5. Environmental Analysis

5.1 AIR QUALITY

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for the proposed project to impact air quality from on-road vehicles in a local and regional context. This evaluation is based on the methodology recommended by the South Coast Air Quality Management District (SCAQMD) and in part on information obtained from the traffic study, "Etiwanda Avenue and Country Village Truck Restriction Traffic Analysis Study" (May 15, 2018) by Iteris, included as Appendix F to this DEIR. The mobile source health risk assessment for the project, "Health Risk Assessment Background and Modeling Data" by PlaceWorks is appended to this DEIR as Appendix D. The analysis focuses on air pollution from on-road mobile-source regional emissions and localized pollutant concentrations. Criteria air pollutant emissions modeling for the proposed project is included in Appendix C of this DEIR. Transportation-sector impacts are based on trip generation and vehicle miles traveled (VMT) provided by Iteris (see Appendix F). Cumulative impacts related to air quality are based on the regional boundaries of the South Coast Air Basin (SoCAB).

5.1.1 Environmental Setting

5.1.1.1 REGULATORY SETTING

Ambient air quality standards (AAQS) have been adopted at the state and federal levels for criteria air pollutants. In addition, both the state and federal government regulate the release of toxic air contaminants (TACs). The project site is in the SoCAB and is subject to the rules and regulations imposed by the SCAQMD as well as the California AAQS adopted by California Air Resources Board (CARB) and 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 project are summarized in this section.

Federal and State

Ambient Air Quality Standards

The Clean Air Act was passed in 1963 by the US 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 represent 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.

Both California and the federal government have established health-based AAQS for seven air pollutants, which are shown in Table 5.1-1, *Ambient Air Quality Standards for Criteria Pollutants*. These pollutants are ozone (O_3), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), coarse inhalable particulate matter (PM_{10}), 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 5.1-1 Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	California Standard[1]	Federal Primary Standard[2]	Major Pollutant Sources
Ozone (O_3)[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 Arithmetic Mean	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	*	0.030 ppm	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	1 hour	0.25 ppm	0.075 ppm	
	24 hours	0.04 ppm	0.14 ppm	
Respirable Coarse 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	

Table 5.1-1 Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	California Standard[1]	Federal Primary Standard[2]	Major Pollutant Sources
Respirable Fine Particulate Matter ($PM_{2.5}$)[4]	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 Quarter	*	1.5 µg/m^3	
	Rolling 3-Month Average	*	0.15 µg/m^3	
Sulfates (SO_4)[5]	24 hours	25 µg/m^3	*	Industrial processes.
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_2S) 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.

Table 5.1-1 Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	California Standard[1]	Federal Primary Standard[2]	Major Pollutant Sources

Source: CARB 2016.
Notes: ppm: parts per million; µg/m^3: micrograms per cubic meter
* Standard has not been established for this pollutant/duration by this entity.
1 California standards for O_3, CO (except 8-hour Lake Tahoe), SO_2 (1 and 24 hour), NO_2, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2 National standards (other than O_3, PM, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The O_3 standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.
3 On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
4 On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 µg/m^3 to 12.0 µg/m^3. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 µg/m^3, as was the annual secondary standard of 15 µg/m^3. The existing 24-hour PM_{10} standards (primary and secondary) of 150 µg/m^3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
5 On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. The 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

Tanner Air Toxics Act and Air Toxics Hots Information and Assessment Act

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 reduce exposure to them. 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" (17 CCR [California Code of Regulations] § 93000). A substance that is listed as a hazardous air pollutant pursuant to Section 112(b) of the federal Clean Air Act (42 US Code § 7412[b]) is a toxic air contaminant. 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 Assembly Bill (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 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.

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.

CARB has promulgated the following specific rules to limit TAC emissions:

- **13 CCR Chapter 10 § 2485.** Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling
- **13 CCR Chapter 10 § 2480.** Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools
- **13 CCR § 2477 and Article 8.** Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets and Facilities Where TRUs Operate

Air Pollutants of Concern

Criteria Air Pollutants

The pollutants emitted into the ambient air by stationary and mobile sources 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 (SO_2), coarse inhalable particulate matter (PM_{10}), fine inhalable particulate matter ($PM_{2.5}$), and lead (Pb) are primary air pollutants. Of these, CO, SO_2, NO_2, PM_{10}, and $PM_{2.5}$ are "criteria air pollutants," which means that AAQS have been established for them. VOC and NO_X are criteria pollutant precursors that form secondary criteria air pollutants through chemical and photochemical reactions in the atmosphere. Ozone (O_3) and nitrogen dioxide (NO_2) are the principal secondary pollutants.

A description of each of the primary and secondary criteria air pollutants and its 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-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 2018). The SoCAB is designated under the California and National AAQS as being in attainment of CO criteria levels (CARB 2017).
- **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 include evaporative emissions from paints and solvents, asphalt paving, and household consumer products such as aerosols (SCAQMD 2005). There are no AAQS for VOCs. However, because they contribute to the formation of O_3, SCAQMD has established a significance threshold.
- **Nitrogen Oxides** are a by-product of fuel combustion and contribute to the formation of ground-level O_3, PM_{10}, and $PM_{2.5}$. The two major forms of NO_X are nitric oxide (NO) and nitrogen dioxide (NO_2). NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure. The principal form of NO_X produced by

combustion is NO, but NO reacts quickly with oxygen to form NO_2, creating the mixture of NO and NO_2 commonly called NO_X. NO_2 is an acute irritant and more injurious than NO in equal concentrations. At atmospheric concentrations, however, NO_2 is only potentially irritating. NO_2 absorbs blue light; the result is a brownish-red cast to the atmosphere and reduced visibility. NO_2 exposure concentrations near roadways are of particular concern for susceptible individuals, including asthmatics, children, and the elderly. Current scientific evidence links short-term NO_2 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 NO_2 concentrations and increased visits to emergency departments and hospital admissions for respiratory issues, especially asthma (SCAQMD 2005; EPA 2018). The SoCAB is designated an attainment area for NO_2 under the National and California AAQS (CARB 2017).

- **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 SO_2. When sulfur dioxide forms sulfates (SO_4) in the atmosphere, together these pollutants are referred to as sulfur oxides (SO_X). Thus, SO_2 is both a primary and secondary criteria air pollutant. At sufficiently high concentrations, SO_2 may irritate the upper respiratory tract. Current scientific evidence links short-term exposures to SO_2, 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, SO_2 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 2018). The SoCAB is designated attainment under the California and National AAQS (CARB 2017).

- **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 PM_{10}, 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 PM_{10} and $PM_{2.5}$ may adversely affect the human respiratory system, especially in people who are naturally sensitive or susceptible to breathing problems. The EPA's scientific review concluded that $PM_{2.5}$, which penetrates deeply into the lungs, is more likely than PM_{10} to contribute to health effects and at far lower concentrations. These health effects include premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms (e.g., irritation of the airways, coughing, or difficulty breathing) (SCAQMD 2005). There has been emerging evidence that ultrafine particulates, which are even smaller particulates with an aerodynamic diameter of <0.1 microns or less (i.e., ≤0.1 millionth of a meter or <0.000004 inch), have human health implications, because their 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 or CARB has yet to adopt AAQS to regulate these particulates. Diesel particulate matter is classified by CARB as a carcinogen (CARB 1998). Particulate matter can also cause environmental effects such as visibility impairment,[1] environmental damage,[2] and aesthetic damage[3] (SCAQMD 2005; EPA 2018). The SoCAB is a nonattainment area for $PM_{2.5}$ under California and National AAQS and a nonattainment area for PM_{10} under the California AAQS (CARB 2017).[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. O_3 is a secondary criteria air pollutant. O_3 concentrations are generally highest during the summer months when direct sunlight, light winds, and warm temperatures create favorable conditions for its formation. O_3 poses a health threat to those who already suffer from respiratory diseases as well as to healthy people. Breathing O_3 can trigger a variety of health problems, including chest pain, coughing, throat irritation, and congestion. It can worsen bronchitis, emphysema, and asthma. Ground-level O_3 also can reduce lung function and inflame the linings of the lungs. Repeated exposure may permanently scar lung tissue. O_3 also affects sensitive vegetation and ecosystems, including forests, parks, wildlife refuges, and wilderness areas. In particular, O_3 harms sensitive vegetation during the growing season (SCAQMD 2005; EPA 2018). The SoCAB is designated extreme nonattainment under the California AAQS (1-hour and 8-hour) and National AAQS (8-hour) (CARB 2017).

- **Lead** is a metal found naturally in the environment as well as in manufactured products. 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 effects of lead 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 2018). 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. However, in 2008 the EPA and CARB

[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 PM_{10} to attainment for PM_{10} under the National AAQS on March 25, 2010, because the SoCAB did not violate federal 24-hour PM_{10} standards from 2004 to 2007. The EPA approved the State of California's request to redesignate the South Coast PM_{10} nonattainment area to attainment of the PM_{10} National AAQS, effective on July 26, 2013.

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 as nonattainment under the National AAQS for lead (SCAQMD 2012; CARB 2017). 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

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.

Diesel Particulate Matter

In 1998, CARB identified diesel particulate matter 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.

Air Quality Management Planning

SCAQMD is the agency responsible for improving air quality in the SoCAB and assuring that the National and California AAQS are attained and maintained. 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.

2016 AQMP

On March 3, 2017, SCAQMD adopted the 2016 AQMP, which serves as an update to the 2012 AQMP. The 2016 AQMP addresses strategies and measures to attain the following National AAQS:

- 2008 8-hour ozone standard by 2031
- 2012 annual $PM_{2.5}$ standard by 2025[6]
- 2006 24-hour $PM_{2.5}$ standard by 2019
- 1997 8-hour ozone standard by 2023
- 1979 1-hour ozone standard by year 2022

[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 2012).

[6] The 2016 AQMP requests a reclassification from moderate to serious nonattainment for the 2012 National $PM_{2.5}$ standard.

