provisions of the Clean Air Act, as well as state and regional policies and established standards for air quality.
- **Policy 1.5:** Require projects that generate potentially significant levels of air pollutants, such as landfill operations or large construction projects, to incorporate best available air quality and greenhouse gas mitigation in project design.
- **Policy 1.6:** Require measures to control air pollutant emissions at construction sites and during soil- disturbing or dust-generating activities (i.e., tilling, landscaping) for projects requiring such activities.
- **Policy 1.7:** Require reduced idling, trip reduction, and efficiency routing of transportation for City departments, where appropriate.

- **Policy 1.8:** Continue to acquire alternative fuel vehicles like hybrid, natural gas, electric, or hydrogen-powered vehicles when adding to the City's vehicle fleet.
- **Policy 1.9:** Encourage the use of zero-emission vehicles, low-emission vehicles, bicycles, and other non-motorized vehicles, and car-sharing programs. Consider requiring sufficient and convenient infrastructure and parking facilities in residential developments and employment centers to accommodate these vehicles.
- **Policy 1.10:** Give preference to qualified contractors using reduced-emission equipment for City construction projects and contracts for services, as well as businesses that practice sustainable operations.
- **Policy 1.11:** Offer incentives for all City employees to use means other than a single-occupant vehicle for their daily work commute. Require large employers, defined with the City's Transportation Demand Management program to offer similar incentives to reduce employee vehicle trips.
- **Policy 2.2:** Separate sensitive uses such as residences, schools, parks, and day care facilities from sources of air pollution and toxic chemicals.

  Provide proper site planning and design features to buffer and protect when physical separation of these uses is not feasible.
- **Policy 2.4:** Reduce the effects of air pollution, poor ambient air quality, and urban heat island effect with increased tree planting in public and private spaces
- **Policy 2.5:** Require the use of recommendations from CARB's Land Use Handbook to guide decisions regarding location of sensitive land uses.

Unincorporated County

Applicable regulations for unincorporated County areas are described above in the *Regional* regulatory section.

Frame 8

City of Los Angeles

Applicable regulations for the City of Los Angeles are described above in Frame 1.

Frame 9

City of Los Angeles

Applicable regulations for the City of Los Angeles are described above in Frame 1.

3.2.3 Impact Analysis

This section describes the impact analysis related to air quality for the two Typical Projects, six kit of parts (KOP) categories, and the overall *2020 LA River Master Plan* implementation. It describes the methods used to determine impacts of the proposed Project and lists the thresholds used to conclude whether an impact would be significant. Measures to avoid or reduce significant impacts accompany each impact discussion, where necessary. Where the two Typical Projects or the six KOP categories have similar impacts related to a specific criterion, the discussion is combined. Where differences between the Typical Projects or the KOP categories are identified, the impact analysis is presented separately. Furthermore, construction and operations impacts are presented together

where they largely overlap and it would not be meaningful to discuss them separately to address a specific criterion.

3.2.3.1 Methods for Estimating Emissions

Construction of the *2020 LA River Master Plan* would generate emissions of criteria pollutants and TACs (i.e., DPM) associated with mobile and stationary construction equipment combustion exhaust, fugitive dust (PM_{10} and $PM_{2.5}$) from soil transfer and vehicles traveling on unpaved roads, fugitive off-gassing (VOC) from architectural coatings, and employee and haul truck vehicle combustion exhaust. Operation of the *2020 LA River Master Plan* would result in the generation of criteria pollutant and TAC emissions associated with motor vehicle travel to and from the site, natural gas combustion for space and water heating, area sources associated with consumer products (e.g., cleaning supplies, kitchen aerosols, cosmetics, toiletries), architectural coatings, any stationary sources, and landscaping.

Emissions associated with the six KOP categories and related design components—as well as the *2020 LA River Master Plan* in its entirety—are analyzed qualitatively at a program level. The two Typical Projects, the Common Elements and the Multi-Use Trails and Access Gateways, are analyzed in greater detail than the other elements based on the design components for which Public Works could make reasonable and informed construction and operations assumptions. The methodology for quantifying construction- and operations-related emissions from the two Typical Projects is presented below.

Quantifying Construction Mass Emissions from the Typical Projects

Mass daily emissions associated with the construction activities have been estimated for the Typical Projects using the most recent version of California Emissions Estimator Model (CalEEMod) (version 2016.3.2) developed by the California Air Pollution Control Officers Association. Given that the specific construction schedule for each element of the Typical Projects is unknown at this point, CalEEMod modeling defaults regarding construction phase types and phase lengths were used to provide a conservative analysis. Public Works developed conservative assumptions related to construction start date, construction duration, construction equipment, soil transfer volume, demolition material volume, haul truck trip distances, number of employees, grading area, and paving area. Public Works has assumed that the earliest the Typical Projects would begin construction is 2021, but actual construction dates would be determined later dependent upon the implementing agency, community needs, policy decisions, and availability of funding. Typical Projects developed in future years would result in less emissions due to expected improvements in engine technologies and increasingly strict regulations governing off-road equipment and vehicles. Therefore, the use of 2021 as the construction year results in a conservative estimate of emissions. The Typical Projects are discussed in more detail in Section 2.5.3, *Project Phasing, Construction, Operations/Maintenance Scenarios*. See Appendix C for the CalEEMod inputs and results for both Typical Projects.

Regarding localized effects, SCAQMD's localized significance threshold (LST) methodology was developed to aid in the analysis of construction associated with land use development projects. SCAQMD's LST methodology focuses on emissions from construction equipment (i.e., loaders, backhoes, forklifts), stationary sources (i.e., natural gas furnaces, emergency generators) and onsite vehicles (i.e., water trucks, dump trucks) operating on site and within the project boundary. The LST methodology and lookup tables are not designed to evaluate impacts from mobile sources traveling

over roadways outside of the project boundary. To account for localized emissions from haul trucks, it was assumed that 10 percent of total offsite mobile emissions would occur at the project site. The inclusion of such emissions likely overstates impacts, as all but a small amount of on-road haul truck use would occur away from the site.

For purposes of analysis, fugitive dust emissions assume compliance with SCAQMD Rule 403, which would reduce fugitive dust emissions by 61 percent by requiring watering three times per day. The exact dust-control methods used for construction will be specified in a dust-control plan that would be submitted to SCAQMD per Rule 403 prior to construction. The Typical Project emissions are presented at the daily time scale and compared with the thresholds discussed in Section 3.2.3.2, below.

Quantifying Operational Mass Emissions from the Typical Projects

Criteria pollutant and TAC emissions associated with the Typical Projects were estimated using the most recent version of CalEEMod (version 2016.3.2). The energy consumption and area source activity rates were based on CalEEMod defaults. The default motor vehicle trip values were adjusted to include activity associated with maintenance work.[1] The Typical Projects have been assumed to begin operation in 2021, but actual construction dates would be determined later depending on the implementing agency, community needs, policy decisions, and availability of funding.

Emissions are presented at the daily time scale and compared with the thresholds discussed in Section 3.2.3.2, *Criteria for Determining Significance*, in this PEIR. See Appendix C for the CalEEMod inputs and results for both Typical Projects.

Regarding localized effects, the LST analysis focuses on criteria pollutant emissions from equipment, vehicle trips, area sources, and stationary sources that would operate on site. Like the construction analysis, to account for the localized emissions from haul trucks, it was assumed that 10 percent of total offsite mobile emissions would occur at the project site. The inclusion of such emissions likely overstates impacts, as all but a small amount of on-road haul truck use would occur away from the site.

For purposes of analysis, the gasoline-powered vehicle emissions outputted by CalEEMod were adjusted to assume implementation of the SAFE Vehicles Rule Part 1, based on CARB guidance (CARB 2019). SAFE Vehicles Rule Part 1 will reduce passenger vehicle fuel efficiency standards in future years, thereby increasing passenger vehicle emissions of criteria pollutants (CARB 2019).

[1] Sources of emissions during maintenance activities could include intermittent vehicle trips from maintenance workers and any area-source landscaping equipment used for maintenance of vegetation. CalEEMod by default quantifies emissions associated with landscaping but does not explicitly do so for maintenance worker vehicle trips. Maintenance would occur at a low frequency and low intensity. The maintenance worker vehicle trips were added to the CalEEMod default vehicle trip values. See Appendix C for the CalEEMod inputs and results for both Typical Projects.

3.2.3.2 Criteria for Determining Significance

Thresholds of Significance

For the purposes of the analysis in this PEIR, and in accordance with Appendix G of the State CEQA Guidelines, the proposed Project would have a significant environmental impact if it would:

3.2(a) Conflict with or obstruct implementation of the applicable air quality plan.

3.2(b) Result in a cumulatively considerable net increase in any criteria pollutant for which the project region is a nonattainment area with respect to the applicable federal or State ambient air quality standard.

3.2(c) Expose sensitive receptors to substantial pollutant concentrations.

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

Appendix G, Section III, of the State CEQA Guidelines states that, where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make determinations regarding air quality impacts. Given SCAQMD's regulatory role in the Basin, the significance thresholds and analysis methodologies established by SCAQMD are relied upon to make determinations regarding air quality impacts, where applicable.

Criteria Pollutants

The significance thresholds and analysis methodologies outlined in SCAQMD's *CEQA Air Quality Handbook* (SCAQMD 1993), *Final Localized Significance Threshold Methodology* (SCAQMD 2008a), and *Final Methodology to Calculate Particulate Matter (PM) 2.5 and PM 2.5 Significance Thresholds* (SCAQMD 2008b) guidance documents were used in evaluating project impacts. Specifically, the SCAQMD construction and operational regional mass emissions thresholds identified in Table 3.2-4, below, were used for the regional assessment of criteria pollutants herein.

With respect to localized emissions, SCAQMD has developed LSTs and mass rate look-up tables to help public agencies analyze the project-related effects of pollutants on nearby receptors. The LSTs are based on (1) the size or total area of the emissions source, (2) the distance to nearby sensitive receptor locations, and (3) the ambient air quality in each source receptor area (SRA) where the emissions sources are located.

1. **Size.** The LST categories for size (acres) are less than or equal to 1 acre, 2 acres, and greater than or equal to 5 acres. For the Typical Projects, the Common Elements Typical Project (Tier III pavilion) would be approximately 3 acres and the Multi-Use Trails and Access Gateways Typical Project would be approximately 24 acres (based on a 5-mile length and 40-foot width). Accordingly, the highest LST category for a size of greater than or equal to 5 acres was used for both of the Typical Projects.
2. **Distance.** The LST categories for distance (meters) to nearby sensitive receptor locations range from less than or equal to 25 meters, 50 meters, 100 meters, or 200 meters, to greater than or equal to 500 meters. The Typical Projects could be sited between the top of levee and the fenceline at any location in the study area. Accordingly, it was conservatively assumed that a sensitive receptor could be within 25 meters of the Typical Projects for any of the nine planning frames.

3. **SRA.** The LST SRA for a project is based on the city or community within which the project is located. The nine planning frames of the study area consist of several SRAs: 1, 2, 4, 5, 7, 11, and 12 (SCAQMD 2009). To create a worst-case scenario using a 5-acre project distanced 25 meters from the nearest sensitive receptor, the Typical Projects were conservatively compared with the lowest, and therefore strictest, criteria pollutant LST from these SRAs. If the LSTs would not be exceeded by the Typical Projects under the worst-case scenario SRA, then the LSTs would not be exceeded by the Typical Projects in any of the SRAs that occur in the nine planning frames. The worst-case LSTs used to assess the impacts of the Typical Projects are presented in Table 3.2-4 below.

Table 3.2-4. SCAQMD Significance Thresholds (pounds per day)

Threshold per Activity	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$	Pb[a]
Localized Significance Thresholds[b]							
Construction	N/A	98	630	N/A	13	6	N/A
Operation	N/A	98	630	N/A	3	2	N/A
Regional Significance Thresholds							
Construction	75	100	550	150	150	55	3
Operation	55	55	550	150	150	55	3

Source: SCAQMD 2009, 2019.

[a] The Project would result in no Pb emissions during construction or operations due to the prohibition of Pb in fuels. As such, Pb emissions are not evaluated herein.

[b] Localized thresholds are based on a 5-acre project site and 25-meter distance to receptors within a worst-case scenario using the SRA zones (12 and 2) in the study area that yield the strictest thresholds. SCAQMD has not developed LSTs for VOC, SO_2, or Pb emissions.

