

5. Environmental Analysis

5.2 AIR QUALITY

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the Westminster General Plan Update (project) to impact or be impacted by air quality in the City of Westminster and its sphere of influence (SOI). This evaluation is based on the methodology recommended by the South Coast Air Quality Management District (SCAQMD). The analysis focuses on air pollution from regional emissions and localized pollutant concentrations. Transportation-sector impacts are based on vehicle miles traveled provided by Fehr and Peers (see Appendix I). Criteria air pollutant emissions modeling for the project is included in Appendix D of this DEIR. Cumulative impacts related to air quality are based on the regional boundaries of the South Coast Air Basin (SoCAB).

5.2.1 Environmental Setting

5.2.1.1 REGULATORY SETTING

Ambient air quality standards (AAQS) have been adopted at state and federal levels for criteria air pollutants. In addition, both the state and federal governments regulate the release of toxic air contaminants (TACs). The City of Westminster is in the SoCAB and is subject to the rules and regulations imposed by SCAQMD, the California AAQS adopted by the California Air Resources Board (CARB), and the National AAQS adopted by the United States Environmental Protection Agency (EPA). Federal, state, regional, and local laws, regulations, plans, or guidelines that are potentially applicable to the proposed project are summarized below.

Federal and State Laws

Ambient Air Quality Standards

The Clean Air Act was passed in 1963 by the U.S. Congress and has been amended several times. The 1970 Clean Air Act amendments strengthened previous legislation and laid the foundation for the regulatory scheme of the 1970s and 1980s. In 1977, Congress again added several provisions, including nonattainment requirements for areas not meeting National AAQS and the Prevention of Significant Deterioration program. The 1990 amendments are the latest in a series of federal efforts to regulate the protection of air quality in the United States. The Clean Air Act allows states to adopt more stringent standards or to include other pollution species. The California Clean Air Act, signed into law in 1988, requires all areas of the state to achieve and maintain the California AAQS by the earliest practical date. The California AAQS tend to be more restrictive than the National AAQS.

The National and California AAQS are the levels of air quality considered to provide a margin of safety in the protection of the public health and welfare. They are designed to protect “sensitive receptors” most susceptible to further respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

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Both California and the federal government have established health-based AAQS for seven air pollutants, which are shown in Table 5.2-1, *Ambient Air Quality Standards for Criteria Pollutants*. These pollutants are ozone (O₃), nitrogen dioxide (NO₂), carbon monoxide (CO), sulfur dioxide (SO₂), coarse inhalable particulate matter (PM₁₀), fine inhalable particulate matter (PM_{2.5}), and lead (Pb). In addition, the state has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety.

Table 5.2-1 Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	California Standard	Federal Primary Standard	Major Pollutant Sources
Ozone (O ₃)	1 hour	0.09 ppm	*	Motor vehicles, paints, coatings, and solvents.
	8 hours	0.070 ppm	0.070 ppm	
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9 ppm	
Nitrogen Dioxide (NO ₂)	Annual Average	0.030 ppm	0.053 ppm	Motor vehicles, petroleum-refining operations, industrial sources, aircraft, ships, and railroads.
	1 hour	0.18 ppm	0.100 ppm	
Sulfur Dioxide (SO ₂)	Annual Arithmetic Mean	*	*1	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	1 hour	0.25 ppm	0.075 ppm	
	24 hours	0.04 ppm	*1	
Respirable Particulate Matter (PM ₁₀)	Annual Arithmetic Mean	20 µg/m ³	*	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g. wind-raised dust and ocean sprays).
	24 hours	50 µg/m ³	150 µg/m ³	
Respirable Particulate Matter (PM _{2.5})	Annual Arithmetic Mean	12 µg/m ³	12 µg/m ³	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g. wind-raised dust and ocean sprays).
	24 hours	*	35 µg/m ³	
Lead (Pb)	30-Day Average	1.5 µg/m ³	*	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Calendar Quarterly	*	1.5 µg/m ³	
	Rolling 3-Month Average	*	0.15 µg/m ³	
Sulfates (SO ₄)	24 hours	25 µg/m ³	*	Industrial processes.

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Table 5.2-1 Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	California Standard	Federal Primary Standard	Major Pollutant Sources
Visibility Reducing Particles	8 hours	ExCo =0.23/km visibility of 10≥ miles	No Federal Standard	Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size, and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust, and salt.
Hydrogen Sulfide	1 hour	0.03 ppm	No Federal Standard	Hydrogen sulfide (H ₂ S) is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas, and can be emitted as the result of geothermal energy exploitation.
Vinyl Chloride	24 hour	0.01 ppm	No Federal Standard	Vinyl chloride (chloroethene), a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents.

Source: CARB 2015.

Notes: ppm: parts per million; µg/m³: micrograms per cubic meter

* Standard has not been established for this pollutant/duration by this entity.

¹ On June 2, 2010, a new 1-hour SO₂ standard was established, and the existing 24-hour and annual primary standards were revoked.

Air Pollutants of Concern

Criteria Air Pollutants

The pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and state law. Air pollutants are categorized as primary and/or secondary pollutants. Primary air pollutants are emitted directly from sources. Carbon monoxide (CO), volatile organic compounds (VOC), nitrogen oxides (NO_x), sulfur dioxide (SO₂), coarse inhalable particulate matter (PM₁₀), fine inhalable particulate matter (PM_{2.5}), and lead (Pb) are primary air pollutants. Of these, CO, SO₂, NO₂, PM₁₀, and PM_{2.5} are “criteria air pollutants,” which means that AAQS have been established for them. VOC and NO₂ are criteria pollutant precursors that form secondary criteria air pollutants through chemical and photochemical reactions in the atmosphere. Ozone (O₃) and nitrogen dioxide (NO₂) are the principal secondary pollutants.

A description of each of the primary and secondary criteria air pollutants and their known health effects is presented below.

- **Carbon Monoxide** is a colorless, odorless gas produced by incomplete combustion of carbon substances, such as gasoline or diesel fuel. CO is a primary criteria air pollutant. CO concentrations tend to be the highest during winter mornings with little to no wind, when surface-based inversions trap the pollutant at ground levels. The highest ambient CO concentrations are generally found near traffic-

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congested corridors and intersections. The primary adverse health effect associated with CO is interference with normal oxygen transfer to the blood, which may result in tissue oxygen deprivation (SCAQMD 2005; EPA 2016). The SoCAB is designated under the California and National AAQS as being in attainment of CO criteria levels (CARB 2014).

- **Volatile Organic Compounds** are composed primarily of hydrogen and carbon atoms. Internal combustion associated with motor vehicle usage is the major source of VOCs. Other sources of VOCs include evaporative emissions associated with paints and solvents, asphalt paving, and household consumer products such as aerosols (SCAQMD 2005). There are no ambient air quality standards established for VOCs. However, because they contribute to the formation of O₃, SCAQMD has established a significance threshold for this pollutant.
- **Nitrogen Oxides** are a by-product of fuel combustion and contribute to the formation of ground-level O₃, PM₁₀, and PM_{2.5}. The two major forms of NO_x are nitric oxide (NO) and nitrogen dioxide (NO₂). NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure. The principal form of NO₂ produced by combustion is NO, but NO reacts quickly with oxygen to form NO₂, creating the mixture of NO and NO₂ commonly called NO_x. NO₂ is an acute irritant and more injurious than NO in equal concentrations. At atmospheric concentrations, however, NO₂ is only potentially irritating. NO₂ absorbs blue light; the result is a brownish-red cast to the atmosphere and reduced visibility. NO₂ exposure concentrations near roadways are of particular concern for susceptible individuals, including asthmatics, children, and the elderly. Current scientific evidence links short-term NO₂ exposures, ranging from 30 minutes to 24 hours, with adverse respiratory effects, including airway inflammation in healthy people and increased respiratory symptoms in people with asthma. Also, studies show a connection between elevated short-term NO₂ concentrations and increased visits to emergency departments and hospital admissions for respiratory issues, especially asthma (SCAQMD 2005; EPA 2016). The SoCAB is designated as an attainment area for NO₂ under the National AAQS and California AAQS (CARB 2014).
- **Sulfur Dioxide** is a colorless, pungent, irritating gas formed by the combustion of sulfurous fossil fuels. It enters the atmosphere as a result of burning high-sulfur-content fuel oils and coal and chemical processes at plants and refineries. Gasoline and natural gas have very low sulfur content and do not release significant quantities of SO₂. When sulfur dioxide forms sulfates (SO₄) in the atmosphere, together these pollutants are referred to as sulfur oxides (SO_x). Thus, SO₂ is both a primary and secondary criteria air pollutant. At sufficiently high concentrations, SO₂ may irritate the upper respiratory tract. Current scientific evidence links short-term exposures to SO₂, ranging from 5 minutes to 24 hours, with an array of adverse respiratory effects, including bronchoconstriction and increased asthma symptoms. These effects are particularly adverse for asthmatics at elevated ventilation rates (e.g., while exercising or playing.) At lower concentrations and when combined with particulates, SO₂ may do greater harm by injuring lung tissue. Studies also show a connection between short-term exposure and increased visits to emergency facilities and hospital admissions for respiratory illnesses, particularly in at-risk populations such as children, the elderly, and asthmatics (SCAQMD 2005; EPA 2016). The SoCAB is designated as an attainment area for SO₂ under the California and National AAQS (CARB 2014).

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- **Suspended Particulate Matter** consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. Two forms of fine particulates are now recognized and regulated. Inhalable coarse particles, or PM₁₀, include particulate matter with an aerodynamic diameter of 10 microns or less (i.e., ≤10 millionths of a meter or 0.0004 inch). Inhalable fine particles, or PM_{2.5}, have an aerodynamic diameter of 2.5 microns or less (i.e., ≤2.5 millionths of a meter or 0.0001 inch). Particulate discharge into the atmosphere results primarily from industrial, agricultural, construction, and transportation activities. Both PM₁₀ and PM_{2.5} may adversely affect the human respiratory system, especially in people who are naturally sensitive or susceptible to breathing problems (SCAQMD 2005).

