California High-Speed Rail Authority

Palmdale to Burbank Project Section

Draft General Conformity Report

April 2024

CALIFORNIA High-Speed Rail Authority

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being or have been carried out by the State of California pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated July 23, 2019, and executed by the Federal Railroad Administration and the State of California.

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ACRONYMS AND ABBREVIATIONS

µg/m^3	micrograms per cubic meter
AQMP	air quality management plan
Authority	California High-Speed Rail Authority
AVAQMD	Antelope Valley Air Quality Management District
C.F.R.	Code of Federal Regulations
CAA	Clean Air Act
CalEEMod	California Emissions Estimator Model
CARB	California Air Resources Board
CEQA	California Environmental Quality Act
CO	carbon monoxide
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EMFAC2017	Emission Factors 2017
FRA	Federal Railroad Administration
HSR	high-speed rail
IAMF	impact avoidance and minimization feature
MM	mitigation measure
N/A	not available
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NM	not monitored
NO_2	nitrogen dioxide
NO_X	nitrogen oxides
NZE	near zero emission
O_3	ozone
PM	particulate matter
PM_{10}	particulate matter 10 microns in diameter or less
$PM_{2.5}$	particulate matter 2.5 microns in diameter or less
ppm	parts per million
ROG	reactive organic gas
RSA	resource study area
SCAQMD	South Coast Air Quality Management District
SIP	state implementation plan
SJVAPCD	San Joaquin Air Pollution Control District
SO_2	sulfur dioxide

SO_X	sulfur oxides
tpy	tons per year
U.S.C.	United States Code
USEPA	U.S. Environmental Protection Agency
ZE	zero emission
ZEV	zero emission vehicles

EXECUTIVE SUMMARY

The California High-Speed Rail (HSR) System, proposed by the California High-Speed Rail Authority (Authority), will provide intercity, high-speed service on more than 800 miles of guideway throughout California, connecting the major population centers of Sacramento, the San Francisco Bay Area, the Central Valley, Los Angeles, the Inland Empire, Orange County, and San Diego. The Palmdale to Burbank HSR Section ("Project"), which is the focus of this General Conformity Determination, is a critical link in Phase 1 of the California HSR System connecting the San Francisco Bay Area to the Los Angeles Basin.[1]

The General Conformity Rule, as codified in Title 40 Code of Federal Regulations Part 93, Subpart B, establishes the process by which federal agencies determine conformance of proposed projects that are federally funded or require federal approval with applicable air quality standards. This determination must demonstrate that a project would not cause or contribute to new violations of air quality standards, exacerbate existing violations, or interfere with timely attainment or required interim emissions reductions towards attainment.

This Draft General Conformity Determination documents the Federal Railroad Administration's finding that the Project complies with the General Conformity Rule, that it conforms to the purposes of the area's approved State Implementation Plan, and that it is consistent with all applicable requirements. This Draft General Conformity Determination is being issued for public review and comment based on the adopted impact avoidance and minimization features (IAMFs) and mitigation measures described in Section 3.3.4.2 and Section 3.3.7, respectively, of the *Palmdale to Burbank Section Environmental Impact Report/Environmental Impact Statement* (. This compliance is demonstrated herein as follows:

- The operation of the Project would result in a reduction of regional emissions of all applicable air pollutants and would not cause a localized exceedance of an air quality standard; and
- Whereas emissions generated during the construction of the Project would exceed the *de minimis* levels for nitrogen oxides and (NO_x) and carbon monoxide (CO) in the South Coast Air Basin, these exceedances would be offset through an agreement between the Authority and South Coast Air Quality Management District (SCAQMD). Prior to issuance of a Final General Conformity Determination, the Authority and SCAQMD will agree to develop and execute an agreement to offset, as necessary, any criteria air pollutant emissions exceedances resulting from the Project as described in Section 12.2, Compliance with Conformity Requirements, which will be executed prior to the start of construction.

[1] As part of its first phase, the California HSR System is currently planned as eight distinct sections from San Francisco in the north to Los Angeles and Anaheim in the south.

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1 INTRODUCTION

This document is the Draft General Conformity Determination for the Palmdale to Burbank Section of the California High-Speed Rail (HSR) system ("Project") and is required by the implementing regulations of Section 176 of the Clean Air Act (CAA). Section 176(c)(1) of the CAA prohibits federal agencies from engaging in, supporting, or providing financial assistance for licensing, permitting, or approving any activities that do not conform to an approved CAA implementation plan. That approved plan may be a federal, state, or tribal implementation plan.

The CAA defines nonattainment areas as geographic regions that have been designated as failing to meet one or more of the National Ambient Air Quality Standards (NAAQS). The CAA requires that each state prepare a state implementation plan (SIP) for each nonattainment area, and that a maintenance plan be prepared for each former nonattainment area that has subsequently demonstrated compliance with the standards. The SIP is a state's plan for how it will meet the NAAQS by the deadlines established by the CAA.

The General Conformity Rule is codified in Title 40 Code of Federal Regulations (C.F.R.) Part 93, Subpart B, "Determining Conformity of General Federal Actions to State or Federal Implementation Plans." Conformity is defined as "upholding an implementation plan's purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of such standards." The General Conformity Rule also establishes the process by which federal agencies determine conformity of proposed projects that are federally funded or require federal approval. This determination must demonstrate that the Project would not cause or contribute to new violations of air quality standards, exacerbate existing violations, or interfere with timely attainment or required interim emissions reductions towards attainment. Because the Project is receiving federal funds through grants with the Federal Railroad Administration (FRA) and may also receive safety approvals from FRA, it is an action that may be subject to the General Conformity Rule.

This Draft General Conformity Determination was issued following the *Palmdale to Burbank Project Section Environmental Impact Report/Environmental Impact Statement* (EIR/EIS), which complies with the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). Because the analysis used for the EIR/EIS also generated the information necessary for the General Conformity Determination, specific analysis may be incorporated herein by reference.

1.1 Regulatory Status of Study Area

In November 24, 1993, the U.S. Environmental Protection Agency (USEPA) promulgated final conformity regulations to address transportation plans, programs, and projects developed, funded, or approved under title 23 U.S. Code or the Federal Transit Act, 49 U.S. Code 1601 et seq. (40 C.F.R. Part 93 Subpart A). These regulations have been revised several times since they were first issued. Although the Transportation Conformity regulations do not apply to this Project (see Section 1.2), many of the transportation planning documents developed under those regulations explain the regional air quality and planning status of the resource study area (RSA).

The RSA for the Project is the South Coast Air Basin. While the Project would occur within the South Coast Air Basin, San Joaquin Valley Air Basin, and the Mojave Desert Air Basin, the RSA includes only the South Coast Air Basin because construction-phase emissions (without mitigation) for the Preferred Alternative will only exceed the *de minimis* levels for applicable criteria pollutants within the South Coast Air Basin. As described, in Table 3.3-16 and Table 3.3-18 of the *Palmdale to Burbank Project Section EIR/EIS*, the emissions-intensive construction activities for the Project will primarily occur within the South Coast Air Basin. As described in Table 3.3-19 and Table 3.3-20, the construction-phase emissions (without mitigation) for the Preferred Alternative will not exceed *de minimis* levels in either the Mojave Desert Air Basin or San Joaquin Valley Air Basin. Thus, as construction activities from the Project (the Preferred Alternative) will not result in an exceedance of the *de minimis* levels for any applicable criteria pollutant in either the Mojave Desert Air Basin or San Joaquin Valley Air Basin, a General

Conformity Determination is not required for those basins. Therefore, the Project's RSA for the General Conformity Report is limited to the South Coast Air Basin. Planning documents for pollutants for which the RSA is classified as federal nonattainment or maintenance are developed by the SCAQMD and the California Air Resources Board (CARB) and are approved by the USEPA. Table 1-1 lists the planning documents relevant to the Project's RSA.

Table 1-1 Planning Documents Relevant to the Resource Study Area

Type of Plan	Status
SCAQMD 2022 Air Quality Management Plan	On October 1, 2015, USEPA strengthened the NAAQS for ground-level ozone, lowering the primary and secondary ozone standard levels to 70 parts per billion. The South Coast Air Basin is classified as an "extreme" nonattainment area, and the Coachella Valley is classified as a "severe-15" nonattainment area for the 2015 Ozone NAAQS. The 2022 AQMP was developed to address the requirements for meeting this standard and was adopted December 2, 2022, by the SCAQMD Governing Board.
SCAQMD 2016 Air Quality Management Plan	Approved by the SCAQMD Governing Board in March 2017, the 2016 AQMP demonstrates attainment for the 8-hour ozone NAAQS established in 2008, the annual $PM_{2.5}$ NAAQS established in 2012, and the 24-hour $PM_{2.5}$ NAAQS established in 2006. In addition, the 2016 AQMP includes revisions to the attainment demonstrations for the 1997 8-hour ozone NAAQS and the 1979 1-hour ozone NAAQS. The 2016 AQMP was submitted to USEPA on April 27, 2017, but no clean air determination has been made to date.
SCAQMD 2012 Air Quality Management Plan	Approved by the SCAQMD Governing Board in February 2013, the 2012 AQMP was submitted to demonstrate attainment for the 24-hour $PM_{2.5}$ NAAQS established in 2006. On September 30, 2015, USEPA proposed to approve elements of the South Coast 2012 $PM_{2.5}$ Plan and 2015 Supplement, which addressed Clean Air Act requirements for the 2006 $PM_{2.5}$ NAAQS and proposed to reclassify the area as a 'Serious' nonattainment area for the 2006 $PM_{2.5}$ standard. USEPA provided a 30-day public comment period from the date of publication in the Federal Register. On March 15, 2016, USEPA approved in part and disapproved in part those portions of the SCAQMD's 2012 Air Quality Management Plan (2012 $PM_{2.5}$ Plan) that address attainment of the 2006 24-hour $PM_{2.5}$ standards and the 2015 Supplement to the 2012 $PM_{2.5}$ Plan. To correct these deficiencies, the state was required to submit to USEPA a demonstration that the NO_x Regional Clean Air Incentive Market program, either as adopted in 2010 or as subsequently amended, ensures emissions reductions equivalent, in the aggregate, to the reductions anticipated from the direct application of reasonably available control technology on covered sources.

Type of Plan	Status
2010 South Coast Air Basin Request for PM_{10} Redesignation Request and Maintenance Plan	On April 28, 2010, CARB submitted Request for PM_{10} Redesignation and Maintenance Plan to USEPA. On June 12, 2013, the USEPA's regional administrator signed a final rule to approve the South Coast PM_{10} Redesignation Request and Maintenance Plan. The plan was developed and adopted by SCAQMD, and showed how the area would maintain the PM_{10} standard for at least the next 10 years.
2005 South Coast Air Basin Request for CO Maintenance Plan and Redesignation Request	On February 24, 2006, CARB transmitted the Redesignation Request and Maintenance Plan (including the CO budgets) to USEPA for approval. In addition, on August 11, 2006, CARB provided information to USEPA that demonstrates the Smog Check program satisfies federal inspection & maintenance requirements for CO and provides emission reductions necessary for continued improvement in CO air quality. On April 24, 2007, USEPA's regional administrator signed a final rule to approve the South Coast Maintenance Plan and Redesignation Request for Carbon Monoxide.

