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Lake Elsinore General Plan Update

Air Quality Report

December 5, 2025

CEQA Lead Agency:

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List of Acronyms, Abbreviations, and Symbols	
Acronym / Abbreviation	Full Phrase or Description
AB	Assembly Bill
ACC	Advanced Clean Cars
APN	Assessor Parcel Number
AQ	Air Quality
AQMP	Air Quality Management Plan
AREA	Area Source
ARLN	Area Line Source
CAA	Clean Air Act
Cal-EPA	California Environmental Protection Agency
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CARB	California Air Resources Board
CAFE	Corporate Average Fuel Economy
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CO	Carbon Monoxide
CVSIP	Coachella Valley PM ₁₀ State Implementation Plan
DPM	Diesel Particulate Matter
ETC	Employee Transportation Coordinator
GHG	Greenhouse Gas(es)
GVWR	Gross Vehicle Weight Rating
H ₂ S	Hydrogen Sulfide
HAP	Hazardous Air Pollutants
HI	Hazard Index
HHDT	Heavy Heavy-Duty Truck
HR	Hour
HRA	Health Risk Assessment
KBtu	Thousand British Thermal Units
lb/day	Pounds per Day
LDA	Light Duty Auto
LDT	Light Duty Truck
LHDT	Light Heavy-Duty Truck
LST	Localized Significance Threshold

List of Acronyms, Abbreviations, and Symbols	
Acronym / Abbreviation	Full Phrase or Description
m ³	Cubic Meter
MATES V	Multiple Air Toxics Exposure Study in the South Coast Air Basin
MEIR	Maximally Exposed Individual Resident
MG	Milligrams
MHDT	Medium Heavy-Duty Truck
MPO	Metropolitan Planning Organization
NAAQS	National Ambient Air Quality Standards
NHTSA	National Highway Transportation and Safety Administration
NO	Nitric Oxide
NO _x	Oxides of Nitrogen
O ₃	Ozone
OEHHA	Office of Environmental Health Hazard Assessment
PPB	Parts Per Billion
PPM	Parts Per Million
PM	Particulate Matter
PM _{2.5}	Fine Particulate Matter
PM ₁₀	Coarse Particulate Matter
PMI	Point of Maximum Impact
PRC	Public Resources Code
ROG	Reactive Organic Gases
ROW	Right of Way
RTP	Regional Transportation Plan
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Communities Strategy
SIP	State Implementation Plan
SO ₂	Sulfur Dioxide
SO _x	Sulfates
SRA	Source Receptor Area
SSAB	Salton Sea Air Basin
TAC	Toxic Air Contaminants
TIA	Transportation Impact Analysis

List of Acronyms, Abbreviations, and Symbols	
Acronym / Abbreviation	Full Phrase or Description
TMA	Transportation Management Agency
TMO	Transportation Management Organization
U.S.	United States
U.S. EPA	United States Environmental Protection Agency
VMT	Vehicle Miles Travelled
VOC	Volatile Organic Compounds
VOL	Volume Source
µg	Micrograms
§	Section
° F	Degrees Fahrenheit

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EXECUTIVE SUMMARY

This Air Quality Report (Report) evaluates and documents the potential air quality impacts associated with implementation of the proposed Lake Elsinore General Plan Update (proposed GPU) that would guide land use and development decisions for the City of Lake Elsinore, southwestern region of Riverside County, California. If approved, the proposed GPU would support the sustainable development of both residential and non-residential land uses.

This Report is consistent with the guidance and recommendations contained in the South Coast Air Quality Management District's (SCAQMD) California Environmental Quality Act (CEQA) Air Quality Handbook, as amended and supplemented. This Report is intended to assist the CEQA Lead Agency (the City of Lake Elsinore) with its review of potential air impacts in compliance with the State CEQA Statutes and Guidelines, particularly with respect to the air quality issues identified in Appendix G of the State CEQA Guidelines.

S.1 PROPOSED PROJECT DESCRIPTION

The City of Lake Elsinore and its adjacent unincorporated area encompass 115 square miles in the southwestern portion of Riverside County, California. The City surrounds Lake Elsinore, a natural freshwater lake about 3,000 acres in size. The City is located east and west of the I-15 Freeway and north and south of the Ortega Highway (SR-74). The Planning Area encompasses all properties within the incorporated City limits, as well as unincorporated properties within the City's sphere of influence. Like many cities in the Inland Empire, large portions of Lake Elsinore are undeveloped, where approximately 20 percent of land is vacant. The remainder of the Planning area includes park/open space, residential, commercial, industrial, and agricultural/rural land uses.

The General Plan Update (GPU) serves as the guide for the City's future growth and development and allows for increased residential and non-residential development within the City and its sphere of influence.

S.2 POTENTIAL REGIONAL CONSTRUCTION AIR QUALITY IMPACTS

The construction activities that could occur under implementation of the proposed GPU would be speculative, and it is not possible at this time to accurately assess the level of emissions that would be generated by future development and redevelopment activities in the Planning Area. It is possible that either no construction could be occurring within the Planning Area at any given time, or multiple projects could be occurring simultaneously. Despite these unknowns, it is plausible that one or more projects developed under implementation of the proposed GPU could have the potential to exceed one or more of the SCAQMD's construction criteria air pollutant threshold of significance (e.g., NO_x for a project involving a substantial amount of earthwork during grading, ROG during architectural coating activities, etc.). To reduce the proposed Project's regional operations emissions levels, MIG recommends the proposed Project incorporate Mitigation Measure AIR-2A (Require a Project-level Construction Air Quality Assessment for New Discretionary Development Projects). The GPU could result in construction emissions that exceed the SCAQMD's regional construction emissions thresholds even with the implementation of feasible mitigation measures. This is considered a **significant and unavoidable impact**.

S.3 POTENTIAL REGIONAL OPERATIONAL AIR QUALITY IMPACTS

The proposed Project's operational emissions were estimated using the California Emissions Estimator Model (CalEEMod), V. 2022.1.1, and other SCAQMD-recommended methods. The modeling indicates the proposed Project would have the potential to generate daily operational emissions that could exceed the SCAQMD's recommended regional emissions thresholds for VOCs, NO_x, carbon monoxide (CO), respirable particulate matter (PM₁₀), and fine particulate matter (PM_{2.5}). This is considered a potentially significant impact. To reduce the proposed Project's regional operations emissions levels, MIG recommends the proposed Project incorporate Mitigation Measure AIR-2B (Require a Project-level Operational Air Quality Assessment for New Discretionary Development Projects). The implementation of these measures would reduce emissions of VOCs, CO, NO_x, PM₁₀, and PM_{2.5}. However, even with the implementation of feasible mitigation measures, potential impacts would remain **significant and unavoidable**.

S.4 POTENTIAL HEALTH RISK IMPACTS

Future development activities under the GPU would generate emissions, including emissions of DPM (a TAC), during construction activities that have the potential to exceed SCAQMD thresholds of significance for cancerogenic and non-cancerogenic health risks. This represents a potentially significant impact. To reduce the GPU's construction emissions, MIG recommends the incorporation of Mitigation Measure AIR-2A (Require a Project-level Construction Air Quality Assessment for New Discretionary Development Projects). Despite the implementation of Mitigation Measure AQ-2A, which requires the preparation of project-specific air quality analysis prior to the construction of any new development and incorporation of mitigation if emissions levels are shown to be above SCAQMD-recommended thresholds of significance for cancerogenic and non-cancerogenic risks, as well as SCAQMD LSTs, it cannot be definitively known or stated that all future development projects occurring under implementation of the proposed GPU would be able to reduce potential risks and localized construction air pollutant emissions to levels that are below SCAQMD thresholds. Therefore, with regard to localized criteria air pollutant and TAC emissions generated during future construction activities, this impact would be **significant and unavoidable**. Operational emissions would not expose receptors to substantial operational pollutant concentrations, and operational health risk impacts would be **less than significant**.

S.5 ODORS

The GPU would allow for an increased amount of residential and non-residential development in the Planning Area. Construction occurring within the Planning Area could produce odors from fuel combustion or solvents/paints used. These odors would be temporary, quickly disperse, and would not affect a substantial number of people. The GPU does not in and of itself permit or authorize any new, major sources of potential odors (e.g., wastewater treatment plant), and odor impacts would be less than significant with standard environmental review practices. **This impact would be less than significant.**

S.6 RECOMMENDED MITIGATION MEASURES

The following mitigation measures are recommended to reduce the proposed Project's criteria air pollutant and TAC emissions.

Mitigation Measure AIR-2A: Require a Project-level Construction Air Quality Assessment for New Discretionary Development Projects. Prior to a discretionary approval by the City for development projects subject to CEQA (meaning, non-exempt CEQA projects), project applicants

shall prepare and submit a technical assessment evaluating potential project-specific construction-related air quality impacts to the City for review and approval. The evaluation shall be prepared in conformance with South Coast Air Quality Management District (SCAQMD) methodology for assessing air quality impacts. If construction-related criteria air pollutants are determined to have the potential to exceed the SCAQMD's adopted thresholds of significance, the City shall require that applicants for new development projects incorporate strategies to reduce air pollutant emissions during construction activities. The specific strategies identified for a project shall be included as conditions of project approval, and be incorporated into all appropriate construction bid, engineering, and planning documents prepared for the project. Potential strategies to reduce construction-related emissions include, but are not limited to:

- Using heavy-duty off-road construction equipment that meets U.S. EPA Tier IV Final emissions standards (for equipment greater than 50 horsepower), either through original manufacturer's certification or through the use of California Air Resources Board verified diesel emissions control strategies (e.g., a diesel particulate filter).
- Using electric equipment, particularly for equipment less than 50 horsepower
- Using alternative fuels such as renewable diesel, biodiesel (no more than B20 blend), or liquefied or compressed natural gas biodiesel,
- Using smaller equipment that can complete the same construction activities in the same time as standard-sized equipment.
- Limiting idling time of diesel-powered construction equipment to two (2) minutes.
- Ensuring equipment brought to a site has been properly serviced and maintained in accordance with manufacturer's standards.
- Implementing applicable SCAQMD fugitive dust control measures.
- Using interior and exterior coatings that meet SCAQMD Rule "Low-VOC" or "Super-Compliant" definitions.

Mitigation Measure AIR-2B: Require a Project-level Operational Air Quality Assessment for New Discretionary Development Projects.

Prior to a discretionary approval by the City for development projects subject to CEQA (meaning non-exempt CEQA projects) project applicants shall prepare and submit a technical assessment evaluating potential project-specific operation air quality impacts to the City for review and approval. The evaluation shall be prepared in conformance with South Coast Air Quality Management District (SCAQMD) methodology in assessing air quality impacts. If operation-related air pollutants are determined to have the potential to exceed the SCAQMD's adopted thresholds of significance, the City shall require that applicants for new development projects incorporate strategies to reduce air pollutant emissions during operational activities. The specific strategies identified for a project shall be included as conditions of project approval, and be incorporated into all appropriate planning documents for the project. Potential strategies to reduce operational emissions include, but are not limited to the following:

- Reducing vehicle trips or vehicle miles travelled (VMT) generated by residential and non-residential projects.
 - Reducing or eliminating new natural gas fireplaces and hearths in residential projects.
 - Reducing or eliminating new natural gas appliances in residential and non-residential projects.
-

- Reducing or prohibiting gasoline-powered landscaping equipment in residential and non-residential projects.
- Incorporating clean of air vehicle parking, bicycle parking, and electric vehicle and truck charging infrastructure that meets the additional, voluntary standards established in the version of the CALGreen code in effect at the time the building permit application is submitted for a project.
- Incorporating appropriate transit-supporting infrastructure into site plans.

1 INTRODUCTION

The City of Lake Elsinore (City) proposes to adopt and implement the General Plan Update (GPU). The GPU would guide land use and development decisions for the Planning Area, which encompasses all properties within the incorporated City limits, as well as unincorporated properties within the City's sphere of influence. If approved, the GPU would support the sustainable development of both residential and non-residential land uses.

MIG, Inc. (MIG) has prepared this Air Quality Report (Report) to evaluate the potential amount of emissions of regulated air pollutants that could be generated by construction and operation of projects pursuant to the proposed GPU. MIG has prepared this Report using project-specific information contained in the GPU, as well as supplemental materials prepared in support of the GPU (e.g., land use buildout, transportation study, etc.).

This Report is intended for use by the City to assess the potential air quality impacts of the proposed GPU in compliance with the California Environmental Quality Act (CEQA; Public Resources Code [PRC] Section 21000 et seq.) and the State CEQA Guidelines (Title 14 of the California Code of Regulations [CCR] Section 15000 et seq.), particularly in respect to the air quality issues identified in Appendix G of the State CEQA Guidelines.

1.1 REPORT ORGANIZATION

This Report is organized as follows:

- **Chapter 1, Introduction**, explains the contents of this Report and its intended use.
- **Chapter 2, Proposed Project Description**, provides an overview of the construction and operational activities associated with the proposed GPU.
- **Chapter 3, Environmental and Regulatory Setting**, describes the existing air quality setting of the proposed GPU and provides information on the federal, state, and local regulations that govern the Planning Area's air quality setting and its potential air quality impacts.
- **Chapter 4, Air Quality Impact Analysis**, identifies the methods used to estimate the proposed GPU's potential construction and operational air quality emissions, and evaluates the GPU's air quality impacts in accordance with Appendix G of the State CEQA Guidelines.
- **Chapter 5, Report Preparers and References**, list the individuals involved, and the references used, in the preparation of this Report.