The EPA's scientific review concluded that PM_{2.5}, which penetrates deeply into the lungs, is more likely than PM₁₀ to contribute to health effects and at concentrations that extend well below those allowed by the current PM₁₀ standards. These health effects include premature death and increased hospital admissions and emergency room visits (primarily the elderly and individuals with cardiopulmonary disease); increased respiratory symptoms and disease (children and individuals with cardiopulmonary disease such as asthma); decreased lung functions (particularly in children and individuals with asthma); and alterations in lung tissue and structure and in respiratory tract defense mechanisms (SCAQMD 2005). There has been emerging evidence that even smaller particulates with an aerodynamic diameter of <0.1 microns or less (i.e., ≤0.1 millionths of a meter or <0.000004 inch), known as ultrafine particulates (UFPs), have human health implications, because UFPs toxic components may initiate or facilitate biological processes that may lead to adverse effects to the heart, lungs, and other organs (SCAQMD 2013). However, the EPA and CARB have not yet adopted AAQS to regulate these particulates. Diesel particulate matter (DPM) is classified by the CARB as a carcinogen (CARB 1998). Particulate matter can also cause environmental effects such as visibility impairment,¹ environmental damage,² and aesthetic damage³ (SCAQMD 2005; EPA 2016). The SoCAB is a nonattainment area for PM_{2.5} under California and National AAQS and a nonattainment area for PM₁₀ under the California AAQS (CARB 2014).⁴

- **Ozone** is commonly referred to as “smog” and is a gas that is formed when VOCs and NO_x, both by-products of internal combustion engine exhaust, undergo photochemical reactions in sunlight. O₃ is a secondary criteria air pollutant. O₃ concentrations are generally highest during the summer months when direct sunlight, light winds, and warm temperatures create favorable conditions for its formation. O₃ poses a health threat to those who already suffer from respiratory diseases as well as to healthy people. Breathing O₃ can trigger a variety of health problems, including chest pain, coughing, throat irritation, and congestion. It can worsen bronchitis, emphysema, and asthma. Ground-level O₃ also can reduce lung function and inflame the linings of the lungs. Repeated exposure may permanently scar lung tissue. O₃

¹ PM_{2.5} is the main cause of reduced visibility (haze) in parts of the United States.

² Particulate matter can be carried over long distances by wind and then settle on ground or water, making lakes and streams acidic; changing the nutrient balance in coastal waters and large river basins; depleting the nutrients in soil; damaging sensitive forests and farm crops; and affecting the diversity of ecosystems.

³ Particulate matter can stain and damage stone and other materials, including culturally important objects such as statues and monuments.

⁴ CARB approved the SCAQMD's request to redesignate the SoCAB from serious nonattainment for PM₁₀ to attainment for PM₁₀ under the National AAQS on March 25, 2010, because the SoCAB has not violated federal 24-hour PM₁₀ standards during the period from 2004 to 2007. In June 2013, the EPA approved the State of California's request to redesignate the PM₁₀ nonattainment area to attainment of the PM₁₀ National AAQS, effective on July 26, 2013.

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also affects sensitive vegetation and ecosystems, including forests, parks, wildlife refuges, and wilderness areas. In particular, O₃ harms sensitive vegetation, including forest trees and plants during the growing season (SCAQMD 2005; EPA 2016). The SoCAB is designated extreme nonattainment under the California AAQS (1-hour and 8-hour) and National AAQS (8-hour) (CARB 2014).

- **Lead** is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been mobile and industrial sources. As a result of the EPA's regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector dramatically declined by 95 percent between 1980 and 1999, and levels of lead in the air decreased by 94 percent between 1980 and 1999. Today, the highest levels of lead in air are usually found near lead smelters. The major sources of lead emissions today are ore and metals processing and piston-engine aircraft operating on leaded aviation gasoline. Once taken into the body, lead distributes throughout the body in the blood and accumulates in the bones. Depending on the level of exposure, lead can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems, and the cardiovascular system. Lead exposure also affects the oxygen-carrying capacity of the blood. The lead effects most commonly encountered in current populations are neurological effects in children and cardiovascular effects in adults (e.g., high blood pressure and heart disease). Infants and young children are especially sensitive to even low levels of lead, which may contribute to behavioral problems, learning deficits, and lowered IQ (SCAQMD 2005; EPA 2016). However, in 2008 the EPA and CARB adopted stricter lead standards, and special monitoring sites immediately downwind of lead sources recorded very localized violations of the new state and federal standards.⁵ As a result of these violations, the Los Angeles County portion of the SoCAB is designated nonattainment under the National AAQS for lead (SCAQMD 2012a, CARB 2014). Because emissions of lead are found only in projects that are permitted by SCAQMD, lead is not a pollutant of concern for the proposed project.

Toxic Air Contaminants

Public exposure to TACs is a significant environmental health issue in California. In 1983, the California legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health. The California Health and Safety Code defines a TAC as “an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health” (HSC § 39655). A substance that is listed as a hazardous air pollutant pursuant to Section 112(b) of the federal Clean Air Act (42 U.S. Code § 7412[b]) is a TAC. Under state law, the California Environmental Protection Agency, acting through CARB, is authorized to identify a substance as a TAC if it is an air pollutant that may cause or contribute to an increase in mortality or serious illness, or may pose a present or potential hazard to human health.

California regulates TACs primarily through AB 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics “Hot Spot” Information and Assessment Act of 1987). The Tanner Air Toxics Act set up a formal procedure for

⁵ Source-oriented monitors record concentrations of lead at lead-related industrial facilities in the SoCAB, which include Exide Technologies in the City of Commerce; Quemetco, Inc., in the City of Industry; Trojan Battery Company in Santa Fe Springs; and Exide Technologies in Vernon. Monitoring conducted between 2004 through 2007 showed that the Trojan Battery Company and Exide Technologies exceed the federal standards (SCAQMD 2012a).

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CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an “airborne toxics control measure” for sources that emit that TAC. If there is a safe threshold for a substance (i.e., a point below which there is no toxic effect), the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology to minimize emissions. To date, CARB has established formal control measures for 11 TACs that are identified as having no safe threshold.

Air toxics from stationary sources are also regulated in California under the Air Toxics “Hot Spot” Information and Assessment Act of 1987. Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High priority facilities are required to perform a health risk assessment, and if specific thresholds are exceeded, are required to communicate the results to the public through notices and public meetings.

By the last update to the TAC list in December 1999, CARB had designated 244 compounds as TACs (CARB 1999). Additionally, CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. The majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being particulate matter from diesel-fueled engines.

In 1998, CARB identified DPM as a TAC. Previously, the individual chemical compounds in diesel exhaust were considered TACs. Almost all diesel exhaust particles are 10 microns or less in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lungs.

Multiple Air Toxics Exposure Study IV

The Multiple Air Toxics Exposure Study (MATES) is a monitoring and evaluation study on ambient concentrations of TACs and estimated the potential health risks from air toxics in the SoCAB. In 2008, SCAQMD conducted its third update to the MATES study (MATES III). The results showed that the overall risk for excess cancer from a lifetime exposure to ambient levels of air toxics was about 1,200 in a million. The largest contributor to this risk was diesel exhaust, accounting for 84 percent of the cancer risk (SCAQMD 2008a).

SCAQMD recently released the fourth update (MATES IV). The results showed that the overall monitored risk for excess cancer from a lifetime exposure to ambient levels of air toxics decreased to approximately 418 in one million. Compared to the 2008 MATES III, monitored excess cancer risks decreased by approximately 65 percent. Approximately 90 percent of the risk is attributed to mobile sources, and 10 percent is attributed to TACs from stationary sources, such as refineries, metal processing facilities, gas stations, and chrome plating facilities. The largest contributor to this risk was diesel exhaust, accounting for approximately 68 percent of the air toxics risk. Compared to MATES III, MATES IV found substantial improvement in air quality and associated decrease in air toxics exposure. As a result, the estimated basinwide population-weighted risk decreased by approximately 57 percent compared to the analysis done for the MATES III time period (SCAQMD 2015a).

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The Office of Environmental Health Hazard Assessment updated the guidelines for estimating cancer risks on March 6, 2015. The new method utilizes higher estimates of cancer potency during early life exposures, which result in a higher calculation of risk. There are also differences in the assumptions on breathing rates and length of residential exposures. When combined together, SCAQMD estimates that risks for a given inhalation exposure level will be about 2.7 times higher using the proposed updated methods identified in MATES IV (e.g., 2.7 times higher than 418 in one million overall excess cancer risk) (SCAQMD 2015a).

Local

Air Quality Management Planning

SCAQMD is the agency responsible for ensuring that the National and California AAQS are attained and maintained in the SoCAB. SCAQMD is responsible for preparing the air quality management plan (AQMP) for the SoCAB in coordination with the Southern California Association of Governments (SCAG). Since 1979, a number of AQMPs have been prepared.

2012 AQMP

On December 7, 2012, SCAQMD adopted the 2012 AQMP, which employs the most up-to-date science and analytical tools and incorporates a comprehensive strategy aimed at controlling pollution from all sources, including stationary sources, on- and off-road mobile sources, and area sources. It also addresses several state and federal planning requirements, incorporating new scientific information, primarily in the form of updated emissions inventories, ambient measurements, and new meteorological air quality models. The 2012 AQMP builds upon the approach identified in the 2007 AQMP for attainment of federal PM and ozone standards and highlights the significant amount of reductions needed. It also highlights the urgent need to engage in interagency coordinated planning to identify additional strategies, especially in the area of mobile sources, to meet all federal criteria air pollutant standards within the time frames allowed under the Clean Air Act. The 2012 AQMP demonstrates attainment of the federal 24-hour PM_{2.5} standard by 2014 and the federal 8-hour ozone standard by 2023.⁶ It includes an update to the revised EPA 8-hour ozone control plan with new commitments for short-term NO_x and VOC reductions. The plan also identifies emerging issues—ultrafine particulate matter (PM_{1.0}), near-roadway exposure, and an analysis of energy supply and demand.

