4.11 | AIR QUALITY

INTRODUCTION

This section describes the existing air quality conditions within Coachella and the potential impacts on air quality from the CGPU. Information for this section is based in part on data from the South Coast Air Quality Management District (SCAQMD) and the California Air Resources Board (CARB). Greenhouse gases and global climate change are discussed in Section 4.12, *Greenhouse Gases*.

EXISTING CONDITIONS

ENVIRONMENTAL BASELINE SETTING

Climate

Coachella is located within the Salton Sea Air Basin (Basin), so named because its geographical formation is that of a basin, with the surrounding San Jacinto and Little San Bernardino mountains trapping the air and its pollutants in the valleys below. The basin includes the central portion of Riverside County and all of Imperial County to the southeast. The regional climate within the basin is typical of a desert regime, with large daily and seasonal fluctuations in temperature and relatively high annual average temperatures (California Resources Agency, 2006). High temperatures frequently exceed 100 degrees Fahrenheit (°F) for the summer months. During the winter, temperatures can drop to near freezing (and below freezing at higher elevations).

The weather of the area is governed by large-scale warming and sinking of air in the semi-permanent subtropical high-pressure center over the Pacific Ocean. The high-pressure ridge blocks most mid-latitude storms, except in the winter when the high-pressure ridge is weakest and farthest south. The coastal mountains prevent the intrusion of the cool, damp air found in California's coastal regions. Throughout the year, average daily relative humidity is low, as are average rainfall values (only three inches per year). Most desert moisture arrives from infrequent warm, moist and unstable air masses from the south.

Daytime winds during the summer (May through October) are predominantly from the south-southeast with occasional winds from the northwest, west, and southwest. This differs from daytime winds during the wintertime (November through April), which demonstrates a strong split between winds from the northwest and from the south-southeast, with occasional winds from the west. Evening and nighttime winds are almost exclusively from the northwest year round, with infrequent winds from the south-southeast.

The wind patterns described above are evidence of the complex airflow patterns in the area. The diurnal shift in wind directions is typical of wind patterns found near land-sea transitions. Air over land is heated during the daytime compared to the air over large bodies of water. The air rises and causes

a pressure gradient that causes the cooler air over the water to blow in and equalize the pressure. During the nighttime, the reverse is true as land cools quickly relative to water. The air over the water becomes relatively warmer and cooler air over the land flows toward the large body of water.

Air Pollutants

Air pollutant emissions within the basin are generated by stationary, mobile, and natural sources. Stationary sources can be divided into two major subcategories: point and area sources. Point sources occur at an identified location and are usually associated with manufacturing and industry. Construction activities such as excavation and grading also contribute to point source emissions. Typical examples are boilers or combustion equipment that produce electricity or generate heat. Area sources are widely distributed and produce many small emissions. Typical examples of area sources include residential and commercial water heaters, painting operations, portable generators, lawn mowers, agricultural fields, landfills, and consumer products such as barbeque lighter fluid and hair spray. Mobile sources refer to emissions from on- and off-road motor vehicles, including tailpipe and evaporative emissions. On-road sources may be legally operated on roadways and highways. Off-road sources include aircraft, trains, and construction vehicles. Mobile sources account for the majority of the air pollutant emissions within the Basin. Air pollutants can also be generated by the natural environment. An example of this is when fine dust particles are pulled off the ground surface and suspended in the air during periods of high winds.

The definitions of the six primary criteria pollutants, including ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulates less than 10 and 2.5 microns in diameter (PM_{10} and $PM_{2.5}$), and lead (Pb) are provided below.

- *Ozone*. Ozone is produced by a photochemical reaction (triggered by sunlight) between nitrogen oxides (NO_X) and reactive organic gases (ROG). NO_X is formed during the combustion of fuels, while reactive organic gases are formed during combustion and evaporation of organic solvents. Because ozone requires sunlight to form, it mostly occurs in substantial concentrations between the months of April and October. Ozone is a pungent, colorless toxic gas with direct health effects on humans including respiratory and eye irritation and possible changes in lung functions. Groups most sensitive to ozone include children, the elderly, persons with respiratory disorders, and people who exercise strenuously outdoors.