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2 PROPOSED PROJECT DESCRIPTION

The comprehensive update of the Lake Elsinore General Plan serves as the guide for the City's future growth and development. The proposed GPU succeeds the last comprehensive general plan adopted in 2011 and coordinates future development and policies with regional planning efforts and serves as the city's fundamental guide in developing strategies to address greenhouse gas reduction, climate change, and climate planning. The proposed GPU's characteristics that are relevant to the evaluation of potential air quality impacts are described in detail below.

2.1 PROJECT LOCATION

The City is located east and west of the I-15 Freeway and north and south of the Ortega Highway (SR-74). Located in southwest Riverside County, approximately 24 miles south of downtown Riverside, the City is bordered by the City of Wildomar to the south and east, the City of Menifee to the East, the City of Canyon Lake to the east and north, and unincorporated portions of Riverside County to the north, west and south.

2.2 EXISTING PLANNING AREA DESCRIPTION AND OPERATIONS

The Planning Area includes a mix of undeveloped/vacant land, park and open space, residential (mostly single-family residential), commercial, industrial, and agricultural/rural land uses.

2.3 PROPOSED PROJECT CHARACTERISTICS

The proposed GPU may result in changes to land use and increases in housing, population, and employment as outlined in Table 2-1, which shows the GPU's 2045 growth projections.

Table 2-1 General Plan Update 2045 Growth Projection

Area	Residential		Non-Residential	
	Units	Population	Square Feet	Jobs
City of Lake Elsinore (City)	40,623	132,382	21,219,257	32,741
Sphere of Influence (SOI)	5,987	19,509	5,166,522	8,054
Planning Area (City + SOI)	46,610	151,891	26,385,778	40,795

2.3.1 LAND USE PLAN

The changes in land uses anticipated under the GPU are shown in Table 2-2.

Table 2-2 Proposed GPU Land Uses

Development Indicators	Existing (2025)			Future (2045)			Difference (2025-2045)			
	City	SOI	Total	City	SOI	Total	City	SOI	Total	%
Dwelling Units	18,946 ^(A)	N/A	18,946	40,623	5,987	46,610	21,677	5,987	27,664	+146
Population	70,435 ^(B)	N/A	70,435	132,382	19,509	151,891	61,947	19,509	81,456	+116
Non-Residential Building (SF) ^(C)	9.5M	0.8M	10.3M	21.2M	5.2M	26.4M	11.7M	4.4M	16.1M	+156
Employees	33,800	N/A	33,800	32,741	8,054	40,795	-1,059	8,054	6,995	+21
Notes: M = million, N/A = Not Applicable, SF = square feet, SOI = sphere of influence (A) City of Lake Elsinore Housing Element 2024-2029 (B) Zoom Prospector.com/communities/ca/city/Lake-Elsinore, 7.24.25 (C) MIG Urban Footprint 2025. Non-Residential Building Square Feet rounded to nearest 100,000.										

3 ENVIRONMENTAL AND REGULATORY SETTING

This chapter provides information on the environmental and regulatory air quality setting of the proposed Project. Information on existing air quality conditions, federal and state ambient air quality standards, and pollutants of concern was obtained from the U.S. Environmental Protection Agency (U.S. EPA), California Air Resources Board (CARB), and South Coast Air Quality Management District (SCAQMD).

3.1 REGIONAL ENVIRONMENTAL SETTING

Air quality is a function of pollutant emissions and topographic and meteorological influences. The amount of pollutants emitted into the air and the physical features and atmospheric conditions of a geographic region interact to affect the movement and dispersion of pollutants and determine the quality of its air.

The U.S. EPA and CARB are the federal and state agencies charged with maintaining air quality in the nation and state, respectively. The U.S. EPA delegates much of its authority over air quality to CARB. CARB has geographically divided the state into 15 air basins for the purposes of managing air quality on a regional basis. An air basin is a CARB-designated management unit with similar meteorological and geographic conditions. The proposed Project is located in the County of Riverside, within the South Coast Air Basin (SCAB). The SCAB includes Orange County, and portions of Los Angeles County, San Bernardino County, and Riverside County.

3.1.1 REGULATED AIR POLLUTANTS

The U.S. EPA has established National Ambient Air Quality Standards (NAAQS) for six common air pollutants: ozone (O₃), particulate matter (PM), which consists of “inhalable coarse” PM (particles with an aerodynamic diameter between 2.5 and 10 microns in diameter, or PM₁₀) and “fine” PM (particles with an aerodynamic diameter smaller than 2.5 microns, or PM_{2.5}), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), and lead. The U.S. EPA refers to these six common pollutants as “criteria” pollutants because the agency regulates the pollutants on the basis of human health and/or environmentally-based criteria. CARB has established California Ambient Air Quality Standards (CAAQS) for the six common air pollutants regulated by the federal Clean Air Act (the CAAQS are more stringent than the NAAQS) plus the following additional air pollutants: hydrogen sulfide (H₂S), sulfates (SO_x), vinyl chloride, and visibility reducing particles. A description of the regulated air pollutants associated with the proposed GPU is provided below.

- **Ground-level ozone**, or smog, is not emitted directly into the atmosphere. It is created from chemical reactions between oxides of nitrogen (NO_x) and volatile organic compounds (VOCs), also called reactive organic gases (ROG), in the presence of sunlight (U.S. EPA, 2022a). Thus, ozone formation is typically highest on hot sunny days in urban areas with NO_x and ROG pollution. Ozone irritates the nose, throat, and air pathways and can cause or aggravate shortness of breath, coughing, asthma attacks, and lung diseases such as emphysema and bronchitis.
 - **ROG** is a term defined by CARB as any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, and includes several low-reactive organic compounds which have been exempted by the U.S. EPA (CARB, 2004).

- **VOC** is a term defined by the U.S. EPA as any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions. VOCs do not include organic compounds of carbon which have been determined to have negligible photochemical reactivity such as methane, ethane, and methylene chloride (CARB, 2004).
- **Particulate matter (PM)**, also known as particle pollution, is a mixture of extremely small solid and liquid particles made up of a variety of components such as organic chemicals, metals, and soil and dust particles (U.S. EPA, 2022b).
 - PM₁₀, also known as inhalable coarse, respirable, or suspended PM₁₀, consists of particles less than or equal to 10 micrometers in diameter (approximately 1/7th the thickness of a human hair). These particles can be inhaled deep into the lungs and possibly enter the blood stream, causing health effects that include, but are not limited to, increased respiratory symptoms (e.g., irritation, coughing), decreased lung capacity, aggravated asthma, irregular heartbeats, heart attacks, and premature death in people with heart or lung disease (U.S. EPA, 2022b).
 - PM_{2.5}, also known as fine PM, consists of particles less than or equal to 2.5 micrometers in diameter (approximately 1/30th the thickness of a human hair). These particles pose an increased risk because they can penetrate the deepest parts of the lung, leading to and exacerbating heart and lung health effects (U.S. EPA, 2022b).
- **Carbon Monoxide (CO)** is an odorless, colorless gas that is formed by the incomplete combustion of fuels. Motor vehicles are the single largest source of carbon monoxide in the SSAB. At high concentrations, CO reduces the oxygen-carrying capacity of the blood and can aggravate cardiovascular disease and cause headaches, dizziness, unconsciousness, and even death (U.S. EPA, 2022c).
- **Nitrogen Dioxide (NO₂)** is a by-product of combustion. NO₂ is not directly emitted but is formed through a reaction between nitric oxide (NO) and atmospheric oxygen. NO and NO₂ are collectively referred to as NO_x and are major contributors to ozone formation. NO₂ also contributes to the formation of particulate matter. NO₂ can cause breathing difficulties at high concentrations (U.S. EPA, 2016d).
- **Sulfur Dioxide (SO₂)** is one of a group of highly reactive gases known as oxides of sulfur (SO_x). Fossil fuel combustion in power plants and industrial facilities are the largest emitters of SO₂. Short-term effects of SO₂ exposure can include adverse respiratory effects such as asthma symptoms. SO₂ and other SO_x can react to form PM (U.S. EPA, 2016e).
- **Sulfates (SO₄²⁻)** are the fully oxidized ionic form of sulfur. SO₄²⁻ are primarily produced from fuel combustion. Sulfur compounds in the fuel are oxidized to SO₂ during the combustion process and subsequently converted to sulfate compounds in the atmosphere. Sulfate exposure can increase risks of respiratory disease (CARB, 2022).

In addition to criteria air pollutants, the U.S. EPA and CARB have classified certain pollutants as hazardous air pollutants (HAPs) or toxic air contaminants (TACs), respectively. These pollutants can cause severe health effects at very low concentrations, and many are suspected or confirmed carcinogens. The U.S. EPA has identified 187 HAPs, including such substances as arsenic and chlorine; CARB considers all U.S. EPA designated HAPs, as well as particulate emissions from diesel-fueled engines (DPM) and other substances, to be a TAC. Since CARB's list of TACs references and includes U.S. EPA's list of HAPs, this

document uses the term TAC when referring to HAPs and TACs. A description of the TACs associated with the proposed GPU and its vicinity is provided below.

- **Gasoline-Powered Mobile Sources.** According to the SCAQMD's *Multiple Air Toxics Exposure Study in the South Coast Air Basin* (SCAQMD, 2021a), or MATES V, gasoline-powered vehicles emit TACs, such as benzene, which can have adverse health risks. Gasoline-powered sources emit TACs in much smaller amounts than diesel-powered vehicles.
- **Diesel Particulate Matter (DPM).** Diesel engines emit both gaseous and solid material; the solid material is known as DPM. Almost all DPM is less than 1 micrometer (μm) in diameter, and thus is a subset of $\text{PM}_{2.5}$. DPM is typically composed of carbon particles and numerous organic compounds. Diesel exhaust also contains gaseous pollutants, including VOCs and NO_x . The primary sources of diesel emissions are ships, trains, trucks, rail yards and heavily traveled roadways. These sources are often located near highly populated areas, resulting in greater DPM related health consequences in urban areas. The majority of DPM is small enough to be inhaled into the lungs and what particles are not exhaled can be deposited on the lung surface and in the deepest regions of the lungs where the lung is most susceptible to injury. In 1998, CARB identified DPM as a toxic air contaminant based on evidence of a relationship between diesel exhaust exposure and lung cancer and other adverse health effects. DPM also contributes to the same non-cancer health effects as $\text{PM}_{2.5}$ exposure (CARB 2016).

Common criteria air pollutants, such as ozone precursors, SO_2 , and PM, are emitted by a large number of sources and have effects on a regional basis (i.e., throughout the SSAB); other pollutants, such as HAPs, TACs, and fugitive dust, are generally not as prevalent and/or emitted by fewer and more specific sources. As such, these pollutants have much greater effects on local air quality conditions and local receptors.

3.1.2 REGIONAL AIR POLLUTANT EMISSIONS LEVELS

CARB's estimate of the amount of emissions generated within the SCAB in 2017, the most recent year for which data is available, is summarized in Table 3-1.

3.1.3 SOUTH COAST AIR BASIN CLIMATE, TOPOGRAPHY, AND METEOROLOGY

The climate of the Los Angeles region is classified as Mediterranean, but weather conditions within the Basin are also dependent on local topography and proximity to the Pacific Ocean. The climate is dominated by the Pacific high-pressure system that results in generally mild, dry summers and mild, wet winters. This temperate climate is occasionally interrupted by extremely hot temperatures during the summer, hot dry westerly "Santa Ana" winds during the fall, and storms from the Pacific northwest during the winter. In addition to the Basin's topography and geographic location, El Niño and La Niña patterns in the central Pacific Ocean can also have large effects on weather and rainfall received in the Basin between November and March.

The Pacific high-pressure system drives the prevailing winds in the Basin. The winds tend to blow onshore in the daytime and offshore at night. In the summer, an inversion layer is often created over the coastal areas and increases ozone levels. A temperature inversion is created when a layer of cool air is overlain by a layer of warmer air; this can occur over coastal areas when cool, dense air that originates over the ocean is blown onto land and flows underneath the warmer, drier air that is present over land. In the winter, areas throughout the basin often experience a shallow inversion layer that prevents the

dispersion of surface level air pollutants, resulting in higher concentrations of criteria air pollutants such as carbon monoxide (CO) and oxides of nitrogen (NO_x). In the fall months, the Basin's weather is often impacted by Santa Ana winds. These winds are the result of a high-pressure system over the Nevada-Utah region that overcomes a westerly wind pattern and forces hot, dry winds from the east to the Pacific Ocean. These winds can be powerful and persistent during these times.

Table 3-1: South Coast Air Basin Emissions Summary

Emissions Source	2017 Pollutant Emissions (Tons Per Day)						
	ROG	NO _x	PM _{2.5}	PM ₁₀	PM	CO	SO _x
Stationary ^(A)	87	42	13	18	26	85	8
Area-wide ^(B)	130	20	32	117	221	53	0
Mobile ^(C)	185	298	17	30	31	1650	5
Total ^(D)	529	367	72	179	292	1893.1	15
Emissions Source	2017 Pollutant Emissions (Tons Per Year)						
	ROG	NO _x	PM _{2.5}	PM ₁₀	PM	CO	SO _x
Stationary ^(A)	31,675	15,217	4,595	6,526	9,432	30,901	2,982
Area-wide ^(B)	47,395	7,420	11,519	42,661	80,815	19,436	128
Mobile ^(C)	67,598	108,901	6,074	11,081	11,344	602,261	1,796
Total ^(D)	193,300	690,989	26,246	65,196	106,722	690,989	5,636
Source: CARB, 2022b, modified by MIG.							
(A) Stationary sources include fuel combustion in stationary equipment, waste disposal, cleaning and surface coatings, petroleum production and marketing, or a specific type of facility such as printing and metals processing facilities.							
(B) Mobile sources include automobiles, trucks, and other vehicles intended for "on-road" travel and other self-propelled machines such as aircraft, ocean going vessels, construction equipment, and all-terrain vehicles intended for "off-road" travel.							
(C) Area-wide sources include solvent evaporation (e.g., consumer products, painting, and asphalt paving) and miscellaneous processes such as residential space heating, fugitive windblown dust, and cooking.							
(D) Totals may not equal due to rounding.							