2016 Draft AQMP

The SCAQMD is in the process of updating the AQMP. The 2016 AQMP will address strategies and measures to attain the 2008 federal 8-hour ozone standard by 2032, the 2012 federal annual PM_{2.5} standard by 2021 to 2025, and the 2006 federal 24-hour PM_{2.5} standard by 2019. The 2016 AQMP will also take an initial look at the 2015 federal 8-hour ozone standard. It will update previous attainment plans for ozone and PM_{2.5} that have not yet been met (SCAQMD 2016).

⁶ Preliminary ambient air quality data suggests that meeting the 2014 deadline for federal 24-hour PM_{2.5} standards is not likely, largely due to the extreme drought conditions in the SoCAB (SCAQMD 2015b).

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Lead State Implementation Plan

In 2008 the EPA designated the Los Angeles County portion of the SoCAB as a nonattainment area under the federal lead classification due to the addition of source-specific monitoring under the new federal regulation. This designation was based on two source-specific monitors in Vernon and in the City of Industry exceeding the new standard in the 2007 to 2009 period. The remainder of the SoCAB outside the Los Angeles County nonattainment area remains in attainment of the new standard. On May 24, 2012, CARB approved the State Implementation Plan (SIP) revision for the federal lead standard, which the EPA revised in 2008. Lead concentrations in this nonattainment area have been below the level of the federal standard since December 2011. The SIP revision was submitted to the EPA for approval.

5.2.1.2 EXISTING CONDITIONS

South Coast Air Basin

The project site is in the SoCAB, which includes all of Orange County and the nondesert portions of Los Angeles, Riverside, and San Bernardino counties. The SoCAB is in a coastal plain with connecting broad valleys and low hills and is bounded by the Pacific Ocean in the southwest, with high mountains forming the remainder of the perimeter. The general region lies in the semipermanent high-pressure zone of the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. This usually mild weather pattern is interrupted infrequently by periods of extremely hot weather, winter storms, and Santa Ana winds (SCAQMD 2005).

Temperature and Precipitation

The annual average temperature varies little throughout the SoCAB, ranging from the low to middle 60s in degrees Fahrenheit (°F). With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. The climatological station that best represents the climatological conditions in the City is the Santa Ana Fire Station Monitoring Station (ID 04788). The average low is reported at 43.1°F in January, and the average high is 84.7°F in August (WRCC 2016).

In contrast to a very steady pattern of temperature, rainfall is seasonally and annually highly variable. Almost all rain falls from November through May. Rainfall averages 13.69 inches per year in the City (WRCC 2016).

Humidity

Although the SoCAB has a semiarid climate, the air near the earth's surface is typically moist because of a shallow marine layer. This "ocean effect" is dominant except for infrequent periods when dry, continental air is brought into the SoCAB by offshore winds. Periods of heavy fog are frequent, especially along the coast. Low clouds, often referred to as high fog, are a characteristic climatic feature. Annual average humidity is 70 percent at the coast and 57 percent in the eastern portions of the SoCAB (SCAQMD 2005).

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Wind

Wind patterns across the southern coastal region are characterized by westerly or southwesterly onshore winds during the day and easterly or northeasterly breezes at night. Wind speed is somewhat greater during the dry summer months than during the rainy winter season.

Between periods of wind, periods of air stagnation may occur in the morning and evening hours. Air stagnation is one of the critical determinants of air quality conditions on any given day. During the winter and fall months, surface high-pressure systems over the SoCAB, combined with other meteorological conditions, can result in very strong, downslope Santa Ana winds. These winds normally continue a few days before predominant meteorological conditions are reestablished.

The mountain ranges to the east inhibit the eastward transport and diffusion of pollutants. Air quality in the SoCAB generally ranges from fair to poor and is similar to air quality in most of coastal southern California. The entire region experiences heavy concentrations of air pollutants during prolonged periods of stable atmospheric conditions (SCAQMD 2005).

Inversions

In conjunction with the two characteristic wind patterns that affect the rate and orientation of horizontal pollutant transport, two distinct types of temperature inversions control the vertical depth through which pollutants are mixed. These inversions are the marine/subsidence inversion and the radiation inversion. The height of the base of the inversion at any given time is known as the “mixing height.” The combination of winds and inversions are critical determinants in leading to the highly degraded air quality in summer and the generally good air quality in the winter in the project area (SCAQMD 2005).

SoCAB Area Designations

The AQMP provides the framework for air quality basins to achieve attainment of the state and federal ambient air quality standards through the SIP. Areas are classified as attainment or nonattainment areas for particular pollutants depending on whether they meet the ambient air quality standards. Severity classifications for ozone nonattainment range in magnitude from marginal, moderate, and serious to severe and extreme.

- **Unclassified:** A pollutant is designated unclassified if the data are incomplete and do not support a designation of attainment or nonattainment.
- **Attainment:** A pollutant is in attainment if the AAQS for that pollutant was not violated at any site in the area during a three-year period.
- **Nonattainment:** A pollutant is in nonattainment if there was at least one violation of an AAQS for that pollutant in the area.

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- **Nonattainment/Transitional:** A subcategory of the nonattainment designation. An area is designated nonattainment/transitional to signify that the area is close to attaining the AAQS for that pollutant.

The attainment status for the SoCAB is shown in Table 5.2-2, *Attainment Status of Criteria Pollutants in the South Coast Air Basin*. The SoCAB is designated in attainment of the California AAQS for CO, NO₂, SO₂, and lead.

Table 5.2-2 Attainment Status of Criteria Pollutants in the South Coast Air Basin

Pollutant	State	Federal
Ozone – 1-hour	Extreme Nonattainment	No Federal Standard
Ozone – 8-hour	Extreme Nonattainment	Extreme Nonattainment ¹
PM ₁₀	Serious Nonattainment	Attainment/Maintenance ²
PM _{2.5}	Nonattainment	Nonattainment
CO	Attainment	Attainment
NO ₂	Attainment	Attainment/Maintenance
SO ₂	Attainment	Attainment
Lead	Attainment	Nonattainment (Los Angeles County only) ³
All others	Attainment/Unclassified	Attainment/Unclassified

Source: CARB 2014.

¹ SCAQMD's petition for Extreme Nonattainment designation was granted.

² Annual standard revoked September 2006. CARB approved the SCAQMD's request to redesignate the SoCAB from serious nonattainment for PM₁₀ to attainment for PM₁₀ under the National AAQS on March 25, 2010, because the SoCAB did not violate federal 24-hour PM₁₀ standards from 2004 to 2007. In June 2013, the EPA approved the State of California's request to redesignate the South Coast PM₁₀ nonattainment area to attainment of the PM₁₀ National AAQS, effective on July 26, 2013.

³ In 2010, the Los Angeles portion of the SoCAB was designated nonattainment for lead under the new federal and existing state AAQS as a result of large industrial emitters. Remaining areas within the SoCAB are unclassified.

Existing Ambient Air Quality

Existing levels of ambient air quality and historical trends and projections for the City are best documented by measurements made by SCAQMD. The City is wholly within Source Receptor Area 17, Central Orange County. The Anaheim-Pampas Lane Monitoring Station best represents the ambient air quality within the City. Because this station does not monitor SO₂, data from the Costa Mesa-Mesa Verde Monitoring Station was obtained. Data from these stations are summarized in Table 5.2-3, *Ambient Air Quality Monitoring Summary*. The data show that the area regularly exceeds the state and federal eight-hour O₃ standards and the state one-hour standard. The state PM₁₀ and federal PM_{2.5} standards are also regularly exceeded. The CO, SO₂, and NO₂ standards have not been exceeded in the last five years in the project vicinity.

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Table 5.2-3 Ambient Air Quality Monitoring Summary

Pollutant/Standard	Number of Days Thresholds Were Exceeded and Maximum Levels				
	2011	2012	2013	2014	2015
Ozone (O₃)¹					
State 1-Hour ≥ 0.09 ppm (days exceed threshold)	0	0	0	2	1
State 8-hour ≥ 0.07 ppm (days exceed threshold)	0	0	0	6	1
Federal 8-Hour > 0.075 ppm (days exceed threshold) ³	1	0	0	4	1
Max. 1-Hour Conc. (ppm)	0.088	0.079	0.084	0.111	0.100
Max. 8-Hour Conc. (ppm)	0.072	0.067	0.070	0.081	0.080
Carbon Monoxide (CO)¹					
State 8-Hour > 9.0 ppm (days exceed threshold)	0	0	*	*	*
Federal 8-Hour ≥ 9.0 ppm (days exceed threshold)	0	0	*	*	*
Max. 8-Hour Conc. (ppm)	2.08	2.34	*	*	*
Nitrogen Dioxide (NO₂)¹					
State 1-Hour ≥ 0.18 ppm (days exceed threshold)	0	0	0	0	0
Max. 1-Hour Conc. (ppb)	0.0738	0.0673	0.0815	0.0758	.0591
Sulfur Dioxide (SO₂)²					
State 24-Hour ≥ 0.04 ppm (days exceed threshold)	0	0	0	*	*
Federal 24-Hour ≥ 0.14 ppm (days exceed threshold)	0	0	0	*	*
Max 24-Hour Conc. (ppm)	0.002	0.001	0.001	*	*
Coarse Particulates (PM₁₀)¹					
State 24-Hour > 50 µg/m ³ (days exceed threshold)	2	0	1	2	1
Federal 24-Hour > 150 µg/m ³ (days exceed threshold)	0	0	0	0	0
Max. 24-Hour Conc. (µg/m ³)	53.0	48.0	77.0	85.0	59.0
Fine Particulates (PM_{2.5})¹					
Federal 24-Hour > 35 µg/m ³ (days exceed threshold)	2	4	1	6	3
Max. 24-Hour Conc. (µg/m ³)	39.2	50.1	37.8	56.2	45.8

Source: CARB 2016.

Notes: ppm: parts per million; parts per billion, µg/m³: micrograms per cubic meter

* Data not available.

¹ Data obtained from the Anaheim-Pampas Lane Monitoring Station.

² Data obtained from the Costa Mesa-Mesa Verde Monitoring Station.

³ On October 1, 2015 the EPA adopted a new 8-hour National ambient air quality standards (AAQS) for ozone of 0.070 ppm (70 ppb).