Sources: South Coast Air Quality Management District, 2005, 2009, 2013, 2017
AQMP = air quality management plan
CARB = California Air Resources Board
CO = carbon monoxide
NAAQS = National Ambient Air Quality Standards
NOx = nitrogen oxides
PM_{10} = particulate matter smaller than or equal to 10 microns in diameter
$PM_{2.5}$ = particulate matter smaller than or equal to 2.5 microns in diameter
SCAQMD = South Coast Air Quality Management District
SIP = State Implementation Plan
USEPA = U.S. Environmental Protection Agency

1.2 General Conformity Requirements

On November 30, 1993, USEPA promulgated final General Conformity regulations at 40 C.F.R. Part 93 Subpart B for all federal activities except highways and transit programs covered by Transportation Conformity. The regulations in Subpart B were subsequently amended in March of 2010. Because the Project will not be funded or require approval(s) under Title 23 U.S. Code or the Federal Transit Act, 49 U.S. Code 1601 et seq., the General Conformity requirements are applicable rather than Transportation Conformity. In general terms, unless a project is exempt under 40 C.F.R. § 93.153(c) or is not on the agency's presumed-to-conform list pursuant to 40 C.F.R. § 93.153(f), a General Conformity Determination is required where a federal action in a nonattainment or maintenance area causes an increase in the total of direct and indirect emissions of the relevant criteria pollutants and precursor pollutants that are equal to or exceed certain *de minimis* rates.

During the applicability analysis, the federal agency determines:

- Whether the action will occur in a nonattainment or maintenance area;
- Whether one or more of the specific exemptions apply to the action;
- Whether the federal agency has included the action on its list of presumed-to-conform actions;
- Whether the total direct and indirect emissions are below or above the *de minimis* levels; and/or
- Where a facility has an emissions budget approved by the State or Tribe as part of the SIP or transportation improvement plan, the federal agency determines that the emissions from the Project are within the budget (USEPA 2022a).

The USEPA Guidance (USEPA 1994) states that the applicability analysis can be (but is not required to be) completed concurrently with any analysis required under NEPA. The applicability analysis for this Project is described in Section 8. If, after the applicability analysis, the federal agency concludes it should conduct a conformity determination, it may demonstrate conformity by one or more of several prescribed methods. These methods include:

- Demonstrating that the direct and indirect emissions are specifically identified in the relevant implementation plan;

- Obtaining a written statement from the entity responsible for the implementation plan that the total indirect and direct emissions from the action, along with other emissions in the area, will not exceed the total implementation plan emission budget; or
- Fully offsetting the total direct and indirect emissions by reducing emissions of the same pollutant in the same nonattainment or maintenance area.

2 DESCRIPTION OF THE FEDERAL ACTION REQUIRING CONFORMITY EVALUATION

In accordance with applicable General Conformity regulations and guidance, when a General Conformity Determination is necessary, FRA conducts a General Conformity evaluation for the specific federal action associated with the preferred alternative for a project or program (USEPA 1994), and FRA must issue a positive conformity determination before the federal action is approved. Each federal agency is responsible for determining conformity of those proposed actions over which it has jurisdiction. This Draft General Conformity Determination is related only to those activities included in the FRA's federal action pertaining to the Proposed Action, which is the Proposed Action's potential approval through a NEPA Record of Decision. The Proposed Action is described further in Section 3.

General Conformity requirements only apply to federal actions proposed in nonattainment areas (i.e., areas where one or more NAAQS are not being achieved at the time of the Proposed Action and requiring SIP provisions to demonstrate how attainment would be achieved) and in maintenance areas (i.e., areas recently reclassified from nonattainment to attainment and requiring SIP provisions to demonstrate how attainment would be maintained).

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3 CALIFORNIA HIGH-SPEED RAIL PROJECT

3.1 California High-Speed Rail System

The Authority, a state governing board formed in 1996, is responsible for planning, designing, constructing, and operating the HSR system. Its mandate is to develop a high-speed rail system connecting the state's major population centers and coordinating with the state's existing transportation network, which includes intercity rail and bus lines, regional commuter rail lines, urban rail and bus transit lines, highways, and airports.

The HSR system will provide intercity, high-speed service on more than 800 miles of railroad throughout California, connecting the major population centers of Sacramento, the San Francisco Bay Area (Bay Area), the Central Valley, Los Angeles, the Inland Empire, Orange County, and San Diego. It will use state-of-the-art, electrically powered, high-speed, steel-wheel-on-steel-rail technology, including contemporary safety, signaling, and automated train-control systems, with trains capable of operating up to 220 miles per hour over a grade-separated, dedicated guideway alignment.

The FRA is responsible for oversight and regulation of railroad safety and is also charged with the implementation of the High-Speed Intercity Passenger Rail financial assistance program. As part of the High-Speed Intercity Passenger Rail Program, FRA is providing partial funding for the environmental analysis and documentation required under NEPA, CEQA, and other related environmental laws. Pursuant to U.S. Code Title 23 Section 327, under the NEPA Assignment Memorandum of Understanding between FRA and the State of California, effective July 23, 2019, the Authority is the federal lead agency for environmental reviews for all Authority Phase 1 and Phase 2 California HSR System projects. The FRA performs Clean Air Act Conformity determinations and other federal approvals retained by the FRA under the NEPA Assignment Memorandum of Understanding.

3.2 California High-Speed Rail System – Palmdale to Burbank Section

The Palmdale to Burbank Project Section of the California HSR System includes approximately 38 miles of alignment between the cities of Palmdale and Burbank, in addition to the Burbank Airport Station. The alignment would include six different track profiles: at-grade, at-grade covered, cut-and-cover, retained cut/trench profile, tunnel, and elevated/aerial structure in a variety of land uses and ecoregions, including urban, rural, and mountainous terrain in Southern California. From the north, the project section would begin at Spruce Court in Palmdale, continue south and turn west to cross under the community of Acton, continue southwest and turn south to travel beneath the Angeles National Forest, including the San Gabriel Mountains National Monument, and then enter the San Fernando Valley where it would connect to the Burbank Airport Station.

The permanent environmental footprint areas of the Palmdale to Burbank Project Section would include elevated track, at-grade track, tunnels, access roads, traction power distribution infrastructure, radio communication sites, and the Burbank Airport Station. In addition, public roadway improvements, grade separations, and railroad improvements would be built in support of the project section. The Palmdale to Burbank Project Section would also require the construction of one adit and one intermediate window facility to improve tunnel access and ventilation, as most of the track alignment in the project section would utilize below-grade tunnels. For reference, adits are intermediate tunnel access shafts intended to facilitate construction of bored tunnels, and intermediate windows are vertical shafts connecting to an underground construction area that comprise an elevator and gantry cranes to provide access to water, power, ventilation, and other support during construction.

The Palmdale to Burbank Project Section alignment would begin at grade in the vicinity of Spruce Court, crossing the current alignment of Sierra Highway just north of the East Avenue S, continuing south and curving eastward to travel approximately 300 feet east of Una Lake. South of Una Lake, the Palmdale to Burbank Project Section alignment would curve westward, cross over the Metrolink Antelope Valley Line, Sierra Highway, and the Soledad Siphon, and continue

southwest and enter a tunnel portal approximately 0.5 mile northeast of the Sierra Highway/Pearblossom Highway intersection. The Palmdale to Burbank Project Section alignment would then continue westward in an approximately 13-mile-long tunnel before surfacing approximately 0.75 mile east of Agua Dulce Canyon Road. The alignment would transition between at-grade and elevated profiles before entering an approximately 1-mile-long tunnel. Transitioning from tunnel to at grade, the Palmdale to Burbank Project Section alignment would converge at the Soledad Canyon Mining Operations (Vulcan Mine) site, California Mine Identification Number 91-19-0038, which is almost entirely within the boundaries of the ANF, including the SGMNM. From this point, the Palmdale to Burbank Project Section alignment would enter twin-bored tunnels for approximately 13 miles, which would be constructed underneath portions of the ANF, including the SGMNM, the city of Santa Clarita, and the Pacoima neighborhood of Los Angeles. These tunnels would have a maximum depth of 2,080 feet. The twin tunnels would pass through the San Gabriel Fault Zone and the Sierra Madre Fault Zone. Upon completion of the tunnels, the Vulcan Mine site would be regraded to better reflect surrounding topography.

The Palmdale to Burbank Project Section alignment would emerge east of the existing Antelope Valley Metrolink Corridor near Montague Street in the Pacoima neighborhood of Los Angeles. From Montague Street, Palmdale to Burbank Project Section alignment would continue south for approximately 0.4 mile in a retained cut/trench, transitioning up to ground level, and passing over the existing Hansen Spreading Grounds on embankment before crossing over the Los Angeles County Flood Control Channel on a bridge and entering the existing Metrolink corridor near Sheldon Street. Continuing along the east side of the Metrolink Corridor, the Palmdale to Burbank Project Section alignment would continue southerly at grade for approximately 1.0 mile where it would cross over Tuxford Street and under the I-5 freeway. Continuing southeast from the I-5 undercrossing, the Palmdale to Burbank Project Section alignment would transition below-grade in an open trench to just north of Olinda Street. From just north of Olinda Street to just south of Sunland Boulevard, the Palmdale to Burbank Project Section alignment would be below-ground in a cut- and-cover box structure. Metrolink would remain on the surface, and the Sun Valley Metrolink station would be reconstructed south of Olinda Street on the surface. South of Sunland Boulevard the Palmdale to Burbank Project Section alignment would continue in a mined or bored tunnel until reaching Lockheed Drive, the southern limit of this subsection. The Palmdale to Burbank Project Section alignment would continue in the cut-and-cover tunnel through the southern limit of the Burbank subsection near Winona Drive.

Although the Project is defined as the section connecting Palmdale to Burbank, the Palmdale Station, including the track alignment north of Spruce Court in Palmdale, was fully evaluated as part of the *Bakersfield to Palmdale Project Section EIR/EIS* and corresponding technical reports, which was approved by the Authority Board in August 2021 (Authority 2021), and evaluated in the Bakersfield to Palmdale Final General Conformity Determination, issued on July 16, 2021. While the analysis of the Palmdale Station and the track alignment north of Spruce Court has been incorporated into the *Palmdale to Burbank Project Section EIR/EIS* to support station-to-station analysis with logical termini for the Palmdale to Burbank Project Section, emissions and concentration results for the Palmdale Station and the track alignment north of Spruce Court are not included in this Draft General Conformity Determination. Similarly, the Burbank Airport Station was fully evaluated as part of the *Burbank to Los Angeles Final EIR/EIS*, which was approved by the Authority Board in March 2022 (Authority 2022a) and evaluated in the Burbank to Los Angeles Final General Conformity Determination, issued on December 9, 2021. However, the Burbank Airport Station is included in the *Palmdale to Burbank EIR/EIS* for context and information. As such, the Burbank Airport Station is similarly included in this Draft General Conformity Determination for context and information.

4 AIR QUALITY CONDITIONS IN THE RESOURCE STUDY AREA

4.1 Meteorology and Climate

Air quality is affected by both the rate and location of pollutant emissions, and by meteorological conditions that influence movement and dispersal of pollutants in the atmosphere. Atmospheric conditions, such as wind speed, wind direction, and air temperature gradients, along with local topography, provide the link between air pollutant emissions and local air quality levels.

The South Coast Air Basin covers an area of 6,745 square miles and includes all of Orange County, Los Angeles County except for the Antelope Valley, the non-desert portion of western San Bernardino County, and the western and Coachella Valley portions of Riverside County.

Low average wind speeds, together with a persistent temperature inversion, limit the vertical dispersion of air pollutants throughout the South Coast Air Basin. However, strong, dry, north or northeasterly winds, known as Santa Ana winds, occur during the fall and winter months, dispersing air contaminants. The Santa Ana conditions tend to last for several days at a time.