It is projected that total NO_X emissions in the SoCAB would need to be reduced to 150 tons per day (tpd) by year 2023 and to 100 tpd in year 2031 to meet the 1997 and 2008 federal 8-hour ozone standards. The strategy to meet the 1997 federal 8-hour ozone standard would also lead to attaining the 1979 federal 1-hour ozone standard by year 2022 (SCAQMD 2017), which requires reducing NO_X emissions in the SoCAB to 250 tpd. This is approximately 45 percent additional reductions from existing regulations for the 2023 ozone standard and 55 percent additional reductions from existing regulations to meet the 2031 ozone standard.

Reducing NO_X emissions would also reduce $PM_{2.5}$ concentrations in the SoCAB, which are in "moderate" nonattainment. SCAQMD's goal is to meet the 2012 federal annual $PM_{2.5}$ standard no later than year 2025, but a "moderate" nonattainment requires meeting the 2012 federal standard by no later than 2021. Therefore, SCAQMD is seeking to reclassify the SoCAB from "moderate" to "serious" nonattainment under this federal standard.

The 2016 AQMP reflects stationary- and mobile-source emission reductions from regulatory control measures, incentive-based programs, co-benefits from climate programs, mobile-source strategies, and reductions from federal sources such as aircrafts, locomotives, and ocean-going vessels. Strategies outlined in the 2016 AQMP would be implemented in collaboration between CARB and the EPA (SCAQMD 2017).

Lead Implementation Plan

In 2008, the EPA designated the Los Angeles County portion of the SoCAB a nonattainment area under the federal lead classification due to the addition of source-specific monitoring under a new federal regulation. This designation was based on two source-specific monitors in the City of Vernon and the City of Industry that exceeded 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 2008 lead 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.

AB 617, Community Air Protection Program

In response to AB 617 (C. Garcia, Chapter 136, Statutes of 2017), CARB has established the Community Air Protection Program, or CAPP. AB 617 requires local air districts to monitor and implement air pollution control strategies that reduce localized air pollution in communities that bear the greatest burdens.

SCAQMD has hosted and continues to host workshops in order to help identify disadvantaged communities disproportionately affected by poor air quality. Once the criteria for identifying the highest priority locations has been identified and the communities have been selected, new community monitoring systems will be installed to track and monitor community-specific air pollution goals. Under AB 617, CARB must prepare an air monitoring plan by October 1, 2018, that evaluates the availability and effectiveness of air monitoring technologies and existing community air monitoring networks.

Under AB 617 CARB is also required to prepare a state-wide strategy to reduce TACs and criteria pollutants in impacted communities; provide a state-wide clearing house for Best Available Retrofit Control Technology

(BARCT); adopt new rules requiring the latest BARCT for all criteria pollutants for which an area has not achieved attainment of California AAQS; and provide uniform statewide reporting of emissions inventories. Air districts are required to adopt a community emissions reduction program to achieve reductions for the air pollution impacted communities identified by CARB.

5.1.1.2 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 quadrant, 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, measured 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 nearest to the project area is the Fontana Kaiser Monitoring Station (ID No. 043120). The lowest average low is reported at 44.0°F in January, and the highest average high is 95.0°F in July (WRCC 2018).

In contrast to a very steady pattern of temperature, rainfall is seasonally and annually highly variable. Almost all rain falls from November through April. Summer rainfall is normally restricted to widely scattered thundershowers near the coast, with slightly heavier shower activity in the east and over the mountains. Rainfall averages 15.32 inches per year in the project area (WRCC 2018).

Humidity

Although the SoCAB has a semiarid climate, the air near the earth's surface is typically moist because of the presence of a shallow marine layer. Except for infrequent periods when dry, continental air is brought into the SoCAB by offshore winds, the "ocean effect" is dominant. Periods of heavy fog, especially along the coast, are frequent. 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).

Wind

Wind patterns across the south coastal region are characterized by westerly or southwesterly onshore winds during the day and by 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, both 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 affect the transport and diffusion of pollutants by inhibiting their eastward transport. 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, there are two similarly distinct types of temperature inversions that control the vertical depth through which pollutants are mixed. These are the marine/subsidence inversion and the radiation inversion. 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 Nonattainment Areas

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 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.
    - **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 5.1-2, *Attainment Status of Criteria Pollutants in the South Coast Air Basin*.

Table 5.1-2 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
PM_{10}	Serious Nonattainment	Attainment
$PM_{2.5}$	Nonattainment	Nonattainment
CO	Attainment	Attainment
NO_2	Attainment	Attainment/Maintenance
SO_2	Attainment	Attainment
Lead	Attainment	Nonattainment (Los Angeles County only)[1]
All others	Attainment/Unclassified	Attainment/Unclassified

Source: CARB 2017.
[1] In 2010, the Los Angeles portion of the SoCAB was designated nonattainment for lead under the new 2008 federal AAQS as a result of large industrial emitters. Remaining areas in the SoCAB are unclassified.

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 the potential health risks from air toxics in the SoCAB. In 2008, SCAQMD conducted its third update, MATES III, based on the Office of Environmental Health Hazards Assessment's (OEHHA) 2003 Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments (2003 HRA Guidance Manual). The results showed that the overall average risk for excess cancer in the SoCAB from a lifetime exposure to ambient levels of air toxics was about 1,200 in a million.7 The largest contributor to this risk was diesel exhaust, which accounted for 84 percent of the cancer risk (SCAQMD 2008a).

In May 2015, SCAQMD released the fourth update, MATES IV, which was also based on OEHHA's 2003 HRA Guidance Manual. The results showed that the overall monitored excess risk for 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, which accounted 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 since MATES III (SCAQMD 2015a).

OEHHA updated the guidelines for estimating cancer risks on March 6, 2015 (OEHHA 2015). The new method uses 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, SCAQMD estimates that risks for a given inhalation exposure level will be about

[7] Excess cancer risk is the probability of an individual developing cancer as a result of exposure to a cancer-causing substance (i.e., TACs).

2.7 times higher than the risk identified in MATES IV using the 2015 OEHHA guidance methodology (e.g., 2.7 times higher than 418 in one million overall excess cancer risk) (SCAQMD 2015a). The cancer risk as estimated under MATES IV for the areas near the proposed affected portions of Etiwanda Boulevard and Country Village Road, which includes Mira Loma Village, is 1,193 in a million (SCAQMD 2015b). Under the MATES IV projections, the excess cancer risk for the greater Mira Loma and Rancho Del Sol communities to the south and the Glen Avon community to the southeast and east range from 804 to 1,035 in a million (SCAQMD 2015b).

Existing Ambient Air Quality

Existing levels of ambient air quality and historical trends and projections in the vicinity of the project site are best documented by measurements taken by the SCAQMD. The project site is located within Source Receptor Area (SRA) 23 – Metropolitan Riverside. The air quality monitoring station closest to the project site is the Mira Loma Van Buren Monitoring Station. However, this station does not monitor SO_2. Therefore, data for this criteria air pollutant were obtained from the Riverside – Rubidoux Drive Monitoring Station. Data from these stations are summarized in Table 5.1-3, *Ambient Air Quality Monitoring Summary*. The data show that the area regularly exceeded the state and federal one-hour and eight-hour O_3 standards within the last five recorded years. The CO, SO_2, NO_2, PM_{10} and federal $PM_{2.5}$ standards have not been exceeded in the last five years in the project vicinity.

Table 5.1-3 Ambient Air Quality Monitoring Summary

Pollutant/Standard	Number of Days Thresholds Were Exceeded and Maximum Levels				
	2012	2013	2014	2015	2016
Ozone (O_3)[1]					
State 1-Hour ≥ 0.09 ppm (days exceed threshold)	31	11	17	29	34
State 8-hour ≥ 0.07 ppm (days exceed threshold)	72	32	55	51	70
Federal 8-Hour > 0.075 ppm (days exceed threshold)	47	21	29	36	73
Max. 1-Hour Conc. (ppm)	0.124	0.118	0.138	0.127	0.140
Max. 8-Hour Conc. (ppm)	0.102	0.096	0.102	0.104	0.106
Carbon Monoxide (CO)[1]					
State 8-Hour > 9.0 ppm (days exceed threshold)	0	*	*	*	*
Federal 8-Hour ≥ 9.0 ppm (days exceed threshold)	0	*	*	*	*
Max. 8-Hour Conc. (ppm)	1.95	*	*	*	*
Nitrogen Dioxide (NO_2)[1]					
State 1-Hour ≥ 0.18 ppm (days exceed threshold)	0	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.0607	0.0537	0.0577	0.0681	0.0649
Sulfur Dioxide (SO_2)[2]					
State 24-Hour ≥ 0.04 ppm (days exceed threshold)	0	*	*	*	*
Federal 24-Hour ≥ 0.14 ppm (days exceed threshold)	0	*	*	*	*
Max 24-Hour Conc. (ppm)	0.001	*	*	*	*
Coarse Particulates (PM_{10})[1]					
State 24-Hour > 50 µg/m^3 (days exceed threshold)	15	12	15	20	*
Federal 24-Hour > 150 µg/m^3 (days exceed threshold)	0	0	0	0	*
Max. 24-Hour Conc. (µg/m^3)	78.0	147.0	85.0	112.0	*

Table 5.1-3 Ambient Air Quality Monitoring Summary

Pollutant/Standard	Number of Days Thresholds Were Exceeded and Maximum Levels				
	2012	2013	2014	2015	2016
Fine Particulates ($PM_{2.5}$)[1]					
Federal 24-Hour > 35 µg/m³ (days exceed threshold)	7	9	9	17	7
Max. 24-Hour Conc. (µg/m³)	39.3	56.5	73.6	56.6	47.2

Source: CARB 2018.
Notes: ppm = parts per million; ppb = parts per billion; µg/m³ = micrograms per cubic meter
* Data not available.
1 Data obtained from the Mira Loma Van Buren Monitoring Station.
2 Data obtained from the Riverside-Rubidoux Monitoring Station.

Existing Emissions

Table 5.1-4, *Existing Daily Emissions Inventory*, shows the average daily mobile-source emissions inventory for vehicles currently traveling on the roadway segments within the traffic study area (see Figure 5.5-1, *Traffic Analysis Study Area*).

Table 5.1-4 Existing Daily Emissions Inventory

Phase	Operation-Related Regional Emissions (pounds/day)					
	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Transportation	183	1,676	3,953	14	1,462	411

Source: EFMAC2017, Version 1.0.2. Based on traffic data provided by Iteris.
Note: Based on Year 2018 emission rates.