Health-Based Thresholds for Project-Generated Pollutants of Human Health Concern

In December 2018, the California Supreme Court issued its decision in *Sierra Club v. County of Fresno* (6 Cal. 5th 502), hereafter referred to as the Friant Ranch Decision. The case reviewed the long-term regional air quality analysis contained in the EIR for the proposed Friant Ranch development project, a 942-acre master-planned development in unincorporated Fresno County within the San Joaquin Valley Air Basin, which is currently in nonattainment for the ozone and $PM_{2.5}$ NAAQS and CAAQS. The court found that the air quality analysis was inadequate because it failed to provide enough detail "for the public to translate the bare [criteria pollutant emissions] numbers provided into adverse health impacts or to understand why such a translation is not possible at this time." The court's decision clarifies that environmental documents must connect a project's air quality impacts to specific health effects or explain why it is not technically feasible to perform such an analysis.

As discussed in Section 3.2.2, *Setting*, of this PEIR, all criteria pollutants that would be generated by the proposed Project are associated with some form of health risk (e.g., asthma). Criteria air pollutants can be classified as either regional or localized pollutants: regional pollutants can be transported over long distances and affect ambient air quality far from the emissions source, and localized pollutants affect ambient air quality near the emissions source. Ozone is considered a regional criteria pollutant, whereas CO, NO_2, SO_2, and Pb are localized pollutants. PM can be both a local and a regional pollutant, depending on its composition. As discussed above, the primary criteria pollutants of concern generated by the Project are ozone precursors (VOCs and NO_X), CO, and PM (including DPM).

Regional Project-Generated Criteria Pollutants (Ozone Precursors and Regional PM)

Adverse health effects induced by regional criteria pollutant emissions generated by the proposed Project (ozone precursors and PM) are highly dependent on a multitude of interconnected variables (e.g., cumulative concentrations, local meteorology and atmospheric conditions, the number and character of exposed individuals [e.g., age, gender]). For these reasons, ozone precursors (VOCs and NO_X) contribute to the formation of ground-borne ozone on a regional scale, where emissions of VOC and NO_X generated in one area may not equate to a specific ozone concentration in that same area. Similarly, some types of particulate pollutant may be transported over long distances or formed through atmospheric reactions. As such, the magnitude and locations of specific health effects from exposure to increased ozone or regional PM concentrations are the product of emissions generated by numerous sources throughout a region, as opposed to an individual project.

Moreover, exposure to regional air pollution does not guarantee that an individual will experience an adverse health effect—as discussed above, there are large individual differences in the intensity of symptomatic responses to air pollutant. These differences are influenced, in part, by the underlying health condition of an individual, which cannot be known.

Models and tools have been developed to correlate regional criteria pollutant emissions to potential community health impacts. While there are models capable of quantifying ozone and secondary PM formation and associated health effects, these tools were developed to support regional planning and policy analysis and have limited sensitivity to small changes in criteria pollutant concentrations induced by individual projects. Therefore, translating project-generated criteria pollutants to the locations where specific health effects could occur or the resultant number of additional days of nonattainment cannot be estimated with a high degree of accuracy for relatively small projects (relative to the regional air basin).

Technical limitations of existing models to correlate project-level regional emissions to specific health consequences are recognized by air quality management districts throughout the State, including the San Joaquin Valley Air Pollution Control District (SJVAPCD) and SCAQMD, both of which provided *amici curiae* briefs for the Friant Ranch legal proceedings. In its brief, SJVAPCD acknowledged that while health risk assessments (HRAs) for localized TACs, such as DPM, are commonly prepared, "it is not feasible to conduct a similar analysis for criteria air pollutants because currently available computer modeling tools are not equipped for this task." SJVAPCD further noted that emissions solely from the Friant Ranch project (which equate to less than 0.1 percent of the total NO_X and VOC in the Valley) are not likely to yield valid information, and that any such information should not be "accurate when applied at the local level" (SJVAPCD 2015). SCAQMD presented similar information in its brief, stating that "it takes a large amount of additional precursor emissions to cause a modeled increase in ambient ozone levels"[2] (SCAQMD 2015b).

As discussed above, air districts develop region-specific CEQA thresholds of significance in consideration of existing air quality concentrations and attainment or nonattainment designations under the NAAQS and CAAQS, both of which are informed by a wide range of scientific evidence that

[2] For example, SCAQMD's analysis of its 2012 Air Quality Attainment Plan showed that modeled NO_X and ROG reductions of 432 and 187 tons per day, respectively, only reduced ozone levels by 9 parts per billion. Analysis of SCAQMD's Rule 1315 showed that emissions of NO_X and ROG of 6,620 and 89,180 pounds per day, respectively, contributed to 20 premature deaths per year and 89,947 school absences (SCAQMD 2015b).

demonstrates there are known safe concentrations of criteria pollutants. While recognizing that air quality is a cumulative problem, air districts typically consider projects that generate criteria pollutant and ozone precursor emissions below these thresholds to be minor in nature and to not adversely affect air quality such that the NAAQS or CAAQS would be exceeded. Emissions generated by a project could increase photochemical reactions and the formation of tropospheric ozone and secondary PM, which at certain concentrations could lead to increased incidence of specific health consequences. Although these health effects are associated with ozone and PM pollution, the effects are a result of cumulative and regional emissions. As such, a project's incremental contribution cannot be traced to specific health outcomes on a regional scale, and a quantitative correlation of project-generated regional criteria pollutant emissions to specific human health impacts is not included in this analysis.

Localized Project-Generated Criteria Pollutants (PM and CO) and Air Toxics (DPM)

Localized pollutants generated by a project are deposited and potentially affect population near the emissions source. Because these pollutants dissipate with distance, emissions from individual projects can result in direct and material health impacts on adjacent sensitive receptors. Models and thresholds are readily available to quantify these potential health effects and evaluate their significance. Locally adopted thresholds and analysis procedures for the localized pollutants of concern associated with the proposed Project (DPM, CO, asbestos)[3] are identified below.

Toxic Air Contaminants

The California Supreme Court has held that lead agencies are not required to analyze the impacts of the environment on a project's future users or residents, unless the project exacerbates existing environmental hazards (see *California Building Industry Association v. Bay Area Air Quality Management District (2015) 62 Cal.41h 369*) or when the legislature has indicated by specific California Public Resources Code sections (21096, 21151.8, 21155.1, 21159.21, 21159.22, 21159.23, and 21159.24) that specifically defined environmental hazards associated with airport noise and safety, school projects, certain kinds of infill housing, and transit priority projects must be addressed. Certain land use types proposed under the Project may introduce emission sources (e.g., generators, delivery trucks) that would exacerbate existing environmental TAC hazards. The Project could introduce new sensitive receptors to the project study area, including residences, that may be exposed to the exacerbated existing TAC hazard. Accordingly, this analysis considers both potential effects of project development on existing receptors, as well as effects of the environment on project receptors.

Regarding sensitive receptors' exposure to substantial pollutant concentrations, SCAQMD (2019) states that a project would have a significant impact from TACs if:

- TACs increase the non-cancer health risk due to short-term (i.e., acute) or long-term (i.e., chronic) exposures. The screening risk assessment for those TACs must estimate the acute and/or chronic Hazard Index, as applicable. Onsite stationary sources emit carcinogenic contaminants or TACs that individually or cumulatively exceed the maximum incremental cancer risk of 10 in 1 million (1.0×10^{-5}) or an acute or chronic Hazard Index of 1.0.

[3] Although SO_2, NO_2, and Pb may also concentrate locally, the proposed Project would not represent a significant source of these pollutants at the local level. Accordingly, they are not discussed or evaluated further.

Carbon Monoxide Hot Spots

A CO *hot spot* is a localized concentration of CO that is above the State or national 1-hour or 8-hour ambient air standards for the pollutant. To determine the potential for localized CO impacts occurring from the addition of project-associated traffic volumes at intersections, SCAQMD's suggested criteria recommend performing a localized CO impact analysis for intersections that change from level of service (LOS) C to D as a result of a project and for all intersections rated LOS D or worse where the project increases the volume-to-capacity (V/C) ratio by 2 percent or more.

As part of SCAQMD's 2003 AQMP, which is the most recent AQMP that addresses CO concentrations, a detailed CO hot spots analysis was conducted at four heavily congested intersections in the Basin that were likely to experience the highest CO concentrations.

- Long Beach Boulevard and Imperial Highway: proximity to the Lynwood monitoring station, which consistently records the highest 8-hour CO concentrations in the Basin each year
- Wilshire Boulevard and Veteran Avenue: the most congested intersection in the County, with an average daily traffic volume of 100,000 vehicles
- Highland Avenue and Sunset Boulevard: one of the most congested intersections in the City of Los Angeles
- Century Boulevard and La Cienega Boulevard: one of the most congested intersections in the City of Los Angeles

The CO hot spots analysis in the 2003 AQMP did not predict a violation of CO standards at the four intersections. Based on the CO modeling for attainment demonstration, the 2003 AQMP disclosed a worst-case 8-hour background CO concentration of 7.8 ppm. As shown earlier in Table 3.2-1, the maximum recorded background CO concentration in the project area in the past 3 years is 2.6 ppm for the 8-hour averaging period. This value is considerably less than the 8-hour average maximum background concentration of 7.8 ppm observed during the 2003 AQMP attainment demonstration.

Asbestos

There are no quantitative thresholds related to receptor exposure to asbestos. However, SCAQMD Rule 1403 (Asbestos Emissions from Demolition/Renovation Activities) specifies work practices to limit asbestos emissions from building demolition and renovation activities including the removal and disturbance of ACM. This rule is generally designed to protect the health and safety of the public in proximity to demolition or renovation activity from exposure to asbestos emissions. Rule 1403 requires surveys of any facility being demolished or renovated for the presence of ACM. Rule 1403 also establishes notification procedures, handling operations, warning label requirements, and removal procedures, including complying with the limitations of the National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations as listed in Code of Federal Regulations, Title 40, Part 61.

Cumulative Impacts

Potential cumulative air quality impacts would result when other projects' pollutant emissions combine with emissions associated with the *2020 LA River Master Plan* to degrade air quality conditions below acceptable levels. This could occur on a local level (e.g., increased vehicle emissions at congested intersections or concurrent construction activities at sensitive receptor locations) or a regional level (e.g., potential ozone impacts from multiple past, present, and

reasonably foreseeable projects within the Basin). Given that both localized and regional pollution is regulated at the air basin level, the Basin is the resource study area for the purposes of air quality.

The Basin experiences chronic exceedances of the NAAQS and CAAQS and is currently in nonattainment status for various criteria pollutants (see Table 3.2-3). These nonattainment conditions within the region are considered cumulatively significant. SCAQMD thresholds have been established to ensure attainment of the NAAQS and CAAQS; therefore, an exceedance of SCAQMD threshold levels must be considered a significant cumulative impact and an adverse cumulative consequence.

3.2.3.3 Impacts and Mitigation

Impact 3.2(a): Would the proposed Project conflict with or obstruct implementation of the applicable air quality plan?

SCAQMD is required, pursuant to the CAA, to reduce emissions of criteria pollutants for which the Basin is in nonattainment status. SCAQMD's most recent plan to achieve air quality standards is the 2016 AQMP, adopted by the SCAQMD Governing Board on March 3, 2017. The AQMP outlines a comprehensive control strategy to meet the requirement for expeditious progress toward attainment of the NAAQS for 2006 24-hour $PM_{2.5}$ and 2012 annual $PM_{2.5}$ through all feasible control measures. The 2016 AQMP also includes specific measures for implementing the ozone strategy from previous AQMPs and attaining the 8-hour ozone standard by 2031 (SCAQMD 2017). These strategies are based, in part, on regional growth (i.e., changes in population, housing, and employment) projections prepared by the region's cities and counties and incorporated by SCAG. As such, projects that propose development that is consistent with anticipated regional growth are considered to be consistent with the AQMP. Furthermore, projects must comply with applicable SCAQMD rules and regulations.