- *Carbon Monoxide*. CO is a local pollutant that is found in high concentrations only near a source of carbon monoxide. The major source of CO, a colorless, odorless, poisonous gas, is automobile traffic. Elevated concentrations, therefore, are usually only found near areas of high traffic volumes. Health effects from CO are related to its affinity for hemoglobin in the blood. At high concentrations, CO reduces the amount of oxygen in the blood, causing heart difficulty in people with chronic diseases, reduced lung capacity and impaired mental abilities.

- *Nitrogen Dioxide*. NO_2 is a by-product of fuel combustion, with the primary source being motor vehicles and industrial boilers and furnaces. The principal form of nitrogen oxide produced by combustion is nitric oxide (NO), but NO reacts rapidly to form NO_2, creating the mixture of NO and NO_2 commonly called NO_X. Nitrogen dioxide is an acute irritant. A relationship between NO_2 and chronic pulmonary fibrosis may exist, and an increase in bronchitis in young children at concentrations below 0.3 parts per million (ppm) may occur. NO_2 absorbs blue light and causes a reddish brown cast to the atmosphere and reduced visibility. It can also contribute to the formation of PM_{10} and acid rain.

- *Suspended Particulates*. Atmospheric particulate matter is comprised of finely divided solids and liquids such as dust, soot, aerosols, fumes, and mists. The particulates that are of particular concern are PM_{10} (which measures no more than 10 microns in diameter) and $PM_{2.5}$, (a fine particulate measuring no more than 2.5 microns in diameter). The characteristics, sources, and potential health effects associated with the small particulates (those between 2.5 and 10 microns in diameter) and $PM_{2.5}$ can be different. Major man-made sources of PM_{10} are agricultural operations, industrial processes, combustion of fossil fuels, construction, demolition operations, and entrainment of road dust into the atmosphere. Natural sources include windblown dust, wildfire smoke, and sea spray salt. The finer, $PM_{2.5}$ particulates are generally associated with combustion processes as well as being formed in the atmosphere as a secondary pollutant through chemical reactions. $PM_{2.5}$ is more likely to penetrate deeply into the lungs and poses a serious health threat to all groups, but particularly to the elderly, children, and those with respiratory problems. More than half of the small and fine particulate matter that is inhaled into the lungs remains there, which can cause permanent lung damage. These materials can damage health by interfering with the body's mechanisms for clearing the respiratory tract or by acting as carriers of an absorbed toxic substance.

- *Sulfur dioxide (SO_2)*. SO_2 is a colorless, extremely irritating gas or liquid. It enters the atmosphere as a pollutant mainly as a result of burning high sulfur-content fuel oils and coal, and from chemical processes occurring at chemical plants and refineries.

- *Lead (Pb)*. Lead occurs in the atmosphere as particulate matter. The combustion of leaded gasoline is the primary source of airborne lead in the Basin. The use of leaded gasoline is no longer permitted for on-road motor vehicles; therefore, most lead combustion emissions are associated with off-road vehicles such as racecars. Other sources of lead include the manufacturing and recycling of batteries, paint, ink, ceramics, ammunition, and secondary lead smelters.

- *Toxic Air Contaminants*. Toxic air contaminants are airborne substances that are capable of causing chronic (i.e., of long duration) and acute (i.e., severe but of short duration) adverse effects on human health. They include both organic and inorganic chemical substances that may be emitted from a variety of common sources including gasoline stations, motor vehicles, dry cleaners, industrial operations, painting operations, and research and teaching facilities. Toxic air contaminants are different than the "criteria" pollutants previously discussed in that ambient air quality standards have not been established for them, largely because there are hundreds of air toxics and their effects on health tend to be local rather than regional.

Current Ambient Air Quality

SCAQMD monitors air pollutant levels to assure that the air quality standards are met, and if they are not met, develop strategies to meet the standards. Depending on whether or not the standards are met or exceeded, the air basin is classified as being in "attainment" or as "nonattainment." The Riverside County portion of the Salton Sea Air Basin (Basin), in which the project site is located, is a non-attainment area for both the federal and state standards for ozone and PM_{10}. However, it should be noted that maximum ozone concentrations in recent years were below the health advisory level (SCAQMD, 2012 AQMP).