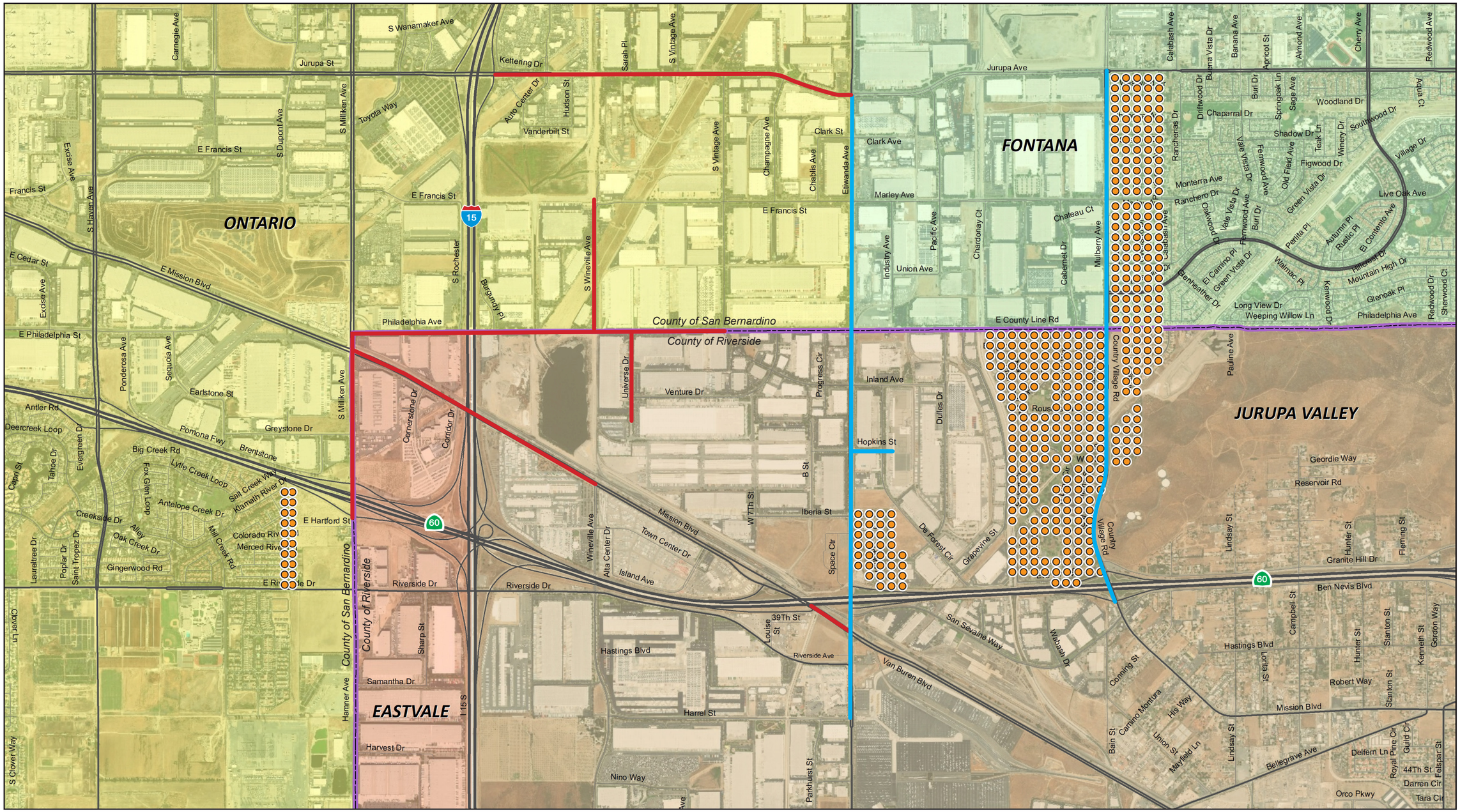
Sensitive Receptors

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 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 workforce is generally the healthiest segment of the population.

The primary residential sensitive receptors within the traffic study area include the residences at the following areas (see Figure 5.1-1):

Figure 5.1-1 - Roadways Impacted by Project
5. Environmental Analysis



5. Environmental Analysis
AIR QUALITY

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- City of Jurupa Valley
  - Along the eastern side of Etiwanda Avenue between State Route 60 (SR-60) and Iberia Street (Mira Loma Village). Along the western and eastern side of the segment of Country Village Road between SR-60 and Philadelphia Avenue.

- City of Fontana
  - Along the eastern side of Mulberry Avenue between Philadelphia Avenue and Jurupa Avenue.

- City of Ontario
  - Along the eastern side of McCloud River Lane west of Hamner Avenue and south of SR-60.

The greater Mira Loma community to the south is approximately 0.60 mile outside of the traffic study and one mile from the segment of Country Village Road where the proposed truck restriction ordinance would be applied.

5.1.2 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.

5.1.2.1 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 (SCAQMD 1993).[8] 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 listed above, projects are also subject to the AAQS. These are addressed through an analysis of localized CO impacts and localized significance thresholds (LSTs).

[8] SCAQMD's Air Quality Significance Thresholds are current as of March 2015 and can be found at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook.

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 5.1-5, *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 ultrafine particulates 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 ultrafine particulates; therefore, SCAQMD has not developed thresholds for them.

Table 5.1-5 SCAQMD 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 2015b.

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 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 (O_3, $PM_{2.5}$)
- Increases bronchitis (O_3, $PM_{2.5}$)
- Causes chest discomfort, throat irritation, and increased effort to take a deep breath (O_3)
- Reduces resistance to infections and increases fatigue (O_3)
- Reduces lung growth in children ($PM_{2.5}$)
- Contributes to heart disease and heart attacks ($PM_{2.5}$)
- Contributes to premature death (O_3, $PM_{2.5}$)
- 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 emission levels in Table 5.1-5 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 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.

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.[9] As identified in SCAQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide, peak carbon monoxide concentrations in the SoCAB in years before redesignation were a result of unusual meteorological and topographical conditions and not of congestion at a particular intersection (SCAQMD 1992; SCAQMD 1992). 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 2017).

Localized Significance Thresholds

SCAQMD identifies localized significance thresholds, shown in Table 5.1-6, *SCAQMD Localized Significance Thresholds*. Emissions of NO_2, CO, PM_{10}, and $PM_{2.5}$ generated at a project site (offsite mobile-source emissions are not included in the LST analysis) could expose sensitive receptors to substantial concentrations of criteria air pollutants. A project that generates emissions that trigger a violation of the AAQS when added to the local background concentrations would generate a significant impact.

[9] 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.

Table 5.1-6 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/m^3 – micrograms per cubic meter
[1] Threshold is based on SCAQMD Rule 403. Since the SoCAB is in nonattainment for PM_{10} and $PM_{2.5}$, the threshold is established as an allowable change in concentration. Therefore, background concentration is irrelevant.

5.1.1.1 HEALTH RISK THRESHOLDS

Whenever a project would use chemical compounds identified in SCAQMD Rule 1401, on CARB's air toxics list pursuant to AB 1807, or on the EPA's National Emissions Standards for Hazardous Air Pollutants, a health risk assessment is required by the SCAQMD. Table 5.1-7, *SCAQMD Toxic Air Contaminants Incremental Risk Thresholds*, lists the SCAQMD's TAC incremental risk thresholds for operation of a project. Projects that do not generate emissions that exceed the values in Table 5.1-7 would not substantially contribute to cumulative air quality hazards or exacerbate an existing environmental hazard. Residential, commercial, office, and institutional uses (such as the hospital land uses) do not use substantial quantities of TACs and typically do not exacerbate existing hazards. Thus, these thresholds are typically applied to new industrial projects. However, for purposes of this analysis, these thresholds are used to determine whether implementation of the proposed truck restriction ordinance project would result in significant health risk impacts.

Table 5.1-7 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.

5.1.3 Existing Regulations and Standard Conditions

5.1.3.1 STATE

- Clean Car Standards – Pavley (AB 1493)
- California Advanced Clean Cars CARB (Title 13 CCR)
- Low-Emission Vehicle Program – LEV III (Title 13 CCR)

- Statewide Retail Provider Emissions Performance Standards (SB 1368).
- Airborne Toxics Control Measure to Limit School Bus Idling and Idling at Schools (13 CCR 2480)
- Airborne Toxic Control Measure to Limit Diesel-Fuel Commercial Vehicle Idling (13 CCR 2485)
- In-Use Off-Road Diesel Idling Restriction (13 CCR 2449)

5.1.3.2 SCAQMD

- SCAQMD Rule 201: Permit to Construct
- SCAQMD Rule 402: Nuisance Odors
- SCAQMD Rule 403: Fugitive Dust
- SCAQMD Rule 1113: Architectural Coatings

5.1.4 Environmental Impacts

5.1.4.1 METHODOLOGY

This air quality evaluation was prepared in accordance with the requirements of CEQA to determine if significant air quality impacts are likely in conjunction with implementation of the proposed truck restriction ordinance. For purposes of this analysis, the Year 2020 With Project conditions are compared to the Year 2020 Without Project conditions to determine the potential operation-related impacts of the proposed project. This approach is used because the proposed project would not be a trip-generating land use project, but could potentially change vehicle travel patterns in the traffic study area. Thus, comparison of these two scenarios better exhibits the potential impacts from the change in travel patterns due to the proposed truck restriction ordinance and minimizes the impact of non-project-related ambient traffic growth. Modeling for on-road mobile-source emissions was completed for the project using the CARB Emissions Factor Model (EMFAC2017), Version 1.0.2. Air quality modeling datasheets are in Appendix C of this DEIR.

Vehicles Emissions

The modeling accounts for the on-road mobile emissions generated from vehicles (e.g., passenger cars and trucks) traveling on the roadway segments in the traffic study area. EMFAC2017 emission factors for Riverside County were used since the City of Jurupa Valley and the affected segments of Etiwanda Avenue and Country Village Road are within the county. Average daily roadway segment volumes by speed bin, segment lengths, and proportion of passenger cars to trucks were provided by Iteris. Vehicle fleet mix assumed in the modeling is based on the EMFAC2017 fleet mix by VMT for Riverside County normalized to the provided proportion of passenger cars to trucks information. The average daily roadway segment volumes and calculated VMT based on the provided average daily roadway segment volumes and segment lengths are shown in Table 5.1-8, *Average Daily Roadway Segment Volumes and VMT*. For further details, refer to Appendix C.