Typical Projects

Common Elements

Construction

As discussed in Section 3.13, *Population and Housing*, it is not anticipated that construction of the Common Elements Typical Project would result in substantial unplanned population growth in the County. Therefore, pursuant to SCAQMD guidelines, because the Common Elements Typical Project would be consistent with the anticipated regional growth, it is considered consistent with the region's AQMP. As such, project-related construction emissions would be accounted for in the AQMP, which has been developed to bring the Basin into attainment for all criteria and precursor pollutant standards. Furthermore, the Common Elements Typical Project would comply with the applicable SCAQMD Rules 402, 403, 1108, 1113, and 1403 (further described in Section 3.2.2.2, *Regulatory*). Therefore, construction of the Common Elements Typical Project would not conflict with or obstruct implementation of the applicable air quality plan.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operation

As discussed in Section 3.13, *Population and Housing*, it is not anticipated that operation of the Common Elements Typical Project would result in substantial unplanned population growth in the County. Therefore, pursuant to SCAQMD guidelines, because the Common Elements Typical Project would be consistent with the anticipated regional growth, it is considered consistent with the region's AQMP. As such, project-related operation emissions would be accounted for in the AQMP, which has been developed to bring the Basin into attainment for all criteria and precursor pollutant standards. Therefore, operation of the Common Elements Typical Project would not conflict with or obstruct implementation of the applicable air quality plan.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Multi-Use Trails and Access Gateways

Construction

The impact discussion above for the Common Elements Typical Project would similarly apply to the Multi-Use Trails and Access Gateway Typical Project because construction of the Multi-Use Trails and Access Gateways Typical Project is not anticipated to result in substantial unplanned population growth in the County.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operation

The impact discussion above for the Common Elements Typical Project would similarly apply to the Multi-Use Trails and Access Gateways Typical Project because operation of the Multi-Use Trails and Access Gateways Typical Project is not anticipated to result in substantial unplanned population growth in the County.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

2020 LA River Master Plan Kit of Parts

The Common Elements Typical Project analyzed above could be implemented in whole or as a combination of its individual elements with all the KOP categories discussed below. Therefore, for potential impacts of the Common Elements Typical Project, see above. The impact discussion below focuses on specific KOP categories only. Because the impacts for KOP Categories 1 through 5 are the same, these impact analyses are grouped together. The impact for KOP Category 6 is analyzed separately.

KOP Categories 1 through 5

Construction

The impact discussion above for the Common Elements Typical Project would similarly apply to KOP Categories 1 through 5 because construction of these KOP categories is not anticipated to result in substantial unplanned population growth in the County.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operation

The impact discussion above for the Common Elements Typical Project would similarly apply to KOP Categories 1 through 5 because operation of these KOP categories is not anticipated to result in substantial unplanned population growth in the County.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

KOP Category 6

Construction

The impact discussion above for the Common Elements Typical Project would similarly apply to KOP Category 6 because construction of this KOP category is not anticipated to result in substantial unplanned population growth in the County.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operation

Implementation of KOP Category 6 is unique compared to the Typical Projects and KOP Categories 1 through 5 in that operations could include affordable housing. However, as discussed in Section 3.13, *Population and Housing*, the population growth from the increase in residences under KOP Category 6 is not anticipated to result in substantial unplanned population growth in the County. Therefore, pursuant to SCAQMD guidelines, because this KOP category would be consistent with the anticipated regional growth, it would be considered consistent with the region's AQMP. As such, associated emissions would be accounted for in the AQMP, which has been developed to bring the Basin into attainment for all criteria and precursor pollutant standards. Furthermore, KOP Category 6 would comply with the applicable SCAQMD Rules 402, 403, 1108, 1113, 1403, and 1470 (further described in Section 3.2.2.2, *Regulatory*). Therefore, operation of KOP Category 6 would not conflict with or obstruct implementation of the applicable air quality plan.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Overall 2020 LA River Master Plan Implementation

As described in the *2020 LA River Master Plan*, it is anticipated that approximately 107 projects ranging in size from extra-small (less than 1 acre) to extra-large (150+ acres/10+ miles) would be implemented under the *2020 LA River Master Plan* over the 25-year horizon period to meet the *2020 LA River Master Plan's* nine objectives. These would include the two Typical Projects that would be implemented along the river, and subsequent projects composed of the KOP categories' multi-benefit design components. These elements together compose the entirety of the *2020 LA River Master Plan.*

Construction

Similar to the impact discussion above for the KOP categories, because construction of the *2020 LA River Master Plan* is not anticipated to result in substantial unplanned population growth in the County, impacts would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operation

Similar to the impact discussion above for the KOP categories, because operation of the overall *2020 LA River Master Plan* is not anticipated to result in substantial unplanned population growth in the County, the impacts would be less than significant.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Impact 3.2(b): Would the proposed Project result in a cumulatively considerable net increase in any criteria pollutant for which the project region is a nonattainment area with respect to the applicable federal or State ambient air quality standard?

The significance of this impact is determined based on SCAQMD's regional and localized thresholds (see Table 3.2-4). The regional thresholds are applicable to projects within the Basin. As all of the nine planning frames are within the Basin, the analysis of the regional impacts applies equally to projects in all nine frames. For purposes of estimating, the proposed Project is conservatively compared with the lowest, and therefore strictest, criteria pollutant LST from the SRAs within the nine planning frames of the project study area, using a 5-acre project distanced 25 meters from the nearest sensitive receptor (see Section 3.2.3.2, *Criteria for Determining Significance*, for discussion of how this LST was chosen). If the LSTs would not be exceeded by the proposed Project under the worst-case scenario SRA, then the LSTs would not be exceeded by the proposed Project in any of the SRAs that occur in the nine planning frames. Therefore, the analysis of the localized emissions applies equally to projects in all nine frames.

Typical Projects

Common Elements

Construction

Regional Impacts

Construction of the Common Elements Typical Project would generate air pollutant emissions from the use of heavy-duty construction equipment, construction worker vehicle trips, material deliveries, and trips by heavy-duty haul trucks. In addition, earthwork activities would result in fugitive dust emissions, and paving and coating activities would release VOCs from off-gassing. 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. The assessment of construction air quality impacts considers each of these potential sources. Fugitive PM_{10} and $PM_{2.5}$ emissions estimates take into account compliance with SCAQMD Rule 403.

As shown in Table 3.2-5 below, maximum daily project-related criteria and precursor pollutant emissions associated with the Common Elements Typical Project would not exceed any SCAQMD regional construction-period thresholds.

Table 3.2-5. Common Elements Typical Project Daily Construction-Period Regional Mass Emissions (pounds per day)

Construction Phase	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Demolition	1	20	9	<1	3	1
Site Preparation	1	8	10	<1	1	<1
Grading	3	40	20	<1	2	1
Building Construction	1	14	8	<1	1	1
Paving	1	8	10	<1	1	<1
Architectural Coatings	3	<1	1	<1	<1	<1
Maximum Daily Regional Emissions	3	40	20	<1	3	1

Construction Phase	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
SCAQMD Regional Construction Threshold	75	100	550	150	150	55
Exceed Significance Threshold?	No	No	No	No	No	No

Source: Emissions estimates using CalEEMod version 2016.3.2 (see Appendix C of this PEIR).
SO_X = sulfur oxides

Localized Emissions

Localized emissions would result from construction activities at the site and in the immediate vicinity of the Common Elements Typical Project area sensitive receptors. Onsite construction equipment emissions are considered, as well as 10 percent of offsite emissions to account for haul truck emissions on and around the project site. Table 3.2-6 shows the onsite emissions estimates for each of the modeled phases of the Common Elements Typical Project. As shown therein, no exceedances of the LSTs would occur.

Table 3.2-6. Common Elements Typical Project Daily Construction Period Localized Onsite Emissions (pounds per day)

Construction Phase	NO_X	CO	PM_{10}	$PM_{2.5}$
Demolition	11	6	3	1
Site Preparation	8	9	<1	<1
Grading	30	17	1	1
Building Construction	12	6	1	<1
Paving	8	9	<1	<1
Architectural Coatings	<1	<1	<1	<1
Maximum Daily Onsite Emissions[a]	30	17	3	1
SCAQMD Localized Significance Threshold[b]	98	630	13	6
Exceed Significance Threshold?	No	No	No	No

Source: Emissions estimates using CalEEMod version 2016.3.2 (see Appendix C of this PEIR).
[a] Accounts for onsite emissions identified in the CalEEMod run as well as 10 percent of offsite emissions to ensure that onsite haul truck emissions are captured.
[b] Localized thresholds are based on a 5-acre project site and 25-meter distance to receptors within a worst-case scenario using the SRA zones (12 and 2) in the study area that yield the strictest thresholds. SCAQMD has not developed LSTs for VOC, SO_2, or Pb emissions.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

Regional Emissions

Operation of the Common Elements Typical Project would generate air pollutant emissions associated with motor vehicle trips, onsite consumption of natural gas for space and water heating, onsite use of solvents and consumer products, and emissions associated with landscaping.

Operation-related emissions are shown in Table 3.2-7, below. Maximum daily project-related criteria and precursor pollutant emissions associated with the Common Elements Typical Project would not exceed any SCAQMD regional operation-period thresholds.

Table 3.2-7. Common Elements Typical Project Daily Operation Regional Mass Emissions (pounds per day)

Source	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area	<1	<1	<1	<1	<1	<1
Energy	<1	1	<1	<1	<1	<1
Mobile	8	37	84	<1	23	6
Total Daily Regional Emissions	8	37	84	<1	23	6
SCAQMD Regional Operation Threshold	55	55	550	150	150	55
Exceed Significance Threshold?	No	No	No	No	No	No

Source: Emissions estimates using CalEEMod version 2016.3.2 (see Appendix C of this PEIR).
SO_X = sulfur oxides

Localized Emissions

Localized emissions would result from operations activities that would occur at the site and in the immediate vicinity of project area sensitive receptors. Onsite area and energy emissions are considered, as well as 10 percent of offsite emissions to account for vehicle trip emissions on and around the project site. Table 3.2-8 shows the onsite emissions estimates for each of the modeled phases of the Common Elements Typical Project. As shown therein, no exceedances of the LSTs would occur.

Table 3.2-8. Common Elements Typical Project Daily Operation Period Localized Onsite Emissions (pounds per day)

Source	NOX	CO	PM_{10}	$PM_{2.5}$
Area	<0.1	<0.1	<0.1	<0.1
Energy	0.6	0.5	<0.1	<0.1
Mobile	3.7	8.4	2.3	0.6
Total Daily Onsite Emissions[a]	4.2	8.9	2.3	0.7
SCAQMD Localized Significance Threshold[b]	98	630	3	2
Exceed Significance Threshold?	No	No	No	No

Source: Emissions estimates using CalEEMod version 2016.3.2 (see Appendix C of this PEIR).
[a] Accounts for onsite emissions identified in the CalEEMod run as well as 10 percent of offsite emissions to ensure that onsite haul truck emissions are captured.
[b] Localized thresholds are based on a 5-acre project site and 25-meter distance to receptors within a worst-case scenario using the SRA zones (12 and 2) in the study area that yield the strictest thresholds. SCAQMD has not developed LSTs for VOC, SO_2, or Pb emissions.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Multi-Use Trails and Access Gateways

Construction

Regional Emissions

Construction of the Multi-Use Trails and Access Gateways Typical Project would generate air pollutant emissions from the use of heavy-duty construction equipment, construction worker vehicle trips, material deliveries, and trips by heavy-duty haul trucks. In addition, earthwork activities would result in fugitive dust emissions, and paving and coating operations would release VOCs from off-gassing. 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. The assessment of construction air quality impacts considers each of these potential sources. Fugitive PM_{10} and $PM_{2.5}$ emissions estimates take into account compliance with SCAQMD Rule 403.

Construction-related emissions are shown in Table 3.2-9, below. Maximum daily project-related criteria and precursor pollutant emissions associated with the Multi-Use Trails and Access Gateways Typical Project would not exceed any SCAQMD regional construction-period thresholds.

Table 3.2-9. Multi-Use Trails and Access Gateways Typical Project Daily Construction-Period Regional Mass Emissions (pounds per day)

Construction Phase	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Demolition	2	26	16	<1	3	1
Site Preparation	1	9	6	<1	<1	<1
Grading	3	59	21	<1	4	2
Building Construction	1	23	10	<1	1	1
Paving	1	21	9	<1	1	1
Architectural Coatings	2	6	7	<1	<1	<1
Maximum Daily Regional Emissions	3	59	21	<1	4	2
SCAQMD Regional Construction Threshold	75	100	550	150	150	55
Exceed Significance Threshold?	No	No	No	No	No	No

Source: Emissions estimates using CalEEMod version 2016.3.2 (see Appendix C of this PEIR).
SO_X = sulfur oxides

Localized Emissions

Localized emissions would result from construction activities that would occur at the site and in the immediate vicinity of project area sensitive receptors. Onsite construction equipment emissions are

considered, as well as 10 percent of offsite emissions to account for haul truck emissions on and around the project site. Table 3.2-10 shows the onsite emissions estimates for each of the modeled phases of the Multi-Use Trails and Access Gateways Typical Project. As shown therein, no exceedances of the LSTs would occur.