The combination of stagnant wind conditions and low inversions tend to produce the highest ground-level pollutant concentrations. On days without a temperature inversion or high wind speeds, ambient air pollutant concentrations are typically the lowest. During periods of low-level inversions and low wind speeds, air pollutants generated in urbanized areas are transported into Riverside and San Bernardino Counties. In the winter, the greatest pollution problems are carbon monoxide (CO) and nitrogen oxides (NO_X) because of extremely low inversions and air stagnation during the night and early morning hours. In the summer, the longer daylight hours and the brighter sunshine combine to cause a reaction between hydrocarbons and NO_X to form photochemical smog.

The annual average temperature varies little throughout the South Coast Air Basin, ranging from average highs of 80s and lows of 50s degrees Fahrenheit. With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. Much of the annual rainfall in the South Coast Air Basin occurs between November and April. Summer rainfall is minimal and is generally limited to scattered thundershowers in coastal regions and slightly heavier showers in the eastern portion of the South Coast Air Basin and along the coastal side of the mountains. Average monthly rainfall during that period varies from 3.80 inches in February to 0.01 inch or less between June and July, with an annual total of 16.35 inches. Patterns in monthly and yearly rainfall totals are unpredictable due to fluctuations in the weather.

The South Coast Air Basin intermittently experiences a temperature inversion (increasing temperature with increasing altitude) because of the Pacific High. This inversion limits the vertical dispersion of air contaminants, holding them relatively near the ground. As the sun warms the ground and the lower air layer, the temperature of the lower air layer approaches the temperature of the base of the inversion (upper) layer until the inversion layer finally breaks, allowing vertical mixing with the lower layer. This phenomenon is observed in mid-afternoon to late afternoon on hot summer days when the smog appears to clear up suddenly. Winter inversions frequently break by midmorning.

4.2 Ambient Air Quality in the Resource Study Area

CARB maintains ambient air monitoring stations for criteria pollutants throughout California. Two stations nearest to the RSA—near the central and southern Project limits—were selected to represent conditions along the Palmdale to Burbank corridor: Santa Clarita and Reseda, respectively. Locations for the monitoring stations are shown on Figure 4-1.

Table 4-1 summarizes the results of ambient monitoring at the two stations, where available, for the most recent 3 years of available data (CARB 2022b; USEPA 2022b). This 3-year period is calendar years 2019 through 2021 for the Reseda and Santa Clarita monitoring stations. A summary of the monitoring data includes the following:

- Monitored data from 2019 through 2021 do not exceed either the state or federal standards for CO.
- Ozone (O_3) values for the region exceed both the state and national 8-hour O_3 standards at all stations for all 3 years. O_3 values for the region also exceed the state 1-hour O_3 standard at both stations for every year from 2019 through 2021.
- The available particulate matter 10 microns in diameter or less (PM_{10}) values for the region did not exceed the national 24-hour PM_{10} standard. The state 24-hour PM_{10} standard was exceeded at the Santa Clarita station for 2019 and 2020. PM_{10} concentrations were not measured at the Reseda station from 2019 through 2021.
- The particulate matter 2.5 microns in diameter or less ($PM_{2.5}$) values for the region exceed the national 24-hour $PM_{2.5}$ standard for the Reseda station for the years 2020 and 2021. The Santa Clarita station exceeded the national 24-hour $PM_{2.5}$ standard in 2020.
- Sulfur dioxide (SO_2) values were not measured at either of the two stations from 2019 through 2021.
- The national 1-hour nitrogen dioxide (NO_2) standard was not exceeded at either of the two stations between 2019 and 2021.

4.3 Resource Study Area Emissions

CARB maintains an annual emission inventory for select counties and air basins in the state. The inventory for the South Coast Air Basin consists of data submitted to CARB by the SCAQMD plus estimates for certain source categories, which are provided by CARB staff. Table 4-2 summarizes the 2022 inventory data for the South Coast Air Basin. Note that Table 4-2 shows tons per day, whereas the emissions estimates for the Project are shown in tons per year.

In the South Coast Air Basin, mobile-source emissions account for more than 90 and 75 percent of the South Coast Air Basin's CO and NO_X emissions, respectively. Mobile-source emissions also account for more than 40 percent of the South Coast Air Basin's reactive organic gas (ROG) emissions. Area-source emissions account for approximately 80 percent of the South Coast Air Basin's particulate matter (PM), and stationary sources account for more than 70 and 60 percent, respectively, of the South Coast Air Basin's total organic gases (TOG) and sulfur oxides (SO_X) emissions.

4.4 Resource Study Area Designations

Under the federal criteria, the South Coast Air Basin is currently designated as nonattainment for the federal 8-hour O_3, $PM_{2.5}$, and lead standards; unclassified for the federal NO_2 and SO_2 standards; attainment/maintenance for the federal PM_{10} and CO standards; and attainment/unclassified for all other standards. The South Coast Air Basin is considered nonattainment for the state 1-hour O_3, 8-hour O_3, $PM_{2.5}$, and PM_{10} standards; small portions of the South Coast Air Basin are classified as nonattainment for the state NO_2 standard; the South Coast Air Basin is in attainment for the state CO, SO_2, and lead standards; and the South Coast Air Basin is in attainment/unclassified for all other state standards.

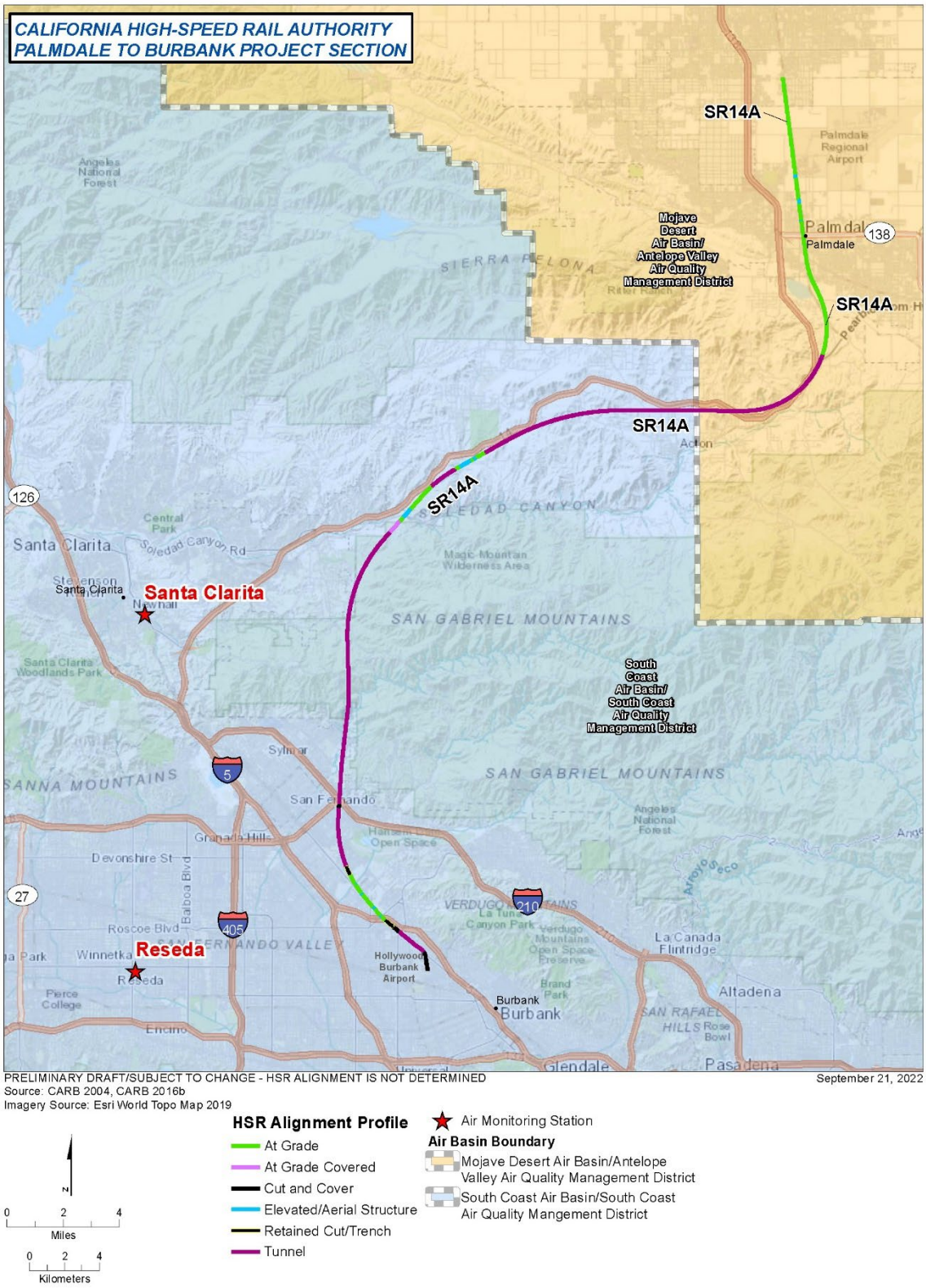

Figure 4-1 Air Quality Monitoring Stations Closest to the Proposed Action

Table 4-1 Ambient Criteria Pollutant Concentrations at Air Quality Monitoring Stations along the Palmdale to Burbank Project Section

Air Pollutant	Standard/Exceedance	Reseda			Santa Clarita		
		2019	2020	2021	2019	2020	2021
Carbon Monoxide (CO)	Year Coverage	NM	NM	NM	NM	NM	NM
	Max. 1-hour Concentration (ppm)	2.6	2	2.6	1.2	1.2	1.0
	Max. 8-hour Concentration (ppm)	1.8	1.7	1.9	1.0	0.8	0.7
	Number of Days>Federal 1-hour Standard of >35 ppm	0	0	0	0	0	0
	Number of Days>Federal 8-hour Standard of >9 ppm	0	0	0	0	0	0
	Number of Days>California 8-hour Standard of >9. ppm	0	0	0	0	0	0
Ozone (O_3)	Year Coverage[1]	94%	92%	97%	93%	92%	99%
	Max. 1-hour Concentration (ppm)	0.122	0.142	0.110	0.128	0.148	0.125
	Max. 8-hour Concentration (ppm)	0.094	0.115	0.083	0.106	0.122	0.103
	Number of Days>Federal 8-hour Standard of >0.075 ppm	20	45	16	42	57	47
	Number of Days>California 1-hour Standard of >0.09 ppm	14	33	4	34	44	30
	Number of Days>California 8-hour Standard of >0.07 ppm	37	65	33	57	75	63
Nitrogen Dioxide (NO_2)	Year Coverage	98%	97%	99%	93%	97%	98%
	Max. 1-hour Concentration (ppm)	64.4	49.9	54.2	46.3	46.3	56.9
	Annual Average (ppm)	10	10	10	9	9	9
	Number of Days>Federal 1-hour Standard of >100 ppm	0	0	0	0	0	0
Sulfur Dioxide (SO_2)	Year Coverage	NM	NM	NM	NM	NM	NM
	Max. 24-hour Concentration (ppm)	NM	NM	NM	NM	NM	NM
	Annual Average (ppm)	NM	NM	NM	NM	NM	NM
	Number of Days>California 24-hour Standard of >0.04 ppm	NM	NM	NM	NM	NM	NM