Table 5.1-8 Average Daily Roadway Segment Volumes and VMT

Scenario	Total Average Daily Roadway Segment Volumes (trips)				Total VMT (miles)			
	Cars	Light Trucks	Heavy Trucks	Total	Cars	Light Trucks	Heavy Trucks	Total
Existing (Year 2018)	3,973,874	56,104	516,812	**4,546,790**	1,632,175	22,831	207,432	**1,862,439**
Year 2020 Without Project	4,126,605	58,226	523,348	**4,708,179**	1,692,194	23,640	210,367	**1,926,202**
Year 2020 With Project	4,132,882	58,246	516,575	**4,707,703**	1,694,210	23,640	211,217	**1,929,066**

Source: Iteris 2018.

Roadway Fugitive Dust Emissions

Roadway fugitive dust emissions are generated from dispersion of dust by vehicles traveling along roadways. PM_{10} and $PM_{2.5}$ fugitive dust "re-entrainment" emission factors (grams per VMT) are based on CARB methodology and factors from EPA AP-42 (CARB 2014; EPA 2011). Total daily PM_{10} and $PM_{2.5}$ fugitive dust emissions generated from vehicle travel on paved roads are based on VMT multiplied to the respective re-entrainment emission factors.

Health Risk Assessment

The City ordinance would restrict medium-heavy- and heavy-heavy-duty trucks with gross vehicle weight rating over 16,000 pounds (lbs.) from accessing Etiwanda Avenue between SR-60 and Hopkins Street and Country Village Road between SR-60 and Philadelphia Avenue in the City of Jurupa Valley. Transportation modeling forecast traffic pattern changes within the traffic study area due to the proposed project:

- Decrease of heavy vehicle trips on Etiwanda Avenue between SR-60 and Hopkins Street, and Country Village Road between SR-60 and Philadelphia Avenue.
- Increase of heavy vehicle trips on Philadelphia Street to Milliken Avenue to access SR-60 and Interstate 15 (I-15).
- Increase of heavy vehicle trips on Jurupa Avenue west of Etiwanda Avenue to access I-15.

This health risk assessment (HRA) involved the following tasks:

- Evaluation of emissions associated with medium-heavy and heavy-heavy duty trucks traveling on specific roadways within the traffic study area that experience a change in traffic volume due to the implementation of the ordinance. An increase or decrease of 500 trucks per day or more was selected for roadway segments affected by truck re-routing in the larger study area away from the restricted roadway segments.
- Air dispersion modeling, using the AERMOD computer model, was conducted to quantify maximum ground-level concentrations for residential and adjacent worker receptors within the traffic study area that are in the vicinity of the impacted roadways. Ground-level concentrations were determined for two

scenarios. The first scenario involved opening year, 2020 traffic without the implementation of the ordinance (Without Project). The second scenario involved redirected traffic in the year 2020 due to the implementation of the proposed ordinance. Meteorological data from the nearest SCAQMD monitoring station with similar meteorological conditions (Ontario International Airport, 2012–2016) were used to represent local weather conditions and prevailing winds (SCAQMD 2018).

- Determination of cancer and noncancer risks to residents and workers of the development were determined based on the results of the air dispersion model. The assessment considered exposure through the inhalation pathway. Unit risk factors and cancer potency factors were used to determine carcinogenic risk, and recommended exposure limits were used to determine noncarcinogenic risk.

- Preparation of a health risk assessment report that compares the calculated risks with thresholds established by the SCAQMD and OEHHA (OEHHA 2015).

Other roadways would be impacted as a result of the project. For the HRA, an increase or decrease of 500 or more trucks per day was selected for roadway segments affected by truck re-routing in the larger study area away from the restricted roadway segments.[10] By setting the traffic change cutoff at 500 trucks per day, the most critical roadway segments evaluated were those most impacted by project implementation, including those in close proximity to residences along Etiwanda Avenue and Country Village Road. The selected roadways are listed in Table 5.1-9, *Roadways Impacted by Project*, and shown on Figure 5.1-1, *Roadways Impacted by Project*.

Table 5.1-9 Roadways Impacted by Project

Roadway	Segment
Milliken Avenue	Between SR-60 ramps and Philadelphia Avenue
Philadelphia Avenue	Between Milliken Avenue and Vintage Avenue
Wineville Avenue	North of Philadelphia Street
Universe Drive	South of Philadelphia Street
Jurupa Avenue	Between I-15 ramps and Etiwanda Avenue
Hopkins Street	East of Etiwanda Avenue
Van Buren Boulevard	West of Etiwanda Avenue
Mission Boulevard	Between Milliken Avenue and Wineville Avenue
Etiwanda Avenue	Between Harrel Street and Jurupa Avenue
Country Village Road	Between SR-60 ramps and Philadelphia Street
Mulberry Avenue	Between Philadelphia Street and Jurupa Avenue

Source: Iteris 2018.
Note: Table only lists roadways with an increase or decrease in traffic volume of 500 or more trucks per day.

[10] The traffic change cutoff of 500 trucks per day was selected because the results of recently prepared warehousing project HRAs have shown that an increase of 500 trucks per day does not create a significant health risk impact to nearby residential receptors (PlaceWorks 2017; PlaceWorks 2018). By selecting a 500 trucks per day cutoff, truck routes proximate to residential areas were included in the analysis, while screening out roadway segments further from sensitive receptors that experience a lesser change in traffic from truck rerouting.

5. Environmental Analysis
AIR QUALITY

The average daily truck traffic volumes for the year 2020 (opening year) were determined from the traffic impact study prepared for the project (Iteris 2018). Table 5.1-10, *Average Daily Traffic, Health Risk Assessment*, lists the average daily traffic volumes with and without implementation of the ordinance, in addition to the change in average daily traffic volume due to the implementation of the ordinance. Since the roadways have segments with varying average daily traffic volumes, the roadways were split into segments. Segments along the same roadway with a difference in their average daily traffic values of less than 100 trucks per day were considered to be one continuous segment.[11]

The arithmetic mean was used to calculate the average daily traffic for such segments. Figure 5.1-2, *Change in Daily Truck Trips*, shows the roadway segments that were studied along with the change in daily truck traffic due to the implementation of the project.

Table 5.1-10 Average Daily Traffic, Health Risk Assessment

#	Roadway	Segment	2020 Average Daily Traffic Without Ordinance (trucks per day)	2020 Average Daily Traffic With Ordinance (trucks per day)	Change in Average Daily Traffic (trucks/day)[1]	Segment Length (meter)
1	Milliken Ave	Between ramps	1,909	2,489	580	210
2	Milliken Ave	SO Mission/NO ramps	2,039	3,025	986	852
3	Milliken Ave	SO Philadelphia	2,886	4,714	1828	186
4	Philadelphia Ave	WO Wineville Ave	2,297	4,381	2084	1,555
5	Philadelphia Ave	EO Wineville Ave	258	1,525	1267	811
6	Wineville Ave	NO Philadelphia Street	1,527	2,170	643	788
7	Universe Drive	SO Philadelphia	512	1,055	543	628
8	Jurupa Ave	WO Etiwanda	447	1,341	894	804
10	Jurupa Ave	EO Vintage Road	2,524	3,563	1039	293
9	Jurupa Ave	WO Vintage/ EO I-15 ramps	3,310	4,531	1221	1,141
11	Hopkins St	EO Etiwanda	826	221	-605	186
12	Van Buren	WO Etiwanda	5,596	6,298	702	266
13	Mission Boulevard	EO Milliken/WO Wineville Ave	759	1,286	532	1,725
14	Country Village Road	SO SR-60 WB ramps	1,500	716	-784	216
15	Country Village Road	SO Philadelphia Street/NO WB SR-60 ramps	1,780	673	-1097	1,555
16	Mulberry Avenue	SO Jurupa Avenue/NO Philadelphia St	1,633	773	-860	1,605

[11] CARB's Air Quality and Land Use Handbook (CARB 2005) specifies 100 trucks per day as a potential health risk screening criteria for siting new sensitive land uses proximate to distribution centers. In other words, an increase of less than 100 trucks per day would result in a less than significant health risk impact to new sensitive land uses. Therefore, segments along the same roadway with a difference in their average daily traffic of less than 100 trucks per day were considered to be one continuous segment.

Table 5.1-10 Average Daily Traffic, Health Risk Assessment

#	Roadway	Segment	2020 Average Daily Traffic Without Ordinance (trucks per day)	2020 Average Daily Traffic With Ordinance (trucks per day)	Change in Average Daily Traffic (trucks/day)[1]	Segment Length (meter)
17	Etiwanda Avenue	SO Riverside Dr.	1,749	1,125	-624	346
18	Etiwanda Avenue	SO Van Buren	3,610	2,344	-1266	177
19	Etiwanda Avenue	NO Van Buren	4,803	2,884	-1919	116
20	Etiwanda Avenue	NO San Sevaine	4,411	2,294	-2117	56
21	Etiwanda Avenue	NO SR-60 on-ramp	4,576	1,780	-2796	138
22	Etiwanda Avenue	NO SR-60 off-ramp	4,814	1,341	-3473	442
23	Etiwanda Avenue	NO Iberia St	4,597	1,285	-3312	425
24	Etiwanda Avenue	NO Hopkins St	3,581	1,391	-2190	745
25	Etiwanda Avenue	NO Philadelphia St	4,079	2,481	-1598	809
26	Etiwanda Avenue	NO Marlay Ave	3,434	2,749	-685	672

Source: Iteris 2018.
Notes: EO = east of; WO = west of; NO = north or; SO = south of
[1] A negative value indicates a decrease in daily truck traffic due to the implementation of the ordinance.