Table 3.2-10. Multi-Use Trails and Access Gateways Typical Project Daily Construction Period Localized Onsite Emissions (pounds per day)

Construction Phase	NO_X	CO	PM_{10}	$PM_{2.5}$
Demolition	18	14	3	1
Site Preparation	9	6	<1	<1
Grading	14	9	1	1
Building Construction	8	5	<1	<1
Paving	7	5	<1	<1
Architectural Coatings	6	7	<1	<1
Maximum Daily Onsite Emissions[a]	18	14	3	1
SCAQMD Localized Significance Threshold[b]	98	630	13	6
Exceed Significance Threshold?	No	No	No	No

Source: Emissions estimates using CalEEMod version 2016.3.2 (see Appendix C of this PEIR).
[a] Accounts for onsite emissions identified in the CalEEMod run as well as 10 percent of offsite emissions to ensure that onsite haul truck emissions are captured.
[b] Localized thresholds are based on a 5-acre project site and 25-meter distance to receptors within a worst-case scenario using the SRA zones (12 and 2) in the study area that yield the strictest thresholds. SCAQMD has not developed LSTs for VOC, SO_2, or Pb emissions.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

Regional Emissions

Operation of the Multi-Use Trails and Access Gateways Typical Project would generate air pollutant emissions associated with motor vehicle trips, onsite consumption of natural gas for space and water heating, onsite use of solvents and consumer products, and emissions associated with landscaping.

Operation-related emissions are shown in Table 3.2-11, below. Maximum daily project-related criteria and precursor pollutant emissions associated with the Multi-Use Trails and Access Gateways Typical Project would not exceed any SCAQMD regional operation-period thresholds.

Table 3.2-11. Multi-Use Trails and Access Gateways Typical Project Daily Operation Regional Mass Emissions (pounds per day)

Source	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area	<1	<1	<1	<1	<1	<1
Energy	<1	<1	<1	<1	<1	<1
Mobile	1	5	11	<1	3	1
Total Daily Regional Emissions	1	5	11	<1	3	1
SCAQMD Regional Operation Threshold	55	55	550	150	150	55
Exceed Significance Threshold?	No	No	No	No	No	No

Source: Emissions estimates using CalEEMod version 2016.3.2 (see Appendix C of this PEIR).
SO_X = sulfur oxides

Localized Emissions

Localized emissions would result from operations activities that would occur at the site and in the immediate vicinity of project area sensitive receptors. Onsite area and energy emissions are considered, as well as 10 percent of offsite emissions to account for vehicle trip emissions on and around the project site. Table 3.2-12 shows the onsite emissions estimates for each of the modeled phases of the Multi-Use Trails and Access Gateways Typical Project. As shown therein, no exceedances of the LSTs would occur.

Table 3.2-12. Multi-Use Trails and Access Gateways Typical Project Daily Operation Period Localized Onsite Emissions (pounds per day)

Source	NO_X	CO	PM_{10}	$PM_{2.5}$
Area	<0.1	<0.1	<0.1	<0.1
Energy	<0.1	<0.1	<0.1	<0.1
Mobile	0.5	1.1	0.3	<0.1
Total Daily Onsite Emissions[a]	0.5	1.1	0.3	<0.1
SCAQMD Localized Significance Threshold[b]	98	630	3	2
Exceed Significance Threshold?	No	No	No	No

Source: Emissions estimates using CalEEMod version 2016.3.2 (see Appendix C of this PEIR).
[a] Accounts for onsite emissions identified in the CalEEMod run as well as 10 percent of offsite emissions to ensure that onsite haul truck emissions are captured.
[b] Localized thresholds are based on a 5-acre project site and 25-meter distance to receptors within a worst-case scenario using the SRA zones (12 and 2) in the study area that yield the strictest thresholds. SCAQMD has not developed LSTs for VOC, SO_2, or Pb emissions.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

2020 LA River Master Plan Kit of Parts

The Common Elements Typical Project analyzed above could be implemented in whole or as a combination of its individual elements with KOP categories discussed below. Therefore, for potential impacts of the Common Elements Typical Project, see above. The impact discussion below focuses on specific KOP categories only.

As discussed above, the wide-ranging functions, characteristics, and complexity of the KOP categories and their respective design components—along with the lack of specific sites or detailed design information—make it particularly challenging to make informed assumptions about reasonable construction and operations scenarios for these elements of the *2020 LA River Master Plan*. The specific location (in-channel/off-channel, frame, etc.), configuration, and design details of these subsequent projects would depend on numerous factors, including the proponent of subsequent projects, the implementing agency, community needs, policy decisions, and availability of funding. Accordingly, the six KOP categories are qualitatively analyzed at a high level for this impact.

Because the impacts for the six KOP categories are the same, the impact analyses are grouped together.

KOP Categories 1 through 6

Projects under the KOP categories would likely be substantially larger than the Typical Projects. Because details about the KOP categories are unknown, emissions associated with construction and operations activities have not been quantified.

Construction

Implementation of the KOP categories would result in the generation of air pollutant emissions from heavy-duty construction equipment, construction worker vehicle trips, material deliveries, trips by heavy-duty haul trucks, earthwork activities, and other construction activities. Such emissions could exceed construction thresholds for regional and localized pollutant emissions depending on the schedules, equipment used, and material movement required.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

In the event that construction of an individual KOP category would result in emissions that exceed regional or localized standards, implementation of the following mitigation measures would be required for that KOP category.

Mitigation Measure AQ-1: Require Cleaner Construction Equipment and Vehicles and Low-VOC Coatings.

In the event that construction-period emissions exceed regional or localized emissions standards in effect at the time that subsequent project details are known, implementing agencies will implement the following or more effective measures to achieve emissions reductions:

- For exceedances of PM or NO_X regional or localized significance thresholds, the implementing agency (or its contractors) will:
    - **Require at Least Tier 4 Final Engines on Construction Equipment.** All off-road equipment greater than 50 horsepower and operating for more than 20 total hours over the entire duration of construction activities will operate on at least an EPA-approved Tier 4 Final or newer engine.
    - **Require Best Available Control Technology on Construction Equipment.** All construction off-road equipment must be outfitted with Best Available Control Technology devices including, but not limited to, CARB-certified Level 3 Diesel Particulate Filters.
    - **Require Use of Diesel Trucks with 2010-Compliant Model Year Engines.** Diesel trucks that have 2010 model year or newer engines, but no less than the average fleet mix for the current calendar year as set forth in CARB's EMFAC database, must be used. In the event that 2010 model year or newer diesel trucks cannot be obtained, a rationale explaining why and showing that a good-faith effort to locate such engines was conducted must be documented.
    - **Require Low-VOC Coatings during Construction.** To reduce construction-related fugitive VOC emissions beyond the requirements of SCAQMD Rule 1113, low-VOC coatings that have a VOC content of 25 grams per liter or less will be used during construction. Evidence must be submitted to SCAQMD detailing the use of low-VOC coatings prior to the start of construction.

Apply the following mitigation measure, which is described in Section 3.7, *Greenhouse Gas Emissions.*

Mitigation Measure GHG-2: Implement Construction GHG Emissions Reduction Strategies.

Significance after Required Mitigation

Although Mitigation Measures GHG-2 and AQ-1 would control construction-period emissions under the KOP categories, it cannot be stated with certainty that emissions would be below applicable regional or localized emissions thresholds. Impacts would be significant and unavoidable.

Operations

Operation of the KOP categories would generate air pollutant emissions associated with motor vehicle trips, onsite consumption of natural gas for space and water heating, onsite use of solvents and consumer products, landscaping, and other sources. Emissions could exceed operational thresholds for regional and localized pollutant emissions depending on project details.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Mitigation Measure AQ-2: Implement Operations Strategies to Reduce VOC Emissions.

The implementing agency will verify if operations air pollutant emissions exceed regional or localized VOC emissions standards in effect at the time that subsequent project details are

known. In the event that operations emissions under subsequent projects exceed regional or localized VOC emissions standards, the implementing agency will implement the following to achieve VOC emissions reductions during operations.

- Use low-VOC coatings (VOC content less than or equal to 25 grams per liter) for periodic painting and facility upkeep.

Apply the following mitigation measure, which is described in Section 3.7, *Greenhouse Gas Emissions*.

Mitigation Measure GHG-1a: Implement Sector-Specific Operations GHG Emissions Reduction Strategies.

As discussed in Section 3.16, *Transportation*, multiple design components of KOP Categories 1 through 6 were determined to have the potential to generate a significant vehicle miles traveled (VMT) impact. If, as part of Mitigation Measure TRA-1a, the subsequent project cannot be screened out using the County's VMT impact criteria and the VMT is determined to exceed the threshold based on applicable guidelines and project type, apply the following mitigation measure, which is described in Section 3.16, *Transportation*.

Mitigation Measure TRA-1b: Implement TDM Strategies and/or Enhancements to Reduce VMT.

This mitigation measure would require implementation of a project-specific program utilizing transportation demand management (TDM) strategies and neighborhood or site enhancements to reduce VMT. By reducing VMT, this mitigation measure would also reduce criteria air pollutant emissions from vehicles associated with operations.

These mitigation measures can be implemented in any combination to further reduce the emissions.

Significance after Required Mitigation

Although Mitigation Measures GHG-1a, AQ-2, and TRA-1b would control operation period emissions under the KOP categories, it cannot be stated with certainty that emissions would be below applicable regional or localized emissions thresholds. Impacts would be significant and unavoidable.

Overall 2020 LA River Master Plan Implementation

Construction

The impact discussion above for the six KOP categories would similarly apply to the overall *2020 LA River Master Plan*.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

On a project-by-project basis, apply the following mitigation measure, which is described above.

Mitigation Measure AQ-1: Require Cleaner Construction Equipment and Vehicles and Low-VOC Coatings.

On a project-by-project basis, apply the following mitigation measure, which is described in Section 3.7, *Greenhouse Gas Emissions*.

Mitigation Measure GHG-2: Implement Construction GHG Emissions Reduction Strategies.

Significance after Required Mitigation

It cannot be stated with certainty that emissions would be below applicable regional or localized emissions thresholds. Impacts would be significant and unavoidable.

Operations

The impact discussion above for the six KOP categories would similarly apply to the overall *2020 LA River Master Plan*.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

On a project-by-project basis, apply the following mitigation measure, which is described above.

Mitigation Measure AQ-2: Implement Operations Strategies to Reduce VOC Emissions.

On a project-by-project basis, apply the following mitigation measure, which is described in Section 3.7, *Greenhouse Gas Emissions*.

Mitigation Measure GHG-1a: Implement Sector-Specific Operations GHG Emissions Reduction Strategies.

On a project-by-project basis, apply the following mitigation measure, which is described in Section 3.16, *Transportation*.

Mitigation Measure TRA-1b: Implement TDM Strategies and/or Enhancements to Reduce VMT.

Significance after Required Mitigation

It cannot be stated with certainty that emissions from the overall *2020 LA River Master Plan* would be below applicable regional or localized emissions thresholds. Impacts would be significant and unavoidable.

Impact 3.2(c): Would the proposed Project expose sensitive receptors to substantial pollutant concentrations?

Similar to Impact 3.2(b), the significance of this impact is determined, in part, based on SCAQMD's regional and localized thresholds (see Table 3.2-4). The analysis of the regional and localized impacts would apply equally to projects in all nine frames. The significance determination for the other elements of Impact 3.2(c) (i.e., health risks, CO hot spots, asbestos) are also not based on frame-specific information. As such, this analysis would apply equally to projects in all nine planning frames.

Typical Projects

The primary pollutants of concern to human health generated by the *2020 LA River Master Plan* construction are criteria pollutants and TACs. Both pollutants and their potential impacts on receptors are analyzed below.