Air Pollutant	Standard/Exceedance	Reseda			Santa Clarita		
		2019	2020	2021	2019	2020	2021
Respirable Particulate Matter (PM_{10})	Year Coverage	NM	NM	NM	98	57	97
	Max. 24-hour Concentration (µg/m³)[2]	NM	NM	NM	62.9	67.8	47.1
	Number of Days>Federal 24-hour Standard of >150 µg/m³	NM	NM	NM	0	0	0
	Number of Days>California 24-hour Standard of >50 µg/m³	NM	NM	NM	1	1	0
	Annual Average[2] (µg/m³)	NM	NM	NM	18.9	21.5	20.3
Fine Particulate Matter ($PM_{2.5}$)	Year Coverage	99	98	99	NM	NM	NM
	Max. 24-hour Concentration (µg/m³)	30.0	73.8	55.5	29.0	43.3	30.1
	State Annual Average (µg/m³)	11.9	11.0	11.6	NM	NM	NM
	Number of Days>Federal 24-hour Standard of >35 µg/m³	0	3	3	NM	NM	NM
	Annual Average[2] (µg/m³)	9.1	11.0	10.0	NM	NM	NM

Sources: CARB 2022a, 2022b, USEPA 2022b
[1] Coverage is for the 8-hour standard.
[2] Coverage is for the national standard> = greater than
µg/m³ = micrograms per cubic meter
CARB = California Air Resources Board
Max. = maximum
NM = not monitored
$PM_{2.5}$ = particulate matter 2.5 microns or less in diameter
PM_{10} = particulate matter 10 microns or less in diameter
ppm = parts per million

Table 4-2 Estimated 2022 Annual Average Emissions for the South Coast Air Basin (tons/day)

Source Category	TOG	ROG	CO	NO_X	SO_X	PM	PM_{10}	$PM_{2.5}$
Stationary Sources								
Fuel Combustion	20.48	5.36	78.61	33.22	6.17	5.31	5.36	5.27
Waste Disposal	715.06	15.16	0.673	1.74	0.47	0.37	0.26	0.24
Cleaning and Surface Coatings	94.99	37.10	0.046	0.05	0.07	1.64	1.58	1.52
Petroleum Production and Marketing	66.65	19.22	3.07	0.862	1.80	1.91	1.28	0.91
Total Industrial Processes	11.64	10.69	0.72	0.82	0.63	17.53	10.05	5.08
Total Stationary Sources	**908.82**	**87.52**	**83.12**	**36.69**	**9.14**	**26.75**	**18.53**	**13.02**
Stationary Sources Percentage of Total	***71.7%***	***23.5%***	***5.1%***	***13.6%***	***64.4%***	***9.5%***	***11.2%***	***22.0%***
Area-wide Sources								
Solvent Evaporation	152.70	123.49	–	–	–	0.03	0.02	0.02
Miscellaneous Processes	36.69	11.80	55.24	21.10	0.38	226.31	119.43	32.29
Total Area-wide Sources	**189.37**	**135.29**	**55.24**	**21.10**	**0.38**	**226.33**	**119.45**	**32.32**
Area-wide Sources Percentage of Total	***14.9%***	***36.3%***	***3.4%***	***7.8%***	***2.7%***	***80.4%***	***72.1%***	***54.5%***
Mobile Sources								
On-Road Motor Vehicles	69.88	59.33	534.30	110.68	1.53	23.30	22.85	9.85
Other Mobile Sources	99.51	91.04	942.23	101.78	3.14	5.08	4.85	4.12
Total Mobile Sources	**169.39**	**150.37**	**1,476.53**	**212.46**	**4.67**	**28.38**	**27.70**	**13.98**
Mobile Sources Percentage of Total	***13.4%***	***40.3%***	***91.4%***	***78.6%***	***32.9%***	***10.1%***	***16.7%***	***23.6%***
Grand Total	**1,267.60**	**373.17**	**1,614.88**	**270.25**	**14.19**	**281.46**	**165.67**	**59.31**

Source: California Air Resources Board, 2019
Rounded to the nearest percentage; category percentages do not sum to 100 percent due to rounding.
- = not applicable or data not available
CO = carbon monoxide
NO_X = nitrogen oxides
PM = particulate matter
PM_{10} = particulate matter smaller than or equal to 10 microns in diameter
$PM_{2.5}$ = particulate matter smaller than or equal to 2.5 microns in diameter
ROG = reactive organic gas
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides
TOG = total organic gas

5 RELATIONSHIP TO NEPA

The *Palmdale to Burbank Project Section EIR/EIS* identifies potential environmental impacts of the Project, both adverse and beneficial, identifies appropriate measures to mitigate adverse impacts, and identifies the agencies' preferred alternative. The EIR/EIS was prepared to comply with both NEPA and CEQA.

The General Conformity regulations establish certain procedural requirements that must be followed when preparing a General Conformity evaluation and are similar but not identical to those for conducting an air quality impact analysis under NEPA regulations. NEPA requires that the air quality impacts of the Project's implementation be analyzed and disclosed. For purposes of NEPA, the air quality impacts of the Project were determined by identifying the Project's associated incremental emissions and air pollutant concentrations and comparing them, respectively, to emissions thresholds and state and national ambient air quality standards. The air quality impacts of the Project under future Build conditions were also compared in the EIR/EIS to the future No Build conditions for NEPA purposes (they were also compared to existing conditions). The General Conformity Determination process and general findings are discussed in Sections 3.3.2.1, Federal Laws, Regulations, and Orders, 3.3.4.3, Methods for NEPA and CEQA Impact Analysis, 3.3.6.3, Build Alternatives, 3.3.7, Mitigation Measures, and 3.3.8, NEPA Impacts Summary, of the EIR/EIS.

To appropriately identify and offset, where necessary, the emissions resulting from the Project, FRA is issuing this Draft General Conformity Determination. Prior to the issuance of a Final General Conformity Determination, the Authority will enter into an agreement with the South Coast Air Quality Management District (SCAQMD) to develop an agreement to offset, as necessary, any criteria air pollutant emissions[2] exceedances resulting from the Project as described in Section 12.2, Compliance with Conformity Requirements, which will be executed prior to the start of construction.

[2] As shown in Table 10-1, the Project will result in two exceedances of the *de minimis* levels for CO within the South Coast Air Basin, which has been redesignated as attainment for CO. However, based on localized CO hot-spot analysis, described in this Draft General Conformity Determination, the Project will not result in CO emissions that would cause a violation of the NAAQS for CO, and therefore, the Project conforms to the SIP.

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6 AVOIDANCE AND MITIGATION MEASURES TO REDUCE EMISSIONS TO BE INCORPORATED IN THE PROJECT

To reduce impacts on the environment and as required by NEPA and CEQA, the construction of the Project will include IAMFs and mitigation measures that will be implemented as part of the Project to minimize, avoid, and mitigate air quality impacts. These IAMFs and mitigation measures will be required components of the Project. They will be included in the Mitigation Monitoring and Enforcement Program, which will be issued concurrently with the Authority's Record of Decision and will be enforceable commitments undertaken by the Authority. Construction of the Project is anticipated to take place through a design/build contract. The Authority will include all the IAMFs and required mitigation measures into the construction contract, which will create binding and enforceable commitments to implement these design features and MMs.

The Authority will be responsible for implementing and overseeing a mitigation monitoring program to ensure that the contractor meets all air quality design features and mitigation measures.

- **AQ-IAMF#1: Fugitive Dust Emissions –** During construction, the contractor shall employ the following measures to minimize and control fugitive dust emissions. The contractor shall prepare a fugitive dust control plan for each distinct construction segment. At a minimum, the plan shall describe how each measure would be employed and identify an individual responsible for ensuring implementation. At a minimum, the plan shall address the following components unless alternative measures are approved by the applicable air quality management district.
  - Cover all vehicle loads transported on public roads to limit visible dust emissions and maintain at least 6 inches of freeboard space from the top of the container or truck bed.
  - Clean all trucks and equipment before exiting the construction site using an appropriate cleaning station that does not allow runoff to leave the site or mud to be carried on tires off the site.
  - Water exposed surfaces and unpaved roads at a minimum three times daily with adequate volume to result in wetting of the top 1 inch of soil but avoiding overland flow. Rain events may result in adequate wetting of top 1 inch of soil thereby alleviating the need to manually apply water.
  - Limit vehicle travel speed on unpaved roads to 15 miles per hour.
  - Suspend any dust-generating activities when average wind speed exceeds 25 miles per hour.
  - Stabilize all disturbed areas, including storage piles that are not being used on a daily basis for construction purposes, by using water, a chemical stabilizer/suppressant, hydro mulch or by covering with a tarp or other suitable cover or vegetative ground cover to control fugitive dust emissions effectively. In areas adjacent to organic farms, the Authority will use non-chemical means of dust suppression.
  - Stabilize all on-site unpaved roads and off-site unpaved access roads, using water or a chemical stabilizer/suppressant, to effectively control fugitive dust emissions. In areas adjacent to organic farms, the Authority will use non-chemical means of dust suppression.
  - Carry out watering or presoaking for all land clearing, grubbing, scraping, excavation, land leveling, grading, cut-and-fill, and demolition activities.
  - For buildings up to 6 stories in height, wet all exterior surfaces of buildings during demolition.

  - Limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at a minimum of once daily, using a vacuum-type sweeper.
  - After the addition of materials to or the removal of materials from surface or outdoor storage piles, apply sufficient water or a chemical stabilizer/suppressant.
  - Before finalizing the plan, the Contractor shall provide a draft of the plan to Los Angeles Unified School District, Acton-Agua Dulce Unified School District, and any other potentially affected public school districts on their request, for their review and comment.

- **AQ-IAMF#2: Selection of Coatings –** During construction, the contractor shall use:
  - Low-volatile organic compound (VOC) paint that contains less than 10 percent of VOC contents (VOC, 10%).
  - Super-compliant or Clean Air paint that has a lower VOC content than that required by SCAQMD Rule 1113 and Antelope Valley Air Quality Management District (AVAQMD) Rule 1113 when available. If not available, the contractor shall document the lack of availability, recommend alternative measure(s) to comply with SCAQMD Rule 1113 and AVAQMD Rule 1113, or disclose absence of measure(s) for full compliance and obtain concurrence from the Authority.
- **AQ-IAMF#3: Renewable Diesel –** During construction, the contractor will use renewable diesel fuel to minimize and control exhaust emissions from all heavy-duty diesel-fueled construction diesel equipment and on-road diesel trucks. Renewable diesel must meet the most recent American Society for Testing and Materials D975 specification for Ultra Low Sulfur Diesel and have a carbon intensity no greater than 50 percent of diesel with the lowest carbon intensity among petroleum fuels sold in California. The contractor will provide the Authority with monthly and annual reports, through the Environmental Mitigation Management and Assessment system, of renewable diesel purchase records and equipment and vehicle fuel consumption. Exemptions to use traditional diesel can be made where renewable diesel is not available from suppliers within 200 miles of the Project site. The construction contract must identify the quantity of traditional diesel purchased and fully document the availability and price of renewable diesel to meet Project demand.
- **AQ-IAMF#4: Reduce Criteria Exhaust Emissions from Construction Equipment –** Prior to issuance of construction contracts, the Authority will incorporate the following construction equipment exhaust emissions requirements into the contract specifications:
  - All heavy-duty off-road construction diesel equipment used during the construction phase will meet Tier 4 Final engine requirements.
  - Small diesel generators (less than 30 horsepower) should be avoided whenever feasible.
  - A copy of each unit's certified tier specification and any required CARB or air pollution control district operating permit will be made available to the Authority at the time of mobilization of each piece of equipment.
  - The contractor will keep a written record (supported by equipment-hour meters where available) of equipment usage during Project construction for each piece of equipment.
  - The contractor will provide the Authority with monthly reports of equipment operating hours (through the Environmental Mitigation Management and Application system) and annual reports documenting compliance.
- **AQ-IAMF#5: Reduce Criteria Exhaust Emissions from On-Road Construction Equipment –** Prior to issuance of construction contracts, the Authority will incorporate the following material-hauling truck fleet mix requirements into the contract specifications:
  - All on-road trucks used to haul construction materials, including fill, ballast, rail ties, and steel, will consist of a fleet mix of equipment model year 2020 or newer, but no less than

the average fleet mix for the current calendar year as set forth in the CARB's EMFAC 2017 database.[3]

- The contractor will provide documentation to the Authority of efforts to secure such a fleet mix.
- The contractor will keep a written record of equipment usage during Project construction for each piece of equipment and provide the Authority with monthly reports of vehicle miles traveled (through Environmental Mitigation Management and Application) and annual reports documenting compliance.