The emission factors (gram per mile) used for the analysis are derived from EMFAC2017 and VMT data provided by Iteris (2018). They are a weighted average based on the EMFAC2017 emission factor for the considered vehicle classes and the overall fleet mix based on VMT. The overall fleet mix used in the analysis is based on the default EMFAC2017 VMT by vehicle class data for Riverside County normalized to the Year 2020 Without Project and With Project VMT data by vehicle category provided by Iteris (see Appendix D for further details).[12] The PM_{10} emission factor for diesel-fueled vehicles was used as the surrogate for diesel particulate matter (DPM) for the opening year of 2020 (CARB 2017).

5.1.4.2 IMPACT ANALYSIS

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 5.1-1: Construction activities associated with the proposed project would not generate short-term emissions in exceedance of SCAQMD'S threshold criteria. [Thresholds AQ-2 and AQ-3]

Impact Analysis: The proposed project would result in the implementation of a truck ordinance that would restrict truck travel on the segment of Etiwanda Avenue between SR-60 and Hopkins Street and the segment of Country Village Road between SR-60 and Philadelphia Avenue in Jurupa Valley. In addition, implementation of the proposed truck restriction ordinance would result in installation of restriction signs. However, it is anticipated that minimal efforts would be required to install these restriction signs, and no

[12] For purposes of this analysis and based on the methodology used by Iteris, the truck category consists of the following EMFAC2007 vehicle classes—LHD1, LHD1, MHD, HHD, OBUS, UBUS, SBUS, and MH.

heavy off-road equipment would be required. Therefore, construction-related regional air quality impacts from implementation of the proposed project are considered less than significant.

Level of Significance before Mitigation: Less than significant.

Impact 5.1-2: Implementation of the proposed project would not result in the generation of long-term emissions in exceedance of SCAQMD's operation-phase regional significance thresholds. [Thresholds AQ-2 and AQ-3]

Impact Analysis: Implementation of the proposed truck restriction ordinance would result in the rerouting of trucks and overall vehicle movements within the general area of the affected roadway segments. Overall, as shown in Table 5.1-8, implementation of the proposed project would result in a total increase in daily VMT of 2,864 miles per day when comparing Year 2020 Without Project conditions to Year 2020 With Project conditions. Specifically, the total daily heavy truck VMT would increase by 850 miles per day, and passenger car VMT would increase by 2,016 miles per day. The increase in VMT is attributed to the rerouting of trucks due to the truck ordinance and passenger vehicles changing their routes in response to avoiding roadways accommodating the rerouted trucks.

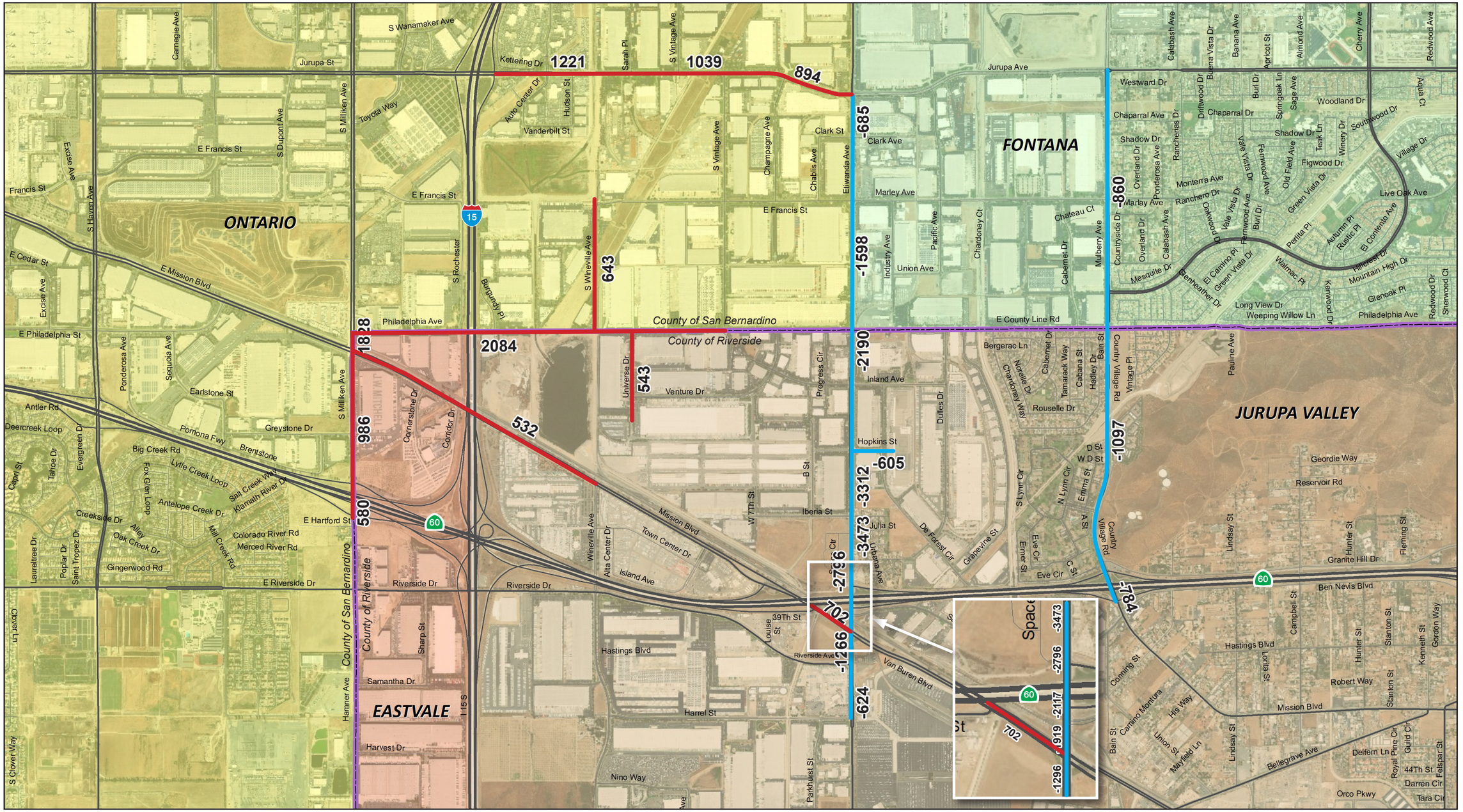
Table 5.1-11, *Maximum Daily Regional Operational Phase Emissions*, identifies the criteria air pollutant emissions that would result in the traffic study area from implementation of the proposed project. As shown in the table, the net change in criteria air pollutant emissions from project implementation would not exceed the SCAQMD's regional emissions thresholds for operational activities. Therefore, impacts to the regional air quality from implementation of the proposed truck restriction ordinance would be less than significant.

Table 5.1-11 Maximum Daily Regional Operational Phase Emissions

Sources	Criteria Air Pollutants (lbs/day)					
	VOC	NOx	CO	SO_2	PM_{10}	$PM_{2.5}$
Year 2020 Without Project	158	1,516	3,595	15	1,523	427
Year 2020 With Project	158	1,521	3,624	15	1,526	428
Net Change	**<1**	**6**	**29**	**<1**	**3**	**1**
SCAQMD Threshold	55	55	550	150	150	55
Exceeds Threshold	No	No	No	No	No	No

Source: EMFAC2017, Version 1.0.2. Based on information provided by Iteris.
Notes: Emissions totals may not equal 100 percent due to rounding.

Figure 5.1-2 - Change in Daily Truck Trips
5. Environmental Analysis



County Boundary Increase Decrease

0 2,000
Scale (Feet)

5. Environmental Analysis
AIR QUALITY

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Level of Significance before Mitigation: Less than significant.

Impact 5.1-3: The proposed project would not expose sensitive receptors to substantial pollutant concentrations of toxic air contaminants. [Threshold AQ-4]

Impact Analysis: Implementation of the proposed truck restriction ordinance would result in the rerouting of trucks and overall vehicle movements in proximity to existing residential areas and industrial areas. The potential health risks to the residential areas identified under *Sensitive Receptors* in Section 5.1.1.2, *Existing Conditions*, and adjacent industrial areas from truck rerouting (Appendix D) were determined. The methodology used to estimate truck emissions is described in Appendix D.

It should be noted that the health impacts were based on conservative (i.e., health protective) assumptions. The EPA (2005) and OEHHA (2015) note that conservative assumptions used in a risk assessment are intended to ensure that the estimated risks do not underestimate the actual risks. Therefore, the estimated risks do not necessarily represent actual risks experienced by populations at or near a site.

For this HRA, the following conservative assumptions were used:

- For the residential exposure scenario, it was assumed that the children and adults at the MER reside at their current location for 30 years. Most residents do not live at the same location for 30 years. Approximately 18 percent of the residents of Jurupa Valley (City) have lived in their homes since 1989 (US Census 2016).

- The vehicle emissions rates are based on 2020 emission factors for the entire 30-year residential exposure duration (EMFAC2017). This approach is a conservative approach because it can be reasonably anticipated that the truck fleet mix would gradually experience a transition to newer and cleaner engines over time. The transition to cleaner vehicles on the roadways would contribute to reducing residential exposure to DPM emissions. Per EMFAC2017, the heavy-heavy duty truck DPM emission factor of 0.0062 grams per mile (g/mi) for year 2050 represents an 88 percent decrease compared to the year 2020 emission factor of 0.0512 g/mi for a speed of 25 miles per hour (mph). For medium-heavy duty trucks, a DPM emission factor reduction of 97 percent is predicted from 2020 to 2050 for a speed of 25 mph. An emission factor reduction of 88 percent over the 30-year residential exposure period could reasonably provide a 50 to 75 percent reduction in DPM-related cancer risks over the exposure period. Thus, the incremental cancer risks provided in Table 5.1-12 would be further reduced.

- The calculated risk for the third-trimester pregnancy and children from 0 to 2 years is multiplied by a factor of 10 (age sensitivity factor), and the calculated risk for children from 2 to 16 years is multiplied by a factor of 3 to account for early life exposure and uncertainty in child vs. adult exposure impacts. Thus, the estimated risks are conservative.