Existing Emissions

Table 5.2-4, *Existing City of Westminster Regional Criteria Air Pollutant Emissions Inventory*, identifies the existing criteria air pollutant emissions inventory of the City of Westminster using emission rates for year 2015 (current conditions) and year 2035 (future conditions). The inventories are based on existing land uses in the City. The Year 2015 inventory represents the projected emissions currently generated by existing land uses using the baseline year 2015 emission factors for on-road vehicles. The Year 2035 inventory represents the projected emissions that the existing land uses would generate in the future utilizing year 2035 emission factors for on-road vehicles. To isolate the impacts related to the change in land uses proposed by the project, emissions related to the proposed project will be based on the difference in emissions generated by the existing and proposed land uses under year 2035 conditions. This approach is taken because existing land uses would be subject to regulations that come into effect in the future that reduce mobile-source emissions. Thus,

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the level of emissions the existing land uses generate today would not be generated in perpetuity, but would be affected by these state regulations.

Table 5.2-4 Existing City of Westminster Regional Criteria Air Pollutant Emissions Inventory

Sector	Criteria Air Pollutant Emissions (pounds per day)					
	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Year 2015						
Transportation (2015 emission factors) ¹	144	1,061	4,299	11	53	79
Energy (natural gas use)	41	354	194	2	28	28
Area – Landscaping/ Consumer Products ²	344	4,966	155	<1	20	19
Area – Construction ²	53	367	350	1	21	20
Existing Land Uses Total	582	6,748	4,997	15	122	147
Year 2035						
Transportation (2035 emissions factors) ¹	41	206	1,315	8	176	72
Energy	41	354	194	2	28	28
Area – Landscaping/ Consumer Products ²	344	4,966	155	<1	20	19
Area – Construction ²	53	367	350	1	21	20
Existing Land Uses Total	479	5,892	2,014	11	244	140

Sources:

¹ EMFAC2014, Version 1.0.7, based on daily VMT provided by Fehr & Peers. Transportation sector includes the full trip length for internal-internal trips and 50 percent trip length for external-internal/internal-external trips. VMT per year based on a conversion of VMT x 347 days per year to account for less travel on weekend, consistent with CARB statewide GHG emissions inventory methodology (CARB 2008).

² OFFROAD2007. Estimated based on population (Landscaping) and employment (Light Commercial Equipment) for Westminster as a percentage of Orange County. Estimated based on housing permit data for Orange County and Westminster from the US Census. Daily off-road construction emissions multiplied by 347 days/year to account for reduced/limited construction activity on weekends and holidays. Excludes fugitive emissions from construction sites and wood-burning fireplaces. Various industrial and commercial processes (e.g., manufacturing, dry cleaning) allowed under the Land Use Plan of the proposed General Plan Update would require permitting and would be subject to further study pursuant to SCAQMD Regulation XIII, New Source Review. Because the nature of those emissions cannot be determined at this time and are subject to further regulation and permitting, they would be speculative and are not included in the table.

Criteria air pollutant emissions generated within the City were estimated using EMFAC2014, OFFROAD2007, and data provided by SoCal Gas for natural gas use. Emissions within the City of Westminster come from the following sources:

- **Transportation:** Emissions from vehicle trips beginning and ending within the City (i.e., internal/internal vehicle trips) and from trips that either begin or end within the City, but not both (i.e., external/internal vehicle trips).
- **Area Sources:** Emissions from lawn and garden equipment use, commercial equipment use, and construction equipment use.
- **Energy:** Emissions generated from natural gas consumption used for cooking and heating in the City.

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Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardiorespiratory diseases.

Residential areas are also considered sensitive receptors to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Other sensitive receptors include retirement facilities, hospitals, and schools. Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods are generally short, exercise places a high demand on respiratory functions, which can be impaired by air pollution. In addition, noticeable air pollution can detract from the enjoyment of recreation. Industrial, commercial, retail, and office areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent, because the majority of the workers tend to stay indoors most of the time. In addition, the working population is generally the healthiest segment of the public.

5.2.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- AQ-1 Conflict with or obstruct implementation of the applicable air quality plan.
- AQ-2 Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
- AQ-3 Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).
- AQ-4 Expose sensitive receptors to substantial pollutant concentrations.
- AQ-5 Create objectionable odors affecting a substantial number of people.

Under the California Supreme Court's decision in *California Building Industry Association v. Bay Area Air Quality Management District* (2015) (*CBLA v. BAAQMD*), the court held in general that evaluation of impacts of the environment on a project is not within the purview of CEQA. However, three exceptions to this general ruling were established. The first pertains to where specific statutes exist requiring assessing impacts of the environment on a project (e.g., Public Resources Code § 21151.8 and Education Code § 17213 require a health risk assessment to evaluate carcinogenic risk to the students and staff of proposed schools from sources within a quarter mile of the site). The second exception pertains to where development of a project would exacerbate an existing onsite hazardous condition (e.g., developing a project that would disturb and release an existing onsite toxic by-product onto the project site and surrounding environment). The third exception pertains to specific instances involving development of a project within a floodplain, coastline, or

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wildfire risk area as “identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas.”

Threshold AQ-4 focuses on whether a project would expose receptors to substantial pollutant concentrations. It can be interpreted to refer not only to localized impacts of a project on the environmental, but also impacts of the existing environment on a project. However, per *CBLA v. BAAQMD*, the analysis under the latter interpretation is no longer under the purview of CEQA. Thus, discussion regarding potential air quality impacts from siting of new projects near to existing sources is omitted from this chapter.

5.2.2.1 SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT THRESHOLDS

The analysis of the proposed project’s air quality impacts follows the guidance and methodologies recommended in SCAQMD’s *CEQA Air Quality Handbook* and the significance thresholds on SCAQMD’s website.⁷ CEQA allows the significance criteria established by the applicable air quality management or air pollution control district to be used to assess impacts of a project on air quality. SCAQMD has established thresholds of significance for regional air quality emissions for construction activities and project operation. In addition to the daily thresholds, projects are also subject to the AAQS. These are addressed through an analysis of localized CO impacts and localized significance thresholds (LSTs).

Regional Significance Thresholds

SCAQMD has adopted regional construction and operational emissions thresholds to determine a project’s cumulative impact on air quality in the SoCAB, shown in Table 5.2-5, *SCAQMD Regional Significance Thresholds*. The table lists thresholds that are applicable for all projects uniformly, regardless of size or scope. There is growing evidence that although UFPs contribute a very small portion of the overall atmospheric mass concentration, they represent a greater proportion of the health risk from PM. However, the EPA and CARB have not adopted AAQS to regulate UFPs; therefore, SCAQMD has not developed thresholds for them.

Table 5.2-5 SCAQMD Regional Significance Thresholds

Air Pollutant	Construction Phase	Operational Phase
Reactive Organic Gases (ROGs)/ Volatile Organic Compounds (VOCs)	75 lbs/day	55 lbs/day
Nitrogen Oxides (NO _x)	100 lbs/day	55 lbs/day
Carbon Monoxide (CO)	550 lbs/day	550 lbs/day
Sulfur Oxides (SO _x)	150 lbs/day	150 lbs/day
Particulates (PM ₁₀)	150 lbs/day	150 lbs/day
Particulates (PM _{2.5})	55 lbs/day	55 lbs/day

Source: SCAQMD 2015c.

Projects that exceed the regional significance threshold contribute to the nonattainment designation of the SoCAB. The attainment designations are based on the AAQS, which are set at levels of exposure that are

⁷ SCAQMD’s Air Quality Significance Thresholds are current as of March 2015 and can be found here: <http://www.aqmd.gov/ceqa/hdbk.html>.

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determined to not result in adverse health effects. Exposure to fine particulate pollution and ozone causes myriad health impacts, particularly to the respiratory and cardiovascular systems:

- Increases cancer risk (PM_{2.5}, TACs)
- Aggravates respiratory disease (O₃, PM_{2.5})
- Increases bronchitis (O₃, PM_{2.5})
- Causes chest discomfort, throat irritation, and increased effort to take a deep breath (O₃)
- Reduces resistance to infections and increases fatigue (O₃)
- Reduces lung growth in children (PM_{2.5})
- Contributes to heart disease and heart attacks (PM_{2.5})
- Contributes to premature death (O₃, PM_{2.5})
- Contributes to lower birth weight in newborns (PM_{2.5}) (SCAQMD 2015d)

Exposure to fine particulates and ozone aggravates asthma attacks and can amplify other lung ailments such as emphysema and chronic obstructive pulmonary disease. Exposure to current levels of PM_{2.5} is responsible for an estimated 4,300 cardiopulmonary-related deaths per year in the SoCAB. In addition, University of Southern California scientists, in a landmark children's health study, found that lung growth improved as air pollution declined for children aged 11 to 15 in five communities in the SoCAB (SCAQMD 2015e).

Mass emissions in Table 5.2-5 are not correlated with concentrations of air pollutants but contribute to the cumulative air quality impacts in the SoCAB. Therefore, regional emissions from a single project do not single-handedly trigger a regional health impact, and it is speculative to identify how many more individuals in the air basin would be affected by the health effects listed above. In addition, the analysis to determine how exceeding the regional thresholds would affect the number of days the region is in nonattainment is within the scope of the AQMP. SCAQMD is the primary agency responsible for ensuring the health and welfare of sensitive individuals exposed to elevated concentrations of air pollutants in the SoCAB. To achieve the health-based standards established by the EPA, SCAQMD prepares an AQMP that details regional programs to attain the AAQS.

CO Hotspots

Areas of vehicle congestion have the potential to create pockets of CO called hotspots. These pockets have the potential to exceed the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm. Because CO is produced in greatest quantities from vehicle combustion and does not readily disperse into the atmosphere, adherence to ambient air quality standards is typically demonstrated through an analysis of localized CO concentrations. Hotspots are typically produced at intersections, where traffic congestion is highest because vehicles queue for longer periods and are subject to reduced speeds. With the turnover of older vehicles and introduction of cleaner fuels as well as implementation of control technology on industrial facilities, CO concentrations in the SoCAB and the state have steadily declined.