- **AQ-IAMF#6: Reduce the Potential Impact of Concrete Batch Plants –** Prior to construction of any concrete batch plant, the contractor will provide the Authority with a technical memorandum documenting consistency with the Authority's concrete batch plant siting criteria and utilization of typical control measures. Concrete batch plants will be sited at least 1,000 feet from sensitive receptors, including places such as daycare centers, hospitals, senior care facilities, residences, parks, and other areas where people may congregate. The concrete batch plant will implement typical control measures to reduce fugitive dust such as water sprays, enclosures, hoods, curtains, shrouds, movable and telescoping chutes, central dust collection systems, and other suitable technology, to reduce emissions to be equivalent to the USEPA AP-42 (USEPA 2006) controlled emission factors for concrete batch plants. The contractor will provide to the Authority documentation that each batch plant meets this standard during operation.

AQ-MM#1: Offset Project Construction Emissions through SCAQMD Emission Offset Programs

The Project's construction emissions that cannot be reduced by IAMFs and any other mitigation measures will, to the extent feasible be offset through a SCAQMD rule or contractual agreement by funding equivalent emissions reductions that achieve reductions in the same years as construction emissions occur, thus offsetting Project-related air quality impacts in real time. The Project will implement measures and best practices to minimize emissions from Project construction. After implementation of these measures, emission levels that still exceed thresholds will be offset to the extent necessary to satisfy General Conformity *de minimis* levels, and to meet CEQA thresholds to the extent feasible. The Authority's Sustainability Policy has a goal to achieve net zero emissions from construction. As the Project advances towards construction, the Authority will work with SCAQMD to assess the estimated emissions, availability of offsets, and cost for achieving the Authority's Sustainability Policy goal to the extent possible.

As part of these offset programs, a copy of each unit's certified tier or model year specification shall be available upon request at the time of mobilization of each applicable equipment unit. Furthermore, the Authority will require periodic reporting and provision of written construction documents by construction contractor(s) to ensure compliance and conduct regular inspections to the maximum extent feasible to ensure compliance with applicable Authority IAMFs and mitigation measures.

AQ-MM#3: Construction Emissions Reduction – Requirements for use of Zero Emission (ZE) and/or Near Zero Emission (NZE) Vehicles and Off-Road Equipment

This mitigation measure would reduce the impact of construction emissions from Project-related on-road vehicles and off-road equipment. All remaining emissions after implementation of this measure will be offset, to the extent feasible, with emission credits required under AQ-MM#1 and AQ-MM#2.

[3] For the purposes of the Palmdale to Burbank EIR/EIS and this General Conformity Determination, the Authority has revised AQ-IAMF#5 to commit to a fleet mix of equipment model year 2020 or newer. This commitment is quantified in the emissions calculations for the construction-phase hauling needs (specifically spoils hauling from tunneling activities). To maintain a conservative estimate of impacts, the emissions calculations for other project construction-phase hauling needs have not taken systematically taken credit for application of this measure.

The Authority and all Project construction contractors will require that a minimum of 25 percent, with a goal of 100 percent, of all light-duty on-road vehicles (e.g., passenger cars, light-duty trucks) associated with the Project (e.g., on-site vehicles, contractor vehicles) use ZE or NZE technology.

The Authority and all Project construction contractors shall have the goal that a minimum of 25 percent of all heavy-duty on-road vehicles (e.g., for hauling, material delivery and soil import/export) associated with the Project use ZE or NZE technology.

The Authority and all Project construction contractors will have the goal that a minimum of 10 percent of off-road construction equipment use ZE or NZE technology.

If local or state regulations mandate a faster transition to using ZE and/or NZE vehicles at the time of construction, the more stringent regulations will be applied. For example, Executive Order N-79-20, issued by California Governor Newsom on September 23, 2020, currently states the following:

- Light-duty and passenger car sales will be 100 percent zero emission vehicles (ZEV) by 2035
- Full transition to ZEV short-haul/drayage trucks by 2035
- Full transition to ZEV heavy-duty long-haul trucks, where feasible, by 2045
- Full transition to ZE off-road equipment by 2035, where feasible.

The Project will have a goal of surpassing the requirements of these or other future regulations as a mitigation measure.

7 REGULATORY PROCEDURES

The General Conformity regulations establish certain procedural requirements that must be followed when preparing a General Conformity evaluation. This section addresses the major applicable procedural issues and specifies how these requirements are met for the evaluation of the Project. The procedures required for the General Conformity evaluation are similar but not identical to those for conducting an air quality impact analysis pursuant to NEPA regulations. It is anticipated, however, that the Final General Conformity Determination will be published concurrent with the Authority's Record of Decision for the Project. This Draft General Conformity Determination is being released for public and agency review pursuant to 40 C.F.R. § 93.156.

The Authority identified the appropriate emission estimation techniques and planning assumptions in close consultation with the state entities charged with regulating air pollution in the South Coast Air Basin.

7.1 Use of Latest Planning Assumptions

The General Conformity regulations require the use of the latest planning assumptions for the area encompassing the Project, derived from the estimates of population, employment, travel, and congestion most recently approved by the area's metropolitan planning organization (40 C.F.R. §93.159(a)).

The traffic data used in the air quality analysis (see EIR/EIS, Section 3.2) are consistent with the most recent estimates made by the metropolitan planning organizations for traffic volume growth rates, including forecast changes in vehicle miles traveled and vehicle hours traveled. The Authority developed these estimates based on the metropolitan planning organizations' traffic assignment models using the baseline and future population, employment, and travel and congestion information available at the time the analysis was prepared. These assumptions are consistent with those in the current conformity determinations for the region's Transportation Plan and Transportation Improvement Plan.

7.2 Use of Latest Emission Estimation Techniques

The General Conformity regulations require the use of the latest and most accurate emission estimation techniques available unless such techniques are inappropriate (40 C.F.R. § 93.159(b)). Operational phase vehicular emission factors were estimated by using the CARB emission factor program, EMission FACtors 2017 (EMFAC2017), the latest approved version of the model at the time of analysis. The USEPA established a 2-year grace period before EMFAC2021 is required for all new regional emissions analyses. The grace period for regional emissions analyses began on November 15, 2022, and ends on November 15, 2024. Parameters were set in EMFAC2017 for each individual county to reflect conditions within each county, and statewide parameters were used to reflect statewide conditions. The EMFAC2017 vehicle emission factors also incorporated adjustment factors, as per CARB guidance, to account for impacts from the National Highway Traffic Safety Administration and USEPA's Safer Affordable Fuel-Efficient Vehicles Rule. Operational phase aircraft emissions were estimated using the Federal Aviation Administration's Aviation Environmental Design Tool. In addition, electrical demands caused by propulsion of the trains, and of the trains at terminal stations and in storage depots and maintenance facilities, were estimated using average emission factors for each kilowatt-hour required from CARB statewide emission inventories of electrical and cogeneration facilities data along with USEPA eGRID2018 (released January 28, 2020) electrical generation data. The energy estimates used for the propulsion of the HSR system include the use of regenerative braking power.

Emissions from regional building demolition and construction of the HSR tunnels, Burbank Airport Station, roadway and rail bridges, and elevated, retained fill, and at-grade rail segments were calculated using emission factors from the California Emissions Estimator Model (CalEEMod), version 2016.3.2, the latest approved version of the model at the time of analysis. CalEEMod uses emission factors from OFFROAD2011 (CAPCOA 2017) For emission rates not available in OFFROAD2011, rates from OFFROAD2007 were conservatively applied. The use of emission

rates from the OFFROAD models reflects the recommendation of CARB to capture the latest off-road construction assumptions. OFFROAD2011 default load factors (the ratio of average equipment horsepower used to maximum equipment horsepower) and useful life parameters were used for emission estimates. Mobile-source emission burdens from worker vehicle trips and truck trips were calculated using vehicle miles traveled estimates and appropriate emission factors from EMFAC2017. Fugitive dust emissions from dirt and aggregate handling were calculated in CalEEMod, which uses emission factors derived from equations from the USEPA's AP-42 (USEPA 2006).

Construction exhaust emissions from equipment, fugitive dust emissions from earthmoving activities, and emissions from worker vehicle trips, deliveries, and materials hauling were calculated and compiled in a spreadsheet tool specific to the HSR Preferred Alternative for each year of construction. Project-specific data, including construction equipment lists and the construction schedule, were used for construction associated with the HSR Build Alternative. Construction exhaust emissions were modeled using Tier 4 Final emission rates (AQ-IAMF#4) from CalEEMod. Fugitive dust reductions from earthmoving best management practices were applied in CalEEMod (AQ-IAMF#1).[4] PM exhaust and greenhouse gas emission reductions (30 percent and 99.1 percent, respectively) would occur from use of renewable diesel (AQ-IAMF#3) in all off-road diesel-powered engines (not applied in CalEEMod, instead applied by manual calculations in the Tables) (Authority 2018).

Mobile-source emission burdens from worker trips and truck trips were calculated using vehicle miles traveled estimates and appropriate emission factors from EMFAC2017. Model year 2020 or newer on-road engines in heavy-duty, diesel-powered truck emissions (AQ-IAMF#5) were modeled using emission rates derived from CalEEMod.

7.3 Major Construction-Phase Activities

Project-specific data, including construction equipment lists and the construction schedule, were used for construction associated with the alignment/guideway. Calculations were performed for each year of construction.

Major activities were grouped into the following categories (described in more detail in Section 9 of this report):

- Mobilization
- Site Preparation/Access Roads
- Demolition
- Earthmoving
- Tunneling
- Roadway Segment Construction
- Grade Separation Construction
- Cut-and-Cover
- Train Station Construction
- Retaining Wall Construction
- Viaduct Construction
- Preferred Alternative Alignment Construction
- Burbank Airport Station Construction
- Demobilization

These major construction activities are used in the construction emission estimates. Construction exhaust emissions were modeled using Tier 4 Final construction equipment emission rates (AQ-IAMF#4) from CalEEMod. Fugitive dust reductions from earthmoving best management practices were applied in CalEEMod (AQ-IAMF#1). PM exhaust and greenhouse gas emission reductions (30 percent and 99.1 percent, respectively) would occur from use of renewable diesel (AQ-

[4] The IAMF requires watering on all unpaved surfaces, which would achieve additional reductions (up to 61 percent).

IAMF#3) in all off-road diesel-powered engines (not applied in CalEEMod, instead applied by manual calculations in the Tables). Mobile-source emission burdens from worker trips and truck trips were calculated using vehicle miles traveled estimates and appropriate emission factors from EMFAC2017. Model year 2020 or newer on-road engines in heavy-duty, diesel-powered truck emissions (AQ-IAMF#5) were modeled using emission rates derived from the CalEEMod. Section 10 provides details of the construction emission calculations.