For residents and workers, the incremental cancer risks and chronic hazard indices from roadway emissions were calculated at the maximum exposed receptor (MER) in the overall study area without and with the project. The MER locations are depicted for residential receptors in Figure 5.1-3, *Diesel Particulate Matter Contours for Residential Receptors, Without Project Scenario*, and Figure 5.1-4, *Diesel Particulate Matter Contours for*

Residential Receptors, With Project Scenario. They are depicted for worker receptors in Figure 5.1-5, *Diesel Particulate Matter Contours for Worker Receptors, Without Project Scenario,* and Figure 5.1-6, *Diesel Particulate Matter Contours for Worker Receptors, With Project Scenario*. The residential MER location is a receptor along the east side of Etiwanda Avenue in Mira Loma Village under both scenarios. For worker receptors, the MER location for the Without Project Scenario is along the east side of Etiwanda Avenue at the commercial area immediately south of Mira Loma Village. The worker MER location for the With Project Scenario is at a business north of Philadelphia Street and east of Milliken Avenue due to truck rerouting (Figure 5.1-6). The results of the HRA are shown in Table 5.1-12, *Health Risk Assessment Results for Maximum Exposed Receptors*.

Table 5.1-12 Health Risk Assessment Results for Maximum Exposed Receptors

Scenario	Incremental Cancer Risk[1] (per million)	Chronic Hazard Index
Residential		
Residential - Without Project[2]	66	0.020
Residential – With Project[2]	21	0.007
Net Change	- 45	- 0.014
SCAQMD Threshold	10	1.0
Exceeds Threshold With Ordinance?	**No**	**No**
Worker[3]		
Worker – Without Project (at Without Project MER)[4]	0.9	0.003
Worker – Project (at Without Project MER)[4]	0.3	0.001
Net Change	- 0.6	- 0.002
SCAQMD Threshold	10	1.0
Exceeds Threshold With Ordinance?	**No**	**No**
Worker – Without Project (at Project MER)[5]	0.6	0.002
Worker – Project (at With Project MER)[5]	1.1	0.004
Net Change	0.5	0.002
SCAQMD Threshold	10	1.0
Exceeds Threshold With Ordinance?	**No**	**No**

Notes: A negative value indicates a risk reduction due to the implementation of the ordinance.
1 OEHHA (2015) recommends that a 30-year (high-end residency time) exposure duration be used to estimate individual cancer risk for the residential MER. For worker receptors, a 25-year exposure period is recommended. 2020 DPM emission rates were used for cancer risk calculations (EMFAC2017).
2 Residential maximum exposed receptor (MER) is the same for Without Project and With Project Scenarios (location at Mira Loma Village, Figures 5.1-3 and 5.1-4).
3 For the adjacent worker analysis, the MER locations for the Without Project and With Project Scenarios are at different locations due to truck re-routing (Figures 5.1-5 and 5.1-6).
4 The Without Project MER is along Etiwanda Avenue, adjacent to Mira Loma Village.
5 The With Project MER is along Philadelphia Avenue, east of Milliken Avenue.

Figure 5.1-3 - Diesel Particulate Matter Contours for Residential Receptors - Without Project Scenario

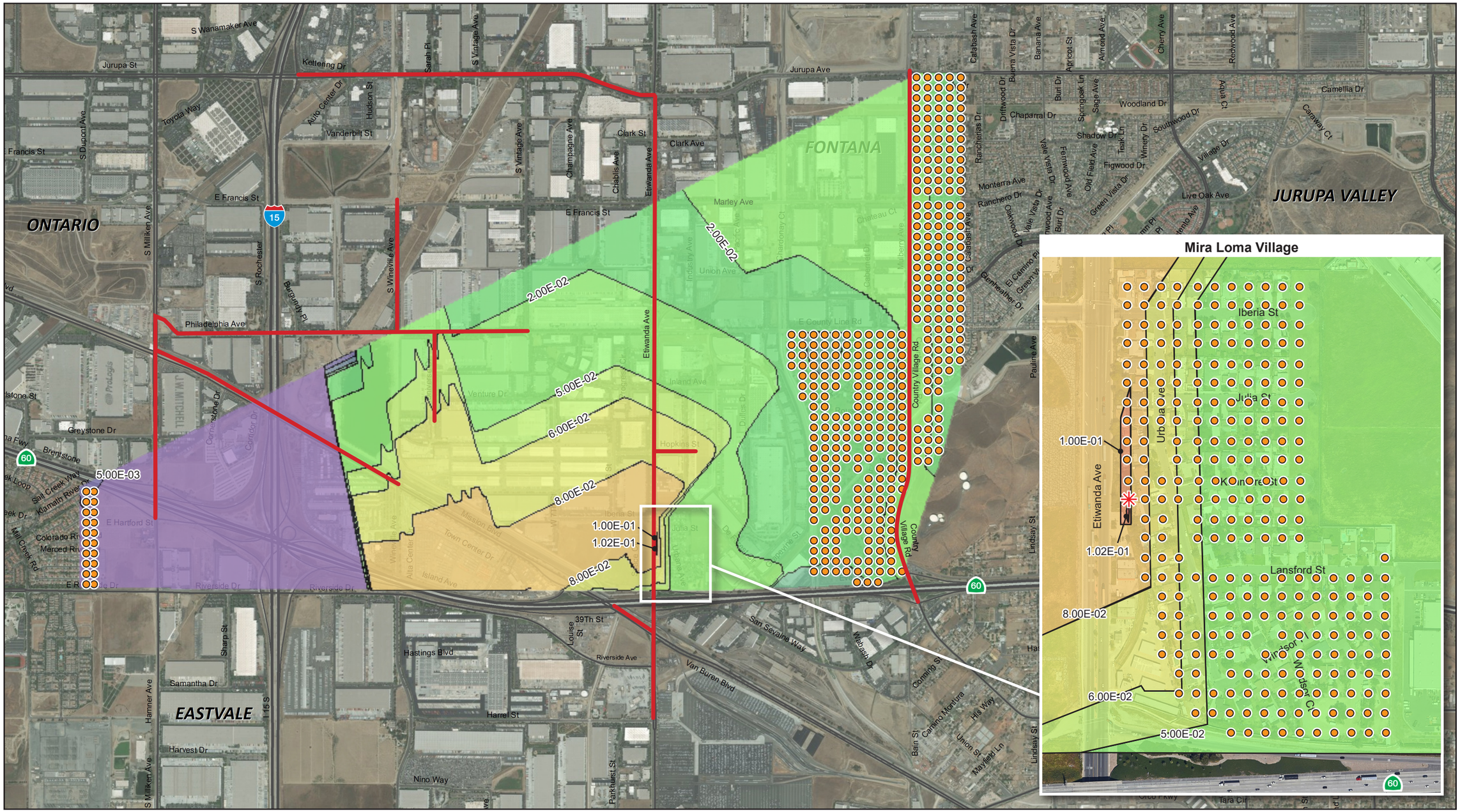

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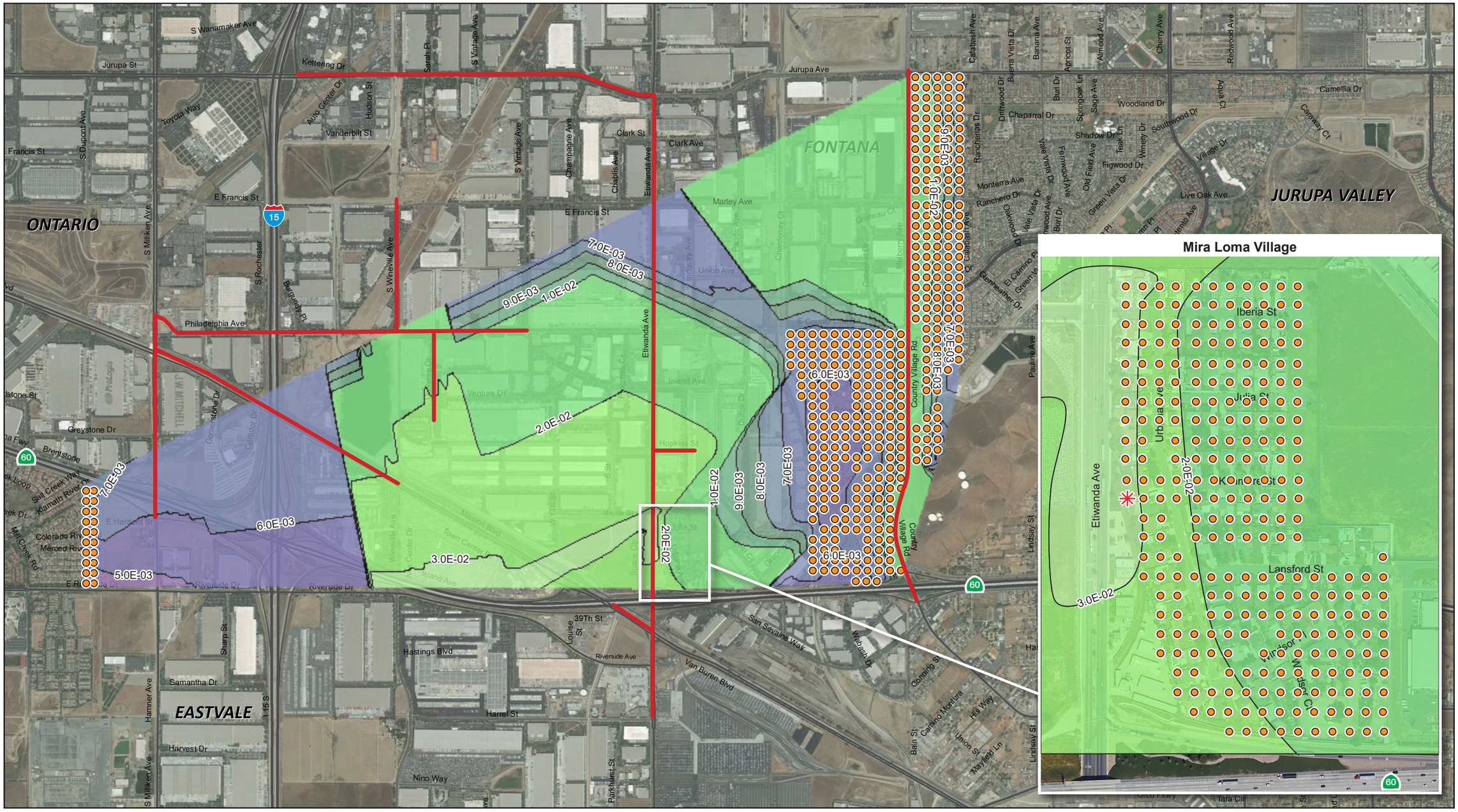
Figure 5.1-4 - Diesel Particulate Matter Contours for Residential Receptors - With Project Scenario