The City of Lake Elsinore's average temperatures range from a high of 98 degrees Fahrenheit in July and August to a low of 36 degrees Fahrenheit in January. Annual precipitation is approximately 12 inches, falling mostly from December through March (WRCC, 2022).

The SCAQMD monitors air quality within the Basin. Existing levels of ambient air quality and historical trends within the Planning Area are best documented by measurements taken by the SCAQMD. The Planning Area is located in SCAQMD Source Receptor Area (SRA) 25 (Elsinore Valley). Air quality monitoring stations usually measure pollutant concentrations at varying heights above ground level depending on the monitoring site and the pollutants being monitored. Therefore, air quality is often referred to in terms of ground-level concentrations. The closest air quality monitoring station is the Lake Elsinore Monitoring Station, located at 506 West Flint Street Lake Elsinore, CA 92530. Air quality data for O₃, NO₂, CO, SO₂, PM₁₀, and PM_{2.5} from the Lake Elsinore monitoring station for SRA 25 are provided in Table 3-2 (Local Air Quality Conditions (2021-2023)).

Table 3-2: Local Air Quality Conditions 2021-2023

Pollutant	Ambient Air Standard	Year ^(A)		
		2021	2022	2023
Ozone (O ₃)				
Maximum 1-hour Concentration (ppm)		0.118	0.121	0.12
Maximum 8-hr Concentration (ppm)		0.097	0.091	0.103
Number of Days Exceeding State 1-hr Standard	>180 µg/m ³	18	17	10
Number of Days Exceeding State 8-hr Standard	>137 µg/m ³	46	37	35
Days Exceeding Federal 1-hr Standard	>0.124 ppm	0	0	0
Days Exceeding Federal 8-hr Standard	>0.070 ppm	44	37	31
Carbon Monoxide (CO)				
Maximum 1-hr Concentration (ppm)		0.9	0.9	1.3
Maximum 8-hr Concentration (ppm)		0.8	0.6	0.7
Days Exceeding State 1-hr Standard	>23,000 µg/m ³	--	--	--
Days Exceeding Federal/State 8-hr Standard	>10,000 µg/m ³	--	--	--
Days Exceeding Federal 1-hr Standard	>40,000 µg/m ³	--	--	--
Nitrogen Dioxide (NO ₂)				
Maximum 1-hr Concentration (ppb)		43.7	37.2	41.7
Annual Arithmetic Mean Concentration (ppb)		7	7.1	6.7
Days Exceeding State 1-hr Standard	>180 µg/m ³	--	--	--
Coarse Particulate Matter (PM ₁₀)				
Maximum 24-hr Concentration (µg/m ³)		89	91	186
Annual Arithmetic Mean (µg/m ³)		21.4	19.8	20.8
Samples Exceeding State 24-hr Standard	>50 µg/m ³	9(3%)	5(2%)	7(2%)
Samples Exceeding Federal 24-hr Standard	>150 µg/m ³	0	0	0
Fine Particulates Matter (PM _{2.5}) ^(B)				
Maximum 24-hr Concentration (µg/m ³)		--	--	--
Annual Arithmetic Mean (µg/m ³)		--	--	--
Samples Exceeding Federal 24-hr Standard	>35 µg/m ³	--	--	--
Source: SCAQMD 2024				
(A) "--" indicates data are no available.				
(B) There is no PM _{2.5} data in SRA 25 nor any other SRA in the vicinity of the Planning Area.				

3.1.4 REGIONAL AIR QUALITY CONDITIONS AND ATTAINMENT STATUS

As described in Section 3.1.1 and shown in Table 3-3, the federal and state governments have established emission standards and limits for air pollutants which may reasonably be anticipated to endanger public health or welfare. These standards typically take one of two forms: standards or requirements that are applicable to specific types of facilities or equipment (e.g., petroleum refining, metal smelting), or concentration-based standards that are applicable to overall ambient air quality. Air quality conditions are best described and understood in the context of these standards; areas that meet, or attain, concentration-based ambient air quality standards are considered to have levels of pollutants in the ambient air that, based on the latest scientific knowledge, do not endanger public health or welfare.

The U.S. EPA, CARB, and the SCAQMD assess the air quality of an area by measuring and monitoring the amount of pollutants in the ambient air and comparing pollutant levels against NAAQS and CAAQS. Based on these comparisons, regions are classified into one of the following categories:

- **Attainment.** A region is “in attainment” if monitoring shows ambient concentrations of a specific pollutant are less than or equal to NAAQS or CAAQS. In addition, an area that has been re-designated from nonattainment to attainment is classified as a “maintenance area” for 10 years to ensure that the air quality improvements are sustained.
- **Nonattainment.** If the NAAQS or CAAQS are exceeded for a pollutant, the region is designated as nonattainment for that pollutant. It is important to note that some NAAQS and CAAQS require multiple exceedances of the standard in order for a region to be classified as nonattainment. Federal and state laws require nonattainment areas to develop strategies, plans, and control measures to reduce pollutant concentrations to levels that meet, or attain, standards.
- **Unclassified.** An area is unclassified if the ambient air monitoring data are incomplete and do not support a designation of attainment or nonattainment.

Table 3-3 lists the NAAQS and CAAQS and summarizes the Basin’s attainment status. The Basin is currently in nonattainment for state and federal ozone, state PM₁₀, and state and federal PM_{2.5} standards.

Pollution problems in the Basin are caused by emissions within the area and the specific meteorology that promotes pollutant concentrations. Emissions sources vary widely from smaller sources such as individual residential water heaters and short-term grading activities to extensive operational sources including long-term operation of electrical power plants and other intense industrial use. Pollutants in the Basin are blown inward from coastal areas by sea breezes from the Pacific Ocean and are prevented from horizontally dispersing due to the surrounding mountains. This is further complicated by atmospheric temperature inversions that create inversion layers. The inversion layer in Southern California refers to the warm layer of air that lies over the cooler air from the Pacific Ocean. This is strongest in the summer and prevents ozone and other pollutants from dispersing upward. A ground-level surface inversion commonly occurs during winter nights and traps carbon monoxide emitted during the morning rush hour.

3.2 LOCAL ENVIRONMENTAL SETTING

Interstate 15 (I-15) and Highway 74 intersect the Planning Area through the northern and southern borders. Vehicles traveling along these transportation corridors contribute to pollutant concentrations in the Planning Area. Truck trips from industrial land uses within the Planning Area also contribute to pollutant concentrations within and in proximity of the Planning Area. Lake Elsinore Motorsports Park would contribute to pollutant concentrations in the area associated with recreational vehicle activity within the

park. The City allows two stroke engine watercraft to operate on the lake which contributes to pollutant concentrations within the Planning Area. In addition, emissions from stationary sources (e.g., those found at industrial facilities) and area sources (e.g., painting activities, gas stations, construction sites, etc.) contribute to pollutant concentrations throughout the Planning Area.

Table 3-3: Summary of Ambient Air Quality Standards and Basin Attainment Status

Pollutant	Averaging Time ^(B)	California Standards ^(A)		National Standards ^(A)	
		Standard ^(C)	Attainment Status	Standard ^(C)	Attainment Status
Ozone	1-Hour (1979)	--	--	240 µg/m ³	Nonattainment
	1-Hour (Current)	180 µg/m ³	Nonattainment	--	--
	8-Hour (1997)	--	--	160 µg/m ³	Nonattainment
	8-Hour (2008)	--	--	147 µg/m ³	Nonattainment
	8-Hour (Current)	137 µg/m ³	Nonattainment	137 µg/m ³	Pending
PM ₁₀	24-Hour	50 µg/m ³	Nonattainment	150 µg/m ³	Attainment
	Annual Average	20 µg/m ³	Nonattainment	--	--
PM _{2.5}	24-Hour	--	--	35 µg/m ³	Nonattainment
	Annual Average (1997)	--	--	15 µg/m ³	Nonattainment
	Annual Average (Current)	12 µg/m ³	Nonattainment	9 µg/m ³ ^(D)	Nonattainment
Carbon Monoxide	1-Hour	23,000 µg/m ³	Attainment	40,000 µg/m ³	Attainment
	8-Hour	10,000 µg/m ³	Attainment	10,000 µg/m ³	Attainment
Nitrogen Dioxide	1-Hour	339 µg/m ³	Attainment	188 µg/m ³	Unclassifiable/Attainment
	Annual Average	57 µg/m ³	Attainment	100 µg/m ³	Attainment
Sulfur Dioxide	1-Hour	655 µg/m ³	Attainment	196 µg/m ³	Attainment
	24-Hour	105 µg/m ³	Attainment	367 µg/m ³	Unclassifiable/Attainment
	Annual Average	--	--	79 µg/m ³	Unclassifiable/Attainment
Lead	3-Months Rolling	--	--	0.15 µg/m ³	Nonattainment (Partial)
Hydrogen Sulfide	1-Hour	42 µg/m ³	Attainment	--	
Sulfates	24-Hour	25 µg/m ³	Attainment	--	
Vinyl Chloride	24-Hour	26 µg/m ³	Attainment	--	

Source: SCAQMD 2018, CARB 2025

(A) This table summarizes the CAAQS and NAAQS and the SSAB's attainments status. This table does not prevent comprehensive information regarding the CAAQS and NAAQS. Each CAAQS and NAAQS has its own averaging time, standard unit of measurement, measurement method, and statistical test for determining if a specific standard has been exceeded. Standards are not presented for visibility reducing particles, which are not concentration-based. The Basin is unclassified for visibility reducing particles.

(B) Ambient air standards have changed over time. This table presents information on the standards previously used by the U.S. EPA for which the SSAB does not meet attainment.

(C) All standards are shown in terms of micrograms per cubic meter (µg/m³) rounded to the nearest whole number for comparison purposes (with the exception of lead, which has a standard less than 1 µg/m³). The actual CAAQS and NAAQS standards specify units for each pollutant measurement.

(D) On February 7, 2024, the U.S. EPA lowered the primary annual average health-based standard for PM_{2.5} from 12 µg/m³ to 9 µg/m³. The U.S. EPA generally makes initial attainment/nonattainment designations within 2 years of the issuance of a new standard.

3.2.1 SENSITIVE AIR QUALITY RECEPTORS

Some people are more affected by air pollution than others. Sensitive air quality receptors include specific subsets of the general population that are susceptible to poor air quality and the potential adverse health effects associated with poor air quality. Both CARB and the SCAQMD consider residences, schools, parks and playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes to be sensitive air quality land uses and receptors (SCAQMD, 2017a; CARB, 2005). The potentially serious detrimental effects caused by even the most common pollutants are of widespread concern. O₃, PM, CO and other pollutants pose a very real threat to health and property in the Basin. In general, the sensitive air quality receptors within the Planning Area include, but are not limited to:

- Existing low- and medium-density residential receptors within the Planning Area;
- Existing elementary and intermediate schools, and education or institutional facilities; and
- Existing parks and recreational facilities, including, but not limited to, Lakepoint Park, Elm Grove Beach, and Alberhill Ranch Community Park.

In addition to existing sensitive receptors in and near the Planning Area, the implementation of the General Plan would result in new, sensitive residential receptors within the Planning Area.

3.2.2 EXISTING HEALTH RISKS AND DISADVANTAGED COMMUNITIES

Sensitive air quality receptors are usually most affected by local sources of air pollution. The I-15 freeway passes through the northwestern and southeastern portions of the Planning Area, and Highway 74 passes through the northeastern and southwestern portions of the Planning Area. These transportation corridors carry trucks that emit DPM causing localized areas of DPM concentrations. There are also two stationary sources located throughout the City. Under the State's Air Toxics Hot Spots Information and Assessment Act (AB 2588; see Section 4.3.2) the SCAQMD is required to prepare an annual report of activities related to facilities that emit TACs. According to the SCAQMD's December 2025 Annual Report on AB 2588 Air Toxics Hot Spots Program, there was one facility within the Planning Area that was required to report its emissions to the SCAQMD under AB 2588 (SCAQMD, 2025). This facility is the Pacific Clay Products (SCAQMD ID 17953), located on Bernard Street, south of Temescal Canyon Road in the northwest portion of the Planning Area. Pacific Clay Products has a cancer risk value of 6.3 excess cancer chances per million and non-cancer acute and chronic hazard indices of 0.16 and 0.71, respectively. CARB also indicates through its Facility Search Tool that there is another facility within the Planning Area that reports emissions pursuant to AB 2588 (CARB, 2021). This facility is the Costco Gasoline #746 (SCAQMD ID 143897), and is located along Central Avenue.