7.4 Emission Scenarios

The General Conformity regulations require that the evaluation reflect certain emission scenarios (40 C.F.R. §93.159(d)). Specifically, these scenarios generally include the evaluation of the direct and indirect emissions from a Project for the following years: (1) for nonattainment areas, the attainment year specified in the SIP or, if the SIP does not specify an attainment year, the latest attainment year possible under the CAA, and for maintenance areas, the farthest year for which emissions are Projected in the approved maintenance plan; (2) the year during which the total of direct and indirect emissions for the federal action are Projected to be the greatest on an annual basis; and (3) any year for which the applicable SIP specifies an emissions budget. Both the operational and construction phases of the action must be analyzed, and the following applies to the Project.

- Emissions generated during the operational phase of the HSR would meet the emission requirements for the years associated with Items 1 and 3, because the emissions generated during the operational phase of the Project would be less than those emitted in the No Build scenario. In addition, microscale analyses conducted for the EIR/EIS demonstrate that the operational phase of the HSR would not cause or exacerbate a violation of the NAAQS for all applicable pollutants.
- Emissions generated during HSR's construction phase, which would include the year with the greatest amount of total direct and indirect emissions, may be subject to General Conformity regulations because regional emissions would increase and, as such, have the potential to cause or exacerbate an exceedance of a NAAQS. Therefore, analyses were conducted to estimate the amounts of emissions that would be generated during the construction phase (for comparison with the General Conformity applicability rates) and the potential impacts of these emissions on local air quality levels. Emissions generated at the construction sites (e.g., tailpipe emissions from the on-site heavy-duty diesel equipment and fugitive dust emissions generated by vehicles traveling within the construction sites) and on the area's roadways by vehicles traveling to and from these sites (by vehicles transporting materials and the workers traveling to and from work) were considered.
- Air quality dispersion modeling would be required for this conformity analysis to estimate the Project's localized impacts on $PM_{2.5}$ and CO concentrations if the annual emissions of the pollutants generated during construction were to exceed the General Conformity *de minimis* levels.

Annual emissions were estimated for each year of the Project's construction period. These emissions, which are the maximum values for the Project, are described in more detail in Section 10 of this report.

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8 APPLICABILITY ANALYSIS

The first step in a General Conformity evaluation is an analysis of whether the requirements apply to a proposed federal action in a nonattainment or a maintenance area. Unless exempted by the regulations or otherwise presumed to conform, a federal (non-Transportation) action requires a General Conformity Determination for each pollutant where the total of direct and indirect emissions caused by the federal action would equal or exceed an annual *de minimis* emission rate.

8.1 Attainment Status of Project Area

The USEPA and the CARB designate each county (or portions of counties) within California as attainment, maintenance, or nonattainment based on the area's ability to meet ambient air quality standards. Regions are designated as attainment for a criteria pollutant when the concentration of that pollutant is below the ambient air standard. If a criteria pollutant concentration is above the ambient air standard, the area is in nonattainment for that pollutant. Areas previously designated as nonattainment that subsequently demonstrated compliance with the ambient air quality standards are designated as maintenance areas. While the Project would occur within the South Coast Air Basin, San Joaquin Valley Air Basin, and the Mojave Desert Air Basin, the RSA for the General Conformity Report includes only the South Coast Air Basin as construction-phase emissions (without mitigation) will only exceed the *de minimis* levels for applicable criteria pollutants within the South Coast Air Basin for the HSR Preferred Alternative, the proposed Project. Table 8-1 summarizes the federal (under NAAQS) and state (under California Ambient Air Quality Standards) attainment status for the South Coast Air Basin.

Table 8-1 Federal and State Attainment Status of the South Coast Air Basin

Pollutant	Federal Classification	State Classification
O_3 1-hour	N/A	Nonattainment
O_3 8-hour (ROG and NOx)	Extreme Nonattainment	Nonattainment
$PM_{2.5}$	Serious Nonattainment	Nonattainment
PM_{10}	Attainment/Maintenance	Nonattainment
CO	Attainment/Maintenance	Attainment
NO_2	Attainment/Maintenance	Attainment/Portion Nonattainment
SO_2	Attainment/Unclassified	Attainment/Unclassified
Lead	Nonattainment	Attainment
All Others	Attainment/Unclassified	Attainment/Unclassified

Source: California Air Resources Board, 2023
CO = carbon monoxide
N/A = not available
NO_2 = nitrogen dioxide
NO_X = nitrogen oxides
ROG = Reactive Organic Compounds
O_3 = ozone
$PM_{2.5}$ = particulate matter 2.5 microns or less in diameter
PM_{10} = particulate matter 10 microns or less in diameter
SO_2 = sulfur dioxide

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9 CONSTRUCTION ACTIVITIES CONSIDERED

As shown in Section 3.3.6.3 of the EIR/EIS, the results of the regional analyses conducted for the Project demonstrate that emissions generated during the operational phase would be less than those emitted in the No Build and existing conditions scenarios, and the microscale analyses demonstrate that the Project would not cause, contribute to, or exacerbate a violation of the NAAQS for any of the applicable criteria pollutants. As such, no further analysis of the operational period emissions is necessary for this General Conformity Determination. Section 10 focuses on the emissions generated from the construction period emissions for the Project.

The analysis conducted for the *Palmdale to Burbank Project Section EIR/EIS* to estimate potential air quality impacts caused by on-site (e.g., demolition activities, construction equipment operations, and truck movements) and off-site (e.g., motor vehicle traffic effects due to truck trips and worker commuting) construction-phase activities included:

- Estimation of emissions generated by the construction activities (e.g., demolition, tunneling, concrete and steel construction), including fugitive dust emissions and emissions released from diesel-powered equipment and trucks based on the hours of operation of each piece of equipment;
- Identification of heavily traveled truck routes to estimate the cumulative effects of on-site construction activity emissions and off-site traffic emissions;
- An on-site dispersion modeling analysis of the major construction areas;
- An off-site dispersion modeling analysis of the roadway intersections/interchanges adjacent to the construction areas using traffic data that include construction-related vehicles and background traffic; and
- A comparison of the on-site and off-site modeling results to the applicable NAAQS for the applicable pollutants

Emission rates for these activities were estimated based on the following:

- The number of hours per day and duration of each construction activity;
- The number and type of construction equipment to be used;
- Horsepower, load factors, and utilization rates (hours per day) for each piece of equipment;
- The quantities of construction/demolition material produced and removed from each site; and
- The number of truck trips needed to remove construction/demolition material, and to bring the supply materials and construction-phase water needs to each site.

The following discusses of the major activities considered, the timing of these activities, and the procedures used to estimate emission rates.

A full description of construction analysis methodology for the Project can be found in Section 6.11 of the *Palmdale to Burbank Project Section: Air Quality and Global Climate Change Technical Report* (Authority 2019). In addition, the equipment counts, horsepower, hours of operation, and load factors used the analysis are included in Appendix D of the *Palmdale to Burbank Project Section: Air Quality and Global Climate Change Technical Report* (Authority 2019).

Construction activities associated with the Project would result in criteria pollutant emissions, and are quantified and analyzed in Section 3.3.6.3 of the *Palmdale to Burbank Project Section EIR/EIS*. The analysis assumed that Project construction would take place from 2020 to 2028; however, the tunneling phase of construction was anticipated to start in April 2020 and last approximately 10 years. Although the construction schedule has been updated, the analysis is still valid as the equipment quantities and annual emission rates would remain unchanged.

9.1 Mobilization

For the purposes of this air quality analysis, mobilization of construction equipment and materials using on-road deliveries were estimated to start in January 2020 and last 1 year. Emissions

generated during the mobilization phase include exhaust and fugitive dust emissions from on-road deliveries. Emissions were calculated using CalEEMod and EMFAC2017 emission factors using the Project-specific equipment list.

9.2 Site Preparation/Access Roads

Site preparation and access road activities would include land clearing and grubbing along the haul routes and other access roads. For the purposes of this analysis, such activities were estimated to start in April 2020 and last 5 years. Site preparation emissions were calculated using CalEEMod and EMFAC2017 emission factors using the Project-specific equipment list. Exhaust emissions and fugitive dust emissions were estimated for off-road construction equipment, as well as on-road worker trips, deliveries, hauling for construction-phase water needs, construction-phase hauling needs, and grading activities.

9.3 Demolition

Demolition of existing structures and track infrastructure along the HSR alignment and HSR stations was estimated to start in January 2021 and last 3 years for the purposes of this air quality analysis. Demolition emissions were calculated using CalEEMod and EMFAC2017 emission factors using the Project-specific equipment list. In addition to the fugitive dust emissions resulting from the destruction of existing buildings, fugitive dust and exhaust emissions were estimated for worker trips, construction equipment operation, and truck-hauling trips.

9.4 Earthmoving

Earthmoving activities include grading, trenching, spoils hauling, and cut/fill activities for the alignment construction. For purposes of this air quality analysis, earthmoving would take place from August 2020 and last 6 years. The emissions associated with the earthmoving activities were estimated using CalEEMod and EMFAC2017 emission factors using the Project-specific equipment list. Exhaust emissions and fugitive dust emissions were estimated for off-road construction equipment, as well as on-road worker trips, hauling for construction- phase water needs[5], construction-phase hauling needs, and grading activities.

9.5 Tunneling

Tunneling activities include excavation, cut/fill activities, and concrete installation for the below-grade tunneled portions of the HSR alignment. Tunnel boring equipment would be used to cut through the ground, progressively installing concrete linings to support the tunnel. The excavated material would be transported through the machine to the surface for removal by trucks. For the purposes of this air quality analysis, the tunneling activities would start in April 2020 and last approximately 10 years. Exhaust emissions and fugitive dust emissions were estimated for off-road construction equipment, as well as on-road worker trips, hauling for construction-phase water needs[6], construction-phase hauling needs[7], and grading activities. Emissions were calculated for tunneling activities using CalEEMod and EMFAC2017 emission factors using the Project-specific equipment list.

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[5] Construction-phase water needs include water anticipated to be needed for tunnel construction methods. Additionally, in this document, construction phase water needs include contingency mitigation needs described in footnote 7.

[6] The emissions calculation includes supplemental hauling for construction-phase water needs in the event that mitigation is needed for disruption of surface water resources in the Angeles National Forest. The EIR/EIS anticipates that it is unlikely that this mitigation will be needed.

[7] Spoils hauling trip estimates assume that most trips will be to standard waste facilities. Allowances for specialized, longer truck trips to distant hazardous waste disposal facilities are included as the project section will be tunneling through multiple listed sites including one federally-designated Superfund site. Exact quantities of hazardous soils cannot be determined at this time as some sites are classified and other sites are in active remediation. Given ongoing remediation, data indicates a progressive diminution of hazardous soils at all such sites.

9.6 Roadway Segment Construction

The Project would include the relocation and the expansion of local roads and roadway undercrossings and overcrossings, and reconstruction of several intersections to provide grade separations between roads and the HSR alignment. Roadway demolition emissions were quantified using CalEEMod and EMFAC2017 emission factors and the Project-specific equipment list. Roadway Project construction would begin in May 2020 and last 7 years. Exhaust emissions and fugitive dust emissions were estimated for off-road construction equipment, as well as on-road worker trips, construction-phase hauling needs, paving, and grading activities.

9.7 Grade Separation Construction

Grade separation construction would be required to isolate the HSR alignment from roadways and other uses. For the purposes of this air quality analysis, grade separation construction activities were estimated to begin in July 2021 and last 6 years. Emissions were quantified using CalEEMod and EMFAC2017 emission factors and the Project-specific equipment list. Exhaust emissions and fugitive dust emissions were estimated for off-road construction equipment, as well as on-road worker trips, construction-phase hauling needs, paving, and grading activities.