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Localized Significance Thresholds

SCAQMD developed LSTs to determine if emissions of NO₂, CO, PM₁₀, or PM_{2.5} generated at a project site (offsite mobile-source emissions are not included the LST analysis) would expose sensitive receptors to substantial concentrations of criteria air pollutants. LSTs are the maximum emissions at a project site that are not expected to cause or contribute to an exceedance of the most stringent federal or state AAQS. LSTs are based on the ambient concentrations of that pollutant within the project source receptor area and the distance to the nearest sensitive receptor. LST analysis for construction is applicable to all projects of five acres or less; however, it can be used to screen larger projects to determine whether or not dispersion modeling may be required. Table 5.2-6, *SCAQMD Localized Significance Thresholds*, shows the localized significance thresholds for projects in the SoCAB.

Table 5.2-6 SCAQMD Localized Significance Thresholds

Air Pollutant (Relevant AAQS)	Concentration
1-Hour CO Standard (CAAQS)	20 ppm
8-Hour CO Standard (CAAQS)	9.0 ppm
1-Hour NO ₂ Standard (CAAQS)	0.18 ppm
Annual NO ₂ Standard (CAAQS)	0.03 ppm
24-Hour PM ₁₀ Standard – Construction (SCAQMD) ¹	10.4 µg/m ³
24-Hour PM _{2.5} Standard – Construction (SCAQMD) ¹	10.4 µg/m ³
24-Hour PM ₁₀ Standard – Operation (SCAQMD) ¹	2.5 µg/m ³
24-Hour PM _{2.5} Standard – Operation (SCAQMD) ¹	2.5 µg/m ³
Annual Average PM ₁₀ Standard (SCAQMD) ¹	1.0 µg/m ³

Source: SCAQMD 2015c.

ppm – parts per million; µg/m³ – micrograms per cubic meter

¹ Threshold is based on SCAQMD Rule 403. Since the SoCAB is in nonattainment for PM₁₀ and PM_{2.5}, the threshold is established as an allowable change in concentration. Therefore, background concentration is irrelevant.

Health Risk Thresholds

Whenever a project would require use of chemical compounds that have been identified in SCAQMD Rule 1401, placed on CARB’s air toxics list pursuant to AB 1807, or placed on the EPA’s National Emissions Standards for Hazardous Air Pollutants, a health risk assessment is required by the SCAQMD. Table 5.2-7, *SCAQMD Toxic Air Contaminants Incremental Risk Thresholds*, lists the SCAQMD’s TAC incremental risk thresholds for operation of a project. Residential, commercial, and office uses do not use substantial quantities of TACs, and these thresholds typically apply to new industrial projects.

Table 5.2-7 SCAQMD Toxic Air Contaminants Incremental Risk Thresholds

Maximum Incremental Cancer Risk	≥ 10 in 1 million
Cancer Burden (in areas ≥ 1 in 1 million)	> 0.5 excess cancer cases
Hazard Index (project increment)	≥ 1.0

Source: SCAQMD 2015c.

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Per the ruling in *CBLA v BAAQMD*, CEQA does not require an EIR to analyze the environmental effects of attracting development and people to an area. However, the EIR must analyze the impacts of environmental hazards on future users when the proposed project exacerbates an existing environmental hazard or condition. Residential, commercial, and office uses do not use substantial quantities of TACs and typically do not exacerbate existing hazards; therefore, these thresholds are typically applied to new industrial projects.

5.2.3 Environmental Impacts

Methodology

This air quality evaluation was prepared in accordance with the requirements of CEQA to determine if significant air quality impacts are likely to occur in conjunction with future development that would be accommodated by the General Plan Update. SCAQMD has published the *CEQA Air Quality Handbook* (Handbook) and updates on its website that are intended to provide local governments with guidance for analyzing and mitigating project-specific air quality impacts. The Handbook provides standards, methodologies, and procedures for conducting air quality analyses in EIRs, and they were used in this analysis. The City's criteria air pollutant emissions inventory includes the following sectors:

- **Transportation:** Transportation emissions forecasts were modeled using CARB's EMFAC2014, version 1.0.7. Model runs were based on daily per-capita vehicle miles traveled (VMT) data provided by Fehr & Peers (see Appendix I of this EIR) and 2015 (existing) and 2035 emission rates. The VMT provided includes the full trip length for land uses in the City (origin-destination approach) and a 50 percent reduction in the trip length for external-internal/internal-external trips.
- **Energy:** Natural gas use for residential, nonresidential, and municipal land uses in the City was modeled using data provided by SoCal Gas for years 2012 to 2014. Forecasts are adjusted for increases in population and employment in the City and SOI.
- **Area Sources:** OFFROAD2007 was used to estimate criteria air pollutant emissions from landscaping equipment, light commercial equipment, and construction equipment in the City. OFFROAD2007 is a database of equipment use and associated emissions for each county compiled by CARB. Annual emissions were compiled using OFFROAD2007 for the County of Orange for year 2015. In order to determine the percentage of emissions attributable to the City of Westminster, landscaping and light commercial equipment are estimated based on population (landscaping) and employment (light commercial equipment) for the City of Westminster as a percentage of Orange County. Construction equipment use is estimated based on building permit data for the City of Westminster and County of Orange from data compiled by the US Census. Daily off-road construction emissions are multiplied by 347 days per year to account for reduced/limited construction activity on weekends and holidays. Forecasts are adjusted for increases in population and employment in the City, with the exception of construction activities, which assumes that construction emissions for the forecast year would be similar to historical levels. Area sources exclude emissions from fireplaces and consumer products in the City.

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The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.2-1: The proposed General Plan Update would be inconsistent with the SCAQMD Air Quality Management Plan (AQMP) because buildout of the General Plan land use plan would exceed the growth projections assumed in the AQMP and would cumulatively contribute to the nonattainment designations of the SoCAB. [Threshold AQ-1]

Impact Analysis: The following describes potential air quality impacts of consistency with the AQMP from the implementation of the project.

CEQA requires that general plans be evaluated for consistency with the air quality management plan(s). A consistency determination plays an important role in local agency project review by linking local planning and individual projects to the air quality management plan(s). It fulfills the CEQA goal of informing decision makers of the environmental efforts of the project under consideration early enough to ensure that air quality concerns are fully addressed. It also provides the local agency with ongoing information as to whether they are contributing to clean air goals in the air quality management plan(s). Only new or amended general plan elements, specific plans, and major projects need to undergo a consistency review. This is because the air quality management plan strategy is based on projections from local general plans.

SCAQMD considers a project consistent with the air quality management plan if it is consistent with the existing land use plan. Zoning changes, specific plans, general plan amendments, and similar land use plan changes that do not increase dwelling unit density, vehicle trips, or vehicle miles traveled are deemed to not exceed this threshold (SCAQMD 1993).

The AQMP is based on projections in population, employment, and VMT in the SoCAB region projected by SCAG. The 2012–2035 Regional Transportation Plan / Sustainable Communities Strategy is partially based on the existing general plan land use designations. Thus, in general, the land use designations of a general plan form, in part, the foundation for the emissions inventory for the SoCAB in the AQMP. Table 5.2-8, *Comparison of Population, Employment, and VMT Forecasts in the City of Westminster and SOI*, compares the General Plan Update to the current General Plan, which was used for regional air quality management planning. As shown in the table, buildout of the project would increase population and employment for the City of Westminster and SOI compared to the current General Plan, resulting in an increase in service population and VMT.

Table 5.2-8 Comparison of Population, Employment, and VMT Forecasts in the City of Westminster and SOI

Scenario	Population	Employment	Service Population (SP)	Daily VMT ¹
Current General Plan	104,492	30,390	134,882	1,779,677
General Plan Update	118,463	39,407	157,870	2,082,988
General Plan Update – Change from Current General Plan	13,971	9,017	22,988	303,311

¹ Based on the VMT per capita for cumulative year 2035 with project conditions, as determined by Fehr and Peers.

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Although individual development projects would be consistent with the control measures/regulations identified in SCAQMD's 2012 AQMP, Table 5.2-8 shows that the project would generate more growth for the City of Westminster and SOI than the current General Plan. As identified in Table 5.2-8, the project would not be consistent with the AQMP because buildout of the City of Westminster and SOI under the project would exceed the forecasts in the current AQMP. Once the General Plan Update is adopted and the next iteration of the AQMP is revised, SCAG and SCAQMD will incorporate the growth projections associated with buildout of the proposed land use plan in their regional planning projections, and the General Plan Update would be consistent with the AQMP. In addition, the proposed land use plan (see Figure 3-4) would increase density and mixed-use development and would therefore be consistent with regional goals of improving transportation and land-use planning. However, since full buildout associated with the General Plan Update is not currently included in the emissions inventory for the SoCAB, the project would be considered inconsistent with the SCAQMD's AQMP, resulting in a significant impact.

Impact 5.2-2: Construction activities associated with buildout of the proposed General Plan Update could generate short-term emissions that exceed the SCAQMD'S significance thresholds for all the criteria air pollutants and would cumulatively contribute to the nonattainment designations of the SoCAB. [Thresholds AQ-2 and AQ-3]

Impact Analysis: Construction activities associated with the proposed land use plan would occur over the buildout horizon of the General Plan Update, causing short-term emissions of criteria air pollutants. The primary source of NO_x, CO, and SO_x emissions is the operation of construction equipment. The primary sources of particulate matter (PM₁₀ and PM_{2.5}) emissions are activities that disturb the soil, such as grading and excavation, road construction, and building demolition and construction. The primary source of VOC emissions is the application of architectural coating and off-gas emissions associated with asphalt paving. A discussion of health impacts associated with air pollutant emissions generated by construction activities is included in section 5.2.1, *Environmental Setting, Air Pollutants of Concern*.