Common Elements

Construction

Criteria Pollutants

As shown in Table 3.2-5, above, the estimated regional construction emissions associated with the Common Elements Typical Project would not exceed any of SCAQMD's regional significance thresholds for criteria pollutants. Moreover, as shown in Table 3.2-6, above, estimated localized construction emissions associated with the Common Elements Typical Project would not exceed any of SCAQMD's LSTs for criteria pollutants. The LSTs represent emission levels that would cause or contribute to a violation of any short-term NAAQS or CAAQS for a particular area, and because the Common Elements Typical Project would not exceed these LSTs, the Common Elements Typical Project would not cause or contribute to a violation of any health-protective standard. Accordingly, an analysis correlating the relatively minor emissions generated by construction of the Common Elements Typical Project with specific levels of health impacts would not yield reliable or accurate results and has therefore not been conducted. Furthermore, it should be noted that the NAAQS and CAAQS are health-protective standards and define the maximum amount of ambient pollution that can be present without harming public health. SCAQMD's LSTs represent the level of pollutant emissions from onsite sources from a project that would not exceed the most stringent applicable federal or State ambient air quality standards. As such, projects with emissions below the applicable LSTs will not be in violation of the NAAQS or CAAQS, and, by extension, EPA and CARB health-protective standards. As shown in Table 3.2-6, the maximum daily emissions from construction would not exceed the applicable LSTs. Therefore, there would be no violations of the health-protective CAAQS and NAAQS. As such, the Common Elements Typical Project would not be expected to contribute a significant level of air pollution during construction such that air quality within the Basin would be degraded. Criteria pollutant emissions would not expose receptors to substantial pollutant concentrations or risk.

Asbestos

Demolition of existing structures results in particulates that may disperse ACM to adjacent sensitive receptor locations. ACM were commonly used as fireproofing and insulating agents prior to the 1970s. The U.S. Consumer Product Safety Commission banned use of most ACM in 1977 due to its link to mesothelioma. Structures constructed prior to 1977 that would be demolished by the development supported by the Common Elements Typical Project may have used ACM and could expose receptors to asbestos, which may become airborne with other particulates during demolition. However, demolition activities during construction would comply with SCAQMD Rule 1403, which specifies work practices to limit asbestos emissions from building demolition to protect surrounding uses from exposure to asbestos emissions. Furthermore, all demolition activities would be subject to EPA's asbestos NESHAP if asbestos is present at the existing facilities. The asbestos NESHAP regulations protect the public by minimizing the release of asbestos fibers during activities involving the processing, handling, and disposal of ACM. Asbestos emissions would be controlled according to SCAQMD and EPA regulations.

Toxic Air Contaminants

Construction of the Common Elements Typical Project would generate onsite DPM emissions from diesel-powered construction equipment and vehicles that could expose adjacent receptors to significant health risks. Without specific details on the locations of building footprints, a quantitative evaluation of potential health risk impacts is not possible. Depending on the proximity of an individual development of the Common Elements Typical Project, there may be instances where DPM emissions could result in cancer or non-cancer health risks that exceed SCAQMD's thresholds.

Impact Determination

Construction of the Common Elements Typical Project would not be expected to contribute a substantial level of air pollution such that air quality within the Basin would be degraded. Criteria pollutant emissions would not expose receptors to substantial pollutant concentrations or risk. Asbestos emissions would be controlled according to SCAQMD and EPA regulations. Without specific details on the locations of construction activities, it is conservatively assumed that there may be instances where DPM emissions could result in cancer or non-cancer health risks that exceed SCAQMD's thresholds. Therefore, impacts would be potentially significant.

Mitigation Measures

Mitigation Measure AQ-3: Require Subsequent Projects that Exceed the SCAQMD LSTs and Are within 1,000 Feet of Sensitive Receptors to Perform a Health Risk Assessment and Implement Measures to Reduce Health Risks.

For subsequent projects that (1) exceed the SCAQMD LSTs and (2) are within 1,000 feet of existing sensitive receptors, as defined by SCAQMD (e.g., residences, daycares), the implementing agency will prepare a site-specific construction and operational HRA. The HRA must identify whether the health risk exposures for adjacent receptors will be less than the SCAQMD project-level thresholds. If the HRA demonstrates that the health risk exposures for adjacent receptors will be less than SCAQMD project-level thresholds, then additional mitigation will be unnecessary. However, if the HRA demonstrates that health risks will exceed SCAQMD project-level thresholds, additional on- and offsite mitigation will be analyzed by the implementing agency to help reduce risks to the greatest extent practicable. Mitigation Measures AQ-1 and GHG-2 will be required.

On a project-by-project basis, apply the following mitigation measure, which is described above.

Mitigation Measure AQ-1: Require Cleaner Construction Equipment and Vehicles and Low-VOC Coatings.

Apply the following mitigation measure, which is described in Section 3.7, *Greenhouse Gas Emissions*.

Mitigation Measure GHG-2: Implement Construction GHG Emissions Reduction Strategies.

Significance after Required Mitigation

Because it cannot be concluded what the result of the subsequent project-level evaluation will be without speculation, it is possible that mitigation for future project health risks may be inadequate to reduce construction impacts below SCAQMD's threshold level. Impacts would be significant and unavoidable.

Operation

Criteria Pollutants

As shown in Table 3.2-7, above, the estimated regional operations emissions associated with the Common Elements Typical Project would not exceed any of SCAQMD's regional significance thresholds for criteria pollutants. Moreover, as shown in Table 3.2-8, above, estimated localized construction emissions associated with operations of the Common Elements Typical Project would not exceed any of SCAQMD's LSTs for criteria pollutants. The LSTs represent emission levels that would cause or contribute to a violation of any short-term NAAQS or CAAQS for a particular area, and because the Common Elements Typical Project would not exceed these LSTs, the Common Elements Typical Project would not cause or contribute to a violation of any health-protective standard. Accordingly, an analysis correlating the relatively minor emissions generated by operation of the Common Elements Typical Project with specific levels of health impacts would not yield reliable or accurate results and has therefore not been conducted. Furthermore, it should be noted that the NAAQS and CAAQS are health-protective standards and define the maximum amount of ambient pollution that can be present without harming public health. SCAQMD's LSTs represent the level of pollutant emissions from onsite sources from a project that would not exceed the most stringent applicable federal or State ambient air quality standards. As such, projects with emissions below the applicable LSTs will not be in violation of the NAAQS or CAAQS, and, by extension, EPA and CARB health-protective standards. As shown in Table 3.2-8, the maximum daily emissions from operations would not exceed the applicable LSTs. Therefore, there would be no violations of the health-protective CAAQS and NAAQS. As such, the Common Elements Typical Project would not be expected to contribute a significant level of air pollution during operations such that air quality within the Basin would be degraded. Criteria pollutant emissions would not expose receptors to substantial pollutant concentrations or risk.

CO Hot Spots

It should be noted that ambient concentrations of CO have declined considerably in California because of existing controls and programs aimed at reducing air pollutant emissions. Most areas of the State, including the region in which the Common Elements Typical Project is located, meet the State and federal CO standards.

To determine the potential for localized CO impacts occurring from the addition of project-associated traffic volumes at intersections, SCAQMD's suggested criteria recommend performing a localized CO impact analysis for intersections that change from LOS C to D as a result of a project and for all intersections rated LOS D or worse where a project increases the V/C ratio by 2 percent or more. It is also common practice to compare the highest daily traffic volumes that would occur among the study intersections analyzed for a project with the highest traffic volumes at the busiest intersection evaluated in the 2003 AQMP to evaluate the potential for a project to result in any localized CO impacts.

The specific location and design details of the Common Elements Typical Project are currently unknown. As such, it is not possible to analyze the effect of project-generated traffic on LOS for unknown intersections or daily traffic volume for unknown roadways in the project area. However, it is unlikely that 1-hour or 8-hour CO concentrations generated along project vicinity roadways would not exceed CAAQS for CO.

Based on ambient air monitoring data collected by SCAQMD, the Basin has continually met State and federal ambient air quality standards for CO since 2003. As such, the Basin was reclassified to attainment/maintenance status from serious nonattainment, effective June 11, 2007. While the Final 2016 AQMP is the most recent AQMP, no additional regional or hot-spot CO modeling has been conducted to demonstrate attainment of the 8-hour average CO standard since the analysis provided in the 2003 AQMP.

As shown earlier in Table 3.2-1, the maximum recorded background CO concentration in the project area in the past 3 years is 2.6 ppm for the 8-hour averaging period. This value is considerably less than the 8-hour average maximum background concentration of 7.8 ppm observed during the 2003 AQMP attainment demonstration.

Due to this considerable reduction in ambient background CO concentrations, and the low trip-generation nature of operations of the Common Elements Typical Project, it is not anticipated that the Common Elements Typical Project would cause local CO concentrations to exceed 1-hour or 8-hour CO standards.

Toxic Air Contaminants

The Common Elements Typical Project would not introduce new sensitive land uses (e.g., residences, schools, hospitals, convalescent homes, daycare centers) that may have sensitive receptors exposed to any existing TAC hazard exacerbated by the Common Elements Typical Project. Accordingly, no analysis of the potential effect of the environment on Common Elements Typical Project receptors is required. This analysis considers the effect of the Common Elements Typical Project development on existing receptors.

Operation of the Common Elements Typical Project is not anticipated to generate a substantial amount of onsite DPM emissions from diesel-powered maintenance equipment or diesel-powered trucks that could expose adjacent receptors to significant health risks. Furthermore, no diesel-powered stationary sources (e.g., generators, boilers) are anticipated to be constructed. However, without specific details on the locations of building footprints, a quantitative evaluation of potential health risk impacts is not possible. Depending on the proximity of an individual development of the Common Elements Typical Project, there may be instances where DPM emissions from operations could result in cancer or non-cancer health risks that exceed SCAQMD's thresholds.

Impact Determination

Operation of the Common Elements Typical Project would not be expected to contribute a substantial level of air pollution such that air quality within the Basin would be degraded. Criteria pollutant emissions would not expose receptors to substantial pollutant concentrations or risk. It not anticipated that the Common Elements Typical Project would exceed the most stringent 1-hour CO standard and no detailed CO hot spots analysis would be required. No analysis of the potential effect of the environment on Common Elements Typical Project's receptors is required given that the Common Elements Typical Project would not introduce new sensitive land uses to the project study area. However, without specific details on the locations of building footprints, it is conservatively assumed that there may be instances where DPM emissions from operations could result in cancer or non-cancer health risks that exceed SCAQMD's thresholds. Therefore, impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure AQ-2: Implement Operations Emissions-Reduction Strategies.

Mitigation Measure AQ-3: Require Future Projects that Exceed the SCAQMD LSTs and Are within 1,000 Feet of Sensitive Receptors to Perform a Health Risk Assessment and Implement Measures to Reduce Health Risks.

Apply the following mitigation measure, which is described in Section 3.7, *Greenhouse Gas Emissions*.

Mitigation Measure GHG-1a: Implement Sector-Specific Operations GHG Emissions Reduction Strategies.

Apply the following mitigation measure, which is described in Section 3.16, *Transportation*.

Mitigation Measure TRA-1b: Implement TDM Strategies and/or Enhancements to Reduce VMT.

Significance after Required Mitigation

Because it cannot be concluded what the result of the project-level evaluation will be without speculation, it is possible that mitigation for future project health risks may be inadequate to reduce operations impacts below SCAQMD's threshold level. Impacts would be significant and unavoidable.

Multi-Use Trails and Access Gateways

Construction

Impacts from construction of the Multi-Use Trails and Access Gateways Typical Project would be similar to those of the Common Elements Typical Project described above.

As shown in Table 3.2-9, above, the estimated regional construction emissions associated with the Multi-Use Trails and Access Gateways Typical Project would not exceed any of SCAQMD's regional significance thresholds for criteria pollutants. Moreover, as shown in Table 3.2-10, above, estimated localized construction emissions associated with construction of the Multi-Use Trails and Access Gateways Typical Project would not exceed any of SCAQMD's LSTs for criteria pollutants. Therefore, there would be no violations of the health-protective CAAQS and NAAQS. As such, the Multi-Use Trails and Access Gateways Typical Project would not be expected to contribute a significant level of air pollution such that air quality within the Basin would be degraded. Criteria pollutant emissions would not expose receptors to substantial pollutant concentrations or risk. However, without specific details on the locations of construction activities, it is conservatively assumed that there may be instances where DPM emissions could result in cancer or non-cancer health risks that exceed SCAQMD's thresholds.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure AQ-1: Require Cleaner Construction Equipment and Vehicles and Low-VOC Coatings.