9.8 Cut-and-Cover

The trenching and tunneling activities include excavation, cut/fill activities, and concrete installation for the below-grade portion of the HSR alignment. Cut-and-cover equipment would be used to cut through the ground, progressively installing concrete linings to support the excavated trench. The excavated material would be transported through the machine to the surface for removal by trucks. For purposes of this air quality analysis, the sequential excavation method and cut-and-cover activities would begin in April 2021 and last 4 years. The emissions associated with the cut-and-cover activities were estimated using CalEEMod and EMFAC2017 emission factors using the Project-specific equipment list. Fugitive dust includes that from worker trips, construction equipment exhaust, and truck-hauling exhaust.

9.9 Train Station Construction

Emissions from Burbank Airport Station construction would result from mass site grading and excavation, underground and aboveground facility construction (i.e., train boarding platforms, the station building, pickup/drop-off facilities for private automobiles, and the transit center for buses and shuttles), asphalt paving activates for surface roadways and parking areas, and architectural coatings. Where applicable, emissions resulting from worker trips, vendor trips, hazardous waste disposal trips, and construction equipment exhaust were quantified using CalEEMod and EMFAC2017 emission factors using the Project-specific equipment list. For the purposes of this air quality analysis, train station construction was estimated to start in March 2023 and last 5 years.

9.10 Retaining Wall Construction

Retaining wall construction would generate emissions from the operation of off-road construction equipment, as well as on-road worker trips, deliveries, construction-phase hauling needs, and grading activities. Emissions were quantified using CalEEMod and EMFAC2017 emission factors using the Project-specific equipment list. For the purposes of this air quality analysis, retaining wall construction was estimated to begin in August 2020 and last 5 years.

9.11 Viaduct Construction

Viaduct construction would generate emissions from the operation of off-road construction equipment, as well as on-road worker trips, deliveries, construction-phase hauling needs, and grading activities. Emissions were quantified using CalEEMod and EMFAC2017 emission factors using the Project-specific equipment list. For the purposes of this air quality analysis, viaduct construction was estimated to begin in April 2020 and last 5 years.

9.12 HSR Preferred Alternative Alignment Construction

For purposes of this air quality analysis, the HSR alignment construction is expected to begin in November 2026 and last 2 years. Construction of the HSR alignment would involve laying rail along the HSR alignment, including the at-grade, elevated, retained fill, tunnel, and cut-and-cover segments in the Palmdale to Burbank Project Section. Emissions from construction of the track were calculated using CalEEMod emission factors. Emissions from the exhaust of trucks used to haul material (including concrete slabs and ballast materials) to the construction site were calculated using heavy-duty truck emission factors from EMFAC2017 and anticipated travel distances of haul trucks within the South Coast Air Basin.

9.13 Demobilization

For the purposes of this air quality analysis, demobilization of construction equipment and materials using on-road deliveries was estimated to start in April 2026 and last 3 years. Emissions generated during the demobilization phase include exhaust and fugitive dust emissions from on-road deliveries. Emissions were calculated using CalEEMod and EMFAC2017 emission factors associated with the Project-specific equipment list.

10 ESTIMATED EMISSIONS RATES AND COMPARISON TO *DE MINIMIS* LEVELS – PALMDALE-BURBANK

Total annual estimated emissions generated within the South Coast Air Basin during the Project's construction period, as presented in the *Palmdale to Burbank Project Section EIR/EIS*, are provided in Table 10-1. As shown in the table, direct emissions from the construction phase of the Project would exceed the General Conformity applicability (i.e., *de minimis*) level for NO_x and CO in certain calendar years in which construction would take place. The following shows the maximum estimated annual values of each pollutant, by nonattainment or maintenance area, and the percentage of the 2022 estimated emission rates in the South Coast Air Basin (see Table 4-2) for Palmdale to Burbank Project Section construction. Note that Table 4-2 shows tons per day, whereas the emissions estimates for the Project in Table 10-1 are shown in tons per year (tpy).

- VOC: 4.9 tpy (<0.01 percent)
- CO: 112.8 tpy (0.02 percent)
- NO_x/NO_2: 55.2 tpy (0.06 percent)
- SO_x: 0.5 tpy (0.01 percent)
- PM_{10}: 14.7 tpy (0.02 percent)
- $PM_{2.5}$: 4.0 tpy (0.02 percent)

Table 10-1 Estimated Annual Average Emissions in the South Coast Air Basin

Pollutants	Emissions (Tons/ Construction Year)[3,4,5]									Conformity Applicability Level (tons/year)[2]
	1	2	3	4	5	6	7	8	9	
VOC	1.2	3.0	4.3	4.9	2.4	1.4	0.6	0.3	<0.1	10
CO	38.5	71.6	**100.7**	**112.8**	69.6	44.0	19.3	8.5	<0.1	100
NO_x	**13.5**	**34.0**	**49.0**	**55.2**	**31.7**	**20.0**	**11.5**	3.8	0.1	10
NO_2[6]	13.5	34.0	49.0	55.2	31.7	20.0	11.5	3.8	0.1	100
SO_x	0.1	0.5	0.4	0.4	0.3	0.2	0.1	0.0	<0.1	N/A
PM_{10}[1]	4.7	14.7	12.6	13.2	7.1	4.6	2.8	0.9	<0.1	100
$PM_{2.5}$[1]	1.3	4.0	3.4	3.8	2.1	1.4	0.8	0.2	<0.1	70

Source: California High-Speed Rail Authority, 2024
Note: **Bold** values exceed the *de minimis* levels.
[1] The PM_{10} and $PM_{2.5}$ emissions consist of exhaust and fugitive dust emissions.
[2] Pursuant to NEPA, effects on air quality would be considered an impact if the HSR Build Alternative criteria pollutant emissions would be equal to or exceed the General Conformity *de minimis* levels in a nonattainment or maintenance area. General conformity would apply only to construction of the HSR Preferred Alternative, as operation of the HSR Preferred Alternative is expected to decrease regional emissions of criteria pollutants.
[3] For the purposes of the EIR/EIS and this General Conformity Determination, the Authority has revised AQ-IAMF#5 to commit to a fleet mix of equipment model year 2020 or newer. This commitment is quantified in the emissions calculations for the construction-phase hauling needs (specifically spoils hauling from tunneling activities). The emissions calculations for all project construction-phase hauling needs and all Alternatives have not been updated, as the application of this commitment would further reduce emissions.
[4] The emissions presented in this table reflect the impact of the Safer Affordable Fuel-Efficient Vehicles Rule, per the California Air Resources Board's "EMFAC Off-Model Adjustment Factors to Account for the Safer Affordable Fuel-Efficient Vehicles Rule Part One" issued on November 20, 2019 available at: EMFAC Off-Model Adjustment Factors to Account for the SAFE Vehicle Rule Part One (ca.gov) (ca.gov). This rule has since been revoked. As such, these emission estimates are conservative.
[5] The air analysis was conducted with the assumption that Project construction would take place from 2020 to 2028; however, the tunneling phase of construction was anticipated to start in April 2020 and last approximately 10 years. Although the construction schedule has been updated, the analysis is still valid as the equipment quantities and annual emission rates would remain unchanged.
[6] For the purposes of this analysis, the NO_2 emissions are assumed to be equal to the NOx emissions.

CO = carbon monoxide
HSR = high-speed rail
N/A = not applicable
NEPA = National Environmental Policy Act
NO_x = nitrogen oxides
NO_2 = nitrogen dioxide
PM_{10} = particulate matter 10 microns or less in diameter
SCAQMD = South Coast Air Quality Management District
SO_x = sulfur oxides
tons/year = tons per year
VOC = volatile organic compound
$PM_{2.5}$ = particulate matter 2.5 microns or less in diameter

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11 REGIONAL EFFECTS

As shown in Section 3.3.6.3 of the *Palmdale to Burbank Project Section EIR/EIS*, the total regional emissions for all the applicable pollutants are lower during the operations phase of the Project than under No Build conditions (and will therefore not exceed the *de minimis* emission level). As such, only emissions generated during the construction phase were compared to the conformity levels to determine conformity compliance. As shown in Table 10-1, construction-phase emissions, compared to the General Conformity applicability rates, are discussed below:

- Annual estimated VOC emissions in the South Coast Air Basin are less than the applicability rate of 10 tons per year for construction years one through nine for the HSR Preferred Alternative.
- Annual estimated CO emissions in the South Coast Air Basin are greater than the applicability rate of 100 tons per year for construction years three and four for the HSR Preferred Alternative.
- Annual estimated NO_x emissions are greater than the applicability rate of 10 tons per year in construction years one through seven for the HSR Preferred Alternative.
- Annual estimated NO_2 emissions in the South Coast Air Basin are less than the applicability rate of 100 tons per year for construction years one through nine for the HSR Preferred Alternative.
- Annual estimated PM_{10} emissions are less than the applicability rate of 100 tons per year for construction in years one through nine for the HSR Preferred Alternative.
- Annual estimated $PM_{2.5}$ emissions are less than the applicability rate of 70 tons per year for construction in years one through nine for the HSR Preferred Alternative.
- There are no applicable thresholds for SO_x annual emissions, as the region is in attainment.

As such, a General Conformity Determination is required for this Project for NO_x and CO for the years during construction where the emissions would exceed the *de minimis* levels and do not meet any of the exceptions in 40 C.F.R. § 93.154(c). This Draft Conformity Determination identifies the Authority's commitment to the purchase of additional offsets to net all NO_x emissions to levels that are below the applicable *de minimis* emissions levels for each calendar year that exceedances occur, explained in Section 14. In addition, this Draft Conformity Determination discusses the localized CO modeling included in the *Palmdale to Burbank Project Section EIR/EIS*, which demonstrates that the Project would satisfy the applicable General Conformity level for CO (also explained in Section 14).

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12 GENERAL CONFORMITY EVALUATION

For federal actions subject to a General Conformity evaluation, the regulations delineate several ways an agency can demonstrate conformity (40 C.F.R. § 93.158). This section summarizes the findings used to make the determination for the Project.

12.1 Conformity Requirements of Project

Based on the analysis shown in Table 10-1, conformity determinations are required for construction-phase emissions for NO_x and CO because annual estimated emissions are greater than the applicability rates of 10 tpy and 100 tpy for NO_x and CO, respectively, in the South Coast Air Basin.

12.2 Compliance with Conformity Requirements

CO emissions caused by the construction of the Project that would exceed the General Conformity *de minimis* levels are also considered to have the potential to cause air quality impacts. However, Section 93.158(a)(4) of the General Conformity Rule stipulates that emission offsets cannot be used to mitigate CO impacts. Instead, the SCAQMD must determine whether the construction-period CO emissions for the Project would result in a level of CO emissions which, together with all other emissions in the nonattainment (or maintenance) area, would exceed the regional emissions budget specified in the applicable SIP. Pursuant to the General Conformity Rule, the SCAQMD may determine that additional air quality modeling is required to demonstrate that the allocation of the construction-period emissions for the Project is within the regional emissions budget. As such, the Authority has confirmed with the SCAQMD that the air quality modeling conducted as part of the localized construction effects analysis for the Project will demonstrates conformity for CO if the modeling shows that there are no exceedances of the applicable NAAQS for CO.

As shown in Impact AQ#5 of the *Palmdale to Burbank Project Section EIR/EIS*, localized CO modeling and additional microscale modeling for the Project show that localized CO concentrations generated during construction at the six discrete worst-case locations would not result in exceedances of the NAAQS. Therefore, FRA concludes the Project will conform to the applicable requirements for CO in the SIP.