Information regarding specific development projects, soil types, and the locations of receptors would be needed in order to quantify the level of impact associated with construction activity. Due to the scale of development activity associated with buildout of the proposed land use plan, emissions would likely exceed the SCAQMD regional significance thresholds. In accordance with the SCAQMD methodology, emissions that exceed the regional significance thresholds would cumulatively contribute to the nonattainment designations of the SoCAB. The SoCAB is designated nonattainment for O₃ and particulate matter (PM₁₀ and PM_{2.5}). Emissions of VOC and NO_x are precursors to the formation of O₃. In addition, NO_x is a precursor to the formation of particulate matter (PM₁₀ and PM_{2.5}). Therefore, the project would cumulatively contribute to the nonattainment designations of the SoCAB for O₃ and particulate matter (PM₁₀ and PM_{2.5}). Air quality emissions related to construction must be addressed on a project-by-project basis.

For this broad-based policy General Plan Update, it is not possible to determine whether the scale and phasing of individual projects would exceed the SCAQMD's short-term regional or localized construction emissions thresholds. In addition to regulatory measures (e.g., SCAQMD Rule 201 for a permit to operate, Rule 403 for fugitive dust control, Rule 1113 for architectural coatings, Rule 1403 for new source review, and CARB's Airborne Toxic Control Measures), mitigation imposed at the project level may include extension of

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construction schedules and/or use of special equipment. Nevertheless, the likely scale and extent of construction activities associated with the proposed General Plan Update would likely continue to exceed the relevant SCAQMD thresholds for some projects. Therefore, construction-related air quality impacts of developments associated with the proposed General Land Use Plan would be significant.

It should be noted that the amount of emissions from a project does not necessarily correspond to the concentrations of air pollutants. The concentration is required to calculate health risk from project implementation. Projects that exceed the regional significance thresholds will contribute to the current nonattainment designation for ozone and particulate matter. Because the nonattainment designation is based on the AAQS, which are set at levels of exposure that are determined to result in adverse health, the proposed General Plan Update would cumulatively contribute to health impacts within the SoCAB. However, since it is not possible to translate the amount of emissions to a particular concentration, it is not possible to calculate the risk factor for a particular health effect. Known health effects related to ozone include worsening of bronchitis, asthma, and emphysema and a decrease in lung function. Particulate matter can also lead to a variety of health effects in people. These include premature death of people with heart or lung disease, heart attacks, irregular heartbeat, decreased lung function, and increased respiratory symptoms.

Regional emissions contribute to these known health effects. The SCAQMD is the primary agency responsible for ensuring the health and welfare of sensitive individuals to elevated concentrations of air quality in the SoCAB. To achieve the health-based standards established by the EPA, the SCAQMD prepares an AQMP that details regional programs to attain the AAQS. However, because cumulative development within the City of Westminster would exceed the regional significance thresholds, the project could contribute to an increase in health effects in the basin until the attainment standards are met in the SoCAB. In addition to the AQMPs, the SCAQMD has also developed and released the LSTs to address impacts from criteria air pollutants at a more localized level (discussed in Impact 5.2-4).

Impact 5.2-3: Buildout in accordance with the proposed General Plan Update would generate long-term emissions that would exceed SCAQMD's regional significance thresholds and cumulatively contribute to the nonattainment designations of the SoCAB. [Thresholds AQ-2 and AQ-3]

Impact Analysis: For the purpose of the following analysis, it is important to note that, per the requirements of CEQA, this analysis is based on a comparison of the proposed General Plan Update land-use map to existing land uses and not to the current General Plan land-use map.

It is also important to note that the proposed General Plan Update is a regulatory document that sets up the framework for growth and development and does not directly result in development. Before development can occur, it is required to be analyzed for conformance with the General Plan, zoning requirements, and other applicable local and state requirements; comply with the requirements of CEQA; and obtain all necessary clearances and permits.

The proposed General Plan Update guides growth and development within the City of Westminster by designating land uses in the proposed land use plan and through implementation of its goals and policies. New development would increase air pollutant emissions in the City and contribute to the overall emissions inventory in the SoCAB. A discussion of health impacts associated with air pollutant emissions generated by

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operational activities is included in the *Air Pollutants of Concern* discussion in section 5.2-1, *Environmental Setting*.

City of Westminster Emissions Inventory

The emissions inventory for the City under the proposed General Plan Update is shown in Table 5.2-9, *Buildout Year 2035 City of Westminster Regional Criteria Air Pollutant Emissions Inventory*. As shown in the table, implementation of the proposed General Plan Update would result in an increase in criteria air pollutant emissions from existing conditions. This increase is based on the difference between existing land uses and land uses associated with buildout of the proposed General Plan Update as well as an estimate of population employment in the City in year 2035.

Table 5.2-9 Buildout Year 2035 City of Westminster Regional Criteria Air Pollutant Emissions Inventory

Sector	Criteria Air Pollutant Emissions (pounds per day)					
	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Existing Land Uses – Year 2035						
Transportation ¹	41	206	1,315	8	176	72
Energy	41	354	194	2	28	28
Area – Landscaping/ Consumer Products ²	344	4,966	155	<1	20	19
Area – Construction ²	53	367	350	1	21	20
Existing Land Uses Total	479	5,892	2,014	11	244	140
Proposed Land Use Plan – Forecast Year 2035						
Transportation ¹	56	283	1,812	11	242	99
Energy	57	501	288	3	40	40
Area – Landscaping/ Consumer Products ²	491	7,293	244	1	30	30
Area – Construction ²	53	367	350	1	21	20
Proposed Land Use Plan Total	657	8,444	2,694	16	333	189
Increase in Emissions	179	2,553	680	4	89	49
SCAQMD Regional Significance Threshold	55	55	550	150	150	55
Significant?	Yes	Yes	Yes	No	No	Yes

Note: Emissions forecasts estimated based on changes in population (residential energy, area), employment (nonresidential energy, area), or service population (transportation).

¹ EMFAC2014, Version 1.0.7, based on daily VMT provided by Fehr & Peers. Transportation sector includes the full trip length for internal-internal trips and 50 percent trip length for external-internal/internal-external trips. VMT per year based on a conversion of VMT x 347 days per year to account for less travel on weekend, consistent with CARB statewide GHG emissions inventory methodology (CARB 2008).

² OFFROAD2007. Estimated based on population (Landscaping) and employment (Light Commercial Equipment) for Westminster as a percentage of Orange County. Construction emissions estimated based on housing permit data for Orange County and Westminster from the US Census. Excludes fugitive emissions from construction sites and wood-burning fireplaces. Various industrial and commercial processes (e.g., manufacturing and dry cleaning) allowed under the Land Use Plan of the proposed General Plan Update would require permitting and would be subject to further study pursuant to SCAQMD Regulation XIII, New Source Review. Because the nature of those emissions cannot be determined at this time and they are subject to further regulation and permitting, they are not included in the table.

Buildout of the proposed General Plan Update would generate long-term emissions that exceed the daily SCAQMD thresholds for VOC, NO_x, CO, and PM_{2.5}. Emissions of VOC and NO_x are precursors to the formation of O₃. In addition, NO_x is a precursor to the formation of particulate matter (PM₁₀ and PM_{2.5}). Therefore, emissions of VOC and NO_x that exceed the SCAQMD regional significance thresholds would

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contribute to the O₃ nonattainment designation of the SoCAB. In addition, emissions of NO_x, and PM_{2.5} that exceed the SCAQMD regional significance threshold would also contribute to the particulate matter (PM₁₀ and PM_{2.5}) nonattainment designation of the SoCAB.

Implementation of the proposed General Plan policies would reduce air quality emissions. Many of these policies promote an increase in concepts and designs that would increase walking, bicycling, and use of public transit, which would contribute to reduced VMT (e.g., Complete Street Policy M-1.8, Active Transit Policies M-2.1 to M-2.8, and Transit Policies M-3.1 to M-3.7). In addition, policies within Goal PHS-7, such as PHS-7.2, PHS-7.3, PHS-7.4, PHS-7.6, and PHS-7.7, would contribute to reducing overall criteria air pollutant emissions from mobile and area sources. Policy PHS-7.8 calls for the reduction and conservation of energy usage in public buildings and facilities and residential and non-residential buildings through the adoption of building codes, promotion of energy-saving technology, and utilization of alternative forms of energy. Lastly, Policy INR-5.7 supports equipping municipal fleet vehicles with enhanced emission controls and purchasing new fleet vehicles that use clean alternative fuels. However, future development projects could exceed the SCAQMD regional emissions thresholds. Therefore, operational air quality impacts associated with future development of the proposed General Plan Update would be significant.

The amount of emissions from a project does not necessarily correspond to the concentrations of air pollutants. Projects that exceed the regional significance threshold contribute to the nonattainment designation. Because the attainment designation is based on the AAQS, which are set at levels of exposure that are determined to not result in adverse health, the proposed General Plan Update would cumulatively contribute to health impacts within the SoCAB. Known health effects related to ozone include worsening of bronchitis, asthma, and emphysema and decreases in lung function. Particulate matter can also lead to a variety of health effects. These include premature death of people with heart or lung disease, heart attacks, irregular heartbeat, decreased lung function, and increased respiratory symptoms.

The SCAQMD is the primary agency responsible for ensuring the health and welfare of sensitive individuals to elevated concentrations of air quality in the SoCAB. To achieve the health-based standards established by the EPA, the SCAQMD prepares an AQMP that details regional programs to attain the AAQS. However, because cumulative development within the City of Westminster would exceed the regional significance thresholds, the project could contribute to an increase in health effects in the basin until the attainment standards are met in the SoCAB. In addition to the AQMP, the SCAQMD has also developed and released LSTs to address impacts from criteria air pollutants at a more localized level (discussed in Impact 5.2-4).

Impact 5.2-4: Industrial and SCAQMD-permitted commercial land uses associated with buildout of the proposed General Plan Update could expose sensitive receptors to substantial concentrations of criteria air pollutants and toxic air contaminants. [Threshold AQ-4]

Impact Analysis: Operation of new land uses consistent with the land use plan of the proposed General Plan Update would generate new sources of criteria air pollutant and TACs in the City from area/stationary sources and mobile sources.