3.2.2.1 SCAQMD MATES V Carcinogenic Risk Map

According to the SCAQMD's MATES V Carcinogenic Risk Map, the Planning Area has an estimated cancer risk ranging between 276 and 299 (SCAQMD, 2021b).¹ These cancer risk estimates are

¹ The potential cancer risk for a given substance is expressed as the incremental number of potential cancer cases that could be developed per million people, assuming that the population is exposed to the substance at a constant annual average

orders of magnitude higher than the SCAQMD's significance threshold of 10 cases in one million for cancer risk. These estimates, however, are based upon regional modeling efforts that largely do not account for site specific emission rates and dispersion characteristics that typically result in refined and substantially lower health risk estimates.

3.2.2.2 CalEnviroScreen and Disadvantaged Communities (Senate Bill 535)

CalEnviroScreen is a mapping tool that helps identify California communities that are most affected by many sources of pollution, and where people are often especially vulnerable to pollution's effects. While CalEnviroScreen was originally developed as part of Senate Bill (SB) 535 and used to identify disadvantaged communities for the purposes of allocating funding from the State's Cap-and-Trade regulation, its application and scope have expanded over the years. The tool uses environmental, health, and socioeconomic information to produce scores for every census tract in the state. The CalEnviroScreen model is made up of four components – two pollution burden components (exposures and environmental effects) and two population characteristics components (sensitive populations and socioeconomic factors). The four components are further divided into 20 indicators. An indicator is a measure of either environmental conditions, in the case of pollution burden indicators, or health and vulnerability factors, in the case of population characteristic indicators.

- **Exposure** indicators are based on the measurements of different types of pollution that people may come into contact with. Exposure indicators include:
 - Air Quality: Ozone
 - Air Quality: PM_{2.5}
 - Children's Lead Risk from Housing
 - Diesel Particulate Matter
 - Drinking Water Contaminants
 - Pesticide Use
 - Toxic Releases from Facilities
 - Traffic Density
- **Environmental effects** indicators are based on the locations of toxic chemicals in or near communities. Environmental effects indicators include:
 - Cleanup Sites
 - Groundwater Threats
 - Hazardous Waste Generators and Facilities
 - Impaired Water Bodies
 - Solid Waste Sites and Facilities
- **Sensitive population** indicators measure the number of people in a community who may be more severely affected by pollution because of their age or health. Sensitive population indicators include:
 - Asthma
 - Cardiovascular Disease
 - Low Birth Weight Infants

concentration over a presumed 70-year lifetime. These risks are usually presented in chances per million. For example, if the cancer risks were estimated to be 100 per million, the probability of an individual developing cancer due to a lifetime of exposure would be 100 in a million, or one in ten thousand. In other words, this predicts an additional 100 cases of cancer in a population of a million people over a 70-year lifetime (SCAQMD, 2021c).

- **Socioeconomic factor** indicators are conditions that may increase people's stress or make healthy living difficult and cause them to be more sensitive to pollution's effects (OEHHA 2018). Socioeconomic factors include:
 - Educational Attainment
 - Housing Burden
 - Linguistic Isolation
 - Poverty
 - Unemployment

Each census tract receives scores for as many of the 20 indicators as possible, and the scores are then mapped so that different communities can be compared. Percentiles are assigned to each census tract based on the census tract's score in relation to the rest of the state. An area with a high percentile is one that experiences a much higher pollution burden than areas with low scores. For example, if a census tract has an indicator in the 40th percentile, it means that indicator's percentile is higher than 40 percent of the census tracts in the state. CalEnviroScreen also provides a total (or cumulative) score, which is the product of multiplying the 10 pollution burden components by the 10 population characteristics. This total / cumulative score helps contextualize how multiple contaminants from multiple sources affect people, while taking into account their living conditions (e.g., nonchemical factors such as socioeconomic and health status). Communities that are within the top 25th percentile for total CalEnviroScreen scores are considered disadvantaged communities pursuant to SB 535 (OEHHA, 2021a and 2022).

According to the OEHHA CalEnviroScreen 4.0 Map, the Planning Area generally has CalEnviroScreen scores that range from 25 to 83. The census tracts in southern portion of the Planning Area have lower CalEnviroScreen scores, while the census tracts in the middle and northwestern portions of the Planning Area tend to have some of the highest scores. Two of the census tracts within the Planning Area have CalEnviroScreen 4.0 percentiles that are above 75, qualifying them as disadvantaged communities based on the SB 535 definition. These census tracts include:

- Census Tract 6065043006 in the central portion of the Planning Area has a CalEnviroScreen 4.0 percentile of 83;
 - Census Tract 6065043001 in the central portion of the Planning Area has a CalEnviroScreen 4.0 percentile of 75;
 - Census Tract 60650443003 in the western portion of the Planning Area has a CalEnviroScreen 4.0 percentile of 64;
 - Census Tract 6065043010 in the western portion of the Planning Area has a CalEnviroScreen 4.0 percentile of 27
 - Census Tract 6065043009 in the western portion of the Planning Area has a CalEnviroScreen 4.0 percentile of 26
 - Census Tract 6065042901 in the northwestern portion of the Planning Area has a CalEnviroScreen 4.0 percentile of 82
 - Census Tract 6065043005 in the northwestern portion of the Planning Area has a CalEnviroScreen 4.0 percentile of 73
 - Census Tract 6065042902 in the northern portion of the Planning Area has a CalEnviroScreen 4.0 percentile of 73
 - Census Tract 6065042715 in the northeastern portion of the Planning Area has a CalEnviroScreen 4.0 percentile of 49
-

- Census Tract 6065046404 in the eastern portion of the Planning Area has a CalEnviroScreen 4.0 percentile of 60
- Census Tract 6065042007 in the northern portion of the Planning Area has a CalEnviroScreen 4.0 percentile of 59.
- Census Tract 6065046404 in the eastern portion of the Planning Area has a CalEnviroScreen 4.0 percentile of 60
- Census Tract 6065042733 in the eastern portion of the Planning Area has a CalEnviroScreen 4.0 percentile of 32
- Census Tract 6065043274 in the eastern portion of the Planning Area has a CalEnviroScreen 4.0 percentile of 25
- Census Tract 6065046405 in the southeastern portion of the Planning Area has a CalEnviroScreen 4.0 percentile of 39
- Census Tract 6065043271 in the southern portion of the Planning Area has a CalEnviroScreen 4.0 percentile of 39
- Census Tract 6065046403 in the southern portion of the Planning Area has a CalEnviroScreen 4.0 percentile of 43
- Census Tract 6065046402 in the southwestern portion of the Planning Area has a CalEnviroScreen 4.0 percentile of 59

According to CalEnviroScreen, the following indicators for these communities generally contribute the most to their high percentile scoring:

- Particulate Matter 2.5
- Diesel Particulate Matter
- Toxic Releases
- Traffic
- Drinking Water
- Lead from Housing
- Cleanup Sites
- Groundwater Threats
- Hazard Waste
- Solid Waste
- Education
- Linguistic Isolation
- Poverty
- Housing Burden

3.2.3 FEDERAL AIR QUALITY REGULATIONS

3.2.3.1 Federal Air Quality Regulations

The Federal Clean Air Act (CAA) defines the U.S. EPA's responsibilities for protecting and improving the United States air quality and ozone layer. Key components of the CAA include reducing ambient concentrations of air pollutants that cause health and aesthetic problems, reducing emission of toxic air pollutants, and stopping production and use of chemicals that destroy the ozone.

Federal clean air laws require areas with unhealthy levels of ozone, inhalable particulate matter, Carbon monoxide, nitrogen dioxide, and sulfur dioxide to develop State Implementation Plans (SIPs); comprehensive documents that identify how an area will attain NAAQS. Deadlines for attainment were

established in the 1990 amendments to the CAA based on the severity of an area's air pollution problem. Failure to meet air quality deadlines can result in sanctions against the State or the U.S. EPA taking over enforcement of the CAA in the affected area. SIPs are a compilation of new and previously submitted plans, programs, district rules, and State and Federal regulations. The SCAQMD implements the required provisions of an applicable SIP through its Air Quality Management Plan (AQMP). Currently, SCAQMD implements the 2012 Lead SIP for the Los Angeles County portion of South Coast Air Basin through the 2012 AQMP, and the 8-hr Ozone, 1-hr Ozone, 24-hr PM_{2.5}, and annual PM_{2.5} SIPs through the 2016 AQMP. The 2022 AQMP was published in December 2022. The SCAQMD also implements the 2003 Coachella Valley PM₁₀ State Implementation Plan (CVSIP) for PM₁₀ in the Coachella Valley.

3.2.3.2 Safe Affordable Fuel-Efficient Rule

On September 27, 2019, the U.S. EPA and the National Highway Traffic Safety Administration (NHTSA) published the SAFE Vehicles Rule Part One: One National Program.” (84 Fed. Reg. 51,310 (Sept. 27, 2019)). The Part One Rule revoked California’s authority to set its own greenhouse gas emissions standards and set zero emission vehicle mandates in California. As a result of the loss of the zero emission vehicles (ZEV) sales requirements in California, there may be fewer ZEVs sold and thus additional gasoline-fueled vehicles sold in future years (CARB 2019).

In April 2020, the U.S. EPA and NHTSA issued the SAFE Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks (Final SAFE Rule) that relaxed federal greenhouse gas emissions and fuel economy standards. The Final SAFE Rule relaxed federal greenhouse gas emissions and Corporate Average Fuel Economy (CAFE) standards to increase in stringency at approximately 1.5 percent per year from model year (MY) 2020 levels over MYs 2021–2026. The previously established emission standards and related “augural” fuel economy standards would have achieved approximately 4 percent per year improvements through MY 2025. The Final SAFE Rule affects both upstream (production and delivery) and downstream (tailpipe exhaust) CO₂ emissions (CARB 2020) and has been challenged by 23 states. NHTSA repealed and the U.S. EPA rescinded the SAFE Rule Part One in December 2021 and March 2022, respectively, restoring California’s authority to implement its GHG standards and ZEV mandates (NHTSA 2022, U.S. EPA 2022f).

3.2.4 STATE AIR QUALITY REGULATIONS

3.2.4.1 California Clean Air Act

The California CAA of 1988 was enacted to develop plans and strategies for attaining the CAAQS. CARB, which is part of the California Environmental Protection Agency (Cal-EPA), develops statewide air quality regulations, including industry-specific limits on criteria, toxic, and nuisance pollutants. The California CAA is more stringent than Federal law in a number of ways including revised standards for PM₁₀ and ozone and state-specific standards for visibility reducing particles, sulfates, hydrogen sulfide, and vinyl chloride.

3.2.4.2 In-Use Off-Road Diesel Equipment Program

CARB’s In-Use Off-Road Diesel Equipment regulation is intended to reduce emissions of NO_x and PM from off-road diesel vehicles, including construction equipment, operating within California. The regulation imposes limits on idling; requires reporting equipment and engine information and labeling all vehicles reported; restricts adding older vehicles to fleets; and requires fleets to reduce their emissions by retiring, replacing, or repowering older engines or installing exhaust retrofits for PM. The requirements and compliance dates of the off-road regulation vary by fleet size, and large fleets (fleets with more than 5,000

horsepower) must meet average targets or comply with Best Available Control Technology (BACT) requirements beginning in 2014. CARB has off-road anti-idling regulations affecting self-propelled diesel-fueled vehicles of 25 horsepower and up. The off-road anti-idling regulations limit idling on applicable equipment to no more than five minutes, unless exempted due to safety, operation, or maintenance requirements. In 2022, CARB approved amendments requiring the use of renewable diesel fuel starting January 1, 2024. Fleets comprised of Tier 4 Final equipment or zero emission equipment are exempt from this requirement.

3.2.4.3 On-road Heavy-Duty Vehicles (In-Use) Regulation

CARB's In-Use Heavy-Duty Diesel-Fueled regulation (also known as the Truck and Bus Regulation) is intended to reduce emissions of NO_x, PM, and other criteria pollutants generated from existing on-road diesel vehicles operating in California. The regulation applies to nearly all diesel-fueled trucks and buses with a gross vehicle weight rating (GVWR) greater than 14,000 pounds that are privately or federally owned, and for privately and publicly owned school buses. Heavier trucks and buses with a GVWR greater than 26,000 pounds must comply with a schedule by engine model year or owners can report to show compliance with more flexible options. Fleets complying with the heavier trucks and buses schedule must install the best available PM filter on 1996 model year and newer engines, and replace the vehicle 8 years later. Trucks with 1995 model year and older engines had to be replaced starting in 2015. Replacements with a 2010 model year or newer engine meet the final requirements, but owners can also replace the equipment with used trucks that have a future compliance date (as specified in regulation). By 2023, all trucks and buses must have at least 2010 model year engines, with few exceptions. In 2022, CARB approved amendments requiring the use of renewable diesel fuel starting January 1, 2024. Fleets comprised of Tier 4 Final equipment or zero emission equipment are exempt from this requirement. CARB indicates implementing the use of renewable diesel in Tier 4 Interim and older engines would result in a 10 percent reduction of NO_x emissions and a 30 percent reduction of PM emissions (CARB 2022c)

3.2.4.4 CARB Stationary Diesel Engines – Emissions Regulations

In 1998, CARB identified DPM as a TAC. To reduce public exposure to DPM, in 2000, the Board approved the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles (Risk Reduction Plan). Integral to this plan is the implementation of control measures to reduce DPM such as the control measures for stationary diesel-fueled engines. As such, diesel generators must comply with regulations under CARB's amendments to Airborne Toxic Control Measure for Stationary Compression Ignition Engines and be permitted by the SCAQMD.