Mitigation Measure AQ-3: Require Future Projects that Exceed the SCAQMD LSTs and Are within 1,000 Feet of Sensitive Receptors to Perform a Health Risk Assessment and Implement Measures to Reduce Health Risks.

Apply the following mitigation measure, which is described in Section 3.7, *Greenhouse Gas Emissions*.

Mitigation Measure GHG-2: Implement Construction GHG Emissions Reduction Strategies.

Significance after Required Mitigation

Because it cannot be concluded what the result of the project-level evaluation will be without speculation, it is possible that mitigation for future project health risks may be inadequate to reduce construction impacts below SCAQMD's threshold level. Impacts would be significant and unavoidable.

Operations

Impacts from operation of the Multi-Use Trails and Access Gateways Typical Project would be similar to those of the Common Elements Typical Project described above.

As shown in Table 3.2-11, above, the estimated regional operation emissions associated with the Multi-Use Trails and Access Gateways Typical Project would not exceed any of SCAQMD's regional significance thresholds for criteria pollutants. Moreover, as shown in Table 3.2-12, above, estimated localized operation emissions associated with the Multi-Use Trails and Access Gateways Typical Project would not exceed any of SCAQMD's LSTs for criteria pollutants. Therefore, there would be no violations of the health-protective CAAQS and NAAQS. As such, the Multi-Use Trails and Access Gateways Typical Project would not be expected to contribute a significant level of air pollution during operations such that air quality within the Basin would be degraded. Criteria pollutant emissions would not expose receptors to substantial pollutant concentrations or risk.

It is not anticipated that the Multi-Use Trails and Access Gateways Typical Project would exceed the most stringent 1-hour CO standard and no detailed CO hot spots analysis would be required. The Multi-Use Trails and Access Gateways Typical Project is not expected to result in high additional traffic volumes at the roadways within the project vicinity. The main objective of the Multi-Use Trails and Access Gateways Typical Project is to connect to other trails and paths along the length of the river to create a mobility network across the County for cyclists, pedestrians, and equestrians.

However, without specific details on the locations of building footprints, it is conservatively assumed that there may be instances where DPM emissions during operations could result in cancer or non-cancer health risks that exceed SCAQMD's thresholds.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure AQ-2: Implement Operations Strategies to Reduce VOC Emissions.

Mitigation Measure AQ-3: Require Subsequent Projects that Exceed the SCAQMD LSTs and Are within 1,000 Feet of Sensitive Receptors to Perform a Health Risk Assessment and Implement Measures to Reduce Health Risks.

Apply the following mitigation measure, which is described in Section 3.7, *Greenhouse Gas Emissions*.

Mitigation Measure GHG-1a: Implement Sector-Specific Operations GHG Emissions Reduction Strategies.

Apply the following mitigation measure, which is described in Section 3.16, *Transportation*.

Mitigation Measure TRA-1b: Implement TDM Strategies and/or Enhancements to Reduce VMT.

Significance after Required Mitigation

Because it cannot be concluded what the result of the project-level evaluation will be without speculation, it is possible that mitigation for future project health risks may be inadequate to reduce operations impacts below SCAQMD's threshold level. Impacts would be significant and unavoidable.

2020 LA River Master Plan Kit of Parts

The Common Elements Typical Project analyzed above could be implemented in whole or as a combination of its individual elements with all the KOP categories discussed below. Therefore, for potential impacts of Common Elements Typical Project, see above. The impact discussion below focuses on specific KOP categories only.

Because the impacts for KOP Categories 1 through 5 are the same, these impact analyses are grouped together. The impact for KOP Category 6 is analyzed separately.

KOP Categories 1 through 5

The specific location and design details for the KOP Categories 1 through 5 are currently unknown. Projects under the KOP categories would likely be substantially larger than the Typical Projects. Because details about the KOP categories are unknown, emissions associated with construction and operations activities have not been quantified.

Impacts from the KOP categories would be similar to those of the Typical Projects described above. The difference in construction and operations impacts is discussed below.

Construction

As discussed above for Impact 3.2(b), implementation of the KOP categories would result in the generation of air pollutant emissions during construction activities. Because the specific location (in-channel/off-channel, frame, etc.), configuration, and design details about KOP Categories 1 through 5 are unknown, emissions associated with construction activities under the KOP categories have not been quantified. Unlike under the Typical Projects, such emissions could exceed construction

thresholds and expose sensitive receptors to substantial pollutant concentrations, depending on the schedules, equipment used, and material movement required. These emissions, if left unmitigated, could contribute to ground-level ozone formation in the Basin, which at certain concentrations, can contribute to short- and long-term human health effects. Certain individuals residing in areas that do not meet the CAAQS or NAAQS, including the Basin, could be exposed to pollutant concentrations that cause or aggregate acute and/or chronic health conditions (e.g., asthma, lost work days, premature mortality). As previously discussed, the magnitude and locations of any potential changes in ambient air quality, and related health consequences, from these additional emissions cannot be quantified with a high level of certainty due to the dynamic and complex nature of pollutant formation and distribution (e.g., meteorology, emissions sources, sunlight exposure). Similar limitations exist for precisely modeling project-level health consequences of directly emitted DPM. However, it is known that public health will continue to be affected in the Basin so long as the region does not attain the CAAQS or NAAQS.

Impact Determination

In the event that KOP Categories 1 through 5 construction activities result in emissions that exceed regional or localized standards at the time plans for the development are further developed, a potentially significant impact would occur. In addition, without specific details on the locations of construction activities, it is conservatively assumed that there may be instances where DPM emissions could result in cancer or non-cancer health risks that exceed SCAQMD's thresholds. Therefore, KOP Categories 1 through 5 would potentially expose sensitive receptors to substantial pollutant concentrations during construction resulting in a potentially significant impact.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure AQ-1: Require Cleaner Construction Equipment and Vehicles and Low-VOC Coatings.

Apply the following mitigation measure, which is described in Section 3.7, *Greenhouse Gas Emissions*.

Mitigation Measure GHG-2: Implement Construction GHG Emissions Reduction Strategies.

In the event that the emission thresholds are exceeded, apply the following mitigation measure, which is described above.

Mitigation Measure AQ-3: Require Subsequent Projects that Exceed the SCAQMD LSTs and Are within 1,000 Feet of Sensitive Receptors to Perform a Health Risk Assessment and Implement Measures to Reduce Health Risks.

Mitigation Measure AQ-3 would apply to this impact, which requires that development that exceeds the LTSs and is within 1,000 feet of existing sensitive receptors prepare a site-specific construction HRA. If the HRA demonstrates that the health risk exposures for adjacent receptors would exceed SCAQMD project-level thresholds, additional feasible on- and offsite mitigation would be analyzed by the implementing agency to help reduce risks to the greatest extent practicable.

Significance after Required Mitigation

Because it cannot be concluded what the result of the project-level evaluation will be without speculation, it is possible that mitigation for future project health risks may be inadequate to reduce construction impacts below SCAQMD's threshold level. Impacts would be significant and unavoidable.

Operations

As discussed above for Impact 3.2(b), the implementation of the KOP categories would result in the generation of air pollutant emissions during operations activities. Because the specific location (in-channel/off-channel, frame, etc.), configuration, and design details about KOP Categories 1 through 5 are unknown, emissions associated with operations activities under the KOP Categories have not been quantified. Unlike under the Typical Projects, such emissions could exceed operation thresholds and expose sensitive receptors to substantial pollutant concentrations, depending on the operational sources of emissions (e.g., diesel-fueled equipment, trucks, and stationary sources). These emissions, if left unmitigated, could contribute to ground-level ozone formation in the Basin, which, at certain concentrations, can contribute to short- and long-term human health effects. Certain individuals residing in areas that do not meet the CAAQS or NAAQS, including the Basin, could be exposed to pollutant concentrations that cause or aggregate acute and/or chronic health conditions (e.g., asthma, lost work days, premature mortality). As previously discussed, the magnitude and locations of any potential changes in ambient air quality, and related health consequences, from these additional emissions cannot be quantified with a high level of certainty due to the dynamic and complex nature of pollutant formation and distribution (e.g., meteorology, emissions sources, sunlight exposure). Similar limitations exist for precisely modeling project-level health consequences of directly emitted DPM. However, it is known that public health will continue to be affected in the Basin so long as the region does not attain the CAAQS or NAAQS.

Impact Determination

In the event that KOP Categories 1 through 5 operations activities result in emissions that exceed regional or localized standards at the time plans for the development are further developed, a potentially significant impact would occur. In addition, without specific details on the locations of building footprints, it is conservatively assumed that there may be instances where DPM emissions could result in cancer or non-cancer health risks that exceed SCAQMD's thresholds. Therefore, KOP Categories 1 through 5 would potentially expose sensitive receptors to substantial pollutant concentrations during operations, resulting in a potentially significant impact.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure AQ-2: Implement Operations Strategies to Reduce VOC Emissions.

Apply the following mitigation measure, which is described in Section 3.7, *Greenhouse Gas Emissions*.

Mitigation Measure GHG-1a: Implement Sector-Specific Operations GHG Emissions Reduction Strategies.

Apply the following mitigation measure, which is described in Section 3.16, *Transportation*.

Mitigation Measure TRA-1b: Implement TDM Strategies and/or Enhancements to Reduce VMT.

In the event that the emission thresholds are exceeded, apply the following mitigation measure, which is described above.

Mitigation Measure AQ-3: Require Subsequent Projects that Exceed the SCAQMD LSTs and Are within 1,000 Feet of Sensitive Receptors to Perform a Health Risk Assessment and Implement Measures to Reduce Health Risks.

Mitigation Measure AQ-3 would apply to this impact, which requires that development that exceeds the LTSs and is within 1,000 feet of existing sensitive receptors prepare a site-specific operational HRA. If the HRA demonstrates that the health risk exposures for adjacent receptors would exceed SCAQMD project-level thresholds, additional feasible on- and offsite mitigation would be analyzed by the implementing agency to help reduce risks to the greatest extent practicable.

Significance after Required Mitigation

Because it cannot be concluded what the result of the project-level evaluation will be without speculation, it is possible that mitigation for future project health risks may be inadequate to reduce operations impacts below SCAQMD's threshold level. Impacts would be significant and unavoidable.

KOP Category 6

The following design components could be constructed under KOP Category 6: affordable housing, cultural centers, urban agriculture/composting, water storage, water treatment facilities, dry wells, spreading grounds, purple pipe connections, storm drain daylighting, injection wells, solar panels, fields, and parks. Examples of recreational uses include a playground, a recreational field, and arts and culture facilities. Examples of ecological uses include orchards, composting centers, community gardens, and ponds.

Impacts from KOP Category 6 would be similar to those of the other KOP categories described above. The difference in impacts is described below.

Construction

Construction impacts would be substantially similar to those identified for KOP Categories 1 through 5.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure AQ-1: Require Cleaner Construction Equipment and Vehicles and Low-VOC Coatings.

Apply the following mitigation measure, which is described in Section 3.7, *Greenhouse Gas Emissions*.

Mitigation Measure GHG-2: Implement Construction GHG Emissions Reduction Strategies.

In the event that the emission thresholds are exceeded, apply the following mitigation measure, which is described above.

Mitigation Measure AQ-3: Require Subsequent Projects that Exceed the SCAQMD LSTs and Are within 1,000 Feet of Sensitive Receptors to Perform a Health Risk Assessment and Implement Measures to Reduce Health Risks.

Mitigation Measure AQ-3 would apply to this impact, which requires that development that exceeds the LTSs and is within 1,000 feet of existing sensitive receptors prepare a site-specific construction HRA. If the HRA demonstrates that the health risk exposures for adjacent receptors would exceed SCAQMD project-level thresholds, additional feasible on- and offsite mitigation would be analyzed by the implementing agency to help reduce risks to the greatest extent practicable.

Significance after Required Mitigation

Because it cannot be concluded what the result of the project-level evaluation will be without speculation, it is possible that mitigation for future project health risks may be inadequate to reduce construction impacts below SCAQMD's threshold level. Impacts would be significant and unavoidable.