5. Environmental Analysis
AIR QUALITY

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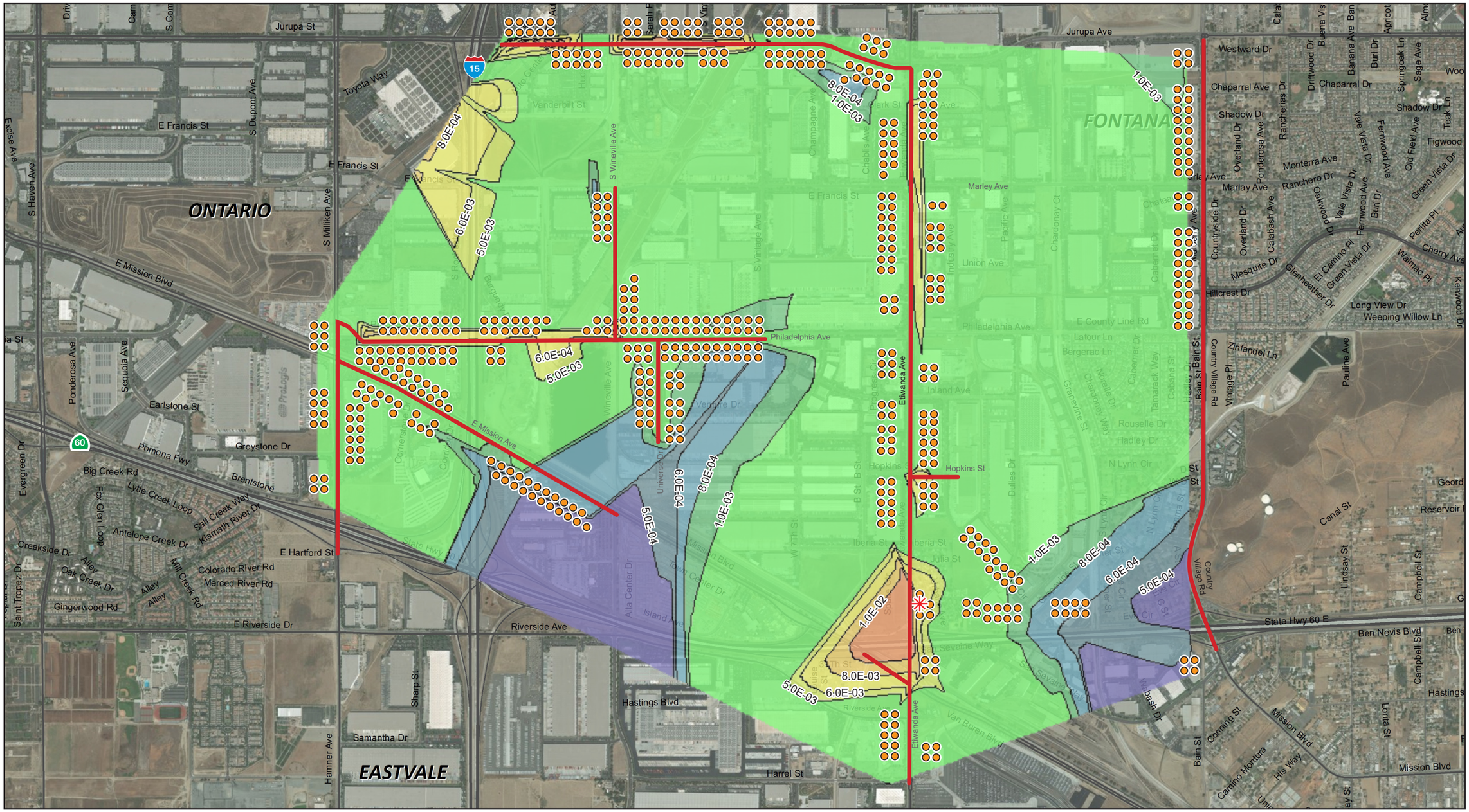
Figure 5.1-5 - Diesel Particulate Matter Contours for Worker Receptors - Without Project Scenario



5. Environmental Analysis
AIR QUALITY

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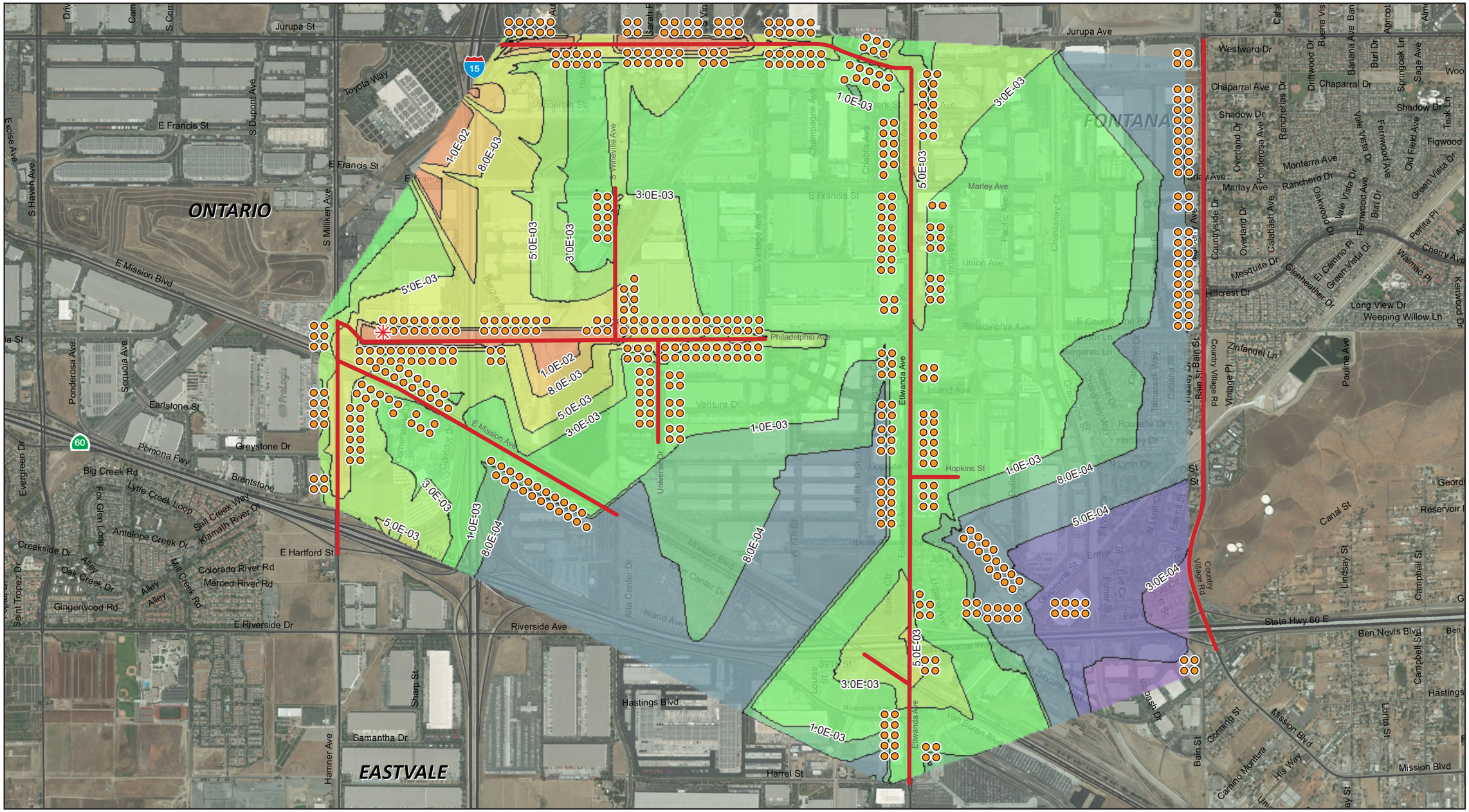
Figure 5.1-6 - Diesel Particulate Matter Contours for Worker Receptors - With Project Scenario



Roadways Impacted by Project

Receptors

Maximum Exposed Receptor (MER)

Max: 1.8E-02 (μg/m³) at (448634.09, 3766039.92) μg/m³

1.9E-04 | 3.0E-04 | 5.0E-04 | 8.0E-04 | 1.0E-03 | 3.0E-03 | 5.0E-03 | 8.0E-03 | 1.0E-02 | 1.8E-02

Concentrations < 0.17 μg/m³ result in cancer risk <10 in million for workers

0 2,000
Scale (Feet)

5. Environmental Analysis
AIR QUALITY

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As shown in Table 5.1-12, the incremental cancer risk decreases substantially for the residential MER (at Mira Loma Village) with implementation of the project. The cancer risk decreases from 66 per million to 21 per million. However, the cancer risk at the MER is still above SCAQMD's 10 in a million threshold. The cancer risk also decreases for the maximum exposed worker from the Without Project Scenario (adjacent to Mira Loma Village) to below the 10 in a million significance threshold. For the maximum exposed worker from the With Project Scenario (along Philadelphia Avenue), the cancer risk increases by 0.5 in a million and is also below the significance threshold of 10 in a million. For noncarcinogenic health risks, the net change in chronic hazard indices was well below the significance threshold of 1.0 for both residential and worker receptors.

In addition to the residential MER analysis, the DPM concentrations and cancer risks were determined for additional residential receptors in the project vicinity. With implementation of the project, the DPM concentrations decrease for all the residential receptors east of Etiwanda Avenue and east and west of Country Village Road adjacent to the restricted truck routes, and east of Mulberry Avenue (Figures 5.1-3 and 5.1-4). For the residences west of Hamner Avenue/Milliken Avenue and south of SR-60 in the City of Ontario, the incremental cancer risk increases between 0.7 and 1.5 in a million, and the chronic hazard indices increase less than 0.001 with implementation of the project (see Figure 5.1.7).