3.2.4.5 CARB Air Quality and Land Use Handbook

CARB's Air Quality and Land Use Handbook is intended to serve as a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process (CARB, 2005). The CARB Handbook recommends that planning agencies consider proximity to air pollution sources when considering new locations for "sensitive" land uses, such as residences, medical facilities, daycare centers, schools, and playgrounds. Air pollution sources of concern include freeways, rail yards, ports, refineries, distribution centers, chrome plating facilities, dry cleaners, and large gasoline service stations. Key recommendations in the Handbook relative to the Project Area include taking steps to consider or avoid siting new, sensitive land uses:

- Within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day;
- Within 300 feet of gasoline fueling stations; or

- Within 300 feet of dry cleaning operations (dry cleaning with TACs is being phased out and will be prohibited in 2023).

CARB prepared a technical supplement to the Handbook, a Technical Advisory on Strategies to Reduce Air Pollution Exposure Near High Volume Roadways (CARB 2017b), that provides recommendations for strategies to minimize exposure of the public to air pollutants due to proximity to high volume roadways.

3.2.4.6 Air Toxics “Hot Spots” Program

State requirements specifically address emissions of air toxics through Assembly Bill (AB) 1807 (known as the Tanner Bill) that established the State Air Toxics “Hot Spots” Program and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588) (California Health and Safety Code Section 44300 et seq.). Under the Air Toxics Hot Spots Information and Assessment Act of 1987 (or Air Toxics “Hot Spots” Act) and Air Toxics Hot Spots Program, the State (CARB) must collect data on toxic emissions from stationary sources (facilities) throughout the State and ascertain potential health risks that these emissions pose to members of community for developing cancer or for resulting in non-cancer health effects. California’s Children’s Environmental Health Protection Act of 1999 (California Health and Safety Code Section 39606), also requires explicit consideration of infants and children in assessing risks from air toxics.

Substances regulated under California’s Air Toxics Hot Spots Program are defined in statute and include a list of substances developed by the following sources:

- International Agency for Research on Cancer (IARC);
- U.S. EPA;
- U.S. National Toxicology Program (NTP);
- CARB Toxic Air Contaminant Identification Program List;
- Hazard Evaluation System and Information Service (HESIS) (State of California);
- Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986) list of carcinogens and reproductive toxicants (State of California); and
- Any additional substance recognized by the State Board as presenting a chronic or acute threat to public health when present in the ambient air

3.2.4.7 California Building Industry Association vs. Bay Area Air Quality Management District

The California Supreme Court in *California Building Industry Association v. Bay Area Air Quality Management District*, 62 Cal.4th 369 (2015) ruled that CEQA review is focused on a project’s impact on the environment “and not the environment’s impact on the project.” The opinion also holds that when a project has “potentially significant exacerbating effects on existing environmental hazards” those impacts are properly within the scope of CEQA because they can be viewed as impacts of the project on “existing conditions” rather than impacts of the environment on the project. The Supreme Court provided the example of a project that threatens to disperse existing buried environmental contaminants that would otherwise remain undisturbed. The Court concluded that it is proper under CEQA to undertake an analysis of the dispersal of existing contaminants because such an analysis would be focused on how the project “would worsen existing conditions.” The court also found that the limited number of express CEQA provisions that require analysis of the impacts of the existing environment on a project – such as impacts associated with school siting and airports – should be viewed as specific statutory exceptions to the general rule that such impacts are not properly within CEQA’s scope.

3.2.5 REGIONAL AIR QUALITY REGULATIONS

3.2.5.1 Southern California Association of Governments

The Southern California Association of Governments (SCAG) is a Joint Powers Authority under California State Law, established as an association of local governments and agencies that voluntarily convene as a forum to address regional issues. SCAG encompasses the counties of Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial.

SCAG is designated as a Metropolitan Planning Organization (MPO) and as a Regional Transportation Planning Agency. Under SB 375, SCAG, as a designated MPO, is required to prepare a Sustainable Communities Strategy (SCS) as an integral part of its Regional Transportation Plan (RTP). On September 3, 2020, SCAG's Regional Council adopted the 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy (2020 RTP/SCS). The 2020 RTP/SCS is a long-range visioning plan that focuses on land use and transportation strategies. Demographic and economic growth projections, travel activity data, strategies, and control measures contained in the 2020 RTP/SCS Information forms the basis for the transportation control strategy portion of the AQMP and are utilized in the preparation of air quality forecasts and consistency analysis included in the AQMP.

3.2.5.2 SCAQMD Air Quality Management Plans

The purpose of an AQMP is to bring an air basin into compliance with federal and state air quality standards and is a multi-tiered document that builds on previously adopted AQMPs. There are two relevant AQMP's for the Coachella Valley Planning Area: the Coachella Valley PM₁₀ State Implementation Plan (CVSIP) and the 2022 AQMP.

The CVSIP was adopted by the SCAQMD in 2002 and updated in 2003. The CVSIP contains control strategies for PM₁₀ in the Coachella Valley in response to the region's nonattainment of PM₁₀ NAAQS in 1999 through 2001.

The 2022 AQMP replaces the 2016 AQMP for the South Coast Air Basin and the Coachella Valley Planning Area, which provided comprehensive planning to demonstrate how the SCAQMD, in coordination with other federal, state, regional, and local entities, would bring the Coachella Valley Planning Area back into attainment for the 1997 8-hour Ozone and 2008 8-hour Ozone NAAQS. The 2022 AQMP focuses on bringing the South Coast Air Basin and the SSAB into compliance with the 2015 8-hour ozone standard. The Coachella Valley Planning Area, which is in severe nonattainment, has an attainment year of 2032 for the 2015 8-hour ozone NAAQS. The 2022 AQMP includes growth projections developed by SCAG for the 2020 RTP/SCS that help inform emissions inventories. The 2022 AQMP plans to reduce NO_x emissions to 60 tons per day in the South Coast Air Basin, where most of the ozone in the Coachella Valley Planning Area is transported from. The 2022 AQMP notes that widespread adoption of zero emission technologies across all sectors and a combination of local, state, and federal action will be required to achieve the projected NO_x reductions.

The SCAQMD proposes incentive programs and 49 control measures that, with state and federal control measures, can achieve the required NO_x reductions. SCAQMD's incentive programs would focus on promoting deployment of existing zero emission and low NO_x technology and on developing new zero emission and ultra-low NO_x technologies. SCAQMD's control measures consist of 30 measures that target stationary sources and 18 that target mobile sources. The 2022 AQMP includes stationary source measures that seek to reduce NO_x from residential combustion sources, commercial combustion sources, and large combustion sources, as further described below.

- Residential control measures focus on reducing NOx by replacing appliances and devices (e.g., for heating and cooking) with zero emission and low-NOx appliances.
- Commercial control measures are identified reduce NOx from commercial appliances, cooking devices, and small internal combustion engines and commercial combustion equipment.
- Large combustion control measures have been included reduce NOx from sources including boilers, engines, and facilities.

In addition, the 2022 AQMP includes stationary source measures to reduce VOC, including reducing leaks and providing incentive funding for the adoption of low-VOC technology. The 2022 AQMP also includes co-benefit measures that quantify the reduction in criteria air pollutants from energy and climate change measures. Other stationary source measures (e.g., education and outreach) seek to reduce all criteria pollutants.

Finally, the 2022 AQMP includes mobile source control measures grouped into the following categories:

- Emission growth management, which mitigate emissions from new or redevelopment projects.
- Facility based, which focus on mobile sources at port, railyards, and intermodal facilities.
- On-road and off-road mobile sources, which focus on vehicles and equipment used during construction and operation at industrial sites.
- Incentives, for early deployment of cleaner technology.
- Other measures (e.g., infrastructure planning).

3.2.5.3 SCAQMD Rule Book

In order to control air pollution in the SSAB, the SCAQMD adopts rules that establish permissible air pollutant emissions and governs a variety of businesses, processes, operations, and products to implement the AQMP and the various federal and state air quality requirements. SCAQMD does not adopt rules for mobile sources; those are established by CARB or the U.S. EPA. In general, the SCAQMD rules that are anticipated to be applicable to the development of the proposed Project, include:

Rule 203 (Permit to Operate) sets forth the requirement that the use or operation any equipment or agricultural permit unit, the use of which may cause the issuance of air contaminants, or the use of which may reduce or control the issuance of air contaminants, must receive a written permit to operate from the Executive Officer.

Rule 401 (Visible Emissions) prohibits discharge into the atmosphere from any single source of emission for any contaminant for a period or periods aggregating more than three minutes in any one hour that is as dark or darker in shade than that designated as No. 1 on the Ringelmann Chart, as published by the U.S. Bureau of Mines.

Rule 402 (Nuisance) prohibits discharges of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

Rule 403 (Fugitive Dust) prohibits emissions of fugitive dust from any active operation (e.g., demolition or grading), storage pile, or other disturbed surface area if it crosses the project property line or if emissions caused by vehicle movement cause substantial impairment of visibility (defined as exceeding 20 percent capacity in the air). Rule 403 requires the implementation of Best Available Control Measures and includes additional provisions that differ depending on whether a project is less than five acres, more

than five acres, or more than 50 acres. Control measures are specified for earth moving activities, active and inactive disturbed surface areas, unpaved roads, open storage piles, and track out control.

SCAQMD Rule 461 (Gasoline Transfer and Dispensing) applies to the transfer of gasoline from any tank truck, trailer, or railroad tank car into any stationary storage tank or mobile fueler, and from any stationary storage tank or mobile fueler into any mobile fueler or vehicle fuel tank. The rule prohibits transfer and dispensing of gasoline in equipment that does not meet CARB Phase I and Phase II vapor recovery requirements that provide between 95% and 98% control of gasoline vapors.

Rule 481 (Spray Coating Operations) imposes equipment and operational restrictions during construction for all spray painting and spray coating operations.

Rule 1108 (Cutback Asphalt) prohibits the sale or use of any cutback asphalt containing more than 0.5 percent by volume organic compounds which evaporate at 260°C (500°F) or lower.

Rule 1113 (Architectural Coatings) establishes maximum concentrations of VOCs in paints and other applications and establishes the thresholds for low-VOC coatings.

Rule 1143 (Consumer Paint Thinners and Multi-Purpose Solvents) prohibits the supply, sale, manufacture, blend, package or repackaging of any consumer paint thinner or multi-purpose solvent for use in the SCAQMD unless consumer paint thinners or other multi-purpose solvents comply with applicable VOC content limits.

Rule 1301 (New Source Review) sets forth pre-construction review requirements for new, modified, or relocated facilities, to ensure that the operation of such facilities does not interfere with progress in attainment of the national ambient air quality standards, and that future economic growth within the SCAQMD is not unnecessarily restricted.

Rule 1401 (New Source Review of Toxic Air Contaminants) establishes limits for maximum individual cancer risk (MICR), cancer burden, and noncancer acute and chronic hazard index (HI) from new permit units, relocations, or modifications to existing permit units which emit toxic air contaminants. This rule establishes allowable risks for sources requiring new permits pursuant to Rules 201 or 203.

Rule 2202 (On-Road Motor Vehicle Mitigation Options) provides employers with options to reduce mobile source emissions generated from employee commutes. The rule applies to any employer who employs 250 or more employees on a full or part time basis at a worksite for a consecutive six-month period.

Rule 2305 (Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program) was adopted by the SCAQMD Governing Board on May 7, 2021, and sets forth requirements that regulated warehouse owners and operators must follow. Rule 2305 specifies that warehouse operators (for warehouses with an indoor floor space of 100,000 square feet or more and operate at least 50,000 square feet of that space for warehousing activities) must achieve a specified number of WAIRE Points (also referred to as the WAIRE Point Compliance Obligation, or WPCO) every year using either a menu of options, developing and implementing a custom plan, or paying a mitigation fee. Regardless of size, warehouse operators are required to submit a Warehouse Operations Notification (WON): 1) within 14 days of a new warehouse operator having access to at least 50,000 square feet of space for warehousing purposes, 2) within 30 days after a renovation that alters the size of the warehouse, or 3) within three days of a request from the SCAQMD. An Initial Site Information Report (ISIR) must also be submitted by an authorized official of the warehouse operator through the WAIRE Program Online Portal. No additional reporting is required in the ISIR if 1) the total square footage that may be used

for warehousing activities in that facility is less than 100,000 square feet, or 2) the warehouse operator's lease does not allow them to use more than 50,000 square feet for warehousing activities.

3.2.6 CITY OF LAKE ELSINORE GENERAL PLAN

The City's proposed GPU contains the following goals, policies, and implementation measures related to air quality. These include supporting electric vehicles, transit, and active transportation, developing mitigation measures to improve air quality, and reducing pollution from construction. Please refer to Appendix A for a complete list of goals, policies, and implementation measures regarding air quality.

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4 AIR QUALITY IMPACT AND HEALTH RISK ANALYSIS

This chapter evaluates the direct and indirect air quality impacts that could result from implementation of the proposed GPU.

4.1 THRESHOLDS OF SIGNIFICANCE

In accordance with Appendix G of the State CEQA Guidelines, the proposed GPU could result in potentially significant impacts related to air quality if it would:

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

Consistent with the guidance contained in Appendix G of the State CEQA Guidelines, this Report relies upon SCAQMD-recommended methods and pollutant thresholds to evaluate whether the proposed GPU would conflict with or obstruct implementation of an applicable air quality plan, result in a cumulatively considerable net increase of any criteria air pollutant for which the South Coast Air Basin is designated nonattainment, expose sensitive receptors to substantial pollutant concentrations, or result in other emissions adversely affecting a substantial number of people.