Operations

KOP Category 6 could introduce a new sensitive land use (residences) that may have sensitive receptors that would be exposed to any existing TAC hazards exacerbated by design components (e.g., water treatment plant) of KOP Category 6. Accordingly, an analysis of the potential effect of the environment on KOP Category 6 receptors is required. Without details on the specific locations (in-channel/off-channel, frame, etc.), configuration, and design of the design components developed under KOP Category 6, a quantitative evaluation of potential health risk impacts on the onsite sensitive receptors is not possible. Depending on the proximity of individual projects to existing TAC hazards, there may be instances where DPM emissions could result in cancer or non-cancer health risks that exceed SCAQMD's thresholds.

Impact Determination

The impact discussion above for KOP Categories 1 through 5 would similarly apply to KOP Category 6. Also, KOP Category 6 would result in additional impacts from the potential siting of sensitive receptors in close proximity to existing TAC hazards. Therefore, KOP Category 6 would potentially expose sensitive receptors to substantial pollutant concentrations during operations, resulting in a potentially significant impact.

Mitigation Measures

Mitigation Measure AQ-4: Require Subsequent Projects with Sensitive Receptors within 1,000 Feet of Existing Toxic Air Contaminant Hazards to Perform a Health Risk Assessment.

For subsequent projects with sensitive receptors (e.g., affordable housing) within 1,000 feet of existing TAC hazards (e.g., heavily traveled roadways, stationary sources), the implementing agency will prepare a site-specific construction and operational HRA. If the HRA demonstrates that the health risk exposures for onsite receptors will be less than SCAQMD project-level thresholds, then additional mitigation would be unnecessary. However, if the HRA demonstrates that health risks will exceed SCAQMD project-level thresholds, additional feasible onsite mitigation (e.g., air filters with a higher Minimum Efficiency Reporting Value rating) will be analyzed by the implementing agency to help reduce risks to the greatest extent practicable.

Apply the following mitigation measure, which is described above.

Mitigation Measure AQ-2: Implement Operations Strategies to Reduce VOC Emissions.

Apply the following mitigation measure, which is described in Section 3.7, *Greenhouse Gas Emissions*.

Mitigation Measure GHG-1a: Implement Sector-Specific Operations GHG Emissions Reduction Strategies.

Apply the following mitigation measure, which is described in Section 3.16, *Transportation*.

Mitigation Measure TRA-1b: Implement TDM Strategies and/or Enhancements to Reduce VMT.

In the event that the emission thresholds are exceeded, apply the following mitigation measure, which is described above.

Mitigation Measure AQ-3: Require Subsequent Projects that Exceed the SCAQMD LSTs and Are within 1,000 Feet of Sensitive Receptors to Perform a Health Risk Assessment and Implement Measures to Reduce Health Risks.

Mitigation Measure AQ-3 would apply to this impact, which requires that development that exceeds the LTSs and is within 1,000 feet of existing sensitive receptors prepare a site-specific operational HRA. If the HRA demonstrates that the health risk exposures for adjacent receptors would exceed SCAQMD project-level thresholds, additional feasible on- and offsite mitigation will be analyzed by the implementing agency to help reduce risks to the greatest extent practicable.

Significance After Required Mitigation

Because it cannot be concluded what the result of the project-level evaluation will be without speculation, it is possible that mitigation for future project health risks may be inadequate to reduce operations impacts below SCAQMD's threshold level. Impacts would be significant and unavoidable.

Overall 2020 LA River Master Plan Implementation

Construction

Construction of the *2020 LA River Master Plan* would result in criteria pollutant and TAC emissions. Because details about the *2020 LA River Master Plan* construction scenario are unknown, emissions associated with the entirety of the *2020 LA River Master Plan* have not been quantified. Because development of the *2020 LA River Master Plan* represents all of the Typical Projects and KOP categories combined, the associated exposure of sensitive receptors to substantial pollutant concentrations resulting in health risks could result in a significant impact.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure AQ-1: Require Cleaner Construction Equipment and Vehicles and Low-VOC Coatings.

Mitigation Measure AQ-3: Require Subsequent Projects that Exceed the SCAQMD LSTs and Are within 1,000 Feet of Sensitive Receptors to Perform a Health Risk Assessment and Implement Measures to Reduce Health Risks.

Apply the following mitigation measure, which is described in Section 3.7, *Greenhouse Gas Emissions*.

Mitigation Measure GHG-2: Implement Construction GHG Emissions Reduction Strategies.

Significance after Required Mitigation

Although mitigation would be implemented for all projects developed under the *2020 LA River Master Plan* to ensure that impacts are minimized to the extent feasible, it cannot be stated that health risks from construction activities would be reduced to a level that would be below SCAQMD thresholds. Impacts would be significant and unavoidable.

Operations

Operation of the *2020 LA River Master Plan* would result in criteria pollutant and TAC emissions. Because details about the *2020 LA River Master Plan* operation scenario are unknown, emissions associated with the entirety of the *2020 LA River Master Plan* have not been quantified. Because development of the *2020 LA River Master Plan* represents all of the Typical Projects and KOP categories combined, the associated exposure of sensitive receptors to substantial pollutant concentrations resulting in health risks could result in a significant impact.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measures, which are described above.

Mitigation Measure AQ-2: Implement Operations Strategies to Reduce VOC Emissions.

Mitigation Measure AQ-3: Require Subsequent Projects that Exceed the SCAQMD LSTs and Are within 1,000 Feet of Sensitive Receptors to Perform a Health Risk Assessment and Implement Measures to Reduce Health Risks.

Mitigation Measure AQ-4: Require Subsequent Projects with Sensitive Receptors within 1,000 Feet of Existing Toxic Air Contaminant Hazards to Perform a Health Risk Assessment.

Apply the following mitigation measure, which is described in Section 3.7, *Greenhouse Gas Emissions*.

Mitigation Measure GHG-1a: Implement Sector-Specific Operations GHG Emissions Reduction Strategies.

Apply the following mitigation measure, which is described in Section 3.16, *Transportation*.

Mitigation Measure TRA-1b: Implement TDM Strategies and/or Enhancements to Reduce VMT.

Significance after Required Mitigation

Although mitigation would be implemented for all projects developed under the *2020 LA River Master Plan* to ensure that impacts are minimized to the extent feasible, it cannot be stated that health risks from operations activities would be reduced to a level that would be below SCAQMD thresholds. Impacts would be significant and unavoidable.

Impact 3.2(d): Would the proposed Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

The significance of this impact is largely determined based on SCAQMD's list of land uses associated with odor complaints. The land uses list is applicable to projects within the Basin. As all of the nine planning frames are within the Basin, the analysis of the odor impacts would apply equally to projects in all nine frames.

Typical Projects

Common Elements and Multi-Use Trails and Access Gateways

Construction and Operations

According to the SCAQMD's *CEQA Air Quality Handbook*, land uses associated with odor complaints typically include agricultural uses, wastewater treatment facilities, food processing plants, chemical plants, composting areas, refineries, landfills, dairies, and fiberglass molding facilities. The Common Elements and Multi-Use Trails and Access Gateways Typical Projects include none of these land uses.

Project construction would involve the use of mobile sources of air quality emissions including off-road construction equipment and on-road mobile sources resulting from worker trips, both of which may emit objectionable odors due to the combustion of diesel fuel, as well as during asphalt paving. However, asphalt paving would occur for a limited time period (less than 2 weeks), and the locations of equipment usage and paving activities would be distributed over the 3-acre site at any one time.

Project construction activities would also remove vegetation and excavate soil, which could expose buried organic materials. However, odors associated with organic decomposition are typically generated under anaerobic conditions. Excavation on these soils and stockpiling of cut material on site is therefore not expected to affect the potential for soil-based odors, which would be limited given that any decomposition of organic material would occur under aerobic conditions.

Furthermore, SCAQMD Rule 402 prohibits the discharge of air contaminants that cause nuisance or annoyance to the public, including odors. Also, SCAQMD maintains both a toll-free phone line (1-800-CUT-SMOG) and a web-based platform (https://www.aqmd.gov/nav/online-services/complaints) for reporting complaints related to air quality, including odors. Given the limited duration and location of asphalt paving and equipment usage, mandatory compliance with SCAQMD Rule 402, and ability for the public to report complaints to SCAQMD, the Common Elements and Multi-Use Trails and Access Gateways Typical Projects would not create a significant level of objectionable odors.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance After Required Mitigation

Impacts would be less than significant. No mitigation is required.

2020 LA River Master Plan Kit of Parts

The Common Elements Typical Project analyzed above could be implemented in whole or as a combination of its individual elements with all the KOP categories discussed below. Therefore, for potential impacts of the Common Elements Typical Project, see above. The impact discussion below focuses on specific KOP categories only.

Because the impacts for KOP Categories 2 through 6 are the same, these impact analyses are grouped together. The impact for KOP Category 1 is analyzed separately.

KOP Category 1

Certain design components of KOP Category 1 inform the Multi-Use Trails and Access Gateways Typical Project analyzed above in more detail. Therefore, for potential construction and operation impacts of these design components, see above. The design components analyzed in this section include those listed in Section 2.5.1 under the *KOP 1: Trails and Access Gateways* heading.

In addition to the design components specified in the Multi-Use Trails and Access Gateways Typical Project, the following design components could be constructed under KOP Category 1: equestrian facilities, light towers, water towers, lookouts, boardwalks, channel access points, vehicular access for maintenance and operations, underpasses and overpasses, and habitat corridor.

Construction

Construction of KOP Category 1 could involve the use of mobile sources of air quality emissions, including off-road construction equipment and on-road vehicle trips, both of which may emit objectionable odors due to the combustion of diesel fuel. In addition, any asphalt paving would off-gas potentially objectionable odors. However, construction activities would be temporary, and the locations of any equipment usage and paving activities would be distributed over the project site at any one time.

Construction of KOP Category 1 could also result in the removal of vegetation and excavation of soil, which could expose buried organic materials. However, odors associated with organic decomposition are typically generated under anaerobic conditions. Excavation on these soils and stockpiling of cut material on site is therefore not expected to affect the potential for soil-based odors, which would be limited given that any decomposition of organic material would occur under aerobic conditions.

Furthermore, SCAQMD Rule 402 prohibits the discharge of air contaminants that cause nuisance or annoyance to the public, including odors. Also, SCAQMD maintains both a toll-free phone line (1-800-CUT-SMOG) and a web-based platform (https://www.aqmd.gov/nav/online-services/complaints) for reporting complaints related to air quality, including odors. Given the limited duration and location of asphalt paving and equipment usage, mandatory compliance with SCAQMD Rule 402, and ability for the public to report complaints to SCAQMD, construction of KOP Category 1 would not create a significant level of objectionable odors.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operations

KOP Category 1 includes none of the land uses identified in SCAQMD's *CEQA Air Quality Handbook* as typically associated with odor complaints. However, the equestrian facilities design component, similar to SCAQMD's identified agricultural uses, composting areas, and dairies, has the potential to generate nuisance odors during operations due to manure and soiled bedding generated and stockpiled on site. Good housekeeping and best management practices can eliminate nuisance concerns. Manure that is properly handled or composted provides environmental benefits and can be used as a valuable soil amendment. Improper handling and storage of manure, along with odor migration, may lead to offsite nuisance violations.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Mitigation Measure AQ-5: Implement Equestrian Manure Management.

Equestrian activities may generate odors due to improper handling of manure and soiled bedding. The implementing agency will comply with the following measures:

- The facility, including animal stalls and warmup and training areas, will be cleaned at least once per day, including the removal of manure and soiled bedding.
- Manure and soiled bedding will either be incorporated into composting by the end of the day or temporarily stockpiled prior to incorporation into the composting system.
- Stockpiled material in containment vessels will be covered with a lid or tarp. Containment vessels will be located at the farthest feasible distance from nearby residents and/or sensitive receptors.

This mitigation measure will be implemented on a project-by-project basis, only where the design elements of KOP Category 1 include an equestrian facility.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

KOP Categories 2 through 6

Construction and Operations

As described in Chapter 2, *Project Description*, KOP Categories 2 through 6 and their design components could provide a range of recreation and ecological uses, some of which, according to SCAQMD's *CEQA Air Quality Handbook,* are typically associated with odor complaints. KOP Categories 2 and 3 would have no land uses associated with odor complaints, while KOP Categories 4 and 6 would. KOP Categories 4, 5, and 6 would have design components including water treatment facilities, which is a land use associated with odor complaints. KOP Category 6 would also include urban agriculture/composting, a land use associated with odor complaints. However, the community gardens envisioned under the *2020 LA River Master Plan* would not operate at the scale or intensity of commercial farming operations that are typically associated with odor complaints. Furthermore, it is important to note that SCAQMD Rule 402 prohibits the discharge of air contaminants that cause nuisance or annoyance to the public, including odors. Also, SCAQMD maintains both a toll-free phone line (1-800-CUT-SMOG) and a web-based platform (https://www.aqmd.gov/nav/online-services/complaints) for reporting complaints related to air quality, including odors. As such, proposed project improvements would be designed to meet Rule 402 standards. Consequently, mandatory compliance with SCAQMD Rule 402, and the ability for the public to report complaints to SCAQMD, would ensure that KOP Categories 2 through 6 would not result in emissions leading to significant odors.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance After Required Mitigation

Impacts would be less than significant. No mitigation is required.