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Toxic Air Contaminants

Permitted Stationary Sources

Various industrial and commercial processes (e.g., manufacturing, dry cleaning) allowed under the proposed General Plan would be expected to release TACs. Industrial land uses, such as chemical processing facilities, chrome-plating facilities, dry cleaners, and gasoline-dispensing facilities, have the potential to be substantial stationary sources that would require a permit from SCAQMD. Emissions of TACs would be controlled by SCAQMD through permitting and would be subject to further study and health risk assessment prior to the issuance of any necessary air quality permits under SCAQMD Rule 1401. Until specific future projects are proposed, the associated emissions cannot be determined or modeled at this time. Implementation of the General Plan Update may result in projects that emit TACs throughout the City and SOI, which is a significant impact.

Non-permitted Sources

In addition, mobile sources of TACs are not regulated by SCAQMD. New warehousing operations permitted within the proposed areas designated Industrial and Urban Industrial could generate substantial diesel particulate matter emissions from off-road equipment use and truck idling. In addition, some warehousing and industrial facilities may use transport refrigeration units (TRUs) for cold storage. New land uses in the City of Westminster that are permitted under the proposed General Plan Update that use trucks, including trucks with TRUs, could generate an increase in diesel particulate matter that would contribute to cancer and noncancer health risk in the SoCAB. These types of facilities could also generate particulate matter (PM₁₀ and PM_{2.5}) that could cause an exceedance or contribute to the continuing exceedance of the federal and state AAQS. These new land uses could be near existing sensitive receptors within and outside the City of Westminster and SOI. As shown in Figure 3-4, the areas designated Industrial and Urban Industrial throughout the City are in close proximity or adjacent to areas designated for residential use. In addition, trucks would travel on regional transportation routes through the SoCAB, contributing to near-roadway diesel particulate matter concentrations. Therefore, health risk impacts from development of industrial and commercial land uses are considered significant and unavoidable.

Localized Significance Thresholds

LSTs are the amount of project-related emissions at which localized concentrations (ppm or µg/m³) could exceed the AAQS for criteria air pollutants for which the SoCAB is designated nonattainment. Per the LST methodology, information regarding specific development projects and the locations of receptors would be needed in order to quantify the levels of impact associated with future development projects. Thus, because the proposed General Plan Update is a broad-based policy plan, it is not possible to calculate individual project-related emissions at this time. Nevertheless, because of the likely scale of future development that would be accommodated by the project, at least some projects would likely exceed the AAQS. This is considered a significant impact of the project.

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CO Hotspots

Areas of vehicle congestion have the potential to create pockets of CO called hotspots. These pockets have the potential to exceed the state one-hour standard of 20 parts per million (ppm) or the eight-hour standard of 9.0 ppm. Because CO is produced in greatest quantities from vehicle combustion and does not readily disperse into the atmosphere, adherence to ambient air quality standards is typically demonstrated through an analysis of localized CO concentrations. Hotspots are typically produced at intersections, where traffic congestion is highest because vehicles queue for longer periods and are subject to reduced speeds. Typically, for an intersection to exhibit a significant CO concentration, it would need operate at level of service (LOS) E or worse without improvements (Caltrans 1997).

However, at the time of the 1993 Handbook, the SoCAB was designated nonattainment under the California AAQS and National AAQS for CO. With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations in the SoCAB and in the state have steadily declined. In 2007, the SoCAB was designated in attainment for CO under both the California AAQS and National AAQS. The CO hotspot analysis conducted for the attainment by SCAQMD did not predict a violation of CO standards at the busiest intersections in Los Angeles during the peak morning and afternoon periods.⁸ As identified in SCAQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan), peak carbon monoxide concentrations in the SoCAB in previous years, prior to redesignation, were a result of unusual meteorological and topographical conditions and not of congestion at a particular intersection. Under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (BAAQMD 2011). Buildout of the proposed General Plan Update would not produce the volume of traffic required to generate a CO hotspot. Therefore, CO hotspots are not an environmental impact of concern for the proposed project.

Impact 5.2-5: Industrial and SCAQMD-permitted land uses associated with buildout of the proposed General Plan Update would have the potential to create objectionable odors that could affect a substantial number of people. [Threshold AQ-5]

Impact Analysis: Growth within the City of Westminster could generate new sources of odors. Nuisance odors from land uses in the SoCAB are regulated under SCAQMD Rule 402, Nuisance, which states:

A person shall not discharge from any source whatsoever such 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. The provisions of this rule shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

⁸ The four intersections were: Long Beach Boulevard and Imperial Highway; Wilshire Boulevard and Veteran Avenue; Sunset Boulevard and Highland Avenue; and La Cienega Boulevard and Century Boulevard. The busiest intersection evaluated (Wilshire and Veteran) had a daily traffic volume of approximately 100,000 vehicles per day with LOS E in the morning peak hour and LOS F in the evening peak hour.

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Industrial and SCAQMD Permitted Land Uses

Industrial land uses have the potential to generate objectionable odors. Examples of industrial projects are wastewater treatment plants, compost facilities, landfills, solid-waste transfer stations, fiberglass manufacturing facilities, paint/coating operations (e.g., auto body shops), dairy farms, petroleum refineries, asphalt batch manufacturing plants, chemical manufacturing, and food manufacturing facilities. Areas where these types of uses could be developed would be generally limited to the areas designated Industrial and Urban Industrial and to Mixed Use Little Saigon. While industrial land uses associated with the proposed General Plan Update would be required to comply with SCAQMD Rule 402, additional measures may be necessary to prevent an odor nuisance. Therefore, industrial land uses associated with the General Plan Update may generate potentially significant odor impacts to a substantial number of people.

Residential and Commercial Land Uses

Residential and commercial land uses could result in generation of odors such as exhaust from landscaping equipment. However, unlike industrial land uses, these are not considered potential generators of odor that could affect a substantial number of people. Therefore, impacts from potential odors generated from residential and commercial land uses associated with the General Plan Update are considered less than significant.

Construction

During construction activities, construction equipment exhaust and application of asphalt and architectural coatings would temporarily generate odors. Any construction-related odor emissions would be temporary and intermittent. Additionally, noxious odors would be confined to the immediate vicinity of the construction equipment. By the time such emissions reached any sensitive receptor sites, they would be diluted to well below any level of air quality concern. Furthermore, short-term construction-related odors are expected to cease upon the drying or hardening of odor-producing materials. Therefore, impacts associated with construction-generated odors are considered less than significant.

5.2.4 General Plan Update Goals and Policies

Public Health and Safety Element

- Goal PHS-7: Air Quality
 - PHS-7.1: Integrated Planning
 - PHS-7.2: GHG Emissions
 - PHS-7.3: Regional Coordination
 - PHS-7.4: Air Quality Monitoring
 - PHS-7.5: Sensitive Receptors
 - PHS-7.6: Construction Activities
 - PHS-7.7: Airborne Pollutants and Noxious Odors

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- PHS-7.8: Energy Efficiency

Mobility Element

- Goal M-1: Complete Streets
 - M-1.1: Priority Travel Modes
 - M-1.2: Agency Coordination
 - M-1.3: Level of Service
 - M-1.4: Multi-modal Level of Service
 - M-1.6: Funding
 - M-1.7: Future Improvements
 - M-1.8: Residential Streets
 - M-1.9: Traffic Calming Tools
 - M-1.10: Truck Routes
- Goal M-2: Active Transit
 - M-2.1: Facility Enhancement
 - M-2.2: Street Retrofits
 - M-2.3: Development Projects
 - M-2.4: Agency Cooperation
 - M-2.5: Safe Routes to School
 - M-2.6: Accessibility Standards
 - M-2.7: Regional Bike Routes
 - M-2.8: Intersection and Signal Enhancements
- Goal M-3: Transit
 - M-3.1: Local Service
 - M-3.2: Regional Service
 - M-3.3: First-Mile/Last-Mile
 - M-3.4: Park-Ride Lots
 - M-3.5: Bus Stops
 - M-3.6: Funding
 - M-3.7: Fixed-Transit Guideway
- Goal M-5: Transportation Management
 - M-5.1: Transportation Demand Management
 - M-5.2: Transportation System Management

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Infrastructure and Natural Resources Element

- Goal INR-5: Natural Resources and Conservation (Energy Resources)
 - INR-5.7: Energy Plan
 - INR-5.8: Energy Efficient Building and Site Design
 - INR-5.9: Community Education
 - INR-5.10: Alternative Energy and Fuel Efficient Fleet
 - INR-5.11: Green Buildings

5.2.5 Existing Regulations and Standard Conditions

State

- CARB Rule 2480 (13 CCR 2480): Airborne Toxics Control Measure to Limit School Bus Idling and Idling at Schools: limits nonessential idling for commercial trucks and school buses within 100 feet of a school.
- CARB Rule 2485(13 CCR 2485): Airborne Toxic Control Measure to Limit Diesel-Fuel Commercial Vehicle Idling: limits nonessential idling to five minutes or less for commercial trucks.
- CARB Rule 2449(13 CCR 2449): In-Use Off-Road Diesel Idling Restricts: limits nonessential idling to five minutes or less for diesel-powered off-road equipment.
- Building Energy Efficiency Standards (Title 24)
- Appliance Energy Efficiency Standards (Title 20)
- Motor Vehicle Standards (AB 1493)

Regional (Air District)

- SCAQMD Rule 201: Permit to Construct
- SCAQMD Rule 402: Nuisance Odors
- SCAQMD Rule 403: Fugitive Dust
- SCAQMD Rule 1113: Architectural Coatings
- SCAQMD Rule 1186: Street Sweeping
- SCAQMD Rule 1403: Asbestos Emissions from Demolition/Renovation Activities

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5.2.6 Level of Significance Before Mitigation

Without mitigation, these impacts would be **potentially significant**:

- **Impact 5.2-1** The proposed General Plan Update would be inconsistent with the SCAQMD Air Quality Management Plan (AQMP) since buildout of the General Land Use Plan would exceed the growth projections assumed for the AQMP and would cumulatively contribute to the nonattainment designations of the SoCAB.
- **Impact 5.2-2** Construction activities associated with buildout of the proposed General Plan Update could generate short-term emissions that exceed the SCAQMD'S significance thresholds for all the criteria air pollutants and would cumulatively contribute to the nonattainment designations of the SoCAB.
- **Impact 5.2-3** Buildout in accordance with the proposed General Plan Update would generate long-term emissions that would exceed SCAQMD'S regional significance thresholds for all the criteria air pollutants and cumulatively contribute to the nonattainment designations of the SoCAB.
- **Impact 5.2-4** Industrial and SCAQMD permitted commercial land uses associated with buildout of the proposed General Plan Update could expose sensitive receptors to substantial concentrations of criteria air pollutants and toxic air contaminants.
- **Impact 5.2-5** Industrial and SCAQMD permitted land uses associated with buildout of the proposed General Plan Update would have the potential to create objectionable odors that could affect a substantial number of people.