4.1.1 MASS DAILY THRESHOLDS FOR CRITERIA AIR POLLUTANTS

The SCAQMD's recommended regional mass daily thresholds of significance for criteria air pollutants are shown in Table 4-1.

Table 4-1: SCAQMD-Recommended CEQA Thresholds

Pollutant	Maximum Daily Emissions (lbs/day)	
	Construction	Operation
NO _x	100	55
VOC/ROG	75	55
PM ₁₀	150	150
PM _{2.5}	55	55
SO _x	150	150
CO	550	550
Lead	3	3
Source: SCAQMD, 2023		

4.1.2 LOCALIZED EMISSIONS THRESHOLDS

In addition to establishing thresholds of significance for regional emissions of criteria air pollutants on a regional level, the SCAQMD has also developed Localized Significance Thresholds (LSTs) that represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable Federal or State ambient air quality standards, which would result in significant adverse localized air quality effects. The LST methodology takes into account a number

of factors, including (1) existing ambient air quality in each SRA; (2) how many acres the project would disturb; and (3) how far project construction and operational activities would take place from the nearest sensitive receptor. Unlike the regional emission significance thresholds, LSTs have only been developed for NO_x, CO, PM₁₀ and PM_{2.5}.

The construction and operational LSTs for one-acre, two-acre, and five-acre sites in SRA 25 (Lake Elsinore), the SRA in which the City of Lake Elsinore is located, are shown in Table 4-2.

Table 4-2: SCAQMD Localized Significance Thresholds for Source Receptor Area 25

Pollutant Monitored	Maximum Allowable Emissions (Pounds per Day) as a Function of Receptor Distance from Site Boundary				
	82 Feet (25 Meters)	164 Feet (50 Meters)	328 Feet (100 Meters)	656 Feet (200 Meters)	1,640 Feet (500 Meters)
ONE-ACRE SITE					
<i>Construction Thresholds</i>					
Nitrogen Oxides (NO _x)	162	203	292	460	896
Carbon Monoxide (CO)	750	1,105	2,176	5,501	23,866
Particulate Matter (PM ₁₀)	4	12	30	67	178
Particulate Matter (PM _{2.5})	3	4	8	20	86
<i>Operational Thresholds</i>					
Nitrogen Oxides (NO _x)	162	203	292	460	896
Carbon Monoxide (CO)	750	1,105	2,176	5,501	23,866
Particulate Matter (PM ₁₀)	1	3	8	17	43
Particulate Matter (PM _{2.5})	1	1	2	5	21
TWO-ACRE SITE					
<i>Construction Thresholds</i>					
Nitrogen Oxides (NO _x)	234	275	363	521	941
Carbon Monoxide (CO)	1,100	1,572	2,781	6,399	25,412
Particulate Matter (PM ₁₀)	7	20	38	75	186
Particulate Matter (PM _{2.5})	4	6	10	23	91
<i>Operational Thresholds</i>					
Nitrogen Oxides (NO _x)	234	275	363	521	941
Carbon Monoxide (CO)	1,100	1,572	2,781	6,399	25,412
Particulate Matter (PM ₁₀)	2	5	10	18	45
Particulate Matter (PM _{2.5})	1	2	3	6	22
FIVE-ACRE SITE					
<i>Construction Thresholds</i>					
Nitrogen Oxides (NO _x)	371	416	520	672	1,072

Table 4-2: SCAQMD Localized Significance Thresholds for Source Receptor Area 25

Pollutant Monitored	Maximum Allowable Emissions (Pounds per Day) as a Function of Receptor Distance from Site Boundary				
	82 Feet (25 Meters)	164 Feet (50 Meters)	328 Feet (100 Meters)	656 Feet (200 Meters)	1,640 Feet (500 Meters)
Carbon Monoxide (CO)	1,965	2,714	4,282	8,547	29,256
Particulate Matter (PM ₁₀)	13	40	59	96	207
Particulate Matter (PM _{2.5})	8	10	16	31	105
<i>Operational Thresholds</i>					
Nitrogen Oxides (NO _x)	371	416	520	672	1,072
Carbon Monoxide (CO)	1,965	2,714	4,282	8,547	29,256
Particulate Matter (PM ₁₀)	4	10	14	23	50
Particulate Matter (PM _{2.5})	2	3	4	8	26
Source: SCAQMD 2008					

4.1.3 CO HOT SPOTS

Historically, to determine whether a project poses the potential for a CO hotspot, the quantitative CO screening procedures provided in the Transportation Project-Level Carbon Monoxide Protocol (the Protocol) were used (UCD ITS, 1997). Under the Protocol, a project may worsen air quality if the project increases the percentage of vehicles in cold start modes by two percent or more; significantly increases traffic volumes by five percent or more; or worsens traffic flow, defined for signalized intersections as increasing average delay at intersections operating at level of service (LOS) E or F or causing an intersection that would operate at LOS D or better without the project, to operate at LOS E or F. With new vehicles and improvements in fuels resulting in fewer emissions, the retirement of older polluting vehicles, and new controls and programs, CO concentrations have declined dramatically in California. As a result of emissions controls on new vehicles, the number of vehicles that can idle and the length of time that vehicles can idle before emissions would trigger a CO impact has increased, so the use of LOS as an indicator is no longer applicable for determining CO impacts.

The SCAQMD does not have a methodology for screening CO hotspots. However, the SCAQMD performed CO modeling as part of its 2003 AQMP at four busy intersections during morning and evening peak hour periods. The busiest intersection studied in the analysis, Wilshire Boulevard and Veteran Avenue, had 8,062 vehicles per hour during morning peak hours, 7,719 vehicles per hour during evening peak hours, and approximately 100,000 vehicles per day. The 2003 AQMP estimated that the 1-hour CO concentration for this intersection was 4.6 ppm, which is less than a fourth of the 1-hour CAAQS CO standard (20 ppm) (SCAQMD, 2003a). For purposes of this Report, the proposed GPU would have the potential for a CO hotspot if it would exceed the peak hour traffic volumes modeled by the SCAQMD in its 2003 AQMP (8,000 vehicles per hour, thereby having the potential to result in CO concentrations that exceed 1-hour State [20 ppm], 1-hour Federal [35 ppm], and/or State and Federal 8-hour [9 ppm] ambient air quality standards for CO).

4.1.4 TOXIC AIR CONTAMINANTS (TAC)

The SCAQMD recommends preparation of a Health Risk Assessment (HRA) for large commercial or industrial projects to determine the specific health risks posed by long-term emissions of TACs from a project. Following OEHHA and SCAQMD guidance, health risks from TAC emissions are estimated based on “Individual Cancer Risk,” which is the likelihood that a person exposed to TACs over 70-year lifetime will get cancer or suffer some other “non-cancer” effect (measured by what is called as a “hazard index”). Numerous weighting factors (e.g., age sensitivity factors, breathing rates, etc.) are applied during health risk calculations to account for those members of the public who may be more sensitive to pollution than others (e.g., sensitive receptors). A project is considered to have a significant impact if it results in any of the following:

- A maximum incremental cancer risk greater than or equal to 10 in one million;
- A population-wide cancer burden greater than 0.5 (in areas where cancer risk is greater than or equal to one in a million); or
- A chronic or acute hazard index greater than or equal to 1.0.

The California Supreme Court in *California Building Industry Association v. Bay Area Air Quality Management District*, 62 Cal.4th 369 (2015) ruled CEQA review is focused on a project’s impact on the environment “and not the environment’s impact on the project.” The opinion also holds that when a project has “potentially significant exacerbating effects on existing environmental hazards” those impacts are properly within the scope of CEQA because they can be viewed as impacts of the project on “existing conditions” rather than impacts of the environment on the project. The Supreme Court provided the example of a project that threatens to disperse existing buried environmental contaminants that would otherwise remain undisturbed. The Court concluded that it is proper under CEQA to undertake an analysis of the dispersal of existing contaminants because such an analysis would be focused on how the project “would worsen existing conditions.” The court also found that the limited number of express CEQA provisions that require analysis of the impacts of the existing environment on a project – such as impacts associated with school siting and airports – should be viewed as specific statutory exceptions to the general rule that such impacts are not properly within CEQA’s scope.

In another recent Supreme Court Ruling – *Sierra Club v. County of Fresno* 6 Cal. 5th 502 (2018) – the Supreme Court held that CEQA requires a Lead Agency to make a reasonable effort to provide an appropriate, project-specific context and connection between mass pollutant emissions estimates (i.e., pounds per day or tons per year) and the potential health impacts associated with such emissions estimates, or to explain what is and is not yet known about the GPU’s “bare” emissions numbers and their potential adverse health impacts.

Consistent with these court rulings, this report focuses on the proposed GPU’s effect on air quality and existing health risks, rather than the effect of existing air quality and its potential risks on the proposed GPU’s residents. The analysis evaluates whether the proposed GPU would create or exacerbate adverse public health risk conditions at sensitive receptor locations, as identified in the SCAQMD’s CEQA significance criteria.

4.1.5 ODOR THRESHOLDS

The SCAQMD recommends that a lead agency evaluate potential odor impacts based on whether a project would have the potential to create an odor nuisance pursuant to SCAQMD Rule 402, which defines a nuisance as “quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the

comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.” SCAQMD Rule 402 excludes odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals from Ruel 402 nuisance provisions.

4.2 CONSISTENCY WITH THE APPLICABLE AIR QUALITY PLAN

As described in Section 3.1, the proposed GPU is within the South Coast Air Basin, which is under the jurisdiction of the SCAQMD. Pursuant to the methodology provided in Chapter 12 of the SCAQMD *CEQA Air Quality Handbook*, consistency with the AQMP is affirmed if the Project:

- 1) Is consistent with the growth assumptions in the AQMP; and
- 2) Does not increase the frequency or severity of an air quality standards violation, or cause a new one.

Consistency Criterion 1 refers to the growth forecasts and associated assumptions included in the 2022 AQMP. Projects that are consistent with the AQMP growth assumptions would not interfere with attainment of air quality standards, because this growth is included in the projections used to formulate the AQMP. Therefore, if the growth under the proposed GPU is consistent with the regional population, housing, and employment forecasts identified by SCAG in the RTP/SCS, plan implementation would be consistent with the AQMP, even if emissions could potentially exceed the SCAQMD’s recommended daily emissions thresholds. The comparison of the AQMP’s and the proposed GPU’s potential growth projections is provided in Table 4-3.

Table 4-3: Comparison of RTP/SCS and Compton GPU 2045 Population, Dwelling Units, and Employment Projections			
Scenario	Population	Dwelling Units^(A)	Employment
GPU ^(B)	151,891	46,610	40,795
AQMP/RTP/SCS	111,600	30,484	24,900
Within RTP/SCS Growth Assumptions?	No	No	No
Source: SCAG, 2020			
(A) The RTP/SCS dwelling unit data includes only occupied dwelling units, while the proposed GPU dwelling unit data includes both occupied and unoccupied dwelling units. Therefore, to create a direct comparison of the projections within the GPU and RTP/SCS, the vacancy rate for the City of Lake Elsinore (7.1%) was applied (SCAG 2021). Using the vacancy rate and the RTP/SCS data of 37,800 occupied households, MIG assumes a total dwelling unit value of 40,484.			
(B) The GPU projections include population, dwelling unit, and employment data from both the City limits and the City’s sphere of influence.			
(C) The SCAG 2020 RTP/SCS formulates the growth projections which the 2022 AQMP is based on.			

As shown in Table 4-3, the growth envisioned in the GPU is inconsistent with the totals for population and dwelling units that the 2020 RTP/SCS (which the 2022 AQMP is based on) projected for 2045. Therefore, from a population growth standpoint, the proposed GPU would be inconsistent with the AQMP.

Consistency Criterion 2 refers to the California Ambient Air Quality Standards (CAAQS) and National Ambient Air Quality Standards (NAAQS), as presented in Table 3-3. As described in Section 3.1.4, the Basin is designated nonattainment for national and state O₃, PM₁₀, and PM_{2.5} standards. The analyses of potential emissions under Section 4.4 below indicates the GPU could result in significant emissions that cannot be mitigated during construction activities, which would include NO_x and ROG (precursor emissions

to ozone) and PM₁₀ and PM_{2.5}. The analysis contained under Section 4.4 also indicates the operational ROG and NO_x emissions (precursor emissions to O₃) as well as PM₁₀ and PM_{2.5}, associated with implementation of the proposed GPU would exceed the SCAQMD-recommended CEQA thresholds of significance, which have been designed to bring the region into attainment for CAAQS and NAAQS.

Implementation of the proposed GPU would result in population, household, and employment growth that is in excess of that accounted for in the 2022 AQMP. This growth could generate construction and operational emissions of criteria air pollutants, including ROG and NO_x (O₃ precursor pollutants), PM₁₀, and PM_{2.5} that could exceed SCAQMD-recommended thresholds of significance. The SCAQMD, in developing its CEQA significance thresholds, considered the emission levels at which a project's individual emissions would be cumulatively considerable (SCAQMD, 2003b; page D-3). Even though the mass amount of emissions attributable to a single project (i.e., pounds per day) does not necessarily contribute to air pollution levels measured throughout the Basin and in or near the City, the SCAQMD considers projects that result in emissions that exceed its CEQA significance thresholds to result in individual impacts that are cumulatively considerable and significant. Since the proposed GPU could result in construction and operational emissions that exceed SCAQMD regional CEQA thresholds, the proposed GPU could increase the frequency and/or severity of air quality violations in the Basin or otherwise impede attainment of air quality standards, particularly national and state ozone standards. This is considered to be a potentially significant impact.