In addition, NO_x emissions caused by the construction of the Project that would exceed the General Conformity *de minimis* levels are considered to have the potential to cause air quality impacts. The Authority will commit to the purchase of additional offsets, by developing and executing an agreement with SCAQMD, to reduce or offset all criteria pollutant emissions to levels that are below the General Conformity *de minimis* level for each calendar year that exceedances occur. Based on this commitment, the Project will not exceed the applicable *de minimis* levels for NOx, or any exceedances will be offset by an agreement between the Authority and SCAQMD, and therefore, FRA concludes the Project will conform to the applicable requirements for ozone in the SIP.

The requirements for offsets would be implemented as part of the Project, as described in the mitigation measures from the EIR/EIS:

AQ-MM#1: Offset Project Construction Emissions through SCAQMD Emission Offset Programs

The Project's construction emissions that cannot be reduced by IAMFs and any other mitigation measures will be offset through a SCAQMD rule or contractual agreement by funding equivalent emissions reductions (to the extent that offsets are available) that achieve reductions in the same years as construction emissions occur, thus offsetting Project-related air quality impacts in real time. The Project will implement measures and best practices to minimize emissions from Project construction. After implementation of these measures, emission levels that still exceed thresholds will be offset to the extent necessary to satisfy General Conformity, and to meet CEQA thresholds to the extent feasible. The Authority's Sustainability Policy has a goal to achieve net zero emissions from construction. As the Palmdale to Burbank Project Section advances towards

construction, the Authority will work with SCAQMD to assess the estimated emissions, availability of offsets, and cost for achieving the Authority's Sustainability Policy goal to the extent possible.

As part of these offset programs, a copy of each unit's certified tier or model year specification shall be available upon request at the time of mobilization of each applicable equipment unit. Furthermore, the Authority will require periodic reporting and provision of written construction documents by construction contractor(s) to ensure compliance and conduct regular inspections to the maximum extent feasible to ensure compliance with applicable Authority IAMFs and mitigation measures.

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AQ-MM#3: Construction Emissions Reduction – Requirements for use of Zero Emission and/or Near Zero Emission Vehicles and Off-Road Equipment

This mitigation measure would reduce the impact of construction emissions from Project-related on-road vehicles and off-road equipment. All remaining emissions after implementation of this measure would be offset with emission credits required under AQ-MM#1 and AQ-MM#2.

The Authority and all Project construction contractors will require that a minimum of 25 percent, with a goal of 100 percent, of all light-duty on-road vehicles (e.g., passenger cars, light-duty trucks) associated with the Project (e.g., on-site vehicles, contractor vehicles) use ZE or NZE technology.

The Authority and all Project construction contractors will have the goal that a minimum of 25 percent of all heavy-duty on-road vehicles (e.g., for hauling, material delivery, and soil import/export) associated with the Project use ZE or NZE technology.

The Authority and all Project construction contractors will have the goal that a minimum of 10 percent of off-road construction equipment use ZE or NZE vehicles.

If local or state regulations mandate a faster transition to using ZE and/or NZE vehicles at the time of construction, the more stringent regulations will be applied. For example, Executive Order N-79-20, issued by California Governor Newsom on September 23, 2020, currently states the following:

- Light-duty and passenger car sales be 100 percent ZEV by 2035;
- Full transition to ZEV short-haul/drayage trucks by 2035;
- Full transition to ZEV heavy-duty long-haul trucks, where feasible, by 2045; and
- Full transition to ZE off-road equipment by 2035, where feasible.

The Project will have a goal of surpassing the requirements of these or other future regulations as a mitigation measure for NO_x emissions.

12.3 Consistency with Requirements and Milestones in Applicable SIP

The General Conformity regulations state that notwithstanding the other requirements of the rule, a federal action may not be determined to conform unless the total of direct and indirect emissions from the federal action is in compliance or consistent with all relevant requirements and milestones in the applicable SIP (40 C.F.R. § 93.158(c)). This includes but is not limited to such issues as reasonable further progress schedules, assumptions specified in the attainment or maintenance demonstration, prohibitions, numerical emission limits, and work practice standards. This section briefly addresses how the construction emissions for the Project were assessed for SIP consistency for this evaluation.

12.3.1 Applicable Requirements from the USEPA

USEPA has already promulgated, and will continue to promulgate, numerous requirements to support the goals of the CAA with respect to the NAAQS. Typically, these requirements take the form of rules regulating emissions from significant new sources, including emission standards for

major stationary point sources and classes of mobile sources, as well as permitting requirements for new major stationary point sources. Because states have the primary responsibility for implementation and enforcement of requirements under the CAA and can impose stricter limitations than USEPA, the USEPA requirements often serve as guidance to the states in formulating their air quality management strategies.

12.3.2 Applicable Requirements from the CARB

In California, to support the attainment and maintenance of the NAAQS, CARB is primarily responsible for regulating emissions from mobile sources. In fact, USEPA has delegated authority to CARB to establish emission standards for on-road and some non-road vehicles separate from the USEPA vehicle emission standards, although CARB is preempted by the CAA from regulating emissions from many non-road mobile sources, including marine craft. Only USEPA can set emission standards for preempted equipment.

12.3.3 Applicable Requirements from SCAQMD

To support the attainment and maintenance of the NAAQS in the South Coast Air Basin, SCAQMD is primarily responsible for regulating emissions from stationary sources. SCAQMD develops and updates its Air Quality Management Plan regularly to support the California SIP. While the Air Quality Management Plan contains rules and regulations geared to attain and maintain the NAAQS, these rules and regulations also have the much more difficult goal of attaining and maintaining the California ambient air quality standards.

12.3.4 Consistency with Applicable Requirements for the Authority

The Authority already complies with, and will continue to comply with, a number of rules and regulations implemented and enforced by federal, state, regional, and local agencies to protect and enhance ambient air quality in the South Coast Air Basin.

The Authority will continue to comply with all existing applicable air quality regulatory requirements for activities over which it has direct control and will meet in a timely manner all regulatory requirements that become applicable in the future.

These are appropriate USEPA, CARB, and SCAQMD rules that are standard practice and best management practices for construction in the SCAQMD and include control of emissions and exhaust:

- SCAQMD Rule 402, Nuisance: This rule restricts the discharge of any contaminant in quantities that cause, or have a natural ability to cause, injury, damage, nuisance, or annoyance to businesses, property, or the public. The proposed Project does not plan to discharge any contaminants in quantities that would cause injury to the public or property.
- SCAQMD Rule 403, Fugitive Dust: This rule requires the prevention, reduction, or mitigation of fugitive dust emissions from a Project site. Rule 403 restricts visible fugitive dust to a Project property line, restricts the net PM_{10} emissions to less than 50 micrograms per cubic meter, and restricts the tracking out of bulk materials onto public roads. Additionally, Rule 403 requires an applicant to use one or more of the best available control measures (identified in the tables within the rule). Mitigation measures may include adding freeboard to haul vehicles, covering loose material on haul vehicles, using dust suppressants such as watering or chemical soil stabilizers, and/or ceasing all activities.
- SCAQMD Rule 1113, Architectural Coatings: This rule limits the amount of VOCs from architectural coatings and solvents, which lowers the emissions of odorous compounds.

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13 REPORTING AND PUBLIC COMMENTS

To support a decision concerning the Project, FRA is issuing this Draft General Conformity Determination for public and agency review for a 30-day period as required by 40 C.F.R §§ 93.155 and 93.156. In developing the analysis underlying this General Conformity Determination, the Authority has consulted with SCAQMD on a variety of technical and modeling issues. The Authority has also consulted with USEPA and CARB on the overall approach to General Conformity.

The FRA will issue a notice in the Federal Register announcing the availability of the draft general conformity determination and requesting written public comments during a 30-day period. This draft conformity determination will be made available on FRA's docket at https://www.regulations.gov/, Docket FRA-2024-0045.

Any comments on the draft General Conformity Determination will be addressed in the Final General Conformity Determination.

13.1 Draft General Conformity Determination

FRA or the Authority will provide copies of this Draft General Conformity Determination to the appropriate regional offices of USEPA, CARB, and SCAQMD or advise them of the availability of the Draft during the 30-day review period. A copy of this Draft General Conformity Determination may also be made available on FRA's website for public review.

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14 FINDINGS AND CONCLUSIONS

FRA conducted a General Conformity evaluation pursuant to 40 C.F.R. Part 93 Subpart B, and based on the Authority's coordination with USEPA, SCAQMD, and CARB. The General Conformity regulations apply at this time to this Project because the Project is in an area that is currently designated as nonattainment for the federal 8-hour O_3, $PM_{2.5}$, and lead standards; unclassified for the federal NO_2 and SO_2 standards; redesignated attainment (i.e., maintenance) for the federal PM_{10} and CO standards; and attainment/unclassified for all other standards. FRA has determined that during the construction phase, the Project will result in exceedances of the *de minimis* levels for CO and NOx emissions. However, FRA concludes the Project will conform to the applicable requirements for CO in the approved SIP, based on localized CO modeling that shows in the two years that construction emissions will exceed the CO *de minimis* level, the exceedances will not cause or contribute to a violation of the NAAQS for CO within the South Coast Air Basin. In addition, the Project will conform to the applicable requirements in the SIP for NOx based on commitments between the Authority and SCAQMD to ensure that construction-phase NO_x emissions will be offset to levels that are below the General Conformity *de minimis* level. Prior to issuing a Final General Conformity Determination, the FRA anticipates that the Authority will:

- Coordinate with SCAQMD and commit to ensuring the lowest levels of construction emissions are generated through the use of IAMFs and mitigation measures, outlined in this report, and rolling review of best available technologies, with priority given first to the use of ZE technology such as electric construction equipment and then to NZE technology; and
- Execute a letter with SCAQMD that describes a commitment between the Authority and SCAQMD to develop and execute an agreement after receipt of construction funding, but prior to the start of construction that includes:
  - A review of emission estimates, coordination with appropriate agencies, revisions (if warranted) of emission estimates before construction start, and a final estimate for review and use by SCAQMD;
  - If criteria air pollutant emissions will exceed General Conformity *de minimis* levels, an offset of all remaining emissions, after implementation of the IAMFs and onsite mitigation measures. The Authority and SCAQMD will specify the applicable criteria air pollutant emission reduction program(s), which will be funded by the Authority and administered by SCAQMD. Applicable emission reduction programs may include state or federal incentive programs that achieve emissions reductions by providing incentive funds for the incremental cost of cleaner than required engines and equipment; and
  - A commitment that the Authority will not start construction until any necessary agreements are executed.

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16 PREPARER QUALIFICATIONS

Keith Lay, Managing Director Air Quality and Climate Change. Mr. Lay has a B.S. in Civil Engineering from the University of Manitoba, Canada. With over 20 years of experience, Mr. Lay serves as a senior air quality and greenhouse gas emissions specialist qualified to conduct analyses for a variety of infrastructure and transportation projects. Mr. Lay is the technical lead on air quality and climate change impact analyses documents and oversees the research and preparation of technical reports. He is skilled in air quality assessment models, including CalEEMod, Emission Factor models (EMFAC/OFFROAD), Road Construction Estimator Model (RoadMod), and Line Dispersion Models (CALINE).

Mary Kaplan, Air Quality and Health Risk Assessment Specialist. Ms. Kaplan has a B.S. in Meteorology from Saint Louis University and a M.S. in Environmental Science (Atmospheric Concentration) from the University of Massachusetts-Lowell. With over 20 years of experience at AECOM, Ms. Kaplan serves as a senior air quality and health risk assessment specialist qualified to conduct analyses for a variety of permitting, infrastructure, and transportation projects. Ms. Kaplan is the technical lead on air quality and health risk assessment impact analyses documents and oversees the research and preparation of technical reports. She is skilled in air quality assessment models, including AERMOD, CALPUFF, HEM4 and HARP2.

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