5.2.7 Mitigation Measures

Impact 5.2-1

When incorporated into future development projects for operation and construction phases, mitigation measures for Impacts 5.2-2 and 5.2-3, described below, would contribute to reduced criteria air pollutant emissions associated with buildout of the proposed General Plan Update. Goals and policies included in the proposed General Plan Update would promote increased capacity for alternative transportation modes and implementation of transportation demand management strategies. However, no further mitigation measures are available that would reduce impacts to below SCAQMD significance thresholds. In addition, the population and employment assumptions of the AQMP would still be exceeded.

Impact 5.2-2

AQ-1 Prior to issuance of any construction permits, development project applicants shall prepare and submit to the City of Westminster Planning Division a technical assessment evaluating potential project construction-related air quality impacts. The evaluation shall be prepared in

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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-adopted thresholds of significance, the City of Westminster Planning Division shall require that applicants for new development projects incorporate mitigation measures to reduce air pollutant emissions during construction activities. These identified measures shall be incorporated into all appropriate construction documents (e.g., construction management plans) submitted to the City and shall be verified by the City's Planning Division. Mitigation measures to reduce construction-related emissions include, but are not limited to:

- Requiring fugitive-dust control measures that exceed SCAQMD's Rule 403, such as:
 - Use of nontoxic soil stabilizers to reduce wind erosion.
 - Applying water every four hours to active soil-disturbing activities.
 - Tarping and/or maintaining a minimum of 24 inches of freeboard on trucks hauling dirt, sand, soil, or other loose materials.
- Using construction equipment rated by the United States Environmental Protection Agency as having Tier 3 (model year 2006 or newer) or Tier 4 (model year 2008 or newer) emission limits, applicable for engines between 50 and 750 horsepower.
- Ensuring that construction equipment is properly serviced and maintained to the manufacturer's standards.
- Limiting nonessential idling of construction equipment to no more than five consecutive minutes.
- Using Super-Compliant VOC paints for coating of architectural surfaces whenever possible. A list of Super-Compliant architectural coating manufactures can be found on the SCAQMD's website at http://www.aqmd.gov/prdas/brochures/Super-Compliant_AIM.pdf.

Impact 5.2-3

AQ-2

Prior to future discretionary project approval, development project applicants shall prepare and submit to the City of Westminster Planning Division a technical assessment evaluating potential project operation phase-related air quality impacts. 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-adopted thresholds of significance, the City of Westminster Planning Division shall require that applicants for new development projects incorporate mitigation measures to reduce air pollutant emissions during operational activities. The identified measures shall be included as part of the

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Standard Conditions of Approval. Below are possible mitigation measures to reduce long-term emissions:

- For site-specific development that requires refrigerated vehicles, the construction documents shall demonstrate an adequate number of electrical service connections at loading docks for plug-in of the anticipated number of refrigerated trailers to reduce idling time and emissions.
- Applicants for manufacturing and light industrial uses shall consider energy storage and combined heat and power in appropriate applications to optimize renewable energy generation systems and avoid peak energy use.
- Site-specific developments with truck delivery and loading areas and truck parking spaces shall include signage as a reminder to limit idling of vehicles while parked for loading/unloading in accordance with California Air Resources Board Rule 2845 (13 CCR Chapter 10 § 2485).
- Site-specific development shall demonstrate that an adequate number of electrical vehicle Level 2 charging stations are provided onsite. The location of the electrical outlets shall be specified on building plans, and proper installation shall be verified by the Building Division prior to issuance of a Certificate of Occupancy.
- Applicant-provided appliances shall be Energy Star appliances (e.g., dishwashers, refrigerators, clothes washers, and dryers). Installation of Energy Star appliances shall be verified by the Building & Safety Division during plan check.
- Applicants for future development projects along existing and planned transit routes shall coordinate with the City of Westminster and the Orange County Transit Authority to ensure that bus pads and shelters are incorporated, as appropriate.

Impact 5.2-4

Mitigation Measure AQ-1 would also be applicable in reducing construction-related LST impacts.

Review of projects by SCAQMD for permitted sources of air toxics would ensure health risks are minimized. The following mitigation measure would ensure that mobile sources of TACs not covered under SCAQMD permits are considered during subsequent project-level environmental review.

AQ-3 Prior to future discretionary project approval, applicants for new industrial or warehousing land uses that 1) have the potential to generate 100 or more diesel truck trips per day or have 40 or more trucks with operating diesel-powered transport refrigeration units, and 2) are within 1,000 feet of a sensitive land use (e.g., residential, schools, hospitals, or nursing homes), as measured from the property line of the project to the property line of the nearest sensitive use, shall submit a health risk assessment (HRA) to the City of Westminster Planning Division. The HRA shall be prepared in accordance with policies and procedures

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of the state Office of Environmental Health Hazard Assessment and the South Coast Air Quality Management District. If the HRA shows that the incremental cancer risk and/or noncancer hazard index exceeds the respective thresholds, as established by the SCAQMD at the time a project is considered, the applicant will be required to identify and demonstrate that best available control technologies for toxics (T-BACTs), including appropriate enforcement mechanisms, are capable of reducing potential cancer and noncancer risks to an acceptable level. T-BACTs may include, but are not limited to, restricting idling onsite or electrifying warehousing docks to reduce diesel particulate matter, or requiring use of newer equipment and/or vehicles. T-BACTs identified in the HRA shall be identified as mitigation measures in the environmental document and/or incorporated into the site plan.

Impact 5.2-5

AQ-4 Prior to future discretionary approval, if it is determined that a project has the potential to emit nuisance odors beyond the property line, an odor management plan shall be prepared by the project applicant, subject to review and approval by the Community Development Director or their designee. Facilities that have the potential to generate nuisance odors include but are not limited to:

- Wastewater treatment plants
- Composting, green waste, or recycling facilities
- Fiberglass manufacturing facilities
- Painting/coating operations
- Large-capacity coffee roasters
- Food-processing facilities

The odor management plan shall show compliance with the South Coast Air Quality Management District's Rule 402 for nuisance odors. The Odor Management Plan shall identify the best available control technologies for toxics (T-BACTs) that will be utilized to reduce potential odors to acceptable levels, including appropriate enforcement mechanisms. T-BACTs may include but are not limited to scrubbers (i.e., air pollution control devices) at the industrial facility. T-BACTs identified in the odor management plan shall be identified as mitigation measures in the environmental document and/or incorporated into the site plan.

5.2.8 Level of Significance After Mitigation

Impact 5.2-1

The proposed General Plan Update would be inconsistent with the SCAQMD AQMP because buildout of the proposed Land Use Plan would exceed the population and employment estimates assumed for the AQMP and would cumulatively contribute to the nonattainment designations of the SoCAB. Incorporation of Mitigation Measures AQ-1 and AQ-2 into future development projects for operation and construction phases described in Impacts 5.2-2 and 5.2-3, below, would contribute to reduced criteria air pollutant emissions

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associated with buildout of the proposed General Plan Update. Goals and policies included in the proposed General Plan Update would promote increased capacity for alternative transportation modes and implementation of transportation demand management strategies. However, due to the magnitude and scale of the land uses that would be developed, no mitigation measures are available that would reduce operation and construction impacts below SCAQMD thresholds. In addition, the population and employment assumptions of the AQMP would still be exceeded until the AQMP is revised and incorporates the projections of the proposed General Plan Update. Therefore, Impact 5.2-1 would remain ***significant and unavoidable***.

Impact 5.2-2

Construction activities associated with buildout of the proposed General Plan Update could generate short-term emissions that exceed the SCAQMD'S significance thresholds and would cumulatively contribute to the nonattainment designations of the SoCAB. Implementation of Mitigation Measure AQ-1 would reduce criteria air pollutant emissions from construction-related activities. However, due to the magnitude of emissions anticipated from future construction activities, no mitigation measures are available that would reduce impacts below SCAQMD's thresholds. Therefore, Impact 5.2-2 would remain ***significant and unavoidable***.

Impact 5.2-3

Buildout in accordance with the proposed General Plan Update would generate long-term emissions that would exceed SCAQMD's regional significance thresholds and cumulatively contribute to the nonattainment designations of the SoCAB. Mitigation Measure AQ-2, in addition to the goals and policies of the proposed General Plan Update, would reduce air pollutant emissions to the extent feasible. The measures and policies covering topics such as expansion of the pedestrian and bicycle networks, promotion of public and active transit, and support to increase building energy efficiency and energy conservation would also reduce criteria air pollutants within the City. However, due to the magnitude of emissions generated by residential, office, commercial, industrial, and warehousing land uses, no mitigation measures are available that would reduce impacts below SCAQMD's thresholds. Therefore, Impact 5.2-3 would remain ***significant and unavoidable***.

Impact 5.2-4

Buildout of the proposed General Plan Update could expose sensitive receptors to substantial concentrations of criteria air pollutants and toxic air contaminants. Buildout of the proposed General Land Use Plan could result in new sources of criteria air pollutant emissions and/or TACs near existing or planned sensitive receptors. Review of projects by SCAQMD for permitted sources of air toxics (e.g., industrial facilities, dry cleaners, and gasoline dispensing facilities) would ensure that health risks are minimized. Mitigation Measure AQ-3 would ensure mobile sources of TACs not covered under SCAQMD permits are considered during subsequent project-level environmental review. Development of individual projects would be required to achieve the incremental risk thresholds established by SCAQMD, and TACs would be less than significant.

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Impact 5.2-5

Mitigation Measure AQ-4 would ensure that odor impacts are minimized and facilities would comply with SCAQMD Rule 402. Therefore, Impact 5.2-6 would be less than significant.

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