The growth that could occur under the GPU by 2045 would be inconsistent with the 2020 RTP/SCS growth forecast. As discussed under Section 4.4, the project would implement Mitigation Measure AQ-2A and Mitigation Measure AQ-2B, which would require the preparation of a project-specific air quality study prior to future development activities and mitigation incorporated into the project if emissions are shown to be above SCAQMD-recommended CEQA significance thresholds. Nonetheless, because it cannot be definitively known or stated at this time that construction emissions would be able to be mitigated such that all criteria air pollutant emissions would be below SCAQMD-recommended thresholds of significance, implementation of the proposed GPU could still increase the frequency and/or severity of air quality violations in the Basin or otherwise impede attainment of air quality standards in the Basin. Furthermore, operational ROG, NO_x, CO, PM₁₀, and PM_{2.5} emissions would be expected to continue to exceed SCAQMD thresholds, even after the incorporation of Mitigation Measures AQ-2A and AQ-2B. For these reasons, the proposed GPU would be inconsistent with the AQMP.

For the reasons described above, the proposed GPU would potentially conflict with the 2022 AQMP. This is considered a **significant and unavoidable impact**.

4.3 INCREASES IN NONATTAINMENT CRITERIA AIR POLLUTANTS

4.3.1 REGIONAL CONSTRUCTION EMISSIONS

The proposed GPU would not directly result in the construction or operation of any specific project; however, future development supported by the GPU would result in short-term construction-related criteria pollutant emissions that have the potential to have an adverse effect on air quality. Short-term criteria air pollutant emissions would occur during demolition, site preparation, grading, building construction, paving, and architectural coating activities associated with specific, new development projects. Emissions would occur from use of equipment, worker, vendor and hauling trips, and disturbance of onsite soils (fugitive dust). ROG and NO_x emissions are primarily associated with gas and diesel equipment exhaust and the application of architectural coatings. Fugitive dust emissions (PM₁₀ and PM_{2.5}) are primarily associated with

site preparation and vary as a function of such parameters as soil silt content, soil moisture, wind speed, acreage of disturbance area, and VMT by construction vehicles on- and off-site. Typical pieces of construction equipment associated with development and redevelopment projects include, but are not limited to, dozers, graders, excavators, loaders, and trucks.

Although it is not possible to know the exact type, number, location, or duration of future construction projects, future development activities would generally entail demolition, site preparation, grading, building construction, paving, and architectural coating. Fugitive dust (PM₁₀) emissions would typically be greatest during building demolition, site preparation, and grading due to the disturbance of soils and transport of material. NO_x emissions would also result from the combustion of diesel fuels used to power off-road heavy-duty pieces of equipment (e.g., backhoes, bulldozers, excavators, etc.). ROG emissions would generally be greatest during architectural coating activities. The types and quantity of equipment, as well as duration of construction activities, would be dependent on project-specific conditions. Larger projects would require more equipment over a longer timeframe than that required for redevelopment of a single, residential home or small residential or mixed-use project.

Given the speculative nature of construction activities that could occur under implementation of the proposed GPU, it is not possible at this time to accurately assess the level of emissions that would be generated by future development and redevelopment activities in the Planning Area. It is possible that either no construction could be occurring within the Planning Area at any given time, or multiple projects could be occurring simultaneously. Despite these unknowns, it is plausible that one or more projects developed under implementation of the proposed GPU could have the potential to exceed one or more of the SCAQMD's construction criteria air pollutant threshold of significance (e.g., NO_x for a project involving a substantial amount of earthwork during grading, ROG during architectural coating activities, etc.). Therefore, this impact is potentially significant and requires mitigation.

4.3.1.1 Regional Construction Emissions Mitigation Measures

To reduce the regional construction emissions levels associated with future development projects under the proposed GPU, MIG recommends incorporating Mitigation Measure AQ-2A which would require the preparation of a project-specific air quality study prior to future development activities and mitigation incorporated into the project if emissions are shown to be above SCAQMD-recommended CEQA significance thresholds.

Mitigation Measure AIR-2A: Require a Project-level Construction Air Quality Assessment for New Discretionary Development Projects. Prior to a discretionary approval by the City for development projects subject to CEQA (meaning, non-exempt CEQA projects), project applicants shall prepare and submit a technical assessment evaluating potential project-specific construction-related air quality impacts to the City for review and approval. The evaluation shall be prepared in conformance with South Coast Air Quality Management District (SCAQMD) methodology for assessing air quality impacts. If construction-related criteria air pollutants are determined to have the potential to exceed the SCAQMD's adopted thresholds of significance, the City shall require that applicants for new development projects incorporate strategies to reduce air pollutant emissions during construction activities. The specific strategies identified for a project shall be included as conditions of project approval, and be incorporated into all appropriate construction bid, engineering, and planning documents prepared for the project. Potential strategies to reduce construction-related emissions include, but are not limited to:

- Using heavy-duty off-road construction equipment that meets U.S. EPA Tier IV Final emissions standards (for equipment greater than 50 horsepower), either through original manufacturer's certification or through the use of California Air Resources Board verified diesel emissions control strategies (e.g., a diesel particulate filter).
- Using electric equipment, particularly for equipment less than 50 horsepower
- Using alternative fuels such as renewable diesel, biodiesel (no more than B20 blend), or liquefied or compressed natural gas biodiesel,
- Using smaller equipment that can complete the same construction activities in the same time as standard-sized equipment.
- Limiting idling time of diesel-powered construction equipment to two (2) minutes.
- Ensuring equipment brought to a site has been properly serviced and maintained in accordance with manufacturer's standards.
- Implementing applicable SCAQMD fugitive dust control measures.
- Using interior and exterior coatings that meet SCAQMD Rule "Low-VOC" or "Super-Compliant" definitions.

4.3.1.2 Regional Construction Emissions Impact Conclusion

The above analysis indicates that the construction emissions associated with future development activities facilitated under implementation of the proposed GPU could exceed SCAQMD-recommended CEQA significance thresholds for regional criteria air pollutant emissions. For these reasons, the proposed GPU's regional construction emissions would remain a **significant and unavoidable impact** even with the incorporation of feasible mitigation measures.

4.3.2 REGIONAL OPERATIONAL EMISSIONS

If adopted, the proposed GPU would accommodate new residential and non-residential land uses, some of which would involve replacing existing development. Overall, project implementation would increase residential dwelling units and non-residential square footage in the Planning Area under year 2045 growth conditions. Although future project-specific characteristics are not known, operational activities associated with typical residential, commercial, industrial, and infrastructure development projects can generate emissions from the following sources:

- **Small "area" sources** including landscaping equipment and the use of consumer products such as paints, cleaners, and fertilizers that result in the evaporation of chemicals to the atmosphere during product use.
- **Energy use** in the form of natural gas combustion for building water and space heating needs.
- **Mobile sources** including trips made to and from the site by new residents, visitors, customers, employees, and truck trips.
- **Off-road sources** such as forklifts used to move materials within the buildings and yard hostellers use to load and unloads goods into and out of trucks.
- **Stationary sources** could include commercial or industrial equipment such as large boilers, restaurant charbroilers, emergency generators, and fuel storage, transfer, and dispensing equipment. These sources can emit a variety of pollutants dependent on the specific equipment application and source.

Growth under the GPU would result in long-term regional emissions of criteria air pollutants associated with the operation of area sources, energy sources, and mobile sources. Area source emissions, which are widely distributed and made of many small emissions sources (e.g., landscaping equipment, consumer products, painting operations, etc.), were modeled according to the size and type of land uses proposed. Energy sources, which include natural gas combustion for heating and other purposes, were also modeled based on the size and type of land uses included in the GPU's proposed 2045 growth forecast. Mobile-source emissions were modeled based on the daily vehicle trips that would result from the proposed GPU. The net change in emissions of regulated air pollutants that would occur with implementation of the GPU was modeled using CalEEMod, V. 2022.1.1. The net change in operational emissions for the GPU was modeled based on the GPU's 2045 growth projection, using default data assumptions provided by CalEEMod, with the following project-specific modifications:

- **Area Sources:** Woodstoves and wood-burning fireplaces were removed pursuant to SCAQMD Rule 445. The default quantity of wood-burning fireplaces that was removed was then added to the default quantity of natural gas fireplaces assumed by CalEEMod.
- **Mobile Sources:** Mobile source operations were modified to be consistent with the proposed GPU's trip generation and VMT analyses (Fehr and Peers 2025):
 - **Trip Generation Rates:** The CalEEMod default weekday and weekend trip generation rates for each modeled land use type (e.g., low-rise apartments, strip retail, etc.) were modified to be consistent with the trip generation information provided by Fehr and Peers for the proposed GPU.
- **Trip Length:** The CalEEMod default trip length values were modified to be consistent with the VMT information provided by Fehr and Peers for the proposed GPU.

Refer to Attachment 1 for CalEEMod output files and detailed operational emissions estimates assumptions. The net increase in long-term operational emissions that would be generated by GPU growth is shown in Table 4-4. The net change in emissions evaluated in this EIR is based on the difference between the existing land uses under future year 2045 conditions and the proposed GPU land uses under 2045 growth conditions.

Table 4-4: 2045 Project Growth Forecast Operational Emissions (Unmitigated)

Emissions Scenario	Maximum Daily Pollutant Emissions					
	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Project Growth Forecast Operational Emissions in Year 2045 (Proposed GPU)						
Area Sources ^(A)	3,023	710	4,247	4.5	58	57
Energy Sources	31	537	309	3.4	42	42
Mobile Source	974	565	5,569	14	1,540	395
<i>Total^(B)</i>	4,029	1,812	10,125	22	1,641	494
Existing General Plan Land Uses Year 2045 Condition						
Area Sources	1,699	456	2,263	2.9	37	36
Energy Sources	17	286	140	1.8	23	23
Mobile Source	777	406	4,636	12	1,345	345
<i>Total^(B)</i>	2,493	1,148	7,039	17	1,405	404
Net Increase in Emissions Levels						
Area Sources	1,324	254	1,984	2	21	21
Energy Sources	14	251	169	2	19	19
Mobile Source	197	159	933	2	195	50
<i>Total^(B)</i>	1,535	664	3,086	5	235	90
SCAQMD CEQA Threshold	55	55	550	150	150	55
Threshold Exceeded?	Yes	Yes	Yes	No	Yes	Yes
Source: MIG 2025 (see Attachment 1) and SCAQMD						
(A) Emissions estimated using CalEEMod, V 2022.1.1. Estimates are based on default model assumptions unless otherwise noted in this document. Maximum daily ROG, CO, SO _x , PM ₁₀ , and PM _{2.5} emissions occur during the summer. Maximum daily NO _x emissions occur during the winter.						
(B) Totals may not equal due to rounding.						

As shown in Table 4-4, maximum daily operational emissions associated with potential 2045 growth under the GPU exceed the SCAQMD's recommended regional pollutant thresholds for all pollutants except SO₂. Area sources (e.g., consumer products, gas fireplaces, and landscaping equipment) and mobile sources combined account for almost all net ROG, CO, PM₁₀, and PM_{2.5} emissions, and for approximately 62% of net NO_x emissions, that would occur under the implementation of the GPU, with the remaining 38% of net NO_x emissions attributable to energy sources (e.g., natural gas consumption). Area sources and mobile sources account for, respectively, approximately 87% and 12% of net ROG emissions, 39% and 23% of net NO_x emissions, 66% and 29% of net CO emissions, 9% and 82% of net PM₁₀ emissions, and 24% and 55% of net PM_{2.5} emissions. Whereas the increases in mobile source emissions are directly attributable to increases in VMT (associated with more people living and working within the Planning Area), the increases in area sources would be due to a combination of factors, including reapplication of architectural coatings and the use of consumer products (e.g., cleaning products), but is primarily due to increased emissions from natural gas hearths. Approximately 1% of the increase in maximum daily area source ROG emissions (14 out of 1,519 pounds per day), 93% of the increase in maximum daily area source NO_x emissions, 5% of the increase in maximum daily area source CO

emissions, and 90 to 92% of the increase in maximum daily area source PM₁₀ and PM_{2.5} emissions are associated with new natural gas hearths.

Emissions from mobile sources are expected to decrease over time, due to vehicle turnover, improvements in emissions technologies, and compliance with regulations. Additionally, the GPU contains policies that would reduce air pollution from passenger vehicles, (e.g., Policy COSP – 40: Encourage the use of sustainable vehicles, Policy PSNAQ-66: Promote the development of climate-resilient public transportation systems, biking lanes, and walkable areas, Policy PSNAQ-109: Encourage investment in low-carbon public transportation systems, PRO-PSNAQ-117: Encourage investment in low-carbon public transportation systems). See Appendix A for a description of the GPU policies most directly related to air quality.

Nevertheless, the South Coast Air Basin is designated nonattainment for national and state ozone standards, and NO_x and ROG are ozone precursor pollutants. Additionally, the Basin is in nonattainment for state PM₁₀ standards and national and state PM_{2.5} standards. This is considered a **potentially significant impact**.

4.3.2.1 Regional Operational Emissions Mitigation Measures

Operational emissions associated with future development under the proposed GPU would be reduced with implementation of Mitigation Measure AQ-2B, which would require the preparation of a project-specific air quality study prior to future development activities and mitigation incorporated into the project if emissions are shown to be above SCAQMD-recommended CEQA significance thresholds.