Finally, the DPM concentrations predicted by AERMOD were compared to the SCAQMD LSTs for PM_{10} listed in Table 5.1-6. The PM_{10} annual average LST of 1.0 $\mu g/m^3$ is not exceeded at either residential or worker receptors for either the Without Project or With Project scenarios. The annual average DPM concentrations were below 0.102 $\mu g/m^3$. To compare to the PM_{10} 24-hour LST of 2.5 $\mu g/m^3$, the annual average DPM concentration was adjusted using OEHHA's recommended factors to convert between averaging periods (OEHHA 2015). When adjusted to 24-hour concentrations, the highest 24-hour DPM concentration is 0.61 $\mu g/m^3$, which is below the 24-hour LST of 2.5 $\mu g/m^3$. Therefore, the net change in DPM emissions due to project implementation would not exceed the annual average and 24-hour LSTs.

Overall, residents and adjacent workers would not be subject to excess cancer risk and noncancer hazards or be exposed to substantial pollutant concentrations due to implementation of the project. Therefore, localized impacts to the Mira Loma Village residents and other residences and workers near affected roadways would be less than significant.

Level of Significance before Mitigation: Less than significant.

Impact 5.1-4: Implementation of the proposed project would not generate CO hotspots. [Threshold AQ-4]

Impact Analysis: 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 mixing is substantially limited—in order to generate a significant CO impact. The proposed project would not directly result in the generation of new vehicle trips, but its implementation would reroute traffic in the general area and result in an increase of up to 1,205 evening peak hour trips at an intersection in the study area in Year 2020. This would be below the CO hotspots screening criteria (Iteris 2018). Thus, implementation of the proposed project would not produce the volume of traffic required to

generate a CO hotspot. Therefore, implementation of the proposed project would not have the potential to substantially increase CO hotspots at intersections near the project site, and impacts would be less than significant.

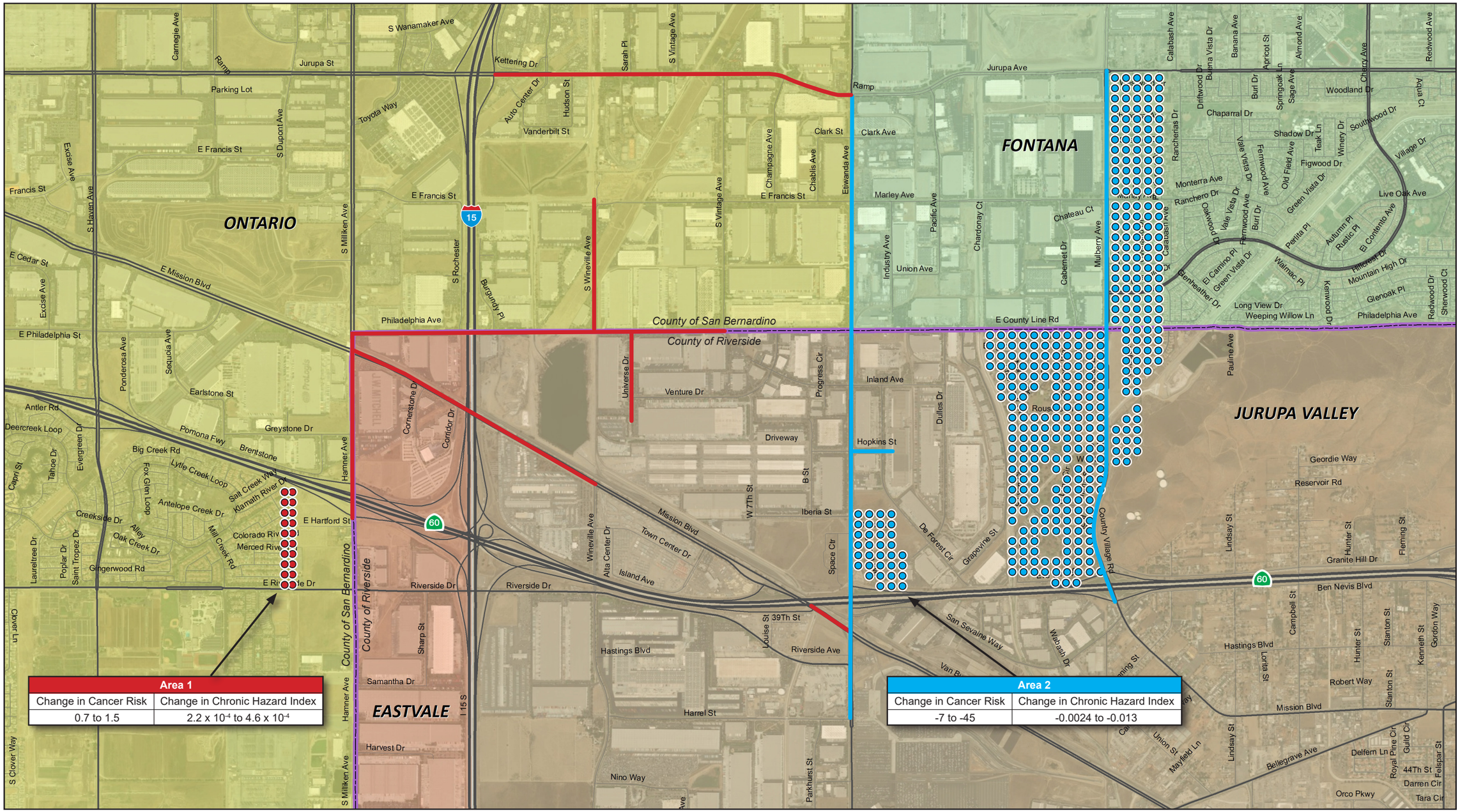
Level of Significance before Mitigation: Less than significant.

Impact 5.1-5: Implementation of the proposed project would not conflict with or obstruct implementation of the applicable air quality plan. [Threshold AQ-1]

Impact Analysis: CEQA requires that projects be evaluated for consistency with the AQMP. A consistency determination plays an important role in local agency project review by linking local planning and individual projects to the AQMP. It fulfills the CEQA goal of informing decision makers of the environmental effects of a project under consideration at a stage 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 the clean air goals of the AQMP. The regional emissions inventory for the SoCAB is compiled by SCAQMD and SCAG. Regional population, housing, and employment projections developed by SCAG are based, in part, on local jurisdictions' general plan land use designations. These projections form the foundation for the emissions inventory of the AQMP. These demographic trends are incorporated into the 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy, compiled by SCAG to determine priority transportation projects and VMT within the SCAG region. Projects that are consistent with the local general plan are considered consistent with the air quality–related regional plan. Typically, only new or amended general plan elements, specific plans, and major projects that have the potential to affect the regional population and employment forecasts need to undergo a consistency review.

The proposed project involves implementation of a truck ordinance that would restrict truck transport along specific segments of Etiwanda Avenue and Country Village Road in the City of Jurupa Valley. Thus, it would not have the direct potential to substantially affect housing, employment, and population projections within the region, which is the basis of the AQMP projections. Furthermore, as discussed in Impact 5.1-2, implementation of the proposed project would not result in generation of long-term regional emissions that would exceed the SCAQMD regional significance thresholds. Therefore, the proposed project would be consistent with the AQMP, and impacts are less than significant.

Figure 5.1-7 - Cancer Risk and Chronic Hazard Indices for Sensitive Receptors
5. Environmental Analysis



5. Environmental Analysis
AIR QUALITY

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Level of Significance before Mitigation: Less than significant.

Impact 5.1-6: The proposed project would not create objectionable odors. [Threshold AQ-5]

Impact Analysis: The proposed project would not result in objectionable odors. The threshold for odor is if a project creates an odor nuisance pursuant to 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.

Typically, the type of facilities that are considered to have objectionable odors include 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 plants, chemical manufacturing, and food manufacturing facilities. The proposed project would result in implementation of a truck ordinance that would restrict trucks from traveling on certain segments of Etiwanda Avenue and Country Village Road and would not result in the development of an odor-generating land use as those listed above. While emissions from rerouted trucks could generate odors such as diesel exhaust, these odors would likely be low in concentration and temporary (i.e., during a pass-by). Regarding construction-related odors, as stated, it is anticipated that any construction associated with installation of signage noting truck restriction along Etiwanda Avenue and Country Village Road would be minimal and would not require the use of heavy off-road construction equipment. In the event that heavy off-road construction is utilized, similar to a passing truck, any odors generated from its operation (e.g., diesel exhaust fumes) would also be temporary and low in concentration. By the time such emissions reach any sensitive receptor sites, it is anticipated that they would be diluted to well below any level of air quality concern. Therefore, overall, implementation of the proposed project is not expected to affect a substantial number of people, and odor impacts are considered less than significant.

Level of Significance before Mitigation: Less than significant.

5.1.5 Cumulative Impacts

In accordance with SCAQMD's methodology, any project that produces a significant project-level regional air quality impact in an area that is in nonattainment contributes to the cumulative impact. Cumulative projects in the local area include new development and general growth in the project area. The greatest source of emissions in the SoCAB is mobile sources. Due to the extent of the area potentially impacted from cumulative project emissions (i.e., the SoCAB), SCAQMD considers a project cumulatively significant when project-related emissions exceed the SCAQMD regional emissions thresholds shown in Table 5.1-5. No significant cumulative impacts were identified with regard to CO hotspots.

Construction

As discussed in Impact 5.1-1, it is anticipated that implementation of the proposed truck restriction ordinance would only require minimal efforts to install signs noting the truck restrictions. Thus, it is also anticipated that any construction emissions that might be generated would be minimal and not exceed the SCAQMD regional significance thresholds. Therefore, the proposed project's contribution to cumulative air quality impacts would not be cumulatively considerable and would be less than significant.

Operation

For operational air quality emissions, any project that does not exceed or can be mitigated to less than the daily regional threshold values is not considered by SCAQMD to be a substantial source of air pollution and does not add significantly to a cumulative impact. As discussed in Impact 5.1-2, implementation of the proposed project would not result in net emissions in excess of the SCAQMD regional emissions thresholds. Therefore, the air pollutant emissions associated with the proposed project would not be cumulatively considerable, and impacts would be less than significant.

5.1.6 Mitigation Measures

No mitigation measures are required.

5.1.7 Level of Significance After Mitigation

Impacts would be less than significant.

5.1.8 References

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