Overall 2020 LA River Master Plan Implementation

As described in the *2020 LA River Master Plan*, it is anticipated that approximately 107 projects ranging in size from extra-small (less than 1 acre) to extra-large (150+ acres/10+ miles) would be implemented under the *2020 LA River Master Plan* over the 25-year horizon period to meet the *2020 LA River Master Plan*'s nine objectives. These would include the Typical Projects that would be implemented along the river, and subsequent projects composed of the KOP categories' multi-benefit design components. These elements together compose the entirety of the *2020 LA River Master Plan*.

Construction

Construction of *2020 LA River Master Plan* elements could involve the use of mobile sources of air quality emissions including off-road construction equipment and on-road mobile sources resulting from worker trips, both of which may emit objectionable odors due to the combustion of diesel fuel, as well as during any asphalt paving. These activities would likely occur for a limited time period, and the locations of equipment usage and paving activities would be distributed over the construction area at any one time.

Construction of *2020 LA River Master Plan* elements would also involve construction activities that could remove vegetation and excavate soil, which could expose buried organic materials. However, odors associated with organic decomposition are typically generated under anaerobic conditions. Excavation on these soils and stockpiling of cut material on site is therefore not expected to affect the potential for soil-based odors, which would be limited given that any decomposition of organic material would occur under aerobic conditions.

Furthermore, SCAQMD Rule 402 prohibits the discharge of air contaminants that cause nuisance or annoyance to the public, including odors. Also, SCAQMD maintains both a toll-free phone line (1-800-CUT-SMOG) and a web-based platform (https://www.aqmd.gov/nav/online-services/complaints) for reporting complaints related to air quality, including odors. Given the mandatory compliance with SCAQMD Rule 402, and ability for the public to report complaints to SCAQMD, construction would not create a significant level of objectionable odors.

Impact Determination

Impacts would be less than significant.

Mitigation Measures

No mitigation is required.

Significance after Required Mitigation

Impacts would be less than significant. No mitigation is required.

Operation

According to SCAQMD's *CEQA Air Quality Handbook*, land uses associated with odor complaints typically include agricultural uses, wastewater treatment facilities, food processing plants, chemical plants, composting areas, refineries, landfills, dairies, and fiberglass molding facilities. The Typical Projects and KOP Categories 2 and 3 do not include any of these land uses. Wetlands are included as part of the design components of KOP Categories 4, 5, and 6, and water treatment plants are included as part of the design components of KOP Categories 4 and 6. Mandatory compliance with SCAQMD Rule 402 and ability for the public to report complaints to SCAQMD would ensure that such project improvements would not create a significant level of objectionable odors. Lastly, urban agriculture/composting is included as part of the design components of KOP Category 6. However, while agriculture/composting is identified by SCAQMD as a source of potential odor complaints, the community gardens envisioned under the *2020 LA River Master Plan* would not operate at the scale or intensity of commercial farming operations that are typically associated with odor complaints.

As part of the design component of KOP Category 1, equestrian facilities, similar to agricultural uses, composting areas, or dairies, have the potential to generate nuisance odors due to manure and soiled bedding generated and stockpiled on site.

Impact Determination

Impacts would be potentially significant.

Mitigation Measures

Apply the following mitigation measure, which is described above.

Mitigation Measure AQ-5: Implement Equestrian Manure Management.

Significance after Required Mitigation

Impacts would be less than significant for later activities when carried out by the County.

Impacts would be significant and unavoidable for later activities when not carried out by the County.

Cumulative Impacts

The geographic context for an analysis of cumulative air quality impacts would be the Basin, which is the area governed by the 2016 AQMP that applies to all development within the Basin. A description of the regulatory setting and approach to cumulative impacts analysis is provided in Section 3.0.2.

Criteria for Determining Significance of Cumulative Impacts

The proposed Project would have the potential to result in a cumulatively considerable impact on air quality if, in combination with other projects within the Basin, it would conflict with or obstruct implementation of the SCAQMD AQMP; generate air pollutant emissions during construction or operational activities of sufficient quantity to exceed the Air Quality Significance Thresholds established by the SCAQMD; or expose sensitive receptors to substantial TAC concentrations.

Cumulative Condition

The cumulative plans and programs within the Basin would result in the production of significant regional or localized emissions. The regional growth that would occur over the project implementation period would increase both mobile and stationary emission sources and contribute to an adverse cumulative air quality impact. According to the *Los Angeles County General Plan*, the Basin is designated nonattainment for ozone, PM_{10}, $PM_{2.5}$, and lead (Los Angeles County only) under the CAAQS and NAAQS, and nonattainment for NO_2 under the CAAQS. Construction of cumulative projects will further degrade the regional air quality.

Furthermore, the implementation of development projects included in the *Los Angeles County General Plan*, as well as the 17 jurisdictions' general plans, when taken into consideration with other development and infrastructure projects within the SCAG region and surrounding areas, would have the potential to result in a significant cumulative impact related to violating an air quality standard or contributing substantially to an existing or projected air quality violation in the short-term from construction emissions. Similarly, while the applicable general plans include strategies to improve public health, cumulative development would result in a significant cumulative impact by exposing sensitive receptors to substantial pollutant concentrations that would harm public health outcomes due to placing sensitive receptors within 500 feet of freeways and high-volume roadways.

Already-imposed mitigation measures from certified EIRs prepared for cumulative projects, as well as existing regulatory programs and plan policies and strategies, will assist in mitigating these cumulative impacts. However, even with implementation of mitigation measures and existing regulatory programs, construction and operational emissions from major development projects would still exceed SCAQMD significance thresholds (SCAQMD 2019). Therefore, emissions associated with projected growth and development would be considered a significant cumulative impact on air quality.

The Los Angeles County portion of the SCAB is in nonattainment for the 8-hour state standards for ozone, and it is in nonattainment (extreme) for the 8-hour national standard. The Basin is in nonattainment for federal standards for $PM_{2.5}$ and lead, and for state standards for $PM_{2.5}$ and PM_{10}. The County is in attainment for all other criteria pollutants. The 2016 AQMP acknowledges that the most significant air quality challenge in the Basin is the reduction of nitrogen oxide (NO_X) emissions sufficient to meet the upcoming ozone standard deadlines.

SCAQMD is required, pursuant to the CAA, to reduce emissions of criteria pollutants for which the Basin is in nonattainment status. SCAQMD's most recent plan to achieve air quality standards is the 2016 AQMP, adopted by the SCAQMD Governing Board on March 3, 2017. The AQMP outlines a comprehensive control strategy to meet the requirement for expeditious progress toward attainment of the 2006 24-hour $PM_{2.5}$ NAAQS through all feasible control measures. The 2016 AQMP also includes specific measures for implementing the ozone strategy from previous AQMPs and attaining the 8-hour ozone standard by 2031. These strategies are based, in part, on regional growth (i.e., changes in population, housing, and employment) projections prepared by the region's cities and counties and incorporated by SCAG. As such, projects that propose development that is consistent with anticipated regional growth are considered to be consistent with the AQMP. Furthermore, projects must comply with applicable SCAQMD rules and regulations.

The SCAQMD has developed strategies to reduce criteria pollutant emissions, as outlined in the AQMP, pursuant to federal CAA mandates.

Contribution of the Project to Cumulative Impacts

The proposed Project would comply with all regulatory requirements and would be required by law to comply with any relevant control measures adopted by the SCAQMD as part of the AQMP. The County recognizes the importance of reducing emissions and improving air quality and would adhere to these goals and objectives.

The *2020 LA River Master Plan* would not result in substantial unplanned population growth in the County (see Section 3.13, *Population and Housing*). The proposed Project would be consistent with goals and policies in the local jurisdictions' general plans, with few, if any, exceptions. Because the Project would be consistent with the anticipated regional growth, it is considered consistent with the region's AQMP. As such, Project-related emissions would be accounted for in the AQMP, which has been developed to bring the Basin into attainment for all criteria and precursor pollutant standards. Furthermore, specific projects would comply with the applicable SCAQMD Rules. Therefore, the *2020 LA River Master Plan* would not conflict with or obstruct implementation of the applicable air quality plan and would not make a cumulatively considerable contribution to a cumulative air quality impact with regard to conflict with the AQMP.

Construction activities would generate air pollutant emissions. Maximum daily project-related criteria and precursor pollutant emissions would not exceed any SCAQMD regional construction-period thresholds or any LSTs during construction or operation. Since the Project would not exceed these LSTs, the project would not cause or contribute to a violation of any health-protective standard.

Construction and operation of the *2020 LA River Master Plan* would not be expected to contribute a substantial level of air pollution such that air quality within the Basin would be degraded. Criteria pollutant emissions would not expose receptors to substantial pollutant concentrations or risk. Asbestos emissions would be controlled according to SCAQMD and EPA regulations. Construction would generate onsite DPM emissions from diesel-powered construction equipment and vehicles that could expose adjacent receptors to significant health risks. Criteria pollutant emissions would not expose receptors to substantial pollutant concentrations or risk. Operation would not violate the health-protective CAAQS and NAAQS. As such, the *2020 LA River Master Plan* would not be expected to contribute a significant level of air pollution during operations such that air quality within the Basin would be degraded.. However, without specific details on the locations of building footprints, it is conservatively assumed that there may be instances where DPM emissions from operations could result in cancer or non-cancer health risks that exceed SCAQMD's thresholds. Therefore, operations impacts would be potentially significant and it is possible that mitigation for future project health risks may be inadequate to reduce operations impacts below SCAQMD's threshold level. Despite implementation of mitigation measures the project would make a cumulatively considerable contribution to cumulative effects with respect to degradation of air quality in the Basin (AQ-1, AQ-2, AQ-3, AQ-4, GHG-1a-b, GHG-2, and TRA-1b).

Project construction would involve the use of mobile sources of air quality emissions that may emit objectionable odors due to the combustion of diesel fuel and application of asphalt paving. However, for the Typical Projects, asphalt paving would occur for a limited time period (less than 2 weeks), and the locations of equipment usage and paving activities would be distributed over the 3-acre site at any one time. Longer-term construction activities would be associated with the KOP categories, but they are not expected to result in emission of objectionable odors that reach a level of significance. Mitigation Measure AQ-5 would be implemented to reduce odors from equestrian

activities to a less-than-significant level. Furthermore, SCAQMD Rule 402 prohibits the discharge of air contaminants that cause nuisance or annoyance to the public, including odors. Given the mandatory compliance with SCAQMD Rule 402, and ability for the public to report complaints to SCAQMD, the proposed Project would not create a significant level of objectionable odors during construction. Similarly, it is not anticipated that operation of projects under the *2020 LA River Master Plan* would result in objectionable odors.

Construction and operation of the *2020 LA River Master Plan* would result in criteria pollutant and TAC emissions. Because details about the *2020 LA River Master Plan* construction and operation scenario are unknown, emissions associated with the entirety of the *2020 LA River Master Plan* have not been quantified. The associated exposure of sensitive receptors to substantial pollutant concentrations resulting in health risks could result in a significant impact. Mitigation Measures AQ-1 through AQ-4 and GHG-1a and GHG-2 would be implemented for all projects developed under the *2020 LA River Master Plan* to ensure that impacts are minimized to the extent feasible. It cannot be stated that health risks would be reduced to a level that would be below SCAQMD thresholds. Despite implementation of mitigation, the Project would make a cumulatively considerable contribution to cumulative effects with respect to generation of emissions above established thresholds and exposure of sensitive receptors to substantial pollutant concentrations.

The *2020 LA River Master Plan* would be generally consistent with plans and policies contained in the various applicable general plans related to air quality. Overall, implementation of the *2020 LA River Master Plan* would make a cumulatively considerable contribution to air quality impacts within the Basin.