The presence of ozone in the Coachella Valley is predominately due to the combustion of fuels in the South Coast Air Basin to the west, rather than to activity within the local Basin. In a well-studied pathway of pollution, air in the South Coast Air Basin is transported inland by the prevailing sea breeze

through the San Gorgonio Pass. Thus, most ozone in the Coachella Valley is directly transported from the South Coast Air Basin or formed photochemically from precursors emitted in Los Angeles County. The Coachella Valley is also particularly susceptible to ozone pollution because it has limited local NOx emissions to scavenge and destroy ozone at night.

PM10 concentrations are normally higher in desert areas such as the Coachella Valley due to windblown and fugitive dust emissions. Even relatively light winds can transport dust entrained from desert thunderstorms in southeastern California, Arizona, Nevada, or northern Mexico to the Coachella Valley. Although the Coachella Valley exceeded the federal 24-hour PM_{10} for two days in 2011, these exceedances were associated with high-wind natural events and excluded for comparison to the NAAQS, pursuant to the U.S. EPA Exceptional Events Rule. Aside from such high-wind natural events in the Coachella Valley, the Riverside portion of the Basin has not exceeded the federal 24-hour PM_{10} standard since the mid-1990s. Accordingly, SCAQMD has requested that U.S. EPA redesignate the Coachella Valley as being in attainment of federal PM10 standards. This request is pending U.S. EPA approval.

In 2011, the Coachella Valley did not exceed the standards for carbon monoxide, nitrogen dioxide, or $PM_{2.5}$. The Riverside County portion of the Basin has not exceeded federal CO standards in nearly three decades. Concentrations of fine particulates are relatively low in the Coachella Valley due to fewer combustion-related emissions sources, relative to windblown and fugitive dust that contribute to airborne PM10. Although sulfur dioxide concentrations were not measured in the Coachella Valley between 2009 and 2011, historical measurements have shown them to be well below the state and federal standards; moreover, there are no significant sources of sulfur dioxide emissions in the Coachella Valley.

In an effort to monitor the various concentrations of air pollutants throughout the basin, the SCAQMD has divided the region into 38 source receptor areas (SRAs) in which over 30 monitoring stations operate. Coachella is located within SRA 30, which covers the Coachella Valley and the northern tip of the Salton Sea. Ambient air pollutant concentrations within SRA 30 are monitored in the cities of Indio and Palm Springs. Whereas the Indio station is located in close proximity to the main population areas of the Coachella Valley, including the City of Coachella, the Palm Springs station is located farther upland near the San Gorgonio Pass.

Of the air pollutants discussed previously, ambient concentrations of ozone, CO, NO_2, PM10, and $PM_{2.5}$ are monitored within SRA 30. Table 4.11-1 provides a summary of ambient air quality within SRA 30 as measured in the City of Indio, located immediately northwest of Coachella, through the period of 2009 to 2011. For these years, the Indio monitoring station measured ozone but no other criteria air pollutants. As of 2011, ambient ozone concentrations at this monitoring station frequently exceed both national and state standards, while ambient PM_{10} concentrations rarely exceed state standards, and ambient $PM_{2.5}$ concentrations do not exceed national standards.

Table 4.11-1: SUMMARY OF AMBIENT AIR QUALITY AT THE INDIO MONITORING STATION (SRA 30)

Pollutant	Air Quality Standards	Year		
		2009	2010	2011
Ozone				
Maximum 1-hour concentration in ppm		0.097	0.100	0.099
Number of days exceeding State 1-hour standard	>0.09 ppm	6	7	3
Maximum 8-hour concentration in ppm		0.090	0.087	0.090
Number of days exceeding national 8-hour standard	>0.075 ppm	24	19	19
Number of days exceeding State 8-hour standard	>0.070 ppm	41	47	42
Suspended Particulates PM_{10}				
Maximum 24-hour concentration in $\mu g/m^3$		132	107	106
Number of samples exceeding national 24-hour standard	>150 $\mu g/m^3$	0	0	0
Number of samples exceeding State 24-hour standard	>50 $\mu g/m^3$	9 (7.5%)	6 (5%)	3 (3%)
Fine Particulates $PM_{2.5}$				
Maximum 24-hour concentration in $\mu g/m^3$		27.5	16.0	35.4
Number of samples exceeding national 24-hour standard	>35 $\mu g/m^3$	0	0	0

Source: South Coast Air Quality Management District, Historical Data by Year, 2013, http://www.aqmd.gov/