Mitigation Measure AIR-2B: Require a Project-level Operational Air Quality Assessment for New Discretionary Development Projects. Prior to a discretionary approval by the City for development projects subject to CEQA (meaning non-exempt CEQA projects) project applicants shall prepare and submit a technical assessment evaluating potential project-specific operation air quality impacts to the City for review and approval. The evaluation shall be prepared in conformance with South Coast Air Quality Management District (SCAQMD) methodology in assessing air quality impacts. If operation-related air pollutants are determined to have the potential to exceed the SCAQMD's adopted thresholds of significance, the City shall require that applicants for new development projects incorporate strategies to reduce air pollutant emissions during operational activities. The specific strategies identified for a project shall be included as conditions of project approval, and be incorporated into all appropriate planning documents for the project. Potential strategies to reduce operational emissions include, but are not limited to the following:

- Reducing vehicle trips or vehicle miles travelled (VMT) generated by residential and non-residential projects.
 - Reducing or eliminating new natural gas fireplaces and hearths in residential projects.
 - Reducing or eliminating new natural gas appliances in residential and non-residential projects.
 - Reducing or prohibiting gasoline-powered landscaping equipment in residential and non-residential projects.
 - Incorporating clean of air vehicle parking, bicycle parking, and electric vehicle and truck charging infrastructure that meets the additional, voluntary standards established in the
-

version of the CALGreen code in effect at the time the building permit application is submitted for a project.

- Incorporating appropriate transit-supporting infrastructure into site plans.

4.3.2.2 Regional Operational Emissions Impact Conclusion

The above analysis indicates that the operational emissions associated with future development activities facilitated under implementation of the proposed GPU could exceed SCAQMD-recommended CEQA significance thresholds for regional criteria air pollutant emissions. For this reason, the proposed GPU's regional operational emissions would remain a **significant and unavoidable impact** even with the incorporation of feasible mitigation measures.

4.4 SENSITIVE RECEPTORS AND SUBSTANTIAL POLLUTANT CONCENTRATIONS

Growth projected to occur under the GPU could expose existing and new sensitive receptors to substantial concentrations of criteria air pollutants and TAC emissions that pose adverse health effects. The potential for the proposed GPU to expose sensitive receptors to substantial pollutant concentrations is evaluated below.

4.4.1 OFF-SITE CARBON MONOXIDE HOTSPOTS

Based on the vehicle trip generation and VMT information provided by Fehr and Peers for the proposed GPU the estimated maximum number of vehicles moving through any road segment under the GPU's 2045 growth project would be approximately 6,828 vehicles per hour (Fehr and Peers 2025). This level of traffic is substantially below the significance threshold of 8,000 vehicles per hour for a CO hotspot analysis (see Section 4.1.3). The proposed GPU, therefore, would not contribute to off-site traffic volumes that could cause or significantly contribute to CO concentrations that exceed State or Federal ambient air quality standards for CO. This impact would be **less than significant**.

4.4.2 CONSTRUCTION EMISSIONS

As discussed under Section 4.4, future development activities facilitated under implementation of the proposed GPU would generate emissions, including emissions of DPM (a TAC), during construction activities. These emissions would occur intermittently over the approximately 20-year growth period associated with the GPU. Although specific details regarding project development within the Planning Area are not known at this time, it is possible that one or more projects developed under implementation of the proposed GPU could have the potential to exceed SCAQMD thresholds of significance for cancerogenic and non-cancerogenic health risks (see Section 4.1.4). This represents a potentially significant impact.

Despite the implementation of Mitigation Measure AQ-2A, which requires the preparation of project-specific air quality analysis prior to the construction of any new development and incorporation of mitigation if emissions levels are shown to be above SCAQMD-recommended thresholds of significance for cancerogenic and non-cancerogenic risks, as well as SCAQMD LSTs, it cannot be definitively known or stated at this time that all future development projects occurring under implementation of the proposed GPU would be able to reduce potential risks and localized construction air pollutant emissions to levels that are below SCAQMD thresholds. Therefore, with regard to localized criteria air pollutant and TAC emissions generated during future construction activities, this impact would be **significant and unavoidable** even with the incorporation of feasible mitigation measures.

4.4.3 OPERATIONAL EMISSIONS

In addition to criteria air pollutant emissions on a regional scale and TAC emissions on a local scale, receptor exposure to elevated concentrations of criteria air pollutants (e.g., CO, O₃, and PM) is capable of causing adverse health effects on heart, lung, and other organ systems. As described in Section 4.4, the proposed GPU would generate cumulatively considerable ROG and NO_x emissions, which are precursors for O₃, and for PM₁₀ and PM_{2.5} emissions – pollutants for which the region is designated nonattainment. However, operational emissions would not expose receptors to substantial operational pollutant concentrations, as described below.

In the amicus brief filed by the SCAQMD on the California Supreme Court's decision in *Sierra Club versus County of Fresno*, the SCAQMD noted that, "[it] takes a large amount of additional precursor emissions [e.g., NO_x] to cause a modeled increase in ambient ozone levels... a project emitting only 10 tons per year of NO_x or VOC is small enough that its regional impact on ambient ozone levels may not be detected in the regional air quality models used to determine ozone levels..." (SCAQMD 2015). Although implementation of the GPU is anticipated to increase ROG, NO_x, and PM emissions within the Planning Area and greater SCAG region, any analysis linking potential adverse health risks to corresponding pollutant concentrations would be speculative for several reasons.

First, to estimate potential adverse health effects from regional emissions, it is necessary to have information on the sources of the ozone and PM emissions, such as the location of emission points, velocity of emissions, the meteorology and topography of the area, and the location of receptors exposed to the emissions (SCAQMD 2015). While the general nature of the emissions sources occurring with implementation of the proposed GPU is known (i.e., area source, energy source, mobile source), the specific location of these sources within the Planning Area is not known, nor is other information, including source emission rate, exit velocity, operating characteristics (e.g., daytime or nighttime, seasonal or steady-state), etc.

Second, approximately 12 percent of the ROG emissions estimated to occur under net 2045 growth would be from mobile sources (i.e., vehicle trips) that would potentially travel on numerous local and regional roadways throughout the Planning Area and beyond that would be subject to varying meteorological and topographical influences. These emissions would be subject to small scale air patterns, such as those formed as wind passes between buildings and other anthropogenic features (e.g., cars), creating eddies and other turbulence that affect pollutant transport. The remaining approximately 88 percent of ROG emissions would be attributable to area sources, including hearths, consumer products, landscaping equipment, and architectural coatings. Area sources including hearths would vary in temporal and spatial distribution throughout the Planning Area. Furthermore, sources such as consumer products and architectural coatings may be used indoors as well as outdoors – the rate at which they are used, as well as operational characteristics of how they are used (e.g., windows opened or closed) – would affect the rate and manner that they are dispersed in accordance with wind circulation patterns in their vicinity.

Third, as mentioned previously, the SCAQMD has stated (SCAQMD 2015, pgs. 10-11): "For the so-called criteria pollutants, such as ozone, it may be more difficult to quantify health impacts . . . It takes time and the influence of meteorological conditions for these reactions to occur, so ozone may be formed at a distance downwind from the sources . . . Scientifically, health effects from ozone are correlated with increases in the ambient level of ozone in the air a person breathes . . . However, it takes a large amount of additional precursor emissions to cause a modeled increase in ambient ozone levels over an entire region. For example, the SCAQMD's 2012 AQMP [Air Quality Management Plan] showed that reducing NO_x by 432 tons per day (157,680 tons/year) and reducing VOC by 187 tons per day (68,255 tons/year) would

reduce ozone levels at the SCAQMD's monitor site with the highest levels by only 9 parts per billion. SCAQMD staff does not currently know of a way to accurately quantify ozone-related health impacts caused by NO_x or VOC emissions from relatively small projects." As noted previously, the total estimated increase in ROG emissions associated with implementation of the GPU is estimated to be approximately 1,519 pounds per day under unmitigated conditions, or approximately 0.5% of the ROG increase identified by the SCAQMD in its amicus brief filed on the California Supreme Court's decision in *Sierra Club versus County of Fresno*. As such, the increase in ROG emissions is anticipated to increase O₃ concentrations more likely in the parts per trillion range, rather than the parts per billion range. This is a magnitude of order less than the change identified by the SCAQMD.

Finally, adverse health effects associated with receptor exposure to criteria air pollutant concentrations is cumulative in nature. In other words, any potential health effects associated with the proposed GPU would also need to be considered in light of background pollutant emissions. As discussed previously, there are many efforts being undertaken at the state and regional level to reduce criteria air pollutant emissions from stationary and mobile sources. These actions are anticipated to reduce pollutant concentrations throughout the region over the next few decades. Therefore, even if the proposed GPU does increase emissions in and near the Planning Area, criteria air pollutant concentrations in the region could still be lower in the future than they are currently due to the advancement of cleaner technologies.

As described above, it would be speculative to transform the mass increase in VOC, NO_x, and PM emissions that could occur with implementation of the proposed GPU into quantifiable health risks for several specific reasons, including the uncertain location of emission points, velocity of emissions, the meteorology and topography of the area (which could affect the transport rate and photochemical reactions needed to produce ozone), background criteria air pollutant emissions in the future, and the location of receptors in relation to emission sources. However, given that the proposed GPU's operational emissions are far less than that modeled by the SCAQMD for its 2012 AQMP which showed a relatively minor decrease in criteria air pollutant concentrations for a large amount of mass emissions (see the above discussion related to the 2012 AQMP and *Sierra Club versus County of Fresno*), emissions associated with implementation of the proposed GPU would not expose sensitive receptors to substantial pollutant concentrations. This impact would be **less than significant**.

4.4.4 ADDITIONAL INFORMATION ON EXISTING SOURCES OF POLLUTANTS

The proposed GPU could result in new sensitive receptors being exposed to significant sources of TAC emissions. The CARB *Air Quality and Land Use Handbook* recommends avoiding the siting of new sensitive land uses (e.g., residences, schools, etc.) within:

- 300 feet of large gasoline fueling stations (with a throughput of more than 3.6 million gallons of gasoline per year);
- Within 300 feet of dry cleaning operations;
- Within 500 feet of freeways, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day; and
- Within 1,000 feet of a major rail service or maintenance yard.

A review for gas stations and dry cleaning facilities within the Planning Area indicates there may be approximately seven dry cleaning facilities and multiple gas station facilities located within the Planning Area. SR-74 and I-15 are also located within the Planning Area. There are existing residential receptors near these facilities, in some cases within 300 feet, and the proposed GPU may locate some new residences within 300 feet of these locations. However, the GPU emphasizes the importance of land use

planning to address pollution exposure, especially while developing business and downtown districts (e.g., EJ-3 which requires sensitive land uses to implement SCAQMD best practices, EJ-9 which involves designating acceptable and unacceptable industrial and diesel truck activities to limit impacts on DACs, and EJ-18, to integrate health, equity, and sustainability considerations into decision-making). The GPU also states that the City should continue to coordinate with local industrial businesses to mitigate environmental impacts and ensure continued compliance with State and federal environmental regulations.

As identified in Section 3.1, several census tracts within the Planning Area are considered disadvantaged communities based on the SB 535 scoring definition. The proposed GPU could result in the placement of additional, residential receptors within these census tracts that are exposed to high levels of pollution; however, as noted above, the City would implement various policies to help control existing sources of pollutants and reduce receptor exposure to those pollutants. Specifically, the proposed GPU includes policies related to reducing pollution from transportation sources through multi-modal transportation networks in long-term planning efforts and encouraging investment in public transportation systems such as electric buses and bike-sharing, as well as a policy to work with regional and state governments to develop effective mitigation measures to improve air quality (see Policies COSP – 40:, PRO-COSP – 51, . PSNAQ-66, PRO-PSNAQ-109, PRO-PSNAQ-117, and Policy PSNAQ-37):

4.5 ODORS

According to the SCAQMD *CEQA Air Quality Handbook*, land uses associated with odor complaints include agricultural operations, wastewater treatment plants, landfills, and certain industrial operations, such as manufacturing uses that produce chemicals, paper, etc. (e.g., asphalt batch plants, chemical manufacturing plants, composting/green waste facilities, painting/coating operations). The GPU does not propose such sources. Construction occurring within the Planning Area could produce odors from fuel combustion or solvents/paints used. These odors would be temporary, quickly disperse, and would not affect a substantial number of people. Under the 2045 growth projection, the GPU would increase the amount of residential and non-residential development in the city, including multi-family development that could be located close to retail, restaurant, and other commercial land uses that may generate localized sources of odors that may or may not be objectionable to nearby residential land uses; however, locating future receptors in proximity of sources of odors would not constitute a CEQA impact. The California Supreme Court in *California Building Industry Association v. Bay Area Air Quality Management District*, 62 Cal.4th 369 (2015) ruled that CEQA review is focused on a project's impact on the environment "and not the environment's impact on the project." Therefore, even if receptors are located in proximity of existing sources of odor, this would be a case of how the existing environment would impact the project, which is (generally) not an assessment required under CEQA.

The GPU does not in and of itself permit or authorize any new, major sources of potential odors (e.g., wastewater treatment plant), and odor impacts would be less than significant with standard environmental review practices. For these reasons, implementation of the proposed GPU would not generate unusual, atypical, or excessive odors that could affect a substantial number of people. This impact would be **less than significant**.

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5 REPORT PREPARERS AND REFERENCES

This report was prepared by MIG under contract to the City of Lake Elsinore. This report reflects the independent, objective, professional opinion of MIG. The following individuals were involved in the preparation and review of this report:

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ATTCHMENT 1
Operational Emissions Estimates

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