3.3 AIR QUALITY

3.3.1 INTRODUCTION

This discussion provides an evaluation of K Line Northern Extension (KNE) as it relates to air quality. It includes descriptions of the federal, state, and local regulatory setting, existing conditions, and the impacts from construction and operation of the proposed alignments and stations, design option, and maintenance and storage facility (MSF), as well as mitigation measures where applicable. For more detailed information, refer to the KNE Air Quality Technical Report (Appendix 3.3-A).

3.3.2 REGULATORY FRAMEWORK

3.3.2.1 FEDERAL

The Federal Clean Air Act (CAA), first enacted in 1955, governs air quality at the national level. The U.S. Environmental Protection Agency (USEPA) is responsible for implementing the CAA and regulating emission sources, such as aircraft, ships, and certain types of locomotives, under the exclusive authority of the federal government. The USEPA also has jurisdiction over emission sources outside state waters (e.g., beyond the outer continental shelf) and establishes various emission standards, including those for vehicles.

The Clean Air Act Amendments of 1990 direct the USEPA to implement environmental policies and regulations that will ensure acceptable levels of air quality. Under the Clean Air Act Amendments, a project cannot:

- Cause or contribute to any new violation of any National Ambient Air Quality Standards (NAAQS) in any area
- Increase the frequency or severity of any existing violation of any NAAQS in any area
- Delay timely attainment of any NAAQS or any required interim emission reductions or other milestones in any area

As required by the CAA, the USEPA has established NAAQS for six major air pollutants. These pollutants are carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM_{10} and $PM_{2.5}$),[1] sulfur dioxide (SO_2), and lead (Pb).

The NAAQS are summarized in Table 3.3-1. The “primary” standards in the table have been established to protect public health. The “secondary” standards are intended to protect the nation’s welfare and account for air pollutant effects on soil, water, visibility, materials, vegetation, and other aspects of the general welfare.

[1] Particulate matter (PM) smaller than or equal to 10 microns (PM_{10}) or 2.5 microns ($PM_{2.5}$) in diameter

TABLE 3.3-1. STATE AND FEDERAL AIR QUALITY STANDARDS

Ambient Air Quality Standards						
Pollutant	**Averaging Time**	**California Standards** [1]		**National Standards** [2]		
		Concentration [3]	**Method** [4]	**Primary** [3,5]	**Secondary** [3,6]	**Method** [7]
Ozone (O_3)[8]	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m^3)		0.070 ppm (137 µg/m^3)		
Respirable Particulate Matter (PM10)[9]	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		—		
Fine Particulate Matter (PM2.5)[9]	24 Hour	—	—	35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	12.0 µg/m^3	15 µg/m^3	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m^3)		9 ppm (10 mg/m^3)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		—	—	
Nitrogen Dioxide (NO_2)[10]	1 Hour	0.18 ppm (339 µg/m^3)	Gas Phase Chemiluminescence	100 ppb (188 µg/m^3)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)		0.053 ppm (100 µg/m^3)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[11]	1 Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	—	Ultraviolet Flourescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m^3)	
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas)[11]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas)[11]	—	
Lead[12,13]	30 Day Average	1.5 µg/m^3	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m^3 (for certain areas)[12]	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m^3		
Visibility Reducing Particles[14]	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	**No National Standards**		
Sulfates	24 Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

See footnotes on next page …

For more information please call ARB-PIO at (916) 322-2990 — California Air Resources Board (5/4/16)

Source: CARB 2016

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.

3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.

5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.

8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 $\mu g/m^3$ to 12.0 $\mu g/m^3$. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour PM10 standards (primary and secondary) of 150 $\mu g/m^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

11. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

    Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

12. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

For more information please call ARB-PIO at (916) 322-2990 **California Air Resources Board (5/4/16)**

Source: CARB 2016

3.3.2.2 STATE

3.3.2.2.1 CALIFORNIA AIR RESOURCES BOARD

Pollutants that degrade air quality in California are also subject to the requirements of the California Clean Air Act (CCAA). The CCAA, as amended in 1992, requires all air quality management districts in the state to endeavor to achieve and maintain State Ambient Air Quality Standards.

The California Air Resources Board (CARB), which became part of the California Environmental Protection Agency in 1991, is responsible for ensuring implementation of the CCAA and meeting state requirements of the CAA. It is also responsible for setting emission standards for vehicles sold in California and for other emission sources, such as consumer products and certain off-road equipment. CARB also established passenger vehicle fuel specifications. Automobiles sold in California must meet the stricter emission standards established by CARB. CARB also oversees the functions of local air pollution control districts and air quality management districts, which in turn administer air quality activities at the regional and county level.

3.3.2.2.2 STATE AMBIENT AIR QUALITY STANDARDS

As required by the CCAA, CARB has also established ambient air quality standards, known as the California Ambient Air Quality Standards (CAAQS). These standards are generally more stringent than the corresponding federal standards and incorporate additional standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. The CAAQS are summarized in Table 3.3-1.

3.3.2.2.3 TOXIC AIR CONTAMINANT IDENTIFICATION AND CONTROL ACT

The Toxic Air Contaminant Identification and Control Act created California's program to reduce exposure to air toxics in 1983. Under the Toxic Air Contaminant Identification and Control Act, CARB is required to prioritize the identification and control of air toxics emissions by considering criteria relating to the risk of harm to public health when selecting substances for review. The Toxic Air Contaminant Identification and Control Act also requires CARB to use available information gathered from the Air Toxics Hot Spots Information and Assessment Act to include in the prioritization of compounds.

CARB classified particulate emissions from diesel-fueled engines (i.e., diesel particulate matter [DPM]) as toxic air contaminants (TACs) in August 1998 and continues to evaluate and develop specific statewide regulations targeting DPM emissions from diesel-fueled engines and vehicles. The goal of each regulation is to make diesel engines as clean as possible by establishing state-of-the-art technology requirements or emission standards to reduce DPM emissions.

3.3.2.2.4 ADVANCED CLEAN CARS PROGRAM

CARB's Advanced Clean Cars Program combines several regulations into one package, including the low-emission vehicle (LEV) criteria and greenhouse gas regulations and the zero-emission vehicle (ZEV) regulation. Advanced Clean Cars I was adopted in 2012, and Advanced Clean Cars II was adopted in 2022. These regulations rapidly scale down emissions of light-duty passenger cars, pickup trucks, and

sport utility vehicles and require an increased number of zero-emission vehicles to meet air quality and climate change emissions goals. In October 2023, staff launched a new effort to consider potential amendments to the Advanced Clean Cars II regulations, including updates to the tailpipe greenhouse gas emission standard and limited revisions to the LEV and ZEV regulations.

3.3.2.2.5 STATE IMPLEMENTATION PLAN AND TRANSPORTATION IMPROVEMENT PROGRAM

A Regional Transportation Plan (RTP) presents the transportation vision for the region and provides a long-term investment framework for addressing the region's transportation and related challenges. Under the Clean Air Act Amendments of 1990, proposed transportation projects must be derived from a long-range transportation plan or RTP that conforms with the state air quality plans as outlined in a State Implementation Plan (SIP). The SIP sets forth the state's strategies for achieving air quality standards. Projects must also be included in a Transportation Improvement Program that conforms with the SIP, and localized impacts from proposed projects must conform to state air quality plans in nonattainment and maintenance areas.

A metropolitan planning organization (MPO) is the designated local decision-making body that is responsible for carrying out the metropolitan transportation planning process for an urban area. The Southern California Association of Governments (SCAG) is the MPO for the six-county region that includes Los Angeles, Orange, Riverside, Ventura, San Bernardino, and Imperial Counties.

3.3.2.3 REGIONAL

The South Coast Air Quality Management District (SCAQMD) is responsible for monitoring air quality and planning, implementing, and enforcing programs designed to attain and maintain state and federal ambient air quality standards in the district. SCAQMD regulates stationary source emissions, including area sources and point sources, and certain mobile source emissions. SCAQMD is also responsible for establishing permitting requirements for stationary sources and ensuring that new, modified, or relocated stationary sources do not create net emissions increases and, therefore, are consistent with the region's air quality goals. SCAQMD has fulfilled this requirement by preparing a series of Air Quality Management Plans (AQMPs). SCAQMD enforces air quality rules and regulations through a variety of means, including inspections, educational or training programs, or fines, when necessary.

All projects in SCAQMD's jurisdiction are subject to SCAQMD rules and regulations, including, but not limited to, the following:

- Rule 401 Visible Emissions: Prohibits discharge of air emissions that results in a plume that is as dark as or darker than that designated No. 1 on the Ringelmann Chart by the United States Bureau of Mines for more than three minutes in any one hour.
- Rule 402 Nuisance: Prohibits the discharge of "such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of people or the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property."

- Rule 403 Fugitive Dust: Requires that future projects reduce the amount of particulate matter entrained in the ambient air as a result of fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions from any active operation, open storage pile, or disturbed surface area.
- Rule 1113 Architectural Coatings: Limits volatile organic compounds (VOC) in architectural coatings used within SCAQMD. These limits are application-specific and are updated as the availability of low-VOC products expands.
- Rule 1166 Volatile Organic Compound Emissions from Decontamination of Soil: Sets requirements to control the emission of VOC from excavating, grading, handling, and treating VOC-contaminated soil as a result of leakage from storage or transfer operations, accidental spillage, or other deposition.
- Rule 1168 Adhesive and Sealant Applications: Reduces emissions of VOCs, TACs, and stratospheric ozone-depleting compounds from the application of adhesives, adhesive primers, sealants, and sealant primers.
- Rule 1186 PM_{10} Emissions from Paved and Unpaved Roads, and Livestock Operations: Reduces the amount of particulate matter entrained in the ambient air as a result of vehicular travel on paved and unpaved public roads, and at livestock operations.
- Rule 1403 Asbestos Emissions from Demolition/Renovation Activities: Specifies work practice requirements to limit asbestos emissions from building demolition and renovation activities, including the removal and associated disturbance of asbestos-containing materials.
- Rule 1466 Control of Particulate Emissions from Soils with Toxic Air Contaminants: Minimizes the amount of off-site fugitive dust emissions containing toxic air contaminants by reducing particulate emissions in the ambient air as a result of earth-moving activities, including dredging, excavating, grading, earth-cutting and filling, loading, unloading, handling, mechanized land clearing, treating, stockpiling, transferring, and removing of soil that contains applicable toxic air contaminants, from applicable sites.
- Rule 1470 Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines: Sets requirements for owners, operators, sellers, or lessors of applicable stationary compression ignition engines.
- Regulation XIII New Source Review: Contains Rules 1300 through 1325, which set forth preconstruction review requirements for new, modified, or relocated facilities, to ensure that the operation of such facilities does not interfere with progress in attainment of the NAAQS and CAAQS, and that future growth within SCAQMD is not unnecessarily restricted. The specific air quality goal of this regulation is to achieve no net increases from new or modified permitted sources of nonattainment air contaminants or their precursors.

3.3.3 METHODOLOGY

3.3.3.1 CEQA METHODOLOGY

The purpose of this analysis is to evaluate the project against California Environmental Quality Act (CEQA) thresholds of significance as the basis for determining the level of impacts related to air quality.

3.3.3.1.1 CONSTRUCTION IMPACTS

3.3.3.1.1.1 REGIONAL EMISSIONS ANALYSIS

An assessment of the air quality construction impacts of the project was conducted using staging information, estimated construction schedule, and construction equipment usage details. Major construction activities for KNE would include surveys and preconstruction; tunnel construction; utility relocation and installation work; station, crossover, and connection box construction; storage track or MSF construction; street restoration; ventilation and emergency egress construction; systems installation and facilities, including trackbed, rail, overhead contact system, conduit, electrical substation, and communications and signaling construction; and construction of other ancillary facilities. During each phase of construction, emissions would be generated from heavy-duty construction equipment, worker travel to and from the project site, and material import and export using haul trucks, delivery trucks, and cement trucks.

This assessment used emission factors from the CARB model for off-road vehicle and equipment emissions (OFFROAD), as well as the CARB model for on-road vehicle emissions (EMission FACtor program, or EMFAC). For the off-road vehicles and equipment, OFFROAD2021 emission factors specific to the South Coast Air Basin (SCAB), along with project-specific information on pieces of equipment for each construction phase, were used. In addition, specific pieces of equipment are required to meet Tier 4 final emission standards, which are USEPA's most stringent emissions standards for engines. Tier 4 engines reduce nitrogen oxides (NO_x) and particulate matter emissions by over 90 percent as compared to older model engines. Tier 4 standards were modeled based on the procedures outlined in the California Emissions Estimator Model (CalEEMod) program.

Equipment that is being used for specific subsurface operations was modeled as Tier 2. Higher-tiered equipment has not been approved for use by the Mining Safety and Health Administration for specific subsurface operations.

Tier-specific emission rates were obtained from CalEEMod. Fleet average emission rates from CARB's OFFROAD2021 model for the SCAB were assumed to be representative for all other pieces of equipment. Emission rates for 2041, the first anticipated year of construction for any project element, were conservatively used to represent the fleet average equipment.

Worker commute, haul truck, delivery truck, and cement truck trip emissions factors were estimated using the EMFAC2021 (v.1.0.2) emission factor model for the Los Angeles County region, aggregated for all model years, all fuel types, and annual average for season in each of the calendar years from 2041 through 2050.

In addition to exhaust emissions from the construction equipment, fugitive dust emissions from dirt handling and re-entrained roadway dust were included in the emission burden analyses to present a full inventory of emission burdens generated by the project. Emissions from construction activities such as earth-moving activities (bulldozing, etc.), truck loading, and road dust were calculated using applicable formulas from USEPA's AP-42 (USEPA 2023a). Area-specific parameters, such as silt content, were taken from the CalEEMod program. Soil moisture content was updated to reflect the muck moisture content based on field data information.

In accordance with guidance from SCAQMD, the air quality assessment characterized the maximum daily emissions that would occur throughout construction of each section of the KNE alignment[2] and the MSF or Hollywood Bowl Design Option that would occur concurrently with that section. The analysis assumes that each KNE alignment section would be built sequentially, not concurrently; therefore, emissions have been presented separately. If concurrent construction is expected, further analysis will be needed to determine combined air quality impacts for KNE.

The maximum daily emissions represent a reasonably conservative estimate of the highest anticipated daily emissions based on detailed phasing and equipment information developed for the project. The estimated maximum daily values were compared to the SCAQMD air quality construction significance thresholds shown in Table 3.3-2 to determine if the project would meet or exceed these values.

Metro's Moving Beyond Sustainability Strategic Plan (MBSSP) and its updated Green Construction Policy require the use of renewable diesel fuel if reasonably available in the vicinity of the project. Emissions benefits associated with this measure were not included in the analysis because renewable diesel emits air pollutants at the same rate as traditional diesel fuel. Use of renewable diesel reduces emissions of greenhouse gases, which are discussed in Section 3.9, Greenhouse Gas Emissions.

[2] As discussed in Section 2.4.6, Construction Sections, of Chapter 2, KNE would be constructed in either two sections (for the KNE Fairfax and La Brea Alignments) or three sections (for the KNE San Vicente–Fairfax Alignment), referred to as Section 1, Section 2, and Section 3. Together these comprise KNE. MSF construction would occur as part of Sections 1 and 2. Hollywood Bowl Design Option construction would occur as part of Section 3 with the KNE San Vicente-Fairfax Alignment or Section 2 with the KNE Fairfax and La Brea Alignments. This report provides an analysis of KNE (i.e., completion of Section 1, Section 2, and Section 3).

TABLE 3.3-2. SCAQMD AIR QUALITY SIGNIFICANCE THRESHOLDS

South Coast AQMD Air Quality Significance Thresholds

Mass Daily Thresholds [a]		
Pollutant	**Construction**	**Operation**
NO_x	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM_{10}	150 lbs/day	150 lbs/day
$PM_{2.5}$	55 lbs/day	55 lbs/day
SO_x	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day
Toxic Air Contaminants (TACs), Odor, and GHG Thresholds		
TACs (including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk ≥ 10 in 1 million Cancer Burden > 0.5 excess cancer cases (in areas ≥ 1 in 1 million) Chronic & Acute Hazard Index ≥ 1.0 (project increment)	
Odor	Project creates an odor nuisance pursuant to South Coast AQMD Rule 402	
GHG	10,000 MT/yr CO_2eq for industrial facilities	
Ambient Air Quality Standards for Criteria Pollutants [b]		
NO_2 1-hour average annual arithmetic mean	South Coast AQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 0.18 ppm (state) 0.03 ppm (state) and 0.0534 ppm (federal)	
PM_{10} 24-hour average annual average	10.4 µg/m³ (construction)[c] & 2.5 µg/m³ (operation) 1.0 µg/m³	
$PM_{2.5}$ 24-hour average	10.4 µg/m³ (construction)[c] & 2.5 µg/m³ (operation)	
SO_2 1-hour average 24-hour average	0.25 ppm (state) & 0.075 ppm (federal – 99th percentile) 0.04 ppm (state)	
Sulfate 24-hour average	25 µg/m³ (state)	
CO 1-hour average 8-hour average	South Coast AQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 20 ppm (state) and 35 ppm (federal) 9.0 ppm (state/federal)	
Lead 30-day Average Rolling 3-month average	1.5 µg/m³ (state) 0.15 µg/m³ (federal)	

[a] Source: South Coast AQMD CEQA Handbook (South Coast AQMD, 1993)
[b] Ambient air quality thresholds for criteria pollutants based on South Coast AQMD Rule 1303, Table A-2 unless otherwise stated.
[c] Ambient air quality threshold based on South Coast AQMD Rule 403.

KEY: lbs/day = pounds per day ppm = parts per million µg/m³ = microgram per cubic meter ≥ = greater than or equal to
MT/yr CO_2eq = metric tons per year of CO_2 equivalents > = greater than

Revision: March 2023

Source: SCAQMD 2023

3.3.3.1.1.2 LOCALIZED POLLUTANT CONCENTRATIONS

Regional emissions refer to all emissions that would be associated with a project, while localized emissions refer to only those emissions that would be produced by sources located on the project site. Construction activities typically generate temporary localized emissions from heavy-duty construction equipment exhaust, fugitive dust (particulate matter) from material movement and ground disturbance, exhaust from on-road vehicle travel on-site, and on-road re-entrained dust and brake and tire wear from on-road vehicle travel on-site. These localized emissions have the potential to create high concentrations of air pollutants.

On-site criteria pollutant emissions from project construction were estimated following the methodology described above. SCAQMD's Final Localized Significance Threshold Methodology was used to assess localized criteria pollutant air quality impacts from construction of KNE (SCAQMD 2009). SCAQMD's Localized Significance Threshold (LST) Methodology divides the SCAB into 38 Source Receptor Areas (SRAs). KNE is located in SRA 2 – Northwest Coastal Los Angeles County. Appendix C of SCAQMD's LST Methodology presents LST tables for site sizes of one, two, and five acres. SCAQMD's example projects show linear interpolation of LSTs for site sizes of three and four acres; that approach was also used for the project.

In order to construct a station, a minimum of one to two acres of construction staging sites would be needed for the duration of the station construction period. A larger construction staging site of three to four acres would be required if the site is also used to launch the tunnel boring machines and support tunneling activities. Appendix 2-C, Construction Approach Report, provides the total size of all construction staging areas for each station used to select the appropriate LSTs for each site. While the total site size for the MSF (i.e., expansion of the existing Division 16 MSF on the adjacent site) would be 16.5 acres, it was assumed that a maximum of five acres would be disturbed per day, and LSTs for a five-acre site were used.

According to SCAQMD, land uses that constitute air quality sensitive receptors include residences, schools, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. SCAQMD recommends that air quality assessments consider the potential localized impacts to sensitive receptors at distances up to 500 meters[3] (1,640 feet) from project sites, depending on the proximity of sensitive land uses. KNE is located in a developed urban setting near many land uses that qualify as sensitive receptors, including residential land uses, schools, and other institutional uses located along the alignment. To ensure a conservative analysis, the closest receptors were assumed to be within 25 meters (82 feet) of the station construction site boundaries, the minimum distance provided in the LST methodology. The MSF is located in an industrial area, and the closest sensitive receptors would be residences located 100 meters (328 feet) north of the site.

On-site use of diesel-fueled heavy-duty construction equipment and on-road trucks would also generate temporary localized TAC emissions in the form of DPM. Impacts to sensitive receptors from localized TAC emissions were assessed qualitatively.

[3] Distances are presented in metric units to match SCAQMD's LST Guidance and LST Thresholds Tables (Table 3.3-3 and Table 3.3-4).

3.3.3.1.1.3 OTHER EMISSIONS

Other construction emissions with the potential to adversely affect a substantial number of people include odors from diesel vehicle exhaust. Diesel vehicle exhaust has a distinctive odor that may be considered unpleasant to certain individuals. While unpleasant odors rarely cause physical harm, they can be considered a nuisance. SCAQMD Air Quality Significance Thresholds address odorous emissions by invoking compliance with SCAQMD Rule 402, which prohibits creation of a public nuisance affecting a considerable number of people. No quantitative threshold has been established for assessing potential odor impacts; therefore, impacts were assessed qualitatively.

3.3.3.1.2 OPERATIONAL IMPACTS

3.3.3.1.2.1 REGIONAL TRAFFIC EMISSIONS ANALYSIS

The regional emission burden analysis determines a project's overall impact on air quality levels. For KNE, an analysis was conducted based upon forecasted vehicle miles traveled (VMT) displaced due to transit use associated with the alignments and stations and operations associated with the MSF.

The regional traffic emissions analysis was conducted for the existing conditions baseline year of 2019, the 2045 without Project Conditions, and the 2045 with Project Conditions for each alignment. The Metro Corridor Based Model 2018c forecasts that the design option would not contribute to a meaningful change in regional VMT, and no additional emissions analyses were conducted. Emission factors were obtained from CARB's EMFAC2021 using parameters set within the program for SCAQMD, including the regional mix of vehicle types, vehicle age, and vehicle speeds. Light rail vehicles (LRVs) and lighting of proposed stations would be electrically powered and would not generate direct criteria pollutant emissions. Project emissions have been compared to the SCAQMD regional significance thresholds described below.

3.3.3.1.2.2 MSF OPERATIONS EMISSIONS ANALYSIS

Project activities associated with the MSF would occur in two parts, concurrent with Section 1 and Section 2 of each alignment. Concurrently with Section 1 of the alignments, MSF facility construction would include the addition of four storage tracks on the existing Division 16 site to accommodate increased LRV storage. Concurrently with Section 2 of the alignments, MSF facilities constructed would include expansion of the existing Division 16 MSF on the adjacent 16.5-acre site and comprise approximately 57,380 square feet of facility structures. No MSF construction would occur as part of Section 3 of the KNE San Vicente–Fairfax Alignment because the MSF would be completed as part of Section 2.

Operation of the MSF additions would result in criteria pollutant emissions from combustion of natural gas for heating and cooling and from activities required for maintenance and upkeep of the structures and LRVs. These emissions were quantified using default model parameters for the "warehouse with rail" land use type in the CalEEMod program with the following modeling parameters: region (Los Angeles sub-area of the SCAB), climate zone (9), utility (Southern California Edison), and size (approximately 57,380 square feet based on space needs estimates). MSF operations would also result in criteria pollutant

emissions from employee commute vehicles. Employee commute trips associated with operation of the MSF are included in the regional VMT projections used to evaluate the change in regional vehicle emissions resulting from KNE.

3.3.3.1.2.3 LOCALIZED POLLUTANT CONCENTRATIONS

Off-site operational criteria pollutant emission sources with the potential to result in substantial localized pollutant concentrations include exhaust from regional motor vehicle traffic and exhaust from employee commute vehicles associated with the MSF. Motor vehicle exhaust can cause elevated concentrations of CO; the highest CO concentrations are typically found close to congested roadways and intersections.

On-site criteria pollutant emission sources with the potential to result in substantial localized pollutant concentrations would be located at the MSF and would include heating and cooling activities that use natural gas and activities required for maintenance and upkeep of the structures and LRVs. LRVs and light rail station operations are electric and would not include any sources of criteria air pollutant emissions.

SCAQMD's Final LST methodology was used to assess localized air quality impacts from operational activities at the MSF (SCAQMD 2009). The MSF is located in SRA 2 – Northwest Coastal Los Angeles County. Appendix C of SCAQMD's LST Methodology presents LST tables for site sizes of one, two, and five acres. To ensure a conservative analysis, it was assumed that daily MSF operations would occur within active areas that are less than or equal to one acre in size. The MSF is located in an industrial area, and the closest sensitive receptors would be residences located 100 meters (328 feet) north of the site. Impacts to sensitive receptors from localized TAC emissions were assessed qualitatively.

3.3.3.1.2.4 OTHER EMISSIONS

Other operational emissions with the potential to adversely affect a substantial number of people include odors. While unpleasant odors rarely cause physical harm, they can be considered a nuisance. SCAQMD Air Quality Significance Thresholds address odorous emissions by invoking compliance with SCAQMD Rule 402, which prohibits creation of a public nuisance affecting a considerable number of people. No quantitative threshold has been established for assessing potential odor impacts; therefore, impacts were assessed qualitatively.

3.3.3.2 SIGNIFICANCE THRESHOLDS

In accordance with Appendix G of the 2022 CEQA Guidelines, the project would have a significant impact related to air quality if it would:

- Impact AQ-1: Conflict with or obstruct implementation of the applicable air quality plan.
- Impact AQ-2: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard.
- Impact AQ-3: Expose sensitive receptors to substantial pollutant concentrations.
- Impact AQ-4: Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

In a CEQA analysis, project-related impacts are typically compared to existing (without project) conditions. However, pursuant to CEQA Guidelines Section 15125(a)(2), a Lead Agency has the discretion to exclusively use a future conditions baseline for the purposes of determination of significance under CEQA in instances where showing an existing conditions analysis would be misleading or without informational value. Use of an existing conditions baseline for the air quality analysis would be misleading for the project because it ignores the regional background growth in population, traffic, and transportation infrastructure that would occur between the 2019 existing conditions baseline year and the 2045 horizon year for the travel demand forecasting (i.e., the 2019 existing conditions will be substantially altered by regional growth that will occur independent of the project, which, in turn, would mask the impacts that are attributable to the project and would not provide an accurate and meaningful representation of project-related impacts).

Consideration of regional background growth is critical when determining future effects for transit projects designed to reduce traffic congestion and associated air quality impacts over time. Use of an existing conditions baseline would also be misleading based on the emissions reductions that will occur to meet vehicle emissions standards, fuel economy standards, market penetration of alternative fuels, and engine technology, as well as compliance with other climate action plan strategies. Isolating the project's impacts from other regional changes in the environment would result in a misleading analysis. Therefore, for the quantification of air quality emissions, project emissions will be defined as the difference between the project (2045) and the existing conditions in 2019 adjusted for regional growth (i.e., the projected future conditions baseline) that would occur by 2045. In this case, the projected future conditions baseline is the 2045 without Project Conditions.

SCAQMD is the agency given primary responsibility for developing plans, programs, rules, and regulations that will improve air quality in the SCAB. SCAQMD published CEQA significance thresholds and guidance for analyzing the significance of project air quality impacts in the CEQA Air Quality Handbook (SCAQMD 1993). Since the release of the CEQA Air Quality Handbook, additional guidance documents updating or adding to SCAQMD's CEQA Handbook have been published on the SCAQMD website. SCAQMD's current CEQA significance thresholds are presented in Table 3.3-2.

SCAQMD guidance recommends that air pollutant emissions be analyzed in both regional and local contexts. Regional emissions refer to all emissions that would be associated with construction and operation of a project (e.g., on-site and off-site), while localized emissions refer to only those emissions that would be produced by sources located on a project site. SCAQMD established regional maximum daily screening threshold values for air pollutant emissions from projects within the SCAB. The mass daily thresholds were developed to prevent the occurrence of air quality violations that would obstruct implementation of the AQMP and hinder efforts to improve regional air quality. In addition to regional significance thresholds, SCAQMD has developed localized concentration-based CEQA screening values for criteria pollutants. As discussed further in Section 3.3.5.1.3, since the SCAB is in nonattainment for PM_{10} and $PM_{2.5}$ under the CAAQS, the threshold is established as an incremental "allowable change" in concentration as a result of project implementation. Quantitative thresholds for determining impacts from TAC emissions have also been developed by SCAQMD. SCAQMD has not established quantitative thresholds for assessing impacts from odors.

SCAQMD has developed area-specific mass emission rate LSTs based on project location, project site size, and proximity of sensitive receptors to the project site. LSTs are only applicable to the following criteria pollutants: NOX, CO, PM10, and PM2.5. LST Mass Rate Look-Up Tables are provided in Appendix C to the SCAQMD Final Localized Significance Threshold Methodology and represent maximum allowable daily emissions from sources on the project site that will not result in the CAAQS being exceeded at sensitive receptor locations (SCAQMD 2009). KNE is located in SRA 2 – Northwest Coastal Los Angeles County. Construction and operation LSTs for SRA 2 are presented in Table 3.3-3 and Table 3.3-4, respectively.

TABLE 3.3-3. SCAQMD LOCALIZED SIGNIFICANCE THRESHOLDS – CONSTRUCTION

SOURCE RECEPTOR AREA	SITE SIZE (ACRES)	RECEPTOR DISTANCE (m)	(LBS/DAY)			
			CO	NO_X	PM_{10}	$PM_{2.5}$
2 (Northwest Coastal Los Angeles County)	≤1	25	562	103	4	3
		50	833	104	12	4
		100	1,233	121	27	8
		200	2,367	156	57	18
		500	7,724	245	146	77
	2	25	827	147	6	4
		50	1,213	143	19	5
		100	1,695	156	34	10
		200	2,961	186	64	21
		500	8,446	262	154	82
	5	25	1,531	221	13	6
		50	1,985	212	40	8
		100	2,762	226	55	14
		200	4,383	250	84	29
		500	10,467	312	174	95

Source: SCAQMD 2009
CO = carbon monoxide; lbs/day = pounds per day; NOx = nitrogen oxides; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; m = meters; SCAQMD = South Coast Air Quality Management District

TABLE 3.3-4. SCAQMD LOCALIZED SIGNIFICANCE THRESHOLDS – OPERATION

SOURCE RECEPTOR AREA	SITE SIZE (ACRES)	RECEPTOR DISTANCE (m)	(LBS/DAY)			
			CO	NO_X	PM_{10}	$PM_{2.5}$
2 (Northwest Coastal Los Angeles County)	≤1	25	562	103	1	1
		50	833	104	3	1
		100	1,233	121	7	2
		200	2,367	156	14	5
		500	7,724	245	36	19
	2	25	827	147	2	1
		50	1,213	143	5	2
		100	1,695	156	9	3
		200	2,961	186	16	6
		500	8,446	262	37	20
	5	25	1,531	221	3	2
		50	1,985	212	10	2
		100	2,762	226	13	4
		200	4,383	250	21	7
		500	10,467	312	42	23

Source: SCAQMD 2009
CO = carbon monoxide; lbs/day = pounds per day; NOx = nitrogen oxides; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; m = meters; SCAQMD = South Coast Air Quality Management District

The Governor's Office of Planning and Research (OPR) released technical advisories for the streamlined review of transportation projects under CEQA in 2018 and 2021 (OPR 2018, 2021). In these advisories, OPR acknowledges the benefits of certain types of transportation projects (including light rail projects) that would reduce VMT and recommends the streamlining of air emissions impact analyses for these projects because they would reduce transportation-related air emissions, improve and increase multimodal transportation networks, and facilitate mixed-use development. The OPR recommendation is based on programmatic review of public transit and active transportation projects, which consistently demonstrate reductions in pollutant emissions from on-road vehicles. The determination of operational air quality impacts is streamlined for the project, as it would not introduce a new substantial permanent source of air pollutant emissions and would induce changes to regional transportation patterns that would decrease VMT and associated air pollutant emissions.

3.3.4 RESOURCE STUDY AREA

The resource study area (RSA) for regional air quality impacts is defined as the SCAG region, which encompasses Los Angeles, Orange, Riverside, Ventura, San Bernardino, and Imperial Counties, as shown in Figure 3.3-1. Although the RSA is extensive, the analysis focused only on air quality emission sources that would affect or be affected by the project. Specifically, this report analyzes impacts within the SCAG region to capture the changes in traffic-related VMT that could occur as a direct result of the alignments as determined by the project traffic analysis (see Section 3.16, Transportation). The RSA applies to regional analysis of all alignments and stations, the design option, and the MSF.

The RSA for localized air quality impacts is the 500 meters (1,640 feet) around each station's construction site along the alignment and the MSF. The RSA is based on the SCAQMD Final LST methodology, which focuses on preventing near-source pollutant concentrations from reaching or exceeding NAAQS or CAAQS at sensitive receptor locations in close proximity to project sites.

3.3.5 EXISTING SETTING

This existing setting discussion summarizes current conditions related to air quality within and near the KNE RSA.

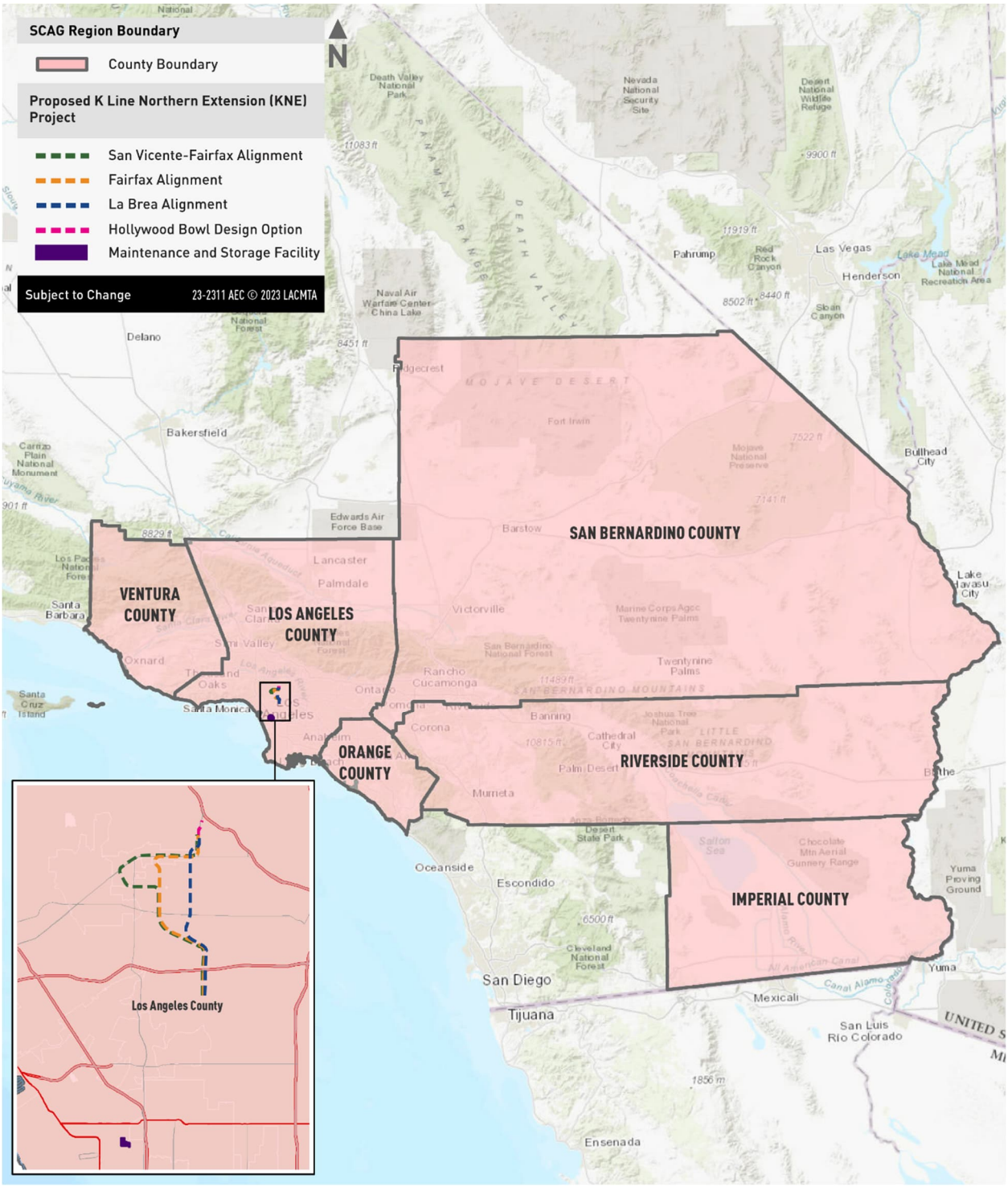
3.3.5.1 REGIONAL SETTING

3.3.5.1.1 POLLUTANT DESCRIPTIONS

Air pollutants relevant to the project include O_3, PM_{10}, $PM_{2.5}$, CO, NO_2, SO_2, and air toxics, particularly DPM. A brief description of these pollutants, their sources, and their effects on human health is provided below.

- **O_3:** O_3 is a colorless toxic gas found in both the Earth's upper and lower atmospheric levels. In the upper atmosphere, O_3 is a naturally occurring gas that helps to prevent the sun's harmful ultraviolet rays from reaching the Earth. In the lower layer of the atmosphere, O_3 is man-made and forms through a chemical reaction between hydrocarbons, also referred to as VOC or reactive organic gases, and NOx, which are emitted from industrial sources and from automobiles. Adverse effects on human health include respiratory function impairment.
- **PM_{10}:** PM_{10} refers to particulate matter less than or equal to 10 microns in diameter, about one-seventh the thickness of a human hair. PM_{10} pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Major sources of PM_{10} include motor vehicles; wood-burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions. Adverse effects on human health include respiratory function impairment and aggravation of chronic respiratory conditions such as asthma.

FIGURE 3.3-1. REGIONAL RESOURCE STUDY AREA



Source: Connect Los Angeles Partners 2024

- **$PM_{2.5}$:** $PM_{2.5}$ refers to particulates that are 2.5 microns or less in diameter, roughly 1/28th the diameter of a human hair. $PM_{2.5}$ results from fuel combustion (from motor vehicles, power generation, and industrial facilities), residential fireplaces, and wood stoves. In addition, $PM_{2.5}$ can be formed in the atmosphere from gases such as SO_2, NO_X, and VOC. Like PM_{10}, $PM_{2.5}$ and can penetrate the human respiratory system's natural defenses and damage the respiratory tract when inhaled. Whereas particles 2.5 to 10 microns in diameter tend to collect in the upper portion of the respiratory system, particles 2.5 microns or less are so tiny that they can penetrate deeper into the lungs and damage lung tissues.
- **CO:** CO is a colorless gas that interferes with the transfer of oxygen to the brain. CO is emitted almost exclusively from the incomplete combustion of fossil fuels. On-road motor vehicle exhaust is the primary source of CO. In cities, 85 to 95 percent of all CO emissions may come from motor vehicle exhaust. Prolonged exposure to high levels of CO can cause headaches, drowsiness, loss of equilibrium, or heart disease.
- **NO_2:** NO_2 is a brownish gas that irritates the lungs. It can cause breathing difficulties at high concentrations. As with O_3, NO_2 is not directly emitted. It is formed through a reaction between nitric oxide (NO) and atmospheric oxygen. NO and NO_2 are collectively referred to as NO_X and are major contributors to O_3 formation. NO_2 also contributes to the formation of PM_{10}. At atmospheric concentrations, NO_2 is only potentially irritating. In high concentrations, the result is a brownish red cast to the atmosphere and reduced visibility. There is some indication of a relationship between NO_2 and chronic pulmonary fibrosis. An increase in bronchitis in children (two and three years old) has also been observed at concentrations below 0.3 parts per million (ppm).
- **SO_2:** SO_2 is a product of high sulfur fuel combustion. The main sources of SO_2 are coal and oil used in power stations, industry, and domestic heating. Industrial chemical manufacturing is another source of SO_2. SO_2 is an irritant gas that can harm the human respiratory system and make breathing difficult. People with asthma, particularly children, are sensitive to these effects of SO_2. SO_2 can also yellow plant leaves and corrode iron and steel. Although diesel-fueled heavy-duty vehicles emit SO_2, USEPA and other regulatory agencies do not consider transportation sources to be significant sources of this pollutant.
- **Air Toxics:** A TAC is defined by California law as an air pollutant that "may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health."[4] The USEPA uses the term hazardous air pollutant in a similar sense and has identified nine compounds with significant contributions from mobile sources that are among national and regional-scale cancer risk drivers or contributors, as well as noncancer hazard contributors. These nine compounds are 1,3 butadiene, acetaldehyde, acrolein, benzene, DPM, ethylbenzene, formaldehyde, naphthalene, and polycyclic organic matter.
- **DPM:** DPM/diesel exhaust organic gases are a complex mixture of hundreds of constituents in either a gaseous or particle form. Gaseous components of diesel exhaust include carbon dioxide, oxygen, nitrogen, water vapor, CO, nitrogen compounds, sulfur compounds, and numerous low-

[4] California Health and Safety Code §39655(a).

molecular-weight hydrocarbons. DPM consists primarily of $PM_{2.5}$, including a subgroup with a large number of particles having a diameter less than 0.1 micrometer. Collectively, these particles have a large surface area, which makes them an excellent medium for adsorbing organic compounds. In addition, their small size makes them highly respirable and able to reach deep into the lungs. DPM is emitted from on-road mobile sources, such as automobiles and trucks, and from off-road mobile sources (e.g., diesel locomotives, marine vessels, and construction equipment). DPM is directly emitted from diesel-powered engines (primary PM) and can be formed from the gaseous compounds emitted by diesel engines (secondary PM).

Acute or short-term (e.g., episodic) exposure to diesel exhaust can cause acute irritation (e.g., eye, throat and bronchial), neurophysiological symptoms (e.g., lightheadedness and nausea), and respiratory symptoms (e.g., cough and phlegm). Evidence also exists for an exacerbation of allergenic responses to known allergens and asthma-like symptoms. Information from available human studies is inadequate for a definitive evaluation of possible noncancer health effects from chronic exposure to diesel exhaust. However, on the basis of extensive animal evidence, diesel exhaust is judged to pose a chronic respiratory hazard to humans. The USEPA has determined that diesel exhaust is likely to be carcinogenic to humans by inhalation and that this hazard applies to environmental exposures.

3.3.5.1.2 CLIMATE AND ATMOSPHERIC CONDITIONS

The surrounding atmosphere is an important element in assessing an area's ambient air quality. The project is located in the SCAB, an approximately 6,745-square-mile area that includes all of Orange County, the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, and the San Gorgonio Pass area in Riverside County. The terrain and geographical location determine the distinctive climate of the SCAB, which is a coastal plain with connecting broad valleys and low hills.

The SCAB is bordered by the Pacific Ocean to the west; the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east; and the San Diego County line to the south. Prevailing winds in the SCAB are mainly out of the west. These prevailing winds are due to the proximity of the SCAB to the coast and the blocking nature of the San Bernardino Mountains to the east; air masses pushed onshore into the basin are often trapped by the San Bernardino Mountains.

During summer, the SCAB is generally influenced by a Pacific subtropical high cell that sits off the coast, inhibiting cloud formation and encouraging daytime solar heating. The SCAB is rarely influenced by cold air masses moving south from Canada and Alaska, since these frontal systems are weak and diffuse as they reach the basin. The SCAB is classified as a dry-hot desert climate.

3.3.5.1.3 ATTAINMENT STATUS

Section 107 of the 1977 Clean Air Act Amendment requires that the USEPA publish a list of all geographic areas in compliance with the NAAQS, plus those not attaining the NAAQS. Areas not in NAAQS compliance are deemed nonattainment areas. Areas that have insufficient data to make a determination are deemed unclassified and are treated as being attainment areas until proven otherwise. An area's designation is based on the data collected by the state monitoring network on a pollutant-by-pollutant basis.

The CCAA, signed into law in 1988, requires all areas of the state to achieve and maintain the CAAQS by the earliest practicable date. CAAQS are at least as stringent as, and often more stringent than, NAAQS. CARB also publishes a list of geographic areas in attainment or nonattainment with the CAAQS.

The project is located in Los Angeles County. As shown in Table 3.3-5, the USEPA has classified Los Angeles County as a federal nonattainment area for O_3 and $PM_{2.5}$, and a portion of the county is nonattainment for lead. Los Angeles County is listed as a maintenance area for CO and PM_{10}, as it was previously a nonattainment area for these pollutants. CARB has classified Los Angeles County as a state nonattainment area for O_3, PM_{10}, and $PM_{2.5}$.

TABLE 3.3-5. LOS ANGELES COUNTY ATTAINMENT STATUS

AIR POLLUTANT	FEDERAL ATTAINMENT STATUS	STATE ATTAINMENT STATUS
Carbon Monoxide (CO)	Maintenance	Attainment
Ozone (O_3)	Nonattainment	Nonattainment
Nitrogen Dioxide (NO_2)	Attainment	Attainment
Suspended Particulates (PM_{10})	Maintenance	Nonattainment
Suspended Particulates ($PM_{2.5}$)	Nonattainment	Nonattainment
Lead (Pb)	Nonattainment (Partial)	Attainment
Sulfur Dioxide (SO_2)	Attainment/Unclassified	Attainment

Sources: USEPA 2023b; CARB 2023a
PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter

3.3.5.1.4 LOCAL MONITORED AIR QUALITY

Air pollutant levels in the SCAB are measured at monitoring stations that CARB maintains. The two monitoring stations nearest the project are located in the City of Los Angeles at the West Los Angeles Veterans Hospital and 1630 North Main Street. The last three years of available monitored data (2020, 2021, and 2022) for these locations are summarized in Table 3.3-6 to illustrate general air quality trends.

3.3.5.1.5 APPLICABLE STATE IMPLEMENTATION PLAN AND TRANSPORTATION IMPROVEMENT PROGRAM

As described above, SCAG is the MPO responsible for carrying out the metropolitan transportation planning process for the SCAG region, which includes Los Angeles County. Every four years, SCAG updates Connect SoCal, its RTP/Sustainable Communities Strategy (SCS) that meets federal and state requirements for infrastructure and sustainable planning. The latest version of Connect SoCal is the 2020-2045 RTP/SCS, which was adopted in 2020 and proposes land use and transportation strategies to improve mobility options and achieve a more sustainable growth pattern (SCAG 2020).

TABLE 3.3-6. AIR QUALITY SUMMARY FOR NEARBY MONITORING STATIONS

AIR POLLUTANT	STANDARD/EXCEEDANCE*	NORTH MAIN STREET LOS ANGELES			VA HOSPITAL WEST LOS ANGELES		
		2020	2021	2022	2020	2021	2022
Carbon Monoxide (CO)	Max. 1-hour Concentration (ppm)	2.1	2.0	1.7	2.0	1.5	NM
	Max. 8-hour Concentration (ppm)	1.6	1.6	1.5	1.2	1.0	NM
	# Days>Federal 1-hour Std. of >35 ppm	0	0	0	0	0	NM
	# Days>Federal 8-hour Std. of >9 ppm	0	0	0	0	0	NM
Ozone (O_3)	Year Coverage – 1 hour/8 hour**	93/92	93/95	97/99	94/97	96/99	94/96
	Max. 1-hour Concentration (ppm)	0.185	0.099	0.138	0.134	0.095	0.081
	Max. 8-hour Concentration (ppm)	0.118	0.085	0.090	0.092	0.082	0.070
	# Days>Federal 8-hour Std. Of >0.070 ppm	22	2	6	8	1	0
	# Days>California 1-hour Std. Of >0.09 ppm	14	1	1	6	1	0
Nitrogen Dioxide (NO_2)	Year Coverage**	90	92	98	95	98	98
	Max. 1-hour Concentration (ppb)	61.8	77.8	75.1	76.6	60.6	51.4
	98th Percentile 1-hour Concentration (ppb)	55.8	57.3	56.9	43.9	41.6	44.5
	National Annual Standard Design Value (ppb)	18	18	18	11	10	11
	California Annual Average (ppb)	17	17	18	10	10	11
	# Days>California 1-hour Std. of >180 ppb	0	0	0	0	0	0
Sulfur Dioxide (SO_2)	Max. 24-hour Concentration (ppb)	0.9	1.2	1.2	NM	NM	NM
	Annual Average (ppb)	0.23	0.39	0.26	NM	NM	NM
	# Days>Federal 1-hour Std. of >75 ppb	0	0	0	NM	NM	NM
Suspended Particulates (PM_{10})	Year Coverage**	88	97	0	NM	NM	NM
	Max. 24-hr National/State Conc. (µg/m^3)***	83.7/185.2	64.0/138.5	61.0/43.7	NM	NM	NM
	#Days>Fed. 24-hour Std. of>150 µg/m^3	0	0	0	NM	NM	NM
	#Days>California 24-hour Std. of>50 µg/m^3	34	14	0	NM	NM	NM
	National Annual Avg/State Annual Avg (µg/m^3)	33.1/33.9	26.0/30.9	29.4/24.1	NM	NM	NM
Suspended Particulates ($PM_{2.5}$)	Year Coverage**	99	100	99	NM	NM	NM
	Max. 24-hour Concentration (µg/m^3)	175.0	61.0	33.7	NM	NM	NM
	State Annual Average (µg/m^3)	15.0	14.8	11.1	NM	NM	NM
	#Days>Fed. 24-hour Std. of>35 µg/m^3	12	13	0	NM	NM	NM
	National Annual Average (µg/m^3)	13.7	12.8	10.9	NM	NM	NM

Source: CARB 2023b; USEPA 2023c (for CO and SO_2)
* The number of days above the standard is not necessarily the number of violations of the standard for the year.
** *Year Coverage* indicates how extensive monitoring was during the time of year when high pollutant concentrations were expected.
*** State statistics are based on California-approved samplers, whereas national statistics are based on samplers using federal reference or equivalent methods. State and national statistics may therefore be based on different samplers.
µg/m^3 = micrograms per cubic meter; NM = not measured; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; ppb = parts per billion; ppm = parts per million

KNE is included in the regional emissions analysis conducted by SCAG for the conforming 2020-2045 RTP/SCS (RTP ID S1160294). The RTP/SCS includes all KNE elements, and KNE's design concept and scope have not changed significantly from what was analyzed in the 2020-2045 RTP/SCS. This analysis found that the plan and, therefore, the individual projects contained in the plan, are conforming projects and will have air quality impacts consistent with those identified in the SIPs for achieving the NAAQS. The 2020-2045 RTP/SCS was adopted by SCAG on September 3, 2020.

Effective October 31, 2019, USEPA approved the 2008 8-hour O_3 NAAQS SIP in the 2016 South Coast AQMP. As a result, the 2016 South Coast AQMP/Ozone SIP is the applicable Ozone SIP for the SCAB (SCAQMD 2017). On January 26, 2023, CARB adopted the 2022 South Coast AQMP, which will be effective for purposes of federal law upon approval by the USEPA. The 2022 South Coast AQMP incorporates projections of regional growth from the Connect SoCal 2020–2045 RTP/SCS pertaining to population, housing, employment, and vehicle travel within the SCAB into its prescriptive approach for reducing regional air pollution. The 2022 South Coast AQMP includes both stationary and mobile source strategies to address the challenge of reducing NO_x emissions sufficiently to achieve attainment of the O_3 NAAQS (SCAQMD 2022).

3.3.6 PROJECT MEASURES

Project measures are design features, best management practices (BMPs), or other commitments that Metro would implement as part of all proposed alignments and stations, the design option, and the MSF to reduce or avoid environmental effects associated with project construction and operation. Project measures are not the same as mitigation measures, which are used to reduce an environmental impact's significance level. Where applicable, project measures are also discussed in Section 3.3.7 as part of the evaluation of environmental impacts.

3.3.6.1 PM AQ-1: METRO GREEN CONSTRUCTION POLICY

Established by formal adoption of the Green Construction Policy in 2011, Metro commits to the following construction equipment requirements, construction best management practices (BMPs), and implementation strategies for all construction projects performed on Metro properties or rights-of-way (Metro 2011):

- Construction equipment shall incorporate, where feasible, emissions-reducing technology such as hybrid drives and specific fuel economy standards.
- Equipment shall be maintained according to manufacturer specifications.
- Idling of construction equipment and heavy-duty trucks shall be restricted to a maximum of five minutes when not in use (certain exceptions apply based on CARB exemptions).
- Traffic speeds shall be limited on all unpaved roads to 15 miles per hour or less.
- All off-road diesel-powered construction equipment greater than 50 horsepower shall meet Tier 4 off-road emission standards at a minimum.
- All on-road heavy-duty trucks with a gross vehicle weight rating greater than or equal to 14,000 pounds shall have engines meeting U.S. 2010 on-road emission standards.

- Where applicable and feasible, coordination shall occur with local jurisdictions to improve traffic flow by signal synchronization during construction activities.
- Electric power shall be used in lieu of diesel power where available.
- Generators: Every effort shall be made to use grid-based electric power at any construction site, where feasible. Where access to the power grid is not available, on-site generators must:
  - Meet a 0.01 gram per brake-horsepower-hour standard for particulate matter; or
  - Be equipped with Best Available Control Technology for particulate matter emissions reductions.
- Inspections: Metro shall conduct inspections of construction sites and affected off-road and on-road equipment and generators as well as compliance with air quality rules.
- Records: Prior to Notice to Proceed to commence construction and to be verified afterward consistent with project contract requirements and through enforcement provisions above, the Contractor shall submit to Metro the following information for all construction equipment to be used on Metro properties or rights-of-way:
  - A certified statement that all construction equipment used conforms to the requirements specified above;
  - A list of all the equipment and vehicles (i.e., off-road equipment, include the CARB-issued Equipment Identification Number) to be used; and
  - A copy of each Contractor's certified U.S. Environmental Protection Agency rating and applicable paperwork issued either by CARB, SCAQMD, and any other jurisdiction that has oversight over the equipment.

3.3.6.2 PM AQ-2: SCAQMD RULE 403

Construction of the project would implement the following BMPs in compliance with SCAQMD Rule 403 – Fugitive Dust (SCAQMD 2005):

- Backfilling: Stabilize backfill materials when actively being handled or when inactive, and stabilize soil at completion of activity.
- Clearing/grubbing: Maintain stability of soil through watering of site prior to, during, and after all clearing/grubbing activities.
- Cut-and-fill: Pre-water soils prior to cut-and-fill activities using water trucks; stabilize soil during and after activities.
- Debris hauling: All trucks hauling dirt, sand, soil, or other loose materials are to be tarped with a fabric cover and maintain a freeboard height of 12 inches.
- Demolition activities: Prohibit demolition activities when wind speeds exceed 25 miles per hour; apply water to disturbed soils after demolition is completed or at the end of each day of cleanup.
- Disturbed soil: Stabilize disturbed soil throughout the construction site by limiting vehicular traffic and disturbance on soil where possible and applying water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes (Rule 401 – Visible Emissions).

- Disturbed surface areas: Apply dust suppression in sufficient quantity and frequency to maintain a stabilized surface; apply water at three-hour intervals to at least 80 percent of the unstabilized area.
- Earth-moving activities: Pre-apply water to depth of proposed cuts and reapply as necessary to maintain soils in a damp condition and to ensure that visible dust plumes do not exceed 100 feet in any direction.
- Importing/exporting of bulk materials: Stabilize material while loading/unloading/transporting to reduce fugitive dust emissions and maintain at least six inches of freeboard on haul vehicles.
- Staging areas and unpaved roads: Stabilize surface areas and limit vehicle speeds to 15 miles per hour.
- Stockpiles/bulk material handling: Stabilize stockpiled materials with intermittent watering and limit stockpiles to eight feet in height within 100 yards of off-site occupied buildings.
- Trenching: Stabilize surface soils with pre-watering where trencher or excavator and support equipment will operate; wash mud and soils from equipment at completion of activities.

3.3.6.3 PM AQ-3: METRO 2020 MOVING BEYOND SUSTAINABILITY STRATEGIC PLAN

Construction and operation of the project will adhere to the commitments established by the MBSSP 2020, including, but not limited to, the application of renewable diesel requirements for contractors, the implementation of the Construction and Demolition Debris Policy, the identification of opportunities to decarbonize fuel sources at construction sites, the use of electric medium- and heavy-duty equipment during construction, and the design and build of capital projects to CalGreen Tier 2 standards (Metro 2020).

3.3.6.4 PM AQ-4: METRO DESIGN STANDARDS

The project will be designed in accordance with the Metro Rail Design Criteria and the Metro Systemwide Station Design Standards Policy, which includes the installation of high-efficiency LED lighting in all fixtures to reduce electricity consumption (Metro 2017, 2018).

3.3.7 IMPACT EVALUATION AND MITIGATION MEASURES

This analysis presents the construction and operational impacts for air quality, as well as any applicable mitigation measures associated with KNE. A summary of the impact conclusions and applicable mitigation measures is found in Table 3.3-29 in Section 3.3.7.6.

3.3.7.1 IMPACT AQ-1: AIR QUALITY PLAN

Impact AQ-1: Would the project conflict with or obstruct implementation of the applicable air quality plan?

The applicable air quality plans are the SCAQMD 2016 AQMP (approved by USEPA), SCAQMD 2022 AQMP (approved by CARB and awaiting USEPA approval), and the conforming SCAG 2020-2045 RTP/SCS. As indicated in the SCAQMD Handbook (SCAQMD 1993), a project is consistent with the AQMP if:

- The project does not result in an increase to the frequency or severity of an existing air quality violation;
- The project does not cause or contribute to new air quality violations;
- The project does not delay the timely attainment of the air quality standards or the interim emission reductions specified in the AQMP;
- The project is consistent with the population and employment growth projections upon which the AQMP-forecasted emission levels are based;
- Project development is consistent with AQMP land use policies; and
- The project is consistent with the applicable mitigation measures assumed in preparation of the AQMP.

KNE was identified as a Strategic Project in the SCAG 2020-2045 RTP/SCS and was incorporated into its regional growth projections and transportation strategies. The SCAG 2020-2045 RTP/SCS conforms with the USEPA-approved SCAQMD 2016 AQMP, which is the applicable Ozone SIP for SCAB; SCAQMD's 2022 AQMP will be effective for purposes of federal law upon approval by the USEPA and relied on transportation, land use, and growth assumptions included in SCAG's 2020-2045 RTP/SCS in the development of its growth and regional air quality projections. Additional information regarding these plans is presented in Section 3.3.5.1.5.

Lowering passenger vehicle VMT is a universal focus of a number of climate action plans, including the 2022 Assembly Bill 32 Scoping Plan for Achieving Carbon Neutrality, the California State Transportation Agency Climate Action Plan for Transportation Infrastructure (2021), Metro's 2019 Climate Action and Adaptation Plan, the City of Los Angeles' Sustainable City pLAn (2015) and LA's Green New Deal (the updated version of the pLAn, 2019), and the City of West Hollywood's 2021 WeHo Climate Action Plan. Lowering passenger vehicle VMT reduces emissions of all criteria pollutants in addition to the GHG emissions reductions called for by these plans.

3.3.7.1.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.3.7.1.1.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE San Vicente–Fairfax Alignment would not conflict with or obstruct the implementation of the applicable plans because the alignment would not result in an increase in the frequency or severity of an existing air quality violation, cause or contribute to new air quality violations, or delay the timely attainment of the air quality standards or the interim emission reductions specified in the AQMP.

Construction activities would generate temporary emissions of regulated air pollutants, which would cease upon completion of construction of the light rail transit corridor. As discussed under Impact AQ-2, emissions from construction activities would not exceed applicable SCAQMD thresholds for all criteria pollutants during construction of the alignment and stations and would therefore not contribute to new air quality violations or an increase in the frequency or severity of existing air quality violations. Project measures PM

AQ-1, PM AQ-2, and PM AQ-3 would be implemented throughout construction to avoid and minimize air pollutant emissions by following equipment and fuel requirements and controlling fugitive dust.

As discussed in Section 3.10, Growth Inducing Impacts, construction of the alignment would not introduce new population or housing growth in the RSA, and any additional employment at Metro-operated facilities would not disproportionately contribute to the growth projections in the SCAG 2020-2045 RTP/SCS. Construction of the alignment and stations would be consistent with the population and employment growth projections upon which the AQMP-forecasted emission levels are based. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during construction.

3.3.7.1.1.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE San Vicente–Fairfax Alignment would not conflict with or obstruct the implementation of applicable plans because the alignment would not result in an increase in the frequency or severity of an existing air quality violation, cause or contribute to new air quality violations, or delay the timely attainment of the air quality standards or the interim emission reductions specified in the AQMP.

As discussed under Impact AQ-2 below, the change in regional emissions would not exceed applicable SCAQMD thresholds for all criteria pollutants during operation of the alignment and would therefore not contribute to new air quality violations or an increase in the frequency or severity of existing air quality violations.

As shown in Table 3.3-7, annual regional passenger VMT under the KNE San Vicente–Fairfax Alignment would be reduced by 49,448,375 as compared to the 2045 without Project Conditions. This is consistent with key objectives of the SCAG 2020-2045 RTP/SCS related to the expansion of high-quality transit infrastructure and reduction of VMT and the VMT-reducing objectives of the AQMP's Transportation Control Measures. Therefore, the alignment would not delay the timely attainment of air quality standards or interim emission reductions specified in the AQMP. KNE, including the alignment, is included in the conforming SCAG 2020-2045 RTP/SCS.

TABLE 3.3-7. KNE SAN VICENTE–FAIRFAX ALIGNMENT VEHICLE MILES TRAVELED

CONDITION	ANNUAL VMT
KNE San Vicente–Fairfax Alignment (2045)	214,090,029,819
2045 without Project Conditions	214,139,478,194
Change in VMT due to project	-49,448,375

Source: Connect Los Angeles Partners 2023
VMT = vehicle miles traveled

Operation of the alignment would not introduce a new permanent source of air pollutant emissions to the SCAB. LRVs would be propelled by electricity and would not directly consume petroleum fuels, the combustion of which would create air pollutant emissions. Emissions of criteria air pollutants that would be produced indirectly at electricity-generating facilities are regulated under permitting programs

administered by SCAQMD and are not under the purview of CEQA. Additionally, project measure PM AQ-4 would require use of high-efficiency LED lighting in light fixtures at stations and other facilities, consistent with SCAQMD AQMP measure ECC-02: Co-Benefits from Existing and Future Residential and Commercial Building Energy Efficiency Measures.

As discussed in Section 3.10, Growth Inducing Impacts, operation of the alignment would not introduce new population or housing growth in the RSA, and any additional employment at Metro-operated facilities would not disproportionately contribute to the growth projections in the SCAG 2020-2045 RTP/SCS. Operation of the alignment would be consistent with the population and employment growth projections upon which the AQMP-forecasted emission levels are based. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

3.3.7.1.2 KNE FAIRFAX ALIGNMENT

3.3.7.1.2.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE Fairfax Alignment would not conflict with or obstruct the implementation of the applicable plans because the alignment would not result in an increase in the frequency or severity of an existing air quality violation, cause or contribute to new air quality violations, or delay the timely attainment of the air quality standards or the interim emission reductions specified in the AQMP.

Construction activities would generate temporary emissions of regulated air pollutants, which would cease upon completion of construction of the light rail transit corridor. As discussed under Impact AQ-2, emissions from construction activities would not exceed applicable SCAQMD thresholds for all criteria pollutants during construction of the KNE Fairfax Alignment and would therefore not contribute to new air quality violations or an increase in the frequency or severity of existing air quality violations. Project measures PM AQ-1, PM AQ-2, and PM AQ-3 would be implemented throughout construction to avoid and minimize air pollutant emissions by following equipment and fuel requirements and controlling fugitive dust.

As discussed in Section 3.10, Growth Inducing Impacts, construction of the KNE Fairfax Alignment would not introduce new population or housing growth in the RSA, and any additional employment at Metro-operated facilities would not disproportionately contribute to the growth projections in the SCAG 2020-2045 RTP/SCS. Construction of the KNE Fairfax Alignment would be consistent with the population and employment growth projections upon which the AQMP-forecasted emission levels are based. Therefore, the KNE Fairfax Alignment would have a less than significant impact during construction.

3.3.7.1.2.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE Fairfax Alignment would not conflict with or obstruct the implementation of the applicable plans because the alignment would not result in an increase in the frequency or severity of an existing air quality violation, cause or contribute to new air quality violations, or delay the timely attainment of the air quality standards or the interim emission reductions specified in the AQMP.

As discussed under Impact AQ-2 below, the change in regional emissions would not exceed applicable SCAQMD thresholds for all criteria pollutants during operation of the KNE Fairfax Alignment and would therefore not contribute to new air quality violations or an increase in the frequency or severity of existing air quality violations.

As shown in Table 3.3-8, the annual regional passenger VMT is forecasted to be reduced by 46,518,885 under the alignment as compared to the 2045 without Project Conditions. This is consistent with key objectives of the SCAG 2020-2045 RTP/SCS related to the expansion of high-quality transit infrastructure and reduction of VMT and the VMT-reducing objectives of the AQMP's Transportation Control Measures. Therefore, the KNE Fairfax Alignment would not delay the timely attainment of air quality standards or interim emission reductions specified in the AQMP. KNE, including the alignment, is included in the conforming SCAG 2020-2045 RTP/SCS.

TABLE 3.3-8. KNE FAIRFAX ALIGNMENT VEHICLE MILES TRAVELED

CONDITION	ANNUAL VMT
KNE Fairfax Alignment (2045)	214,092,959,309
2045 without Project Conditions	214,139,478,194
Change in VMT due to project	-46,518,885

Source: Connect Los Angeles Partners 2023
VMT = vehicle miles traveled

Operation of the KNE Fairfax Alignment would not introduce a new permanent source of air pollutant emissions to the SCAB. LRVs would be propelled by electricity and would not directly consume petroleum fuels, the combustion of which would create air pollutant emissions. Emissions of criteria air pollutants that would be produced indirectly at electricity-generating facilities are regulated under permitting programs administered by SCAQMD and are not under the purview of CEQA. Additionally, project measure PM AQ-4 would require use of high-efficiency LED lighting in light fixtures at stations and other facilities, consistent with SCAQMD AQMP measure ECC-02: Co-Benefits from Existing and Future Residential and Commercial Building Energy Efficiency Measures.

As discussed in Section 3.10, Growth Inducing Impacts, operation of the KNE Fairfax Alignment would not introduce new population or housing growth in the RSA, and any additional employment at Metro-operated facilities would not disproportionately contribute to the growth projections in the SCAG 2020-2045 RTP/SCS. Operation of the KNE Fairfax Alignment would be consistent with the population and employment growth projections upon which the AQMP-forecasted emission levels are based. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

3.3.7.1.3 KNE LA BREA ALIGNMENT

3.3.7.1.3.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE La Brea Alignment would not conflict with or obstruct the implementation of the applicable plans because the alignment would not result in an increase in the frequency or severity of an existing air quality violation, cause or contribute to new air

quality violations, or delay the timely attainment of the air quality standards or the interim emission reductions specified in the AQMP.

Construction activities would generate temporary emissions of regulated air pollutants, which would cease upon completion of construction of the light rail transit corridor. As discussed under Impact AQ-2, emissions from construction activities would not exceed applicable SCAQMD thresholds for all criteria pollutants during construction of the KNE La Brea Alignment and would therefore not contribute to new air quality violations or an increase in the frequency or severity of existing air quality violations. Project measures PM AQ-1, PM AQ-2, and PM AQ-3 would be implemented throughout construction to avoid and minimize air pollutant emissions by following equipment and fuel requirements and controlling fugitive dust.

As discussed in Section 3.10, Growth Inducing Impacts, construction of the KNE La Brea Alignment would not introduce new population or housing growth in the RSA, and any additional employment at Metro-operated facilities would not disproportionately contribute to the growth projections in the SCAG 2020-2045 RTP/SCS. Construction of the KNE La Brea Alignment would be consistent with the population and employment growth projections upon which the AQMP-forecasted emission levels are based. Therefore, the KNE La Brea Alignment would have a less than significant impact during construction.

3.3.7.1.3.2 OPERATIONAL IMPACTS

Less than Significant Impact. Construction of the KNE La Brea Alignment would not conflict with or obstruct the implementation of the applicable plans because KNE would not result in an increase in the frequency or severity of an existing air quality violation, cause or contribute to new air quality violations, or delay the timely attainment of the air quality standards or the interim emission reductions specified in the AQMP.

As discussed under Impact AQ-2 below, the change in regional emissions would not exceed applicable SCAQMD thresholds for all criteria pollutants during operation of the KNE La Brea Alignment and would therefore not contribute to new air quality violations or an increase in the frequency or severity of existing air quality violations.

As shown in Table 3.3-9, the annual regional passenger VMT is forecasted to be reduced by 49,456,770 under the alignment as compared to the 2045 without Project Conditions. This is consistent with key objectives of the SCAG 2020-2045 RTP/SCS related to the expansion of high-quality transit infrastructure and reduction of VMT and the VMT-reducing objectives of the AQMP's Transportation Control Measures. Therefore, the KNE La Brea Alignment would not delay the timely attainment of air quality standards or interim emission reductions specified in the AQMP. KNE, including the alignment, is included in the conforming SCAG 2020-2045 RTP/SCS.

TABLE 3.3-9. KNE LA BREA ALIGNMENT VEHICLE MILES TRAVELED

CONDITION	ANNUAL VMT
KNE La Brea Alignment (2045)	214,090,021,424
2045 without Project Conditions	214,139,478,194
Change in VMT due to Project	-49,456,770

Source: Connect Los Angeles Partners 2023
VMT = vehicle miles traveled

Operation of the KNE La Brea Alignment would not introduce a new permanent source of air pollutant emissions to the SCAB. LRVs would be propelled by electricity and would not directly consume petroleum fuels, the combustion of which would create air pollutant emissions. Emissions of criteria air pollutants that would be produced indirectly at electricity-generating facilities are regulated under permitting programs administered by SCAQMD and are not under the purview of CEQA. Additionally, project measure PM AQ-4 would require use of high-efficiency LED lighting in light fixtures at stations and other facilities, consistent with SCAQMD AQMP measure ECC-02: Co-Benefits from Existing and Future Residential and Commercial Building Energy Efficiency Measures.

As discussed in Section 3.10, Growth Inducing Impacts, operation of the KNE La Brea Alignment would not introduce new population or housing growth in the RSA, and any additional employment at Metro-operated facilities would not disproportionately contribute to the growth projections in the SCAG 2020-2045 RTP/SCS. Operation of the KNE La Brea Alignment would be consistent with the population and employment growth projections upon which the AQMP-forecasted emission levels are based. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

3.3.7.1.4 HOLLYWOOD BOWL DESIGN OPTION

3.3.7.1.4.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the Hollywood Bowl Design Option would not conflict with or obstruct the implementation of the applicable plans because the design option would not result in an increase to the frequency or severity of an existing air quality violation, cause or contribute to new air quality violations, or delay the timely attainment of the air quality standards or the interim emission reductions specified in the AQMP.

Construction activities would generate temporary emissions of regulated air pollutants, which would cease upon completion of construction of the light rail transit corridor. As discussed under Impact AQ-2 below, emissions from construction activities would not exceed applicable SCAQMD thresholds for all criteria pollutants during construction of the Hollywood Bowl Design Option and would therefore not contribute to new air quality violations or an increase in the frequency or severity of existing air quality violations. Project measures PM AQ-1, PM AQ-2, and PM AQ-3 would be implemented throughout construction to avoid and minimize air pollutant emissions by following equipment and fuel requirements and controlling fugitive dust.

As discussed in Section 3.10, Growth Inducing Impacts, construction of the Hollywood Bowl Design Option would not introduce new population or housing growth in the RSA, and any additional employment at Metro-operated facilities would not disproportionately contribute to the growth projections in the SCAG 2020-2045 RTP/SCS. Construction of the Hollywood Bowl Design Option would be consistent with the population and employment growth projections upon which the AQMP-forecasted emission levels are based. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during construction.

3.3.7.1.4.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the Hollywood Bowl Design Option would not conflict with or obstruct the implementation of the applicable plans because KNE would not result in an increase in the frequency or severity of an existing air quality violation, cause or contribute to new air quality violations, or delay the timely attainment of the air quality standards or the interim emission reductions specified in the AQMP.

As discussed under Impact AQ-2 below, the Metro Corridor Based Model 2018c forecasts that the Hollywood Bowl Design Option would not contribute to a meaningful change in regional VMT beyond that expected with implementation of the alignments, and there would be no additional impacts to operational criteria pollutant emissions. The change in regional emissions would not exceed applicable SCAQMD thresholds for all criteria pollutants during operation of the Hollywood Bowl Design Option and would therefore not contribute to new air quality violations or an increase in the frequency or severity of existing air quality violations. Operation of the Hollywood Bowl Design Option would not delay the timely attainment of air quality standards or interim emission reductions specified in the AQMP. KNE, including the Hollywood Bowl Design Option, is included in the conforming SCAG 2020-2045 RTP/SCS.

Operation of the Hollywood Bowl Design Option would not introduce a new permanent source of air pollutant emissions to the SCAB. LRVs would be propelled by electricity and would not directly consume petroleum fuels, the combustion of which would create air pollutant emissions. Emissions of criteria air pollutants that would be produced indirectly at electricity-generating facilities are regulated under permitting programs administered by SCAQMD and are not under the purview of CEQA. Additionally, project measure PM AQ-4 would require use of high-efficiency LED lighting in light fixtures at stations and other facilities, consistent with SCAQMD AQMP measure ECC-02: Co-Benefits from Existing and Future Residential and Commercial Building Energy Efficiency Measures.

As discussed in Section 3.10, Growth Inducing Impacts, operation of the Hollywood Bowl Design Option would not introduce new population or housing growth in the RSA and any additional employment at Metro-operated facilities would not disproportionately contribute to the growth projections in the SCAG 2020-2045 RTP/SCS. Operation of the Hollywood Bowl Design Option would be consistent with the population and employment growth projections upon which the AQMP-forecasted emission levels are based. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

3.3.7.1.5 MAINTENANCE AND STORAGE FACILITY

3.3.7.1.5.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the MSF would not conflict with or obstruct the implementation of the applicable plans because KNE would not result in an increase to the frequency or severity of an existing air quality violation, cause or contribute to new air quality violations, or delay the timely attainment of the air quality standards or the interim emission reductions specified in the AQMP.

Construction activities would generate temporary emissions of regulated air pollutants, which would cease upon completion of construction. As discussed under Impact AQ-2 below, emissions from construction activities would not exceed applicable SCAQMD thresholds for all criteria pollutants during construction of the MSF and would therefore not contribute to new air quality violations or an increase in the frequency or severity of existing air quality violations. Project measures PM AQ-1, PM AQ-2, and PM AQ-3 would be implemented throughout construction to avoid and minimize air pollutant emissions by following equipment and fuel requirements and controlling fugitive dust.

As discussed in Section 3.10, Growth Inducing Impacts, construction of the MSF would not introduce new population or housing growth in the RSA, and any additional employment at Metro-operated facilities would not disproportionately contribute to the growth projections in the SCAG 2020-2045 RTP/SCS. Construction of the MSF is consistent with the population and employment growth projections upon which the AQMP-forecasted emission levels are based. Therefore, the MSF would have a less than significant impact during construction.

3.3.7.1.5.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the MSF would not conflict with or obstruct the implementation of the applicable plans because it would not result in an increase in the frequency or severity of an existing air quality violation, cause or contribute to new air quality violations, or delay the timely attainment of the air quality standards or the interim emission reductions specified in the AQMP.

As discussed under Impact AQ-2, employee commute trips associated with operation of the MSF are included in the regional VMT projections used to evaluate the vehicle emissions from the alignments, and there would be no additional impacts to regional operational criteria pollutant emissions associated with operational vehicle travel.

Project measure PM AQ-4 would be implemented, requiring use of high-efficiency LED lighting in light fixtures at stations and other facilities. As discussed under Impact AQ-2, emissions from operations and maintenance activities at the MSF would not exceed applicable SCAQMD thresholds for all criteria pollutants and would therefore not contribute to new air quality violations or an increase in the frequency or severity of existing air quality violations.

KNE, of which the MSF is an essential part, is included in the conforming SCAG 2020-2045 RTP/SCS. As discussed in Section 3.10, Growth Inducing Impacts, operation of the MSF would not introduce new population or housing growth in the RSA, and any additional employment at Metro-operated facilities would not disproportionately contribute to the growth projections in the SCAG 2020-2045 RTP/SCS.

Operation of the MSF is consistent with the population and employment growth projections upon which the AQMP-forecasted emission levels are based. Therefore, the MSF would have a less than significant impact during operation.

3.3.7.2 IMPACT AQ-2: REGIONAL CRITERIA POLLUTANT EMISSIONS

Impact AQ-2: Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard?

The SCAG region is the RSA for evaluation of regional impacts for air quality to capture all changes to regional VMT; however, the applicable attainment designations are those for the SCAB. The SCAB is currently designated as being in nonattainment of the federal and/or state ambient air quality standards for O_3, PM_{10}, and $PM_{2.5}$. SCAQMD has promulgated guidance related to cumulatively considerable emissions, stating that if daily emissions associated with implementation of a project do not exceed regional significance threshold values, those emissions would not be considered cumulatively considerable and significant. As a result, SCAQMD's project-specific and cumulative significance thresholds are the same. SCAQMD's significance thresholds acknowledge regional sources already contributing to nonattainment and other current and future individual projects. Daily air pollutant emissions that would be generated by construction and operation of each of the alignments, the design option, and the MSF are evaluated in the context of the SCAQMD Air Quality Significance Thresholds in Table 3.3-2 above.

3.3.7.2.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.3.7.2.1.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction emissions associated with the KNE San Vicente–Fairfax Alignment would be generated from heavy-duty construction equipment exhaust; fugitive dust (particulate matter) from material movement and ground disturbance; exhaust from worker vehicle travel to and from the project site; exhaust from haul trucks, delivery trucks, and cement trucks importing and exporting material to the project site; and on-road re-entrained dust and brake and tire wear.

The KNE San Vicente–Fairfax Alignment would be constructed in three sections. Section 1 would extend from the Expo/Crenshaw Station to the Wilshire/Fairfax Station. Section 2 would extend from the Section 1 terminus at the Wilshire/Fairfax Station to the San Vicente/Santa Monica Station. Section 3 would extend from the Section 2 terminus at the San Vicente/Santa Monica Station to the northern terminus at either the Hollywood/Highland Station or the optional Hollywood Bowl Station.

The MSF is an essential element in supporting the reliable operation of a light rail transit (LRT) system and would be necessary for the implementation and operation of the alignment. Project activities associated with the MSF would occur in two parts, concurrent with construction of Section 1 and Section 2 of each alignment. Concurrently with Section 1 of the alignment, MSF facility construction would include the addition of four storage tracks to the existing Division 16 site to accommodate increased LRV storage. Concurrently with Section 2 of the alignment, MSF facility construction would include expansion of the

existing Division 16 MSF on the adjacent 16.5-acre site. No MSF construction would occur concurrently with Section 3 of the KNE San Vicente–Fairfax Alignment.

This analysis assumes that each of the three sections of the alignment would be built sequentially, not concurrently; therefore, maximum daily emissions have been presented and compared to the thresholds separately. Since construction of the alignment and the MSF storage tracks as part of Section 1 would occur concurrently, criteria pollutant emissions were considered together when determining maximum daily emissions for comparison to the thresholds. Similarly, criteria pollutant emissions from concurrent construction of the alignment and the MSF expansion as part of Section 2 were considered together when determining maximum daily emissions for comparison to the thresholds. If concurrent construction of alignment sections is expected, further analysis will be needed to determine combined air quality impacts. As a result of uncertainty in the timing for construction of each section, 2041 was used as a representative "Year 1" for all sections when calculating criteria pollutant emissions since it is the first anticipated construction year for the project.

In accordance with guidance from SCAQMD, the air quality assessment characterized the maximum mass daily emissions that would occur during construction. The maximum daily emissions represent a reasonably conservative estimate of the highest anticipated daily emissions based on detailed phasing and equipment information developed for the alignment and MSF. Daily emissions were calculated for all construction activities over the entire construction period to determine the maximum daily emissions. While the maximum daily emissions are based on a specific combination of estimated concurrent construction activities, they are considered representative of the worst case over the entire construction period. Therefore, the maximum daily emissions are presented as totals and not broken out by source. Daily activity levels and emissions would fluctuate throughout construction and would be lower on average than the calculated daily maximums.

Table 3.3-10 presents the maximum daily criteria pollutant emissions that would be generated during construction of each section of the alignment, including construction of Section 1 of the alignment concurrently with Section 1 MSF facilities, as well as Section 2 of the alignment that would be constructed concurrently with the Division 16 expansion; it also identifies SCAQMD Air Quality Significance Thresholds for mass daily emissions at the regional level. SCAQMD's guidance states that CEQA projects may emit air pollutants at quantities below the air quality significance thresholds without being considered significant at the project or cumulatively considerable level. Projects that generate emissions in excess of the project-specific thresholds are considered to be cumulatively considerable and significant.

TABLE 3.3-10. KNE SAN VICENTE–FAIRFAX ALIGNMENT CRITERIA POLLUTANT CONSTRUCTION EMISSIONS

PROJECT ELEMENT[1]	MAXIMUM DAILY EMISSIONS (LBS/DAY)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Section 1: Expo/Crenshaw Station to Wilshire/Fairfax Station with Corresponding MSF Facilities[2]	3	56	69	0	18	8
SCAQMD Thresholds	75	100	550	150	150	55
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***
Section 2: Wilshire/Fairfax Station to San Vicente/Santa Monica Station with MSF Expansion[3]	4	60	83	0	17	6
SCAQMD Thresholds	75	100	550	150	150	55
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***
Section 3: San Vicente/Santa Monica Station to Hollywood/Highland Station	4	86	80	1	26	9
SCAQMD Thresholds	75	100	550	150	150	55
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***

Source: Connect Los Angeles Partners 2023

[1] The analysis assumes that each of the three sections of the KNE San Vicente–Fairfax Alignment would be built sequentially, not concurrently; therefore, maximum daily emissions have been presented and compared to the thresholds separately. If concurrent construction is expected, further analysis will be needed to determine combined air quality impacts.

[2] The MSF is an essential element in supporting the reliable operation of an LRT system and would be necessary for the implementation and operation of the alignment. MSF facilities would be constructed concurrently with the Section 1 portion of the alignment and would include the addition of four storage tracks to the existing Division 16 site. As such, daily criteria pollutant emissions associated with these MSF facilities have been included with the alignment's Section 1 daily emissions when determining maximum daily emissions for comparison to the thresholds.

[3] The MSF is an essential element in supporting the reliable operation of an LRT system and would be necessary for the implementation and operation of the alignment. The MSF expansion would be constructed as part of Section 2 concurrently with the alignment and would include expansion of the existing Division 16 MSF on the adjacent 16.5-acre site. As such, daily criteria pollutant emissions associated with construction of the MSF expansion have been included with the alignment's Section 2 daily emissions when determining maximum daily emissions for comparison to the thresholds.

CO = carbon monoxide; lbs/day = pounds per day; NO_X = nitrogen oxides; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; SCAQMD = South Coast Air Quality Management District; SO_X = sulfur oxides; VOC = volatile organic compounds

As shown in Table 3.3-10, maximum daily emissions estimates for each section of the alignment with concurrent construction of applicable MSF facilities would be below SCAQMD's mass daily CEQA thresholds.

All construction activities would be conducted in accordance with project measures PM AQ-1, PM AQ-2, and PM AQ-3 to avoid and minimize emissions. Reductions in fugitive dust emissions (affecting PM_{10} and $PM_{2.5}$ emissions) associated with watering as required by SCAQMD Rule 403 (see PM AQ-2) were included in the emission calculations. However, due to uncertainty in the availability of equipment and renewable diesel fuel in the vicinity of the alignment at the time of construction, emission reductions from other project measures were not accounted for in the construction emission estimates. Actual construction emissions are expected to be lower than those estimated and, as a result, this analysis is conservative.

While there would be a temporary increase in emissions of criteria pollutants from construction of the alignment, maximum daily regional emissions would be below SCAQMD CEQA significance thresholds at the cumulatively considerable level (SCAQMD 1993). Construction of the KNE San Vicente–Fairfax Alignment would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during construction.

3.3.7.2.1.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operational criteria air pollutant emission sources under the KNE San Vicente–Fairfax Alignment include exhaust from motor vehicle VMT in the RSA. Emissions associated with exhaust from motor vehicle VMT would be reduced under the alignment as compared to 2045 without Project Conditions due to increased transit use. The stations would not have designated parking, and the small amount of vehicle trips to and from the stations are included in the regional VMT forecasts. LRVs would be electrically powered and would not directly generate criteria pollutant emissions.

As presented in Table 3.3-11, there would be a net reduction in operational regional emissions of VOC, CO, NOx, sulfur oxides (SO_x), PM_{10}, and $PM_{2.5}$ under the alignment, primarily due to the reduction in motor vehicle VMT associated with ridership of the project. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

TABLE 3.3-11. KNE SAN VICENTE–FAIRFAX ALIGNMENT OPERATIONAL REGIONAL CRITERIA POLLUTANT EMISSIONS

	DAILY EMISSIONS (LBS/DAY)					
EMISSION SOURCE	VOC	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$
KNE SAN VICENTE–FAIRFAX ALIGNMENT (2045)						
Regional Traffic	9,252	646,974	85,879	3,548	32,391	11,313
2045 WITHOUT PROJECT CONDITIONS						
Regional Traffic	9,254	647,123	85,899	3,549	32,398	11,316
KNE SAN VICENTE–FAIRFAX ALIGNMENT (2045) COMPARED TO 2045 WITHOUT PROJECT CONDITIONS						
Net Project Emissions[1,2]	(2)	(149)	(20)	(1)	(7)	(3)
SCAQMD Threshold	55	550	55	150	150	55
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Connect Los Angeles Partners 2023
[1] Totals may vary due to rounding.
[2] Emission reductions (i.e., beneficial impacts) are shown in parentheses.
CO = carbon monoxide; lbs/day = pounds per day; NO_X = nitrogen oxides; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; SCAQMD = South Coast Air Quality Management District; SO_X = sulfur oxides; VOC = volatile organic compounds

3.3.7.2.2 KNE FAIRFAX ALIGNMENT

3.3.7.2.2.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction emissions associated with the KNE Fairfax Alignment would be generated from heavy-duty construction equipment exhaust; fugitive dust (particulate matter) from material movement and ground disturbance; exhaust from worker vehicle travel to and from the project site; exhaust from haul trucks, delivery trucks, and cement trucks importing and exporting material to the project site; and on-road re-entrained dust and brake and tire wear.

The KNE Fairfax Alignment would be constructed in two sections. Section 1 would extend from the Expo/Crenshaw Station to the Wilshire/Fairfax Station. Section 2 would extend from the Section 1 terminus at the Wilshire/Fairfax Station to the northern terminus at either the Hollywood/Highland Station or the optional Hollywood Bowl Station.

The MSF is an essential element in supporting the reliable operation of an LRT system and would be necessary for the implementation and operation of the KNE Fairfax Alignment. Project activities associated with the MSF would occur in two parts, concurrent with Section 1 and Section 2 of the alignment. Concurrently with Section 1 of the alignments, MSF facility construction would include the addition of four storage tracks on the existing Division 16 site to accommodate increased LRV storage. Concurrently with Section 2 of the alignments, MSF facilities constructed would include expansion of the existing Division 16 MSF on an adjacent 16.5-acre site.

This analysis assumes that the two sections of the KNE Fairfax Alignment would be built sequentially, not concurrently; therefore, maximum daily emissions have been presented and compared to the thresholds separately. Since construction of the alignment and the MSF storage tracks as part of Section 1 would occur concurrently, criteria pollutant emissions were considered together when determining maximum daily emissions for comparison to the thresholds. Similarly, criteria pollutant emissions from concurrent construction of the alignment and the MSF expansion as part of Section 2 were considered together when determining maximum daily emissions for comparison to the thresholds. If concurrent construction of sections of the alignment is expected, further analysis will be needed to determine combined air quality impacts. As a result of uncertainty in the timing for construction of each section, 2041 was used as a representative “Year 1” for all sections when calculating criteria pollutant emissions since it is the first anticipated construction year for the project.

In accordance with guidance from SCAQMD, the air quality assessment characterized the maximum mass daily emissions that would occur during construction. The maximum daily emissions represent a reasonably conservative estimate of the highest anticipated daily emissions based on detailed phasing and equipment information developed for the alignment and MSF. Daily emissions were calculated for all construction activities over the entire construction period to determine the maximum daily emissions. While the maximum daily emissions are based on a specific combination of estimated concurrent construction activities, they are considered representative of the worst case over the entire construction period. Therefore, the maximum daily emissions are presented as totals and not broken out by source. Daily activity levels and emissions would fluctuate throughout construction and be lower on average than the calculated daily maximums.

Table 3.3-12 presents the maximum daily criteria pollutant emissions that would be generated during construction of each section of the alignment, including construction of Section 1 of the alignment concurrently with additional MSF facilities, as well as Section 2 of the alignment concurrently with the Division 16 expansion; it also identifies SCAQMD Air Quality Significance Thresholds for mass daily emissions at the regional level.

TABLE 3.3-12. KNE FAIRFAX ALIGNMENT CRITERIA POLLUTANT CONSTRUCTION EMISSIONS

PROJECT ELEMENT[1]	MAXIMUM DAILY EMISSIONS (LBS/DAY)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Section 1: Expo/Crenshaw Station to Wilshire/Fairfax Station with Corresponding MSF Facilities[2]	3	56	69	0	18	8
SCAQMD Thresholds	75	100	550	150	150	55
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***
Section 2: Wilshire/Fairfax Station to Hollywood/Highland Station with MSF Expansion[3]	5	91	102	1	29	11
SCAQMD Thresholds	75	100	550	150	150	55
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***

Source: Connect Los Angeles Partners 2023

[1] The analysis assumes that the two sections of the alignment would be built sequentially, not concurrently; therefore, maximum daily emissions have been presented and compared to the thresholds separately. If concurrent construction is expected, further analysis will be needed to determine combined air quality impacts.

[2] The MSF is an essential element in supporting the reliable operation of an LRT system and would be necessary for the implementation and operation of the alignment. MSF facilities would be constructed concurrently with the Section 1 portion of the alignment and would include the addition of four storage tracks to the existing Division 16 site. As such, daily criteria pollutant emissions associated with these MSF facilities have been included with the alignment's Section 1 daily emissions when determining maximum daily emissions for comparison to the thresholds.

[3] The MSF is an essential element in supporting the reliable operation of an LRT system and would be necessary for the implementation and operation of the alignment. The MSF expansion would be constructed as part of Section 2 concurrently with the alignment and would include expansion of the existing Division 16 MSF on the adjacent 16.5-acre site. As such, daily criteria pollutant emissions associated with construction of the MSF expansion have been included with the alignment's Section 2 daily emissions when determining maximum daily emissions for comparison to the thresholds.

CO = carbon monoxide; lbs/day = pounds per day; NO_X = nitrogen oxides; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; SCAQMD = South Coast Air Quality Management District; SO_X = sulfur oxides; VOC = volatile organic compounds

As shown in Table 3.3-12, maximum daily emissions estimates for each section of the alignment with concurrent construction of applicable MSF facilities would be below SCAQMD's mass daily CEQA thresholds.

All construction activities would be conducted in accordance with project measures PM AQ-1, PM AQ-2, and PM AQ-3 to avoid and minimize emissions. Reductions in fugitive dust emissions (affecting PM_{10} and $PM_{2.5}$ emissions) associated with watering as required by SCAQMD Rule 403 (see PM AQ-2) were included in the emission calculations. However, due to uncertainty in the availability of equipment and renewable diesel fuel in the vicinity of KNE at the time of construction, emission reductions from other project measures were not accounted for in the construction emission estimates. Therefore, actual construction emissions are expected to be lower than those estimated and, as a result, this analysis is conservative.

While there would be a temporary increase in emissions of criteria pollutants from construction of the KNE Fairfax Alignment, maximum daily regional emissions would be below SCAQMD CEQA significance thresholds. In accordance with SCAQMD CEQA guidance, because emissions from construction would remain below the project-level CEQA thresholds, the emissions would also be considered less than significant at the cumulatively considerable level (SCAQMD 1993). Therefore, the KNE Fairfax Alignment would have a less than significant impact during construction.

3.3.7.2.2.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operational criteria air pollutant emission sources under the KNE Fairfax Alignment include exhaust from motor vehicle VMT in the RSA. Emissions associated with exhaust from motor vehicle VMT would be reduced under the KNE Fairfax Alignment as compared to 2045 without Project Conditions due to increased transit use. The stations would not have designated parking, and the small amount of vehicle trips to and from the stations are included in the regional VMT forecasts. LRVs would be electrically powered and would not generate any direct criteria pollutant emissions.

Table 3.3-13 presents the regional emissions associated with operation of the alignment compared to the 2045 without Project Conditions. As shown, there would be a net reduction in operational regional emissions of VOC, CO, NO_X, SO_x, PM_{10}, and $PM_{2.5}$ under the alignment, primarily due to the reduction in motor vehicle VMT associated with ridership of the project. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

TABLE 3.3-13. KNE FAIRFAX ALIGNMENT OPERATIONAL REGIONAL CRITERIA POLLUTANT EMISSIONS

EMISSION SOURCE	DAILY EMISSIONS (LBS/DAY)					
	VOC	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$
KNE FAIRFAX ALIGNMENT (2045)						
Regional Traffic	9,252	646,983	85,880	3,548	32,391	11,313
2045 WITHOUT PROJECT CONDITIONS						
Regional Traffic	9,254	647,123	85,899	3,549	32,398	11,316
KNE FAIRFAX ALIGNMENT (2045) COMPARED TO 2045 WITHOUT PROJECT CONDITIONS						
Net Project Emissions[1,2]	(2)	(141)	(19)	(1)	(7)	(2)
SCAQMD Threshold	55	550	55	150	150	55
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Connect Los Angeles Partners 2023
[1] Totals may vary due to rounding.
[2] Emission reductions (i.e., beneficial impacts) are shown in parentheses.
CO = carbon monoxide; lbs/day = pounds per day; NO_X = nitrogen oxides; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; SCAQMD = South Coast Air Quality Management District; SO_X = sulfur oxides; VOC = volatile organic compounds

3.3.7.2.3 KNE LA BREA ALIGNMENT

3.3.7.2.3.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction emissions associated with the KNE La Brea Alignment would be generated from heavy-duty construction equipment exhaust; fugitive dust (particulate matter) from material movement and ground disturbance; exhaust from worker vehicle travel to and from the project site; exhaust from haul trucks, delivery trucks, and cement trucks importing and exporting material to the project site, and on-road re-entrained dust and brake and tire wear. Criteria pollutant emissions from construction were estimated following the methodology described in Section 3.3.3.1.1.

The KNE La Brea Alignment would be constructed in two sections. Section 1 would extend from the Expo/Crenshaw Station to the Wilshire/La Brea Station. Section 2 would extend from the Section 1 terminus at the Wilshire/La Brea Station to the northern terminus at either the Hollywood/Highland Station or the optional Hollywood Bowl Station.

The MSF is an essential element in supporting the reliable operation of an LRT system and would be necessary for the implementation and operation of the KNE La Brea Alignment. Project activities associated with the MSF would occur in two parts, concurrent with Section 1 and Section 2 of the alignment. Concurrently with Section 1 of the alignment, MSF facility construction would include the addition of four storage tracks on the existing Division 16 site to accommodate increased LRV storage. Concurrently with Section 2 of the alignment, MSF facilities constructed would include expansion of the existing Division 16 MSF on an adjacent 16.5-acre site and comprise approximately 57,380 square feet of facility structures.

This analysis assumes that the two sections of the KNE La Brea Alignment would be built sequentially, not concurrently; therefore, maximum daily emissions have been presented and compared to the thresholds separately. Since construction of the alignment and the MSF storage tracks as part of Section 1 would occur concurrently, criteria pollutant emissions were considered together when determining maximum daily emissions for comparison to the thresholds. Similarly, criteria pollutant emissions from concurrent construction of the alignment and the MSF expansion as part of Section 2 were considered together when determining maximum daily emissions for comparison to the thresholds. If concurrent construction of alignment sections is expected, further analysis will be needed to determine combined air quality impacts. As a result of uncertainty in the timing for construction of each section, 2041 was used as a representative “Year 1” for all sections when calculating criteria pollutant emissions since it is the first anticipated construction year for the project.

In accordance with guidance from SCAQMD, the air quality assessment characterized the maximum mass daily emissions that would occur during construction. The maximum daily emissions represent a reasonably conservative estimate of the highest anticipated daily emissions based on detailed phasing and equipment information developed for the alignment and MSF. Daily emissions were calculated for all construction activities over the entire construction period to determine the maximum daily emissions. While the maximum daily emissions are based on a specific combination of estimated concurrent construction activities, they are considered representative of the worst case over the entire construction period. Therefore, the maximum daily emissions are presented as totals and are not broken out by

source. Daily activity levels and emissions would fluctuate throughout construction and be lower on average than the calculated daily maximums.

Table 3.3-14 presents the maximum daily criteria pollutant emissions that would be generated during construction of each section of the alignment, including construction of Section 1 of the alignment concurrently with additional MSF facilities, as well as Section 2 of the alignment concurrently with MSF expansion; it also identifies SCAQMD Air Quality Significance Thresholds for mass daily emissions at the regional level.

TABLE 3.3-14. KNE LA BREA ALIGNMENT CRITERIA POLLUTANT CONSTRUCTION EMISSIONS

PROJECT ELEMENT [1]	MAXIMUM DAILY EMISSIONS (LBS/DAY)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Section 1: Expo/Crenshaw Station to Wilshire/La Brea Station with Corresponding MSF Facilities [2]	3	58	69	0	18	8
SCAQMD Thresholds	75	100	550	150	150	55
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***
Section 2: Wilshire/La Brea Station to Hollywood/Highland Station with MSF Expansion[3]	5	94	99	1	30	11
SCAQMD Thresholds	75	100	550	150	150	55
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***

Source: Connect Los Angeles Partners 2023

[1] The analysis assumes that the two sections of the alignment would be built sequentially, not concurrently; therefore, maximum daily emissions have been presented and compared to the thresholds separately. If concurrent construction is expected, further analysis will be needed to determine combined air quality impacts.

[2] The MSF is an essential element in supporting the reliable operation of a light rail transit system and would be necessary for the implementation and operation of the alignment. MSF facilities would be constructed concurrently with the Section 1 portion of the alignment and would include the addition of four storage tracks to the existing Division 16 site. As such, daily criteria pollutant emissions associated with these MSF facilities have been included with the alignment's Section 1 daily emissions when determining maximum daily emissions for comparison to the thresholds.

[3] The MSF is an essential element in supporting the reliable operation of an LRT system and would be necessary for the implementation and operation of the alignment. The MSF expansion would be constructed as part of Section 2 concurrently with the alignment and would include expansion of the existing Division 16 MSF on the adjacent 16.5-acre site. As such, daily criteria pollutant emissions associated with construction of the MSF expansion have been included with the alignment's Section 2 daily emissions when determining maximum daily emissions for comparison to the thresholds.

CO = carbon monoxide; lbs/day = pounds per day; NO_X = nitrogen oxides; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; SCAQMD = South Coast Air Quality Management District; SO_X = sulfur oxides; VOC = volatile organic compounds

As shown in Table 3.3-14, maximum daily emissions estimates for each section of the alignment with concurrent construction of applicable MSF facilities would be below SCAQMD's mass daily CEQA thresholds.

All construction activities would be conducted in accordance with project measures PM AQ-1, PM AQ-2, and PM AQ-3 to avoid and minimize emissions. Reductions in fugitive dust emissions (affecting PM_{10} and $PM_{2.5}$ emissions) associated with watering as required by SCAQMD Rule 403 (see PM AQ-2) were included in the emission calculations. However, due to uncertainty in the availability of equipment and renewable diesel fuel in the vicinity of KNE at the time of construction, emission reductions from other project

measures were not accounted for in the construction emission estimates. Actual construction emissions are expected to be lower than those estimated and, as a result, this analysis is conservative.

While there would be a temporary increase in emissions of criteria pollutants from construction of the KNE La Brea Alignment, maximum daily regional emissions would be below SCAQMD CEQA significance thresholds. In accordance with SCAQMD CEQA guidance, because emissions from construction would remain below the project-level CEQA thresholds, the emissions would also be considered less than significant at the cumulatively considerable level (SCAQMD 1993). Therefore, the KNE La Brea Alignment would have a less than significant impact during construction.

3.3.7.2.3.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operational criteria air pollutant emission sources under the KNE La Brea Alignment include exhaust from motor vehicle VMT in the RSA. Emissions associated with exhaust from motor vehicle VMT would be reduced under the KNE La Brea Alignment as compared to 2045 without Project Conditions due to increased transit use. The stations would not have designated parking, and the small amount of vehicle trips to and from the stations are included in the regional VMT forecasts. LRVs would be electrically powered and would not generate any direct criteria pollutant emissions.

Table 3.3-15 presents the regional emissions associated with operation of the alignment compared to the 2045 without Project Conditions. As shown, there would be a net reduction in operational regional emissions of VOC, CO, NO_X, SO_x, PM_{10}, and $PM_{2.5}$ under the alignment, primarily due to the reduction in motor vehicle VMT associated with ridership of the project. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

TABLE 3.3-15. KNE LA BREA ALIGNMENT OPERATIONAL REGIONAL CRITERIA POLLUTANT EMISSIONS

	DAILY EMISSIONS (LBS/DAY)					
EMISSION SOURCE	VOC	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$
KNE LA BREA ALIGNMENT (2045)						
Regional Traffic	9,252	646,974	85,879	3,548	32,391	11,313
2045 WITHOUT PROJECT CONDITIONS						
Regional Traffic	9,254	647,123	85,899	3,549	32,398	11,316
KNE LA BREA ALIGNMENT (2045) COMPARED TO 2045 WITHOUT PROJECT CONDITIONS						
Net Project Emissions[1,2]	(2)	(149)	(20)	(1)	(7)	(3)
SCAQMD Threshold	55	550	55	150	150	55
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Connect Los Angeles Partners 2023
[1] Totals may vary due to rounding.
[2] Emission reductions (beneficial impacts) are shown in parentheses.
CO = carbon monoxide; lbs/day = pounds per day; NO_X = nitrogen oxides; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; SCAQMD = South Coast Air Quality Management District; SO_X = sulfur oxides; VOC = volatile organic compounds

3.3.7.2.4 HOLLYWOOD BOWL DESIGN OPTION

3.3.7.2.4.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The Hollywood Bowl Design Option changes the proposed Hollywood/Highland Station from a terminus station to an in-line station and adds a new Hollywood Bowl terminus station to the final section of each alignment (Section 3 of KNE San Vicente–Fairfax Alignment, Section 2 of the KNE Fairfax Alignment, and Section 2 of the KNE La Brea Alignment). In order to capture these changes, criteria pollutant emissions were recalculated for the final section of each alignment to include construction of the Hollywood Bowl Design Option. Construction of other sections (Section 1 and Section 2 of the KNE San Vicente–Fairfax Alignment, Section 1 of the KNE Fairfax Alignment, and Section 1 of the KNE La Brea Alignment) would not be affected by addition of the Hollywood Bowl Design Option to the final sections.

The MSF is an essential element in supporting the reliable operation of an LRT system and would be necessary for the implementation and operation of the alignments. Construction of the MSF expansion to Metro's existing Division 16 would occur concurrently with Section 2 of each alignment, meaning it would also occur concurrently with the Hollywood Bowl Design Option and Section 2 construction for the KNE Fairfax Alignment and KNE La Brea Alignment. As a result, criteria pollutant emissions for MSF Section 2 were considered with the Hollywood Bowl Design Option and Section 2 criteria pollutant emissions for the KNE Fairfax Alignment and KNE La Brea Alignment when determining maximum daily emissions for comparison to the thresholds.

As previously described, this analysis assumes that the sections of each alignment would be built sequentially, not concurrently; therefore, maximum daily emissions have been presented and compared to the thresholds separately. If concurrent construction of alignment sections is expected, further analysis will be needed to determine combined air quality impacts. As a result of uncertainty in the timing for construction of each section, 2041 was used as a representative "Year 1" for all sections when calculating criteria pollutant emissions because it is the first anticipated construction year for the project.

Construction emissions associated with the Hollywood Bowl Design Option would be generated from heavy-duty construction equipment exhaust; fugitive dust (particulate matter) from material movement and ground disturbance; exhaust from worker vehicle travel to and from the project site; exhaust from haul trucks, delivery trucks, and cement trucks importing and exporting material to the project site; and on-road re-entrained dust and brake and tire wear.

In accordance with guidance from SCAQMD, the air quality assessment characterized the maximum mass daily emissions that would occur during construction. The maximum daily emissions represent a reasonably conservative estimate of the highest anticipated daily emissions based on detailed phasing and equipment information developed for the project. Daily emissions were calculated for all construction activities over the entire construction period to determine the maximum daily emissions. While the maximum daily emissions are based on a specific combination of estimated concurrent construction activities, they are considered representative of the worst case over the entire construction period. Therefore, the maximum daily emissions are presented as totals and not broken out by source.

Daily activity levels and emissions would fluctuate throughout construction and would be lower on average than the calculated daily maximums.

Table 3.3-16, Table 3.3-17, and Table 3.3-18 present the maximum daily criteria pollutant emissions that would be generated during construction of the design option, including construction of Section 2 (KNE Fairfax and La Brea Alignment) or Section 3 (KNE San Vicente–Fairfax Alignment) of the alignments. Table 3.3-17 and Table 3.3-18 also include the concurrent construction of the MSF expansion, which is scheduled to occur as part of Section 2. (The MSF expansion is not considered in Table 3.3-16 because the design option would be built as part of Section 3 with the KNE San Vicente–Fairfax Alignment.) The tables also identify SCAQMD Air Quality Significance Thresholds for mass daily emissions at the regional level.

TABLE 3.3-16. KNE SAN VICENTE–FAIRFAX ALIGNMENT (SECTION 3) WITH HOLLYWOOD BOWL DESIGN OPTION CRITERIA POLLUTANT CONSTRUCTION EMISSIONS

PROJECT ELEMENT[1]	MAXIMUM DAILY EMISSIONS (LBS/DAY)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Section 3: San Vicente/Santa Monica Station to Hollywood Bowl Station	8	69	149	1	19	9
SCAQMD Thresholds	75	100	550	150	150	55
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***

Source: Connect Los Angeles Partners 2023
[1] Construction of the Hollywood Bowl Design Option would happen concurrently with construction of Section 3 of the KNE San Vicente–Fairfax Alignment. As such, daily criteria pollutant emissions associated with concurrent Hollywood Bowl Design Option construction have been included with the alignment's Section 3 daily emissions when determining maximum daily emissions for comparison to the thresholds.
CO = carbon monoxide; lbs/day = pounds per day; NO_X = nitrogen oxides; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; SCAQMD = South Coast Air Quality Management District; SO_X = sulfur oxides; VOC = volatile organic compounds

TABLE 3.3-17. KNE FAIRFAX ALIGNMENT (SECTION 2) WITH HOLLYWOOD BOWL DESIGN OPTION CRITERIA POLLUTANT CONSTRUCTION EMISSIONS

PROJECT ELEMENT[1]	MAXIMUM DAILY EMISSIONS (LBS/DAY)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Section 2: Wilshire/Fairfax Station to Hollywood Bowl Station with MSF Expansion	10	91	195	1	25	12
SCAQMD Thresholds	75	100	550	150	150	55
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***

Source: Connect Los Angeles Partners 2023
[1] Construction of the Hollywood Bowl Design Option would happen concurrently with construction of KNE Fairfax Alignment Section 2 and the corresponding MSF expansion. As such, daily criteria pollutant emissions associated with concurrent Hollywood Bowl Design Option construction have been included with the alignment's and the MSF expansion's Section 2 daily emissions when determining maximum daily emissions for comparison to the thresholds.
CO = carbon monoxide; lbs/day = pounds per day; NO_X = nitrogen oxides; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; SCAQMD = South Coast Air Quality Management District; SO_X = sulfur oxides; VOC = volatile organic compounds

TABLE 3.3-18. KNE LA BREA ALIGNMENT (SECTION 2) WITH HOLLYWOOD BOWL DESIGN OPTION CRITERIA POLLUTANT CONSTRUCTION EMISSIONS

PROJECT ELEMENT[1]	MAXIMUM DAILY EMISSIONS (LBS/DAY)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Section 2: Wilshire/La Brea Station to Hollywood Bowl Station with MSF Expansion	11	98	201	1	24	11
SCAQMD Thresholds	75	100	550	150	150	55
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***

Source: Connect Los Angeles Partners 2023
[1] Construction of the Hollywood Bowl Design Option would happen concurrently with construction of Section 2 of the KNE La Brea Alignment and the corresponding MSF expansion. As such, daily criteria pollutant emissions associated with concurrent Hollywood Bowl Design Option construction have been included with Section 2 of the alignment's and the MSF expansion's daily emissions when determining maximum daily emissions for comparison to the thresholds.
CO = carbon monoxide; lbs/day = pounds per day; NO_X = nitrogen oxides; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; SCAQMD = South Coast Air Quality Management District; SO_X = sulfur oxides; VOC = volatile organic compounds

As shown in Table 3.3-16, Table 3.3-17, and Table 3.3-18, maximum daily emissions estimates for the Hollywood Bowl Design Option concurrent with Section 2 or Section 3 of the alignments and Section 2 of the MSF construction would be below SCAQMD's mass daily CEQA thresholds.

All construction activities would be conducted in accordance with project measures PM AQ-1, PM AQ-2, and PM AQ-3 to avoid and minimize emissions. Reductions in fugitive dust emissions (affecting PM_{10} and $PM_{2.5}$ emissions) associated with watering as required by SCAQMD Rule 403 (see PM AQ-2) were included in the emission calculations. However, due to uncertainty in the availability of equipment and renewable diesel fuel in the vicinity of the project at the time of construction, emission reductions from other project measures were not accounted for in the construction emission estimates. Therefore, actual construction emissions are expected to be lower than those estimated and, as a result, this analysis is conservative.

While there would be a temporary increase in emissions of criteria pollutants from construction of the Hollywood Bowl Design Option, maximum daily regional emissions would be below SCAQMD CEQA significance thresholds. In accordance with SCAQMD CEQA guidance, because emissions from construction would remain below the project-level CEQA thresholds, the emissions would also be considered less than significant at the cumulatively considerable level (SCAQMD 1993). Therefore, the Hollywood Bowl Design Option would have a less than significant impact during construction.

3.3.7.2.4.2 OPERATIONAL IMPACTS

Less than Significant Impact. The Hollywood Bowl Design Option would slightly alter the configuration of the light rail alignment and add one underground station. Based on available forecasted travel demand data, implementation of the Hollywood Bowl Design Option would not appreciably increase or decrease ridership of the light rail system, nor would it be expected to appreciably increase or decrease VMT in the RSA relative to the alignments. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

3.3.7.2.5 MAINTENANCE AND STORAGE FACILITY

3.3.7.2.5.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction emissions associated with MSF additions would be generated from heavy-duty construction equipment exhaust; fugitive dust (particulate matter) from material movement and ground disturbance; exhaust from worker vehicle travel to and from the MSF site; exhaust from haul trucks and delivery trucks importing and exporting material to the MSF site; and on-road re-entrained dust and brake and tire wear. The MSF is an essential element in supporting the reliable operation of an LRT system and would be necessary for the implementation and operation of any alignment. Project activities associated with the MSF would occur in two parts, concurrent with Section 1 and Section 2 of each alignment. Concurrently with Section 1 of the alignment, MSF facility construction would include the addition of four storage tracks on the existing Division 16 site to accommodate increased LRV storage. Concurrently with Section 2 of the alignment, MSF facilities constructed would include expansion of the existing Division 16 MSF on an adjacent 16.5-acre site. Since construction of Section 1 of the alignments and corresponding MSF facilities would occur concurrently, criteria pollutant emissions were considered together when determining maximum daily emissions for comparison to the thresholds. Similarly, criteria pollutant emissions from concurrent construction of Section 2 of the alignments and MSF expansions were considered together when determining maximum daily emissions for comparison to the thresholds.

This analysis assumes that MSF facilities associated with Section 1 and Section 2 would be built sequentially, not concurrently; therefore, maximum daily emissions have been presented and compared to the thresholds separately. If concurrent construction of MSF sections is expected, further analysis will be needed to determine combined air quality impacts. As a result of uncertainty in the timing for construction of each section, 2041 was used as a representative "Year 1" for all sections when calculating criteria pollutant emissions since it is the first anticipated construction year for the project.

In accordance with guidance from SCAQMD, the air quality assessment characterized the maximum mass daily emissions that would occur during construction. The maximum daily emissions represent a reasonably conservative estimate of the highest anticipated daily emissions based on detailed phasing and equipment information developed for the project. Daily emissions were calculated for all construction activities over the entire construction period to determine the maximum daily emissions. While the maximum daily emissions are based on a specific combination of estimated concurrent construction activities, they are considered representative of the worst case over the entire construction period. Therefore, the maximum daily emissions are presented as totals and not broken out by source. Daily activity levels and emissions would fluctuate throughout construction and would be lower on average than the calculated daily maximums.

Table 3.3-19 presents the maximum daily criteria pollutant emissions that would be generated during construction of MSF facilities, including corresponding alignments; it also identifies SCAQMD Air Quality Significance Thresholds for mass daily emissions at the regional level. SCAQMD's guidance states that CEQA projects may emit air pollutants at quantities below the air quality significance thresholds without being considered significant at the project or cumulatively considerable level. Projects that generate emissions in excess of the project-specific thresholds are also considered to be cumulatively considerable and significant.

TABLE 3.3-19. MSF CRITERIA POLLUTANT CONSTRUCTION EMISSIONS

PROJECT ELEMENT/ALIGNMENT[1]	MAXIMUM DAILY EMISSIONS (LBS/DAY)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
MSF Facilities Corresponding to Section 1 with San Vicente–Fairfax Section 1: Expo/Crenshaw to Wilshire/Fairfax Station[2]	3	56	69	0	18	8
SCAQMD Thresholds	75	100	550	150	150	55
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***
MSF Expansion Corresponding to Section 2 with San Vicente–Fairfax Section 2: Wilshire/Fairfax to San Vicente/Santa Monica Station[3]	4	60	83	0	17	6
SCAQMD Thresholds	75	100	550	150	150	55
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***
MSF Facilities Corresponding to Section 1 with Fairfax Section 1: Expo/Crenshaw to Wilshire/Fairfax Station[2]	3	56	69	0	18	8
SCAQMD Thresholds	75	100	550	150	150	55
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***
MSF Expansion Corresponding to Section 2 with Fairfax Section 2: Wilshire/Fairfax to Hollywood/Highland Station[3]	5	91	102	1	29	11
SCAQMD Thresholds	75	100	550	150	150	55
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***
MSF Facilities Corresponding to Section 1 with La Brea Section 1: Expo/Crenshaw to Wilshire/La Brea Station[2]	3	58	69	0	18	8
SCAQMD Thresholds	75	100	550	150	150	55
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***
MSF Expansion Corresponding to Section 2 with La Brea Alignment Section 2: Wilshire/La Brea Station to Hollywood/Highland Station[3]	5	94	99	1	30	11
SCAQMD Thresholds	75	100	550	150	150	55
Threshold Exceeded?	***No***	***No***	***No***	***No***	***No***	***No***

Source: Connect Los Angeles Partners 2023

[1] The analysis assumes that MSF facilities associated with Section 1 and Section 2 would be built sequentially, not concurrently; therefore, maximum daily emissions have been presented and compared to the thresholds separately. If concurrent construction is expected, further analysis will be needed to determine combined air quality impacts.

[2] The MSF is an essential element in supporting the reliable operation of an LRT system and would be necessary for the implementation and operation of any alignment. Section 1 MSF facilities would be constructed concurrently with Section 1 of the alignments and would include the addition of four storage tracks to the existing Division 16 site. As such, daily criteria pollutant emissions associated with this construction have been included with daily emissions for Section 1 of the alignments when determining maximum daily emissions for comparison to the thresholds.

[3] The MSF is an essential element in supporting the reliable operation of an LRT system and would be necessary for the implementation and operation of any alignment. MSF expansion would be constructed concurrently with Section 2 of the alignments and would include expansion of the existing Division 16 MSF on the adjacent 16.5-acre site. As such, daily criteria pollutant emissions associated with construction have been included with daily emissions for Section 2 of the alignments when determining maximum daily emissions for comparison to the thresholds.

CO = carbon monoxide; lbs/day = pounds per day; MSF = Maintenance and Storage Facility; NO_X = nitrogen oxides; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; SCAQMD = South Coast Air Quality Management District; SO_X = sulfur oxides; VOC = volatile organic compounds

As shown in Table 3.3-19, maximum daily emissions estimates for MSF facilities along with concurrent construction of Section 1 and Section 2 of the alignments would be below SCAQMD's mass daily CEQA thresholds.

All construction activities would be conducted in accordance with project measures PM AQ-1, PM AQ-2, and PM AQ-3 to avoid and minimize emissions. Reductions in fugitive dust emissions (affecting PM_{10} and $PM_{2.5}$ emissions) associated with watering as required by SCAQMD Rule 403 (see PM AQ-2) were included in the emission calculations. However, due to uncertainty in the availability of equipment and renewable diesel fuel in the vicinity of the project at the time of construction, emission reductions from other project measures were not accounted for in the construction emission estimates. Therefore, actual construction emissions are expected to be lower than those estimated and, as a result, this analysis is conservative.

While there would be a temporary increase in emissions of criteria pollutants from construction of the MSF, maximum daily regional emissions would be below SCAQMD CEQA significance thresholds. In accordance with SCAQMD CEQA guidance, because emissions from construction would remain below the project-level CEQA thresholds, the emissions would also be considered less than significant at the cumulatively considerable level (SCAQMD 1993).Therefore, the MSF would have a less than significant impact during construction.

3.3.7.2.5.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the MSF would result in emissions of exhaust from equipment used on-site, natural gas use, and use of architectural coatings and consumer products. Use of electrical equipment does not generate air pollutant emissions. Emissions from the exhaust of worker commute trips to and from the MSF are included in the regional traffic emissions estimates. It was assumed that emissions from additional activity associated with additional MSF facilities associated with Section 1 operation at the existing Division 16 MSF site would be minimal since that facility is already in operation and would only require the addition of four storage tracks. Therefore, emissions specific to operations of these facilities would be similar to existing conditions and are not included as a separate line item in Table 3.3-20.

TABLE 3.3-20. MSF OPERATIONAL CRITERIA POLLUTANT EMISSIONS

EMISSION SOURCE	DAILY EMISSIONS (LBS/DAY)					
	VOC	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$
MSF	**1.57**	**2.89**	**0.28**	**0.01**	**0.91**	**0.24**
SCAQMD Threshold	55	550	55	150	150	55
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Connect Los Angeles Partners 2023
CO = carbon monoxide; lbs/day = pounds per day; MSF = maintenance and storage facility; NO_X = nitrogen oxides; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; SCAQMD = South Coast Air Quality Management District; SO_X = sulfur oxides; VOC = volatile organic compounds

As shown in Table 3.3-20, emissions from operation of the MSF would be below all the applicable SCAQMD thresholds. As described above, operation of any of the alignments would result in decreased regional criteria pollutant emissions. The addition of MSF emissions to each of the alignments would not exceed SCAQMD thresholds. Therefore, the MSF would have a less than significant impact during operation.

3.3.7.3 IMPACT AQ-3: EXPOSURE OF SENSITIVE RECEPTORS TO LOCALIZED POLLUTANT CONCENTRATIONS

Impact AQ-3: Would the project expose sensitive receptors to substantial pollutant concentrations?

The following analysis addresses exposure of sensitive receptors to localized concentrations of criteria air pollutants and TACs. According to SCAQMD, land uses that constitute sensitive receptors include residences, schools, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. SCAQMD recommends that air quality assessments consider the potential localized impacts to sensitive receptors at distances up to 500 meters (1,640 feet) from project sites, depending on the proximity of sensitive land uses. KNE is located in a developed urban setting near many land uses that qualify as sensitive receptors, including residential land uses, schools, and other institutional uses located along the alignments and near the MSF.

3.3.7.3.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.3.7.3.1.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE San Vicente–Fairfax Alignment would generate temporary localized emissions from heavy-duty construction equipment exhaust, fugitive dust (particulate matter) from material movement and ground disturbance, exhaust from on-road vehicle travel on-site, and on-road re-entrained dust and brake and tire wear from on-road vehicle travel on-site. Consistent with SCAQMD LST guidance, off-site emissions, such as those from worker vehicle and hauling or delivery vehicle exhaust, were not included in the evaluation of localized impacts. LSTs are only applicable to the following criteria pollutants: NO_X, CO, PM_{10}, and $PM_{2.5}$.

Localized construction emissions were estimated at each of the 10 station construction sites for the alignment. In accordance with guidance from SCAQMD, the air quality assessment characterized the maximum mass daily emissions that would occur during construction at each site. This includes emissions from surface and subsurface activities that would be released at the site. Based on information provided in Section 3.11, Hazards and Hazardous Materials, no emissions of hazardous gases from idle or abandoned oil wells were included in the air quality analysis because any detected gases would be mitigated to a level that would not be considered significant. Maximum daily emissions represent a reasonably conservative estimate of the highest anticipated daily emissions based on detailed phasing and equipment information developed for the alignment. Daily emissions were calculated for all site construction activities over the entire site construction period to determine the maximum daily emissions. While the maximum daily emissions are based on a specific combination of estimated concurrent station construction activities, they are considered representative of the worst case over the

entire site construction period. Therefore, the maximum daily emissions are presented as totals and not broken out by source. Daily activity levels and emissions would fluctuate throughout construction and would be lower on average than the calculated daily maximums.

Construction of each alignment section is anticipated to last up to 12 years; however, due to the linear configuration of the alignment, emissions would be spread across multiple construction staging sites. As a result, localized exposures to sensitive receptors near each site would be shorter in duration and lower in magnitude than for each combined alignment section.

Table 3.3-21 presents the maximum daily criteria pollutant emissions that would be generated at each station site during construction of the alignment, as well as the applicable SCAQMD LSTs. A receptor distance of 25 meters (82 feet) was conservatively assumed to assess station construction localized impacts. Per the SCAQMD LST methodology, the LSTs represent the maximum allowable daily emissions from sources situated on the project site that will not result in the CAAQS being exceeded at sensitive receptor locations (SCAQMD 2009).

As shown in Table 3.3-21, construction of the alignment would result in peak daily on-site emissions that would be less than the SCAQMD LSTs. Construction would also generate temporary localized TAC emissions from on-site use of diesel-fueled heavy-duty construction equipment and on-road trucks in the form of DPM. As described under project measure PM AQ-1, Metro's Green Construction Policy includes measures that would reduce emissions of DPM.

Additionally, Metro's MBSSP includes commitments to use renewable diesel and identify opportunities to decarbonize fuel sources at construction sites, which would further reduce DPM emissions (PM AQ-3). Compliance with the identified project measures, as well as the temporary and intermittent nature of construction activities at any particular location, would prevent the occurrence of substantial TAC concentrations at sensitive receptors during construction of the alignment. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during construction.

TABLE 3.3-21. KNE SAN VICENTE–FAIRFAX ALIGNMENT CRITERIA POLLUTANT CONSTRUCTION EMISSIONS – LOCALIZED

PROJECT ELEMENT [1]	MAXIMUM DAILY ON-SITE EMISSIONS (LBS/DAY)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
KNE SAN VICENTE–FAIRFAX ALIGNMENT (SECTION 1)				
Crenshaw/Adams	5	19	3	2
SCAQMD LST Screening Value: 1 acre	103	562	4	3
Threshold Exceeded?	***No***	***No***	***No***	***No***
Midtown Crossing	13	40	5	3
SCAQMD LST Screening Value: 5 acres	221	1,531	13	6
Threshold Exceeded?	***No***	***No***	***No***	***No***
Wilshire/Fairfax	7	21	5	3
SCAQMD LST Screening Value: 3 acres	172	1,062	8	5
Threshold Exceeded?	***No***	***No***	***No***	***No***
Expo/Crenshaw	6	11	3	2
SCAQMD LST Screening Value: 1 acre	103	562	4	3
Threshold Exceeded?	***No***	***No***	***No***	***No***
KNE SAN VICENTE–FAIRFAX ALIGNMENT (SECTION 2)				
Fairfax/3rd	7	21	4	2
SCAQMD LST Screening Value: 4 acres	196	1,296	11	5
Threshold Exceeded?	***No***	***No***	***No***	***No***
La Cienega/Beverly	5	20	3	2
SCAQMD LST Screening Value: 1 acre	103	562	4	3
Threshold Exceeded?	***No***	***No***	***No***	***No***
San Vicente/Santa Monica	13	27	4	2
SCAQMD LST Screening Value: 3 acres	172	1,062	8	5
Threshold Exceeded?	***No***	***No***	***No***	***No***
KNE SAN VICENTE–FAIRFAX ALIGNMENT (SECTION 3)				
Fairfax/Santa Monica	5	20	3	2
SCAQMD LST Screening Value: 1 acre	103	562	4	3
Threshold Exceeded?	***No***	***No***	***No***	***No***
La Brea/Santa Monica	14	28	4	3
SCAQMD LST Screening Value: 4 acres	196	1,296	11	5
Threshold Exceeded?	***No***	***No***	***No***	***No***

PROJECT ELEMENT [1]	MAXIMUM DAILY ON-SITE EMISSIONS (LBS/DAY)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Hollywood/Highland	13	28	6	4
SCAQMD LST Screening Value: 2 acres	147	827	6	4
Threshold Exceeded?	***No***	***No***	***No***	***No***

Source: Connect Los Angeles Partners 2023
[1] LSTs taken from Table 3.3-3 for SRA 2 – Northwest Coastal Los Angeles County, 25 meter (82 foot) receptor distance, and site size identified for each station.
CO = carbon monoxide; lbs/day = pounds per day; LST = Localized Significance Threshold; NO_X = nitrogen oxides; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; SCAQMD = South Coast Air Quality Management District

3.3.7.3.1.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE San Vicente–Fairfax Alignment would not introduce a new substantial permanent direct source of air pollutant emissions to the RSA. No direct source of air pollutant emissions would occur along the alignment because the LRVs would be powered by electricity. Station operations would also be electrically powered, and the stations would not have designated parking. The small amount of rider-related vehicle trips to and from the stations are included in the regional VMT forecasts. These vehicles are typically gasoline-powered and would not expose sensitive receptors to substantial TAC concentrations. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

3.3.7.3.2 KNE FAIRFAX ALIGNMENT

3.3.7.3.2.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE Fairfax Alignment would generate temporary localized emissions from heavy-duty construction equipment exhaust, fugitive dust (particulate matter) from material movement and ground disturbance, exhaust from on-road vehicle travel on-site, and on-road re-entrained dust and brake and tire wear from on-road vehicle travel on-site. Consistent with SCAQMD LST guidance, off-site emissions, such as those from worker vehicle and hauling or delivery vehicle exhaust, were not included in the evaluation of localized impacts. LSTs are only applicable to the following criteria pollutants: NO_X, CO, PM_{10}, and $PM_{2.5}$.

Localized construction emissions were estimated at each of the eight station construction sites for the alignment. In accordance with guidance from SCAQMD, the air quality assessment characterized the maximum mass daily emissions that would occur during construction at each site. This includes emissions from surface and subsurface activities that would be released at the site. Based on information provided in Section 3.11, Hazards and Hazardous Materials, no emissions of hazardous gases from idle or abandoned oil wells were included in the air quality analysis because any detected gases would be mitigated to a level that would not be considered significant. Maximum daily emissions represent a reasonably conservative estimate of the highest anticipated daily emissions based on detailed phasing and equipment information developed for the alignment. Daily emissions were calculated for all site

construction activities over the entire site construction period to determine the maximum daily emissions. While the maximum daily emissions are based on a specific combination of estimated concurrent station construction activities, they are considered representative of the worst case over the entire site construction period. Therefore, the maximum daily emissions are presented as totals and not broken out by source. Daily activity levels and emissions would fluctuate throughout construction and would be lower on average than the calculated daily maximums.

Construction of each alignment section is anticipated to last up to 12 years; however, due to the linear configuration of the alignment, emissions would be spread across multiple construction staging sites. As a result, localized exposures to sensitive receptors near each site would be shorter in duration and lower in magnitude than for each combined alignment section.

Table 3.3-22 presents the maximum daily criteria pollutant emissions that would be generated at each station site during construction of the alignment, as well as the applicable SCAQMD LSTs. A receptor distance of 25 meters (82 feet) was conservatively assumed to assess station construction localized impacts. Per the SCAQMD LST methodology, the LSTs represent the maximum allowable daily emissions from sources situated on the project site that will not result in the CAAQS being exceeded at sensitive receptor locations (SCAQMD 2009). As shown in Table 3.3-22, construction of the alignment would result in peak daily on-site emissions that would be less than the SCAQMD LSTs. Construction would also generate temporary localized TAC emissions from on-site use of diesel-fueled heavy-duty construction equipment and on-road trucks in the form of DPM. As described under project measure PM AQ-1, Metro's Green Construction Policy includes measures that would reduce emissions of DPM.

Additionally, Metro's MBSSP includes commitments to use renewable diesel and identify opportunities to decarbonize fuel sources at construction sites, which would further reduce DPM emissions (PM AQ-3). Compliance with the identified project measures, as well as the temporary and intermittent nature of construction activities at any particular location, would prevent the occurrence of substantial TAC concentrations at sensitive receptors during construction of the alignment. Therefore, the KNE Fairfax Alignment would have a less than significant impact during construction.

TABLE 3.3-22. KNE FAIRFAX ALIGNMENT CRITERIA POLLUTANT CONSTRUCTION EMISSIONS – LOCALIZED

PROJECT ELEMENT[1]	MAXIMUM DAILY ON-SITE EMISSIONS (LBS/DAY)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
KNE FAIRFAX ALIGNMENT (SECTION 1)				
Crenshaw/Adams	5	19	3	2
SCAQMD LST Screening Value: 1 acre	103	562	4	3
Threshold Exceeded?	***No***	***No***	***No***	***No***
Midtown Crossing	13	40	5	3
SCAQMD LST Screening Value: 5 acres	221	1,531	13	6
Threshold Exceeded?	***No***	***No***	***No***	***No***
Wilshire/Fairfax	7	21	5	3
SCAQMD LST Screening Value: 3 acres	172	1,062	8	5
Threshold Exceeded?	***No***	***No***	***No***	***No***
Expo/Crenshaw	6	11	3	2
SCAQMD LST Screening Value: 1 acre	103	562	4	3
Threshold Exceeded?	***No***	***No***	***No***	***No***
KNE FAIRFAX ALIGNMENT (SECTION 2)				
Fairfax/3rd	8	18	4	2
SCAQMD LST Screening Value: 4 acres	196	1,296	11	5
Threshold Exceeded?	***No***	***No***	***No***	***No***
Fairfax/Santa Monica	5	20	3	2
SCAQMD LST Screening Value: 1 acre	103	562	4	3
Threshold Exceeded?	***No***	***No***	***No***	***No***
La Brea/Santa Monica	12	30	4	3
SCAQMD LST Screening Value: 4 acres	196	1,296	11	5
Threshold Exceeded?	***No***	***No***	***No***	***No***
Hollywood/Highland	13	28	6	4
SCAQMD LST Screening Value: 2 acres	147	827	6	4
Threshold Exceeded?	***No***	***No***	***No***	***No***

Source: Connect Los Angeles Partners 2023

[1] LSTs taken from Table 3.3-3 for SRA 2 – Northwest Coastal Los Angeles County, 25 meter (82 foot) receptor distance, and site size identified for each station.

CO = carbon monoxide; lbs/day = pounds per day; LST = Localized Significance Threshold; NO_X = nitrogen oxides; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; SCAQMD = South Coast Air Quality Management District

3.3.7.3.2.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE Fairfax Alignment would not introduce a new substantial permanent direct source of air pollutant emissions to the RSA. No direct source of air pollutant emissions would occur along the alignment because the LRVs would be powered by electricity. Station operations would also be electrically powered, and the stations would not have designated parking. The small amount of rider-related vehicle trips to and from the stations are included in the regional VMT forecasts. These vehicles are typically gasoline-powered and would not expose sensitive receptors to substantial TAC concentrations. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

3.3.7.3.3 KNE LA BREA ALIGNMENT

3.3.7.3.3.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Construction of the KNE La Brea Alignment would generate temporary localized emissions from heavy-duty construction equipment exhaust, fugitive dust (particulate matter) from material movement and ground disturbance, exhaust from on-road vehicle travel on-site, and on-road re-entrained dust and brake and tire wear from on-road vehicle travel on-site. Consistent with SCAQMD LST guidance, off-site emissions, such as those from worker vehicle and hauling or delivery vehicle exhaust, were not included in the evaluation of localized impacts. LSTs are only applicable to the following criteria pollutants: NO_X, CO, PM_{10}, and $PM_{2.5}$.

Localized construction emissions were estimated at each of the six station construction sites for the alignment. In accordance with guidance from SCAQMD, the air quality assessment characterized the maximum mass daily emissions that would occur during construction at each site. This includes emissions from surface and subsurface activities that would be released at the site. Based on information provided in Section 3.11, Hazards and Hazardous Materials, no emissions of hazardous gases from idle or abandoned oil wells were included in the air quality analysis because any detected gases would be mitigated to a level that would not be considered significant. Maximum daily emissions represent a reasonably conservative estimate of the highest anticipated daily emissions based on detailed phasing and equipment information developed for the alignment. Daily emissions were calculated for all site construction activities over the entire site construction period to determine the maximum daily emissions. While the maximum daily emissions are based on a specific combination of estimated concurrent station construction activities, they are considered representative of the worst case over the entire site construction period. Therefore, the maximum daily emissions are presented as totals and not broken out by source. Daily activity levels and emissions would fluctuate throughout construction and would be lower on average than the calculated daily maximums.

Construction of each alignment section is anticipated to last up to 11 years; however, due to the linear configuration of the alignment, emissions would be spread across multiple construction staging sites. As a result, localized exposures to sensitive receptors near each site would be shorter in duration and lower in magnitude than for each combined alignment section.

Table 3.3-23 presents the maximum daily criteria pollutant emissions that would be generated at each station site during construction of the alignment, as well as the applicable SCAQMD LSTs. A receptor distance of 25 meters (82 feet) was conservatively assumed to assess station construction localized impacts. Per the SCAQMD LST methodology, the LSTs represent the maximum allowable daily emissions from sources situated on the project site that will not result in the CAAQS being exceeded at sensitive receptor locations (SCAQMD 2009).

TABLE 3.3-23. KNE LA BREA ALIGNMENT CRITERIA POLLUTANT CONSTRUCTION EMISSIONS – LOCALIZED

PROJECT ELEMENT[1]	MAXIMUM DAILY ON-SITE EMISSIONS (LBS/DAY)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
KNE LA BREA ALIGNMENT (SECTION 1)				
Crenshaw/Adams	5	19	3	2
SCAQMD LST Screening Value: 1 acre	103	562	4	3
Threshold Exceeded?	***No***	***No***	***No***	***No***
Midtown Crossing	12	41	5	3
SCAQMD LST Screening Value: 5 acres	221	1,531	13	6
Threshold Exceeded?	***No***	***No***	***No***	***No***
Wilshire/La Brea	7	20	4	2
SCAQMD LST Screening Value: 2 acres	147	827	6	4
Threshold Exceeded?	***No***	***No***	***No***	***No***
Expo/Crenshaw	6	11	3	2
SCAQMD LST Screening Value: 1 acre	103	562	4	3
Threshold Exceeded?	***No***	***No***	***No***	***No***
KNE LA BREA ALIGNMENT (SECTION 2)				
La Brea/Beverly	5	20	3	2
SCAQMD LST Screening Value: 1 acre	103	562	4	3
Threshold Exceeded?	***No***	***No***	***No***	***No***
La Brea/Santa Monica	13	27	4	3
SCAQMD LST Screening Value: 4 acres	196	1,296	11	5
Threshold Exceeded?	***No***	***No***	***No***	***No***
Hollywood/Highland	13	28	6	4
SCAQMD LST Screening Value: 2 acres	147	827	6	4
Threshold Exceeded?	***No***	***No***	***No***	***No***

Source: Connect Los Angeles Partners 2023
[1] LSTs taken from Table 3.3-3 for SRA 2 – Northwest Coastal Los Angeles County, 25 meter (82 foot) receptor distance, and site size identified for each station.
CO = carbon monoxide; lbs/day = pounds per day; LST = Localized Significance Threshold; NO_X = nitrogen oxides; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; SCAQMD = South Coast Air Quality Management District

As shown in Table 3.3-23, construction of the alignment would result in peak daily on-site emissions that would be less than the SCAQMD LSTs. Construction would also generate temporary localized TAC emissions from on-site use of diesel-fueled heavy-duty construction equipment and on-road trucks in the form of DPM. As described under project measure PM AQ-1, Metro's Green Construction Policy includes measures that would reduce emissions of DPM.

Additionally, Metro's MBSSP includes commitments to use renewable diesel and identify opportunities to decarbonize fuel sources at construction sites, which would further reduce DPM emissions (PM AQ-3). Compliance with the identified project measures, as well as the temporary and intermittent nature of construction activities at any particular location, would prevent the occurrence of substantial TAC concentrations at sensitive receptors during construction of the alignment. Therefore, the KNE La Brea Alignment would have a less than significant impact during construction.

3.3.7.3.3.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the KNE La Brea Alignment would not introduce a new substantial permanent direct source of air pollutant emissions to the RSA. No direct source of air pollutant emissions would occur along the alignment because the LRVs would be powered by electricity. Station operations would also be electrically powered, and the stations would not have designated parking. The small amount of rider-related vehicle trips to and from the stations are included in the regional VMT forecasts. These vehicles are typically gasoline-powered and would not expose sensitive receptors to substantial TAC concentrations. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

3.3.7.3.4 HOLLYWOOD BOWL DESIGN OPTION

3.3.7.3.4.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The Hollywood Bowl Design Option changes the proposed Hollywood/Highland Station from a terminus station to an in-line station and adds a new Hollywood Bowl terminus station to the final section of each alignment (Section 3 of the KNE San Vicente–Fairfax Alignment; Section 2 of the KNE Fairfax Alignment and the KNE La Brea Alignment). In order to capture these changes, criteria pollutant emissions were recalculated for the final section of each alignment to include construction of the Hollywood Bowl Design Option. Construction of other sections (Section 1 and Section 2 for the KNE San Vicente–Fairfax Alignment; Section 1 for the KNE Fairfax Alignment and KNE La Brea Alignment) would not be affected by the addition of the Hollywood Bowl Design Option to the final sections.

Construction of the Hollywood Bowl Design Option would generate temporary localized emissions from heavy-duty construction equipment exhaust, fugitive dust (particulate matter) from material movement and ground disturbance, exhaust from on-road vehicle travel on-site, and on-road re-entrained dust and brake and tire wear from on-road vehicle travel on-site. Consistent with SCAQMD LST guidance, off-site emissions, such as those from worker vehicle and hauling or delivery vehicle exhaust, were not included in the evaluation of localized impacts. LSTs are only applicable to the following criteria pollutants: NO_X, CO, PM_{10}, and $PM_{2.5}$.

Localized construction emissions were estimated at the Hollywood Bowl construction site and each of the other station sites in the final section of each alignment (Section 3 of the KNE San Vicente–Fairfax Alignment; Section 2 of the KNE Fairfax Alignment and KNE La Brea Alignment). The addition of the Hollywood Bowl Design Option would change the construction schedule for the affected sections, potentially affecting emissions at the other station sites.

In accordance with guidance from SCAQMD, the air quality assessment characterized the maximum mass daily emissions that would occur during construction at each site. This includes emissions from surface and subsurface activities that would be released at the site. Maximum daily emissions represent a reasonably conservative estimate of the highest anticipated daily emissions based on detailed phasing and equipment information developed for the project. Daily emissions were calculated for all site construction activities over the entire site construction period to determine the maximum daily emissions. While the maximum daily emissions are based on a specific combination of estimated concurrent station construction activities, they are considered representative of the worst case over the entire site construction period. Therefore, the maximum daily emissions are presented as totals and not broken out by source. Daily activity levels and emissions would fluctuate throughout construction and would be lower on average than the calculated daily maximums. Construction at the Hollywood Bowl site is anticipated to occur intermittently over approximately eight years.

Table 3.3-24, Table 3.3-25, and Table 3.3-26 present the maximum daily criteria pollutant emissions that would be generated during construction at the Hollywood Bowl construction site and each of the other station sites in the final section of each alignment, as well as the applicable SCAQMD LSTs. A receptor distance of 25 meters (82 feet) was conservatively assumed to assess station construction localized impacts. Per the SCAQMD LST methodology, the LSTs represent the maximum allowable daily emissions from sources situated on the project site that will not result in the CAAQS being exceeded at sensitive receptor locations (SCAQMD 2009).

As shown in Table 3.3-24, Table 3.3-25, and Table 3.3-26, construction of the design option would result in peak daily on-site emissions that would be less than the SCAQMD LSTs. Construction would also generate temporary localized TAC emissions from on-site use of diesel-fueled heavy-duty construction equipment and on-road trucks in the form of DPM. As described under project measure PM AQ-1, Metro's Green Construction Policy includes measures that would reduce emissions of DPM.

Additionally, Metro's MBSSP includes commitments to use renewable diesel and identify opportunities to decarbonize fuel sources at construction sites, which would further reduce DPM emissions (PM AQ-3). Compliance with the identified project measures, as well as the temporary and intermittent nature of construction activities at any particular location, would prevent the occurrence of substantial TAC concentrations at sensitive receptors during construction of the alignment. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during construction.

TABLE 3.3-24. HOLLYWOOD BOWL DESIGN OPTION CRITERIA POLLUTANT CONSTRUCTION EMISSIONS WITH KNE SAN VICENTE–FAIRFAX ALIGNMENT – LOCALIZED

PROJECT ELEMENT[1]	MAXIMUM DAILY ON-SITE EMISSIONS (LBS/DAY)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
HOLLYWOOD BOWL DESIGN OPTION, KNE SAN VICENTE–FAIRFAX ALIGNMENT (SECTION 3)				
Fairfax/Santa Monica	5	20	3	2
SCAQMD LST Screening Value: 1 acre	103	562	4	3
Threshold Exceeded?	***No***	***No***	***No***	***No***
La Brea/Santa Monica	12	27	4	3
SCAQMD LST Screening Value: 4 acres	196	1,296	11	5
Threshold Exceeded?	***No***	***No***	***No***	***No***
Hollywood/Highland	10	27	3	2
SCAQMD LST Screening Value: 2 acres	147	827	6	4
Threshold Exceeded?	***No***	***No***	***No***	***No***
Hollywood Bowl	39	100	6	4
SCAQMD LST Screening Value: 4 acres	196	1,296	11	5
Threshold Exceeded?	***No***	***No***	***No***	***No***

Source: Connect Los Angeles Partners 2023
[1] LSTs taken from Table 3.3-3 for SRA 2 – Northwest Coastal Los Angeles County, 25 meter (82 foot) receptor distance, and site size identified for each station.
CO = carbon monoxide; lbs/day = pounds per day; LST = Localized Significance Threshold; NO_X = nitrogen oxides; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter;
SCAQMD = South Coast Air Quality Management District

TABLE 3.3-25. HOLLYWOOD BOWL DESIGN OPTION CRITERIA POLLUTANT CONSTRUCTION EMISSIONS WITH KNE FAIRFAX ALIGNMENT – LOCALIZED

PROJECT ELEMENT[1]	MAXIMUM DAILY ON-SITE EMISSIONS (LBS/DAY)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
HOLLYWOOD BOWL DESIGN OPTION, KNE FAIRFAX ALIGNMENT (SECTION 2)				
Fairfax/3rd	7	20	3	2
SCAQMD LST Screening Value: 4 acres	196	1,296	11	5
Threshold Exceeded?	***No***	***No***	***No***	***No***
Fairfax/Santa Monica	7	21	4	2
SCAQMD LST Screening Value: 1 acre	103	562	4	3
Threshold Exceeded?	***No***	***No***	***No***	***No***
La Brea/Santa Monica	11	29	4	3
SCAQMD LST Screening Value: 4 acres	196	1,296	11	5
Threshold Exceeded?	***No***	***No***	***No***	***No***
Hollywood/Highland	10	27	3	2
SCAQMD LST Screening Value: 2 acres	147	827	6	4
Threshold Exceeded?	***No***	***No***	***No***	***No***
Hollywood Bowl	37	96	6	4
SCAQMD LST Screening Value: 4 acres	196	1,296	11	5
Threshold Exceeded?	***No***	***No***	***No***	***No***

Source: Connect Los Angeles Partners 2023
[1] LSTs taken from Table 3.3-3 for SRA 2 – Northwest Coastal Los Angeles County, 25 meter (82 foot) receptor distance, and site size identified for each station.
CO = carbon monoxide; lbs/day = pounds per day; LST = Localized Significance Threshold; NO_X = nitrogen oxides; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter;
SCAQMD = South Coast Air Quality Management District

TABLE 3.3-26. HOLLYWOOD BOWL DESIGN OPTION SITE CRITERIA POLLUTANT CONSTRUCTION EMISSIONS WITH KNE LA BREA ALIGNMENT – LOCALIZED

PROJECT ELEMENT[1]	MAXIMUM DAILY ON-SITE EMISSIONS (LBS/DAY)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
HOLLYWOOD BOWL DESIGN OPTION, KNE LA BREA ALIGNMENT (SECTION 2)				
La Brea/Beverly	5	20	3	2
SCAQMD LST Screening Value: 1 acre	103	562	4	3
Threshold Exceeded?	***No***	***No***	***No***	***No***
La Brea/Santa Monica	12	28	4	2
SCAQMD LST Screening Value: 4 acres	196	1,296	11	5
Threshold Exceeded?	***No***	***No***	***No***	***No***
Hollywood/Highland	10	27	3	2
SCAQMD LST Screening Value: 2 acres	147	827	6	4
Threshold Exceeded?	***No***	***No***	***No***	***No***
Hollywood Bowl	49	127	7	5
SCAQMD LST Screening Value: 4 acres	196	1,296	11	5
Threshold Exceeded?	***No***	***No***	***No***	***No***

Source: Connect Los Angeles Partners 2023
[1] LSTs taken from Table 3.3-3 for SRA 2 – Northwest Coastal Los Angeles County, 25 meter (82 foot) receptor distance, and site size identified for each station.
CO = carbon monoxide; lbs/day = pounds per day; LST = Localized Significance Threshold; NO_X = nitrogen oxides; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter;
SCAQMD = South Coast Air Quality Management District

3.3.7.3.4.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the Hollywood Bowl Design Option would not introduce a new substantial permanent direct source of air pollutant emissions to the RSA. No direct source of air pollutant emissions would occur along the additional alignment from the Hollywood/Highland Station to the Hollywood Bowl Station because the LRVs would be powered by electricity. Station operations would also be electrically powered, and the Hollywood Bowl Station would not have designated parking. The small amount of rider-related vehicle trips to and from the Hollywood Bowl Station are included in the regional VMT forecasts. These vehicles are typically gasoline-powered and would not expose sensitive receptors to substantial TAC concentrations. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

3.3.7.3.5 MAINTENANCE AND STORAGE FACILITY

3.3.7.3.5.1 CONSTRUCTION IMPACTS

Less than Significant Impact. The MSF is an essential element in supporting the reliable operation of an LRT system and would be necessary for the implementation and operation of any alignment. Construction of the MSF would generate temporary localized emissions from heavy-duty construction equipment exhaust, fugitive dust (particulate matter) from material movement and ground disturbance, exhaust from on-road vehicle travel on-site, and on-road re-entrained dust and brake and tire wear from on-road vehicle travel on-site. Consistent with SCAQMD LST guidance, off-site emissions, such as those from worker vehicle and hauling or delivery vehicle exhaust, were not included in the evaluation of localized impacts. LSTs are only applicable to the following criteria pollutants: NO_X, CO, PM_{10}, and $PM_{2.5}$.

Localized construction emissions from the addition of the four storage tracks to the existing Division 16 MSF as part of Section 1 and the expansion of the existing Division 16 MSF on the adjacent 16.5-acre site as part of Section 2 were estimated for each alignment and the Hollywood Bowl Design Option where the design option would be constructed as part of Section 2 (KNE Fairfax Alignment and KNE La Brea Alignment). The construction schedules for the Section 1 MSF facilities and for the MSF expansion associated with Section 2 would differ between alignments and with the addition of the Hollywood Bowl Design Option, potentially affecting emissions at the MSF site.

In accordance with guidance from SCAQMD, the air quality assessment characterized the maximum mass daily emissions that would occur at the site during construction. Maximum daily emissions represent a reasonably conservative estimate of the highest anticipated daily emissions based on detailed phasing and equipment information developed for the MSF. Daily emissions were calculated for all MSF construction activities over the entire MSF construction period for each section to determine the maximum daily emissions. While the maximum daily emissions are based on a specific combination of estimated concurrent construction activities, they are considered representative of the worst case over the entire MSF section construction period. Therefore, the maximum daily emissions are presented as totals and are not broken out by source. Daily activity levels and emissions would fluctuate throughout construction and would be lower on average than the calculated daily maximums.

Construction at the MSF site is anticipated to occur over approximately one year for MSF facilities associated with Section 1 and up to five years for the MSF expansion concurrent with Section 2. See Appendix 2-C, Construction Approach Report, for construction details.

Table 3.3-27 presents the maximum daily criteria pollutant emissions that would be generated during construction of MSF facilities associated with Section 1 and MSF expansion associated with Section 2 for each KNE alignment and the Hollywood Bowl Design Option, as well as the applicable SCAQMD LSTs. As described above, LSTs for a site size of one acre were used for Section 1 MSF facilities, and LSTs for a site size of five acres were used for MSF expansion associated with Section 2. LSTs for a receptor distance of 100 meters (328 feet) were used based on the location of the closest sensitive receptors to the MSF site. Per the SCAQMD LST methodology, the LSTs represent the maximum allowable daily emissions from sources on the project site that will not result in the CAAQS being exceeded at sensitive receptor locations (SCAQMD 2009).

TABLE 3.3-27. MSF CRITERIA POLLUTANT CONSTRUCTION EMISSIONS – LOCALIZED

PROJECT ELEMENT[1,2]	MAXIMUM DAILY ON-SITE EMISSIONS (LBS/DAY)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
MSF, KNE SAN VICENTE–FAIRFAX ALIGNMENT				
MSF Facilities (Section 1)	2	8	2	1
SCAQMD LST Screening Value: 1 acre	121	1,233	27	8
Threshold Exceeded?	***No***	***No***	***No***	***No***
MSF Expansion (Section 2)	6	21	3	3
SCAQMD LST Screening Value: 5 acres	226	2,762	55	14
Threshold Exceeded?	***No***	***No***	***No***	***No***
MSF, KNE FAIRFAX ALIGNMENT				
MSF Facilities (Section 1)	2	8	2	1
SCAQMD LST Screening Value: 1 acre	121	1,233	27	8
Threshold Exceeded?	***No***	***No***	***No***	***No***
MSF Expansion (Section 2)	6	21	4	3
SCAQMD LST Screening Value: 5 acres	226	2,762	55	14
Threshold Exceeded?	***No***	***No***	***No***	***No***
MSF Expansion, Hollywood Bowl (Section 2)	6	21	4	3
SCAQMD LST Screening Value: 5 acres	226	2,762	55	14
Threshold Exceeded?	***No***	***No***	***No***	***No***
MSF, KNE LA BREA ALIGNMENT				
MSF Facilities (Section 1)	2	8	2	1
SCAQMD LST Screening Value: 1 acre	121	1,233	27	8
Threshold Exceeded?	***No***	***No***	***No***	***No***
MSF Expansion (Section 2)	6	21	4	3
SCAQMD LST Screening Value: 5 acres	226	2,762	55	14
Threshold Exceeded?	***No***	***No***	***No***	***No***
MSF Expansion, Hollywood Bowl (Section 2)	6	21	4	3
SCAQMD LST Screening Value: 5 acres	226	2,762	55	14
Threshold Exceeded?	***No***	***No***	***No***	***No***

Source: Connect Los Angeles Partners 2023

[1] Although the MSF infrastructure is the same across alignments, variations in construction schedules can result in differences in emissions.

[2] LSTs taken from Table 3.3-3 for SRA 2 – Northwest Coastal Los Angeles County and a 100 meter (328 foot) receptor distance. Up to one acre would be disturbed for MSF facilities associated with Section 1 (the addition of four storage tracks to the existing Division 16 MSF site). A maximum daily disturbed area of five acres was assumed for MSF Division 16 expansion associated with Section 2.

CO = carbon monoxide; lbs/day = pounds per day; LST = Localized Significance Threshold; MSF = Maintenance and Storage Facility; NO_X = nitrogen oxides; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; SCAQMD = South Coast Air Quality Management District

As shown in Table 3.3-27, construction activities at the MSF site would result in peak daily on-site emissions that would be less than the SCAQMD LSTs and would not expose sensitive receptors to substantial localized criteria pollutant concentrations. Construction activities would also generate temporary localized TAC emissions from on-site use of diesel-fueled heavy-duty construction equipment and on-road trucks in the form of DPM. As described under project measure PM AQ-1, Metro's Green Construction Policy includes measures that would reduce emissions of DPM.

Additionally, Metro's MBSSP includes commitments to use renewable diesel and identify opportunities to decarbonize fuel sources at construction sites, which would further reduce DPM emissions (PM AQ-3). Compliance with the identified project measures, as well as the temporary and intermittent nature of construction activities at any particular location, would prevent the occurrence of substantial TAC concentrations at sensitive receptors during construction at the MSF site. Construction of the MSF would not expose sensitive receptors to substantial localized TAC concentrations. Therefore, the MSF would have a less than significant impact during construction.

3.3.7.3.5.2 OPERATIONAL IMPACTS

Less than Significant Impact. Operation of the MSF would not introduce a new substantial permanent direct source of air pollutant emissions to the RSA. However, operation of the MSF would result in criteria pollutant emissions from combustion of natural gas for heating and cooling and from activities required for maintenance and upkeep of the structures and LRVs. Use of electrical equipment does not generate air pollutant emissions. It was assumed that emissions from additional activity associated with operational activities for MSF facilities associated with Section 1 at the existing Division 16 MSF site would be minimal since that facility is already in operation and would only require the addition of four storage tracks to accommodate Section 1 of the alignments. Therefore, emissions specific to these facilities would be similar to existing conditions and are not included as a separate line item in Table 3.3-28. Emissions from operation of the MSF would comply with all SCAQMD air permitting regulations, which include an analysis of potential localized pollutant concentrations.

TABLE 3.3-28. MSF OPERATIONAL CRITERIA POLLUTANT EMISSIONS – LOCALIZED

	DAILY ON-SITE EMISSIONS (LBS/DAY)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
MSF On-Site Emissions	0.28	2.89	0.91	0.24
SCAQMD LST Screening Value	121	1,233	7	2
Threshold Exceeded?	***No***	***No***	***No***	***No***

Source: Connect Los Angeles Partners 2023
CO = carbon monoxide; lbs/day = pounds per day; LST = Localized Significance Threshold; MSF = Maintenance and Storage Facility; NO_X = nitrogen oxides; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; SCAQMD = South Coast Air Quality Management District

Consistent with SCAQMD LST guidance, off-site emissions, such as those from worker vehicle exhaust, were not included in the evaluation of localized criteria pollutant impacts. LSTs are only applicable to the following criteria pollutants: NO_X, CO, PM_{10}, and $PM_{2.5}$.

Table 3.3-28 presents the daily criteria pollutant emissions that would be generated during operation of the MSF expansion onto the adjacent 16.5-acre site as part of Section 2, as well as the applicable SCAQMD LSTs. As described above, LSTs for a one-acre site with a receptor distance of 100 meters (328 feet) were used to assess MSF operational impacts. Per the SCAQMD LST methodology, the LSTs represent the maximum allowable daily emissions from sources on the project site that will not result in the CAAQS being exceeded at sensitive receptor locations (SCAQMD 2009).

As shown in Table 3.3-28, operation of the MSF would result in peak daily on-site emissions that would be less than the SCAQMD LSTs, and impacts with respect to exposure of sensitive receptors to localized criteria pollutant concentrations would not be substantial.

Employee commute vehicle trips to and from the MSF are included in the regional VMT forecasts. These vehicles are typically gasoline-powered and would not expose sensitive receptors to substantial TAC concentrations. Therefore, the MSF would have a less than significant impact during operation.

3.3.7.4 IMPACT AQ-4: OTHER EMISSIONS

Impact AQ-4: Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

3.3.7.4.1 KNE SAN VICENTE–FAIRFAX ALIGNMENT

3.3.7.4.1.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Other construction emission sources under the KNE San Vicente–Fairfax Alignment with the potential to adversely affect a substantial number of people include diesel vehicle exhaust, which has a distinctive odor. Diesel-fueled equipment used during construction would have the potential to generate odors that may be considered unpleasant. Construction of each alignment section is anticipated to last up to 12 years; however, due to the linear configuration of the alignment, emissions would be spread across multiple construction staging sites. As a result, people's exposure to potential unpleasant construction-related odors near each site would be shorter in duration than the time required to construct each alignment section and would cease upon completion of construction activities at that site. See Appendix 2-C, Construction Approach Report, for construction details. Additionally, the project measures identified under Impact AQ-3 for the reduction of DPM emissions from diesel-fueled equipment would be effective in limiting odor impacts from diesel construction equipment exhaust. Due to the temporary and highly mobile nature of alignment construction and the implementation of project measures to reduce emissions from diesel-fueled equipment, the alignment would not result in other emissions, such as those leading to unpleasant odors, that would adversely affect a substantial number of people. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during construction.

3.3.7.4.1.2 OPERATIONAL IMPACTS

Less than Significant Impact. Other operational emission sources under the KNE San Vicente–Fairfax Alignment with the potential to adversely affect a substantial number of people include waste from

passengers accessing the stations, which could have an unpleasant odor. SCAQMD has established Rule 402 (Nuisance), which avoids nuisance odor conditions through the establishment of odor complaint tracking systems and other requirements. Typical sources of potential nuisance odors include agricultural uses, wastewater treatment facilities, food processing and chemical plants, landfills, and refineries, none of which are associated with the alignment. Trash receptacles at stations would be a minor source of odors and would be subject to regular servicing, maintenance, and cleaning to prevent unpleasant odors at the stations, and they would not result in unpleasant odors that adversely affect a substantial number of people. Therefore, the KNE San Vicente–Fairfax Alignment would have a less than significant impact during operation.

3.3.7.4.2 KNE FAIRFAX ALIGNMENT

3.3.7.4.2.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Other construction emission sources under the KNE Fairfax Alignment with the potential to adversely affect a substantial number of people include diesel vehicle exhaust, which has a distinctive odor. Diesel-fueled equipment used during construction would have the potential to generate odors that may be considered unpleasant. Construction of each alignment section is anticipated to last up to 12 years; however, due to the linear configuration of the alignment, emissions would be spread across multiple construction staging sites. As a result, people's exposure to potential unpleasant construction-related odors near each site would be shorter in duration than the time required to construct each alignment section and would cease upon completion of construction activities at that site. See Appendix 2-C, Construction Approach Report, for construction details. Additionally, the project measures identified under Impact AQ-3 for the reduction of DPM emissions from diesel-fueled equipment would be effective in limiting odor impacts from diesel construction equipment exhaust. Due to the temporary and highly mobile nature of alignment construction and the implementation of project measures to reduce emissions from diesel-fueled equipment, the alignment would not result in other emissions, such as those leading to unpleasant odors, that would adversely affect a substantial number of people. Therefore, the KNE Fairfax Alignment would have a less than significant impact during construction.

3.3.7.4.2.2 OPERATIONAL IMPACTS

Less than Significant Impact. Other operational emission sources under the KNE Fairfax Alignment with the potential to adversely affect a substantial number of people include waste from passengers accessing the stations, which could have an unpleasant odor. SCAQMD has established Rule 402 (Nuisance), which avoids nuisance odor conditions through the establishment of odor complaint tracking systems and other requirements. Typical sources of potential nuisance odors include agricultural uses, wastewater treatment facilities, food processing and chemical plants, landfills, and refineries, none of which are associated with the project. Trash receptacles at stations would be a minor source of odors and would be subject to regular servicing, maintenance, and cleaning to prevent unpleasant odors at the stations. Therefore, the KNE Fairfax Alignment would have a less than significant impact during operation.

3.3.7.4.3 KNE LA BREA ALIGNMENT

3.3.7.4.3.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Other construction emission sources under the KNE La Brea Alignment with the potential to adversely affect a substantial number of people include diesel vehicle exhaust, which has a distinctive odor. Diesel-fueled equipment used during construction would have the potential to generate odors that may be considered unpleasant. Construction of each alignment section is anticipated to last eight to 10 years; however, due to the linear configuration of the alignment, emissions would be spread across multiple construction staging sites. As a result, people's exposure to potential unpleasant construction-related odors near each site would be shorter in duration than the time required to construct each alignment section and would cease upon completion of construction activities at that site. See Appendix 2-C, Construction Approach Report, for construction details. Additionally, the project measures identified under Impact AQ-3 for the reduction of DPM emissions from diesel-fueled equipment would be effective in limiting odor impacts from diesel construction equipment exhaust. Due to the temporary and highly mobile nature of alignment construction and the implementation of project measures to reduce emissions from diesel-fueled equipment, the alignment would not result in other emissions, such as those leading to unpleasant odors, that would adversely affect a substantial number of people. Therefore, the KNE La Brea Alignment would have a less than significant impact during construction.

3.3.7.4.3.2 OPERATIONAL IMPACTS

Less than Significant Impact. Other operational emission sources under the KNE La Brea Alignment with the potential to adversely affect a substantial number of people include waste from passengers accessing the stations, which could have an unpleasant odor. SCAQMD has established Rule 402 (Nuisance), which avoids nuisance odor conditions through the establishment of odor complaint tracking systems and other requirements. Typical sources of potential nuisance odors include agricultural uses, wastewater treatment facilities, food processing and chemical plants, landfills, and refineries, none of which are associated with the project. Trash receptacles at stations would be a minor source of odors and would be subject to regular servicing, maintenance, and cleaning to prevent unpleasant odors at the stations. Therefore, the KNE La Brea Alignment would have a less than significant impact during operation.

3.3.7.4.4 HOLLYWOOD BOWL DESIGN OPTION

3.3.7.4.4.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Other construction emission sources under the Hollywood Bowl Design Option with the potential to adversely affect a substantial number of people include diesel vehicle exhaust, which has a distinctive odor. Diesel-fueled equipment used during construction would have the potential to generate odors that may be considered unpleasant. Construction at the Hollywood Bowl site is anticipated to occur intermittently over approximately 10 years and would cease upon completion of construction activities. People's exposure to potential unpleasant construction-related odors near the site

would vary over the duration of construction based on the type of construction activity. See Appendix 2-C, Construction Approach Report, for construction details.

Additionally, the project measures identified under Impact AQ-3 for the reduction of DPM emissions from diesel-fueled equipment would be effective in limiting odor impacts from diesel construction equipment exhaust. Due to the temporary nature of design option construction and the implementation of project measures to reduce emissions from diesel-fueled equipment, the Hollywood Bowl Design Option would not result in other emissions, such as those leading to unpleasant odors, that would adversely affect a substantial number of people. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during construction.

3.3.7.4.4.2 OPERATIONAL IMPACTS

Less than Significant Impact. Other operational emission sources under the Hollywood Bowl Design Option with the potential to adversely affect a substantial number of people include waste from passengers accessing the station, which could have an unpleasant odor. SCAQMD has established Rule 402 (Nuisance), which avoids nuisance odor conditions through the establishment of odor complaint tracking systems and other requirements. Typical sources of potential nuisance odors include agricultural uses, wastewater treatment facilities, food processing and chemical plants, landfills, and refineries, none of which are associated with the project. Trash receptacles at the station would be a minor source of odors and would be subject to regular servicing, maintenance, and cleaning to prevent unpleasant odors at the station. Therefore, the Hollywood Bowl Design Option would have a less than significant impact during operation.

3.3.7.4.5 MAINTENANCE AND STORAGE FACILITY

3.3.7.4.5.1 CONSTRUCTION IMPACTS

Less than Significant Impact. Other construction emission sources associated with the MSF that have the potential to adversely affect a substantial number of people include diesel vehicle exhaust, which has a distinctive odor. Diesel-fueled equipment used during construction would have the potential to generate odors that may be considered unpleasant. Construction at the MSF site is anticipated to occur over two separate periods of approximately one year for MSF facilities associated with Section 1 and up to five years for MSF expansion associated with Section 2. As a result, people's exposure to potential unpleasant construction-related odors near the MSF site would be temporary. See Appendix 2-C, Construction Approach Report, for construction details.

Additionally, the project measures identified under Impact AQ-3 for the reduction of DPM emissions from diesel-fueled equipment would also be effective in limiting odor impacts from diesel construction equipment exhaust. Due to the temporary nature of MSF construction and the implementation of project measures to reduce emissions from diesel-fueled equipment, construction of the MSF would not result in other emissions, such as those leading to unpleasant odors, that would adversely affect a substantial number of people. Therefore, the MSF would have a less than significant impact during construction.

3.3.7.4.5.2 OPERATIONAL IMPACTS

Less than Significant Impact. Other MSF operational emission sources with the potential to adversely affect a substantial number of people include combustion of natural gas for comfort heating, activities associated with maintenance and upkeep of structures, and activities required for servicing, cleaning, inspection, and repairs of LRVs. Sources of potential nuisance odors are expected to be similar to those already occurring at Division 16, and operation of the existing Division 16 has not resulted in unpleasant odors affecting a substantial number of people. In addition, SCAQMD has established Rule 402 (Nuisance), which avoids nuisance odor conditions through the establishment of odor complaint tracking systems and other requirements. Therefore, the MSF would have a less than significant impact during operation.

3.3.7.5 MITIGATION MEASURES

As the impact analysis above demonstrates, construction and operation of any of the KNE alignments and stations, the design option, and the MSF would result in a less than significant impact related to air quality. Therefore, no mitigation is required under CEQA.

3.3.7.6 SUMMARY OF IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES

Table 3.3-29 summarizes the air quality impact significance conclusions and applicable mitigation measures. As indicated above, there are no significant air quality impacts that would require mitigation.

TABLE 3.3-29. KNE SUMMARY OF IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES

IMPACT		IMPACT SIGNIFICANCE CONCLUSIONS AND MITIGATION MEASURES				
		KNE SAN VICENTE–FAIRFAX ALIGNMENT	KNE FAIRFAX ALIGNMENT	KNE LA BREA ALIGNMENT	HOLLYWOOD BOWL DESIGN OPTION	MAINTENANCE AND STORAGE FACILITY
Impact AQ-1: Air Quality Plan	Impact Before Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS. Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
Impact AQ-2: Regional Criteria Pollutant Emissions	Impact Before Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
Impact AQ-3: Exposure of Sensitive Receptors to Localized Pollutant Concentrations	Impact Before Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
Impact AQ-4: Other Emissions	Impact Before Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS
	Mitigation Measures	None Required	None Required	None Required	None Required	None Required
	Impact After Mitigation	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS	Construction: LTS Operation: LTS

Source: Connect Los Angeles Partners 2024
LTS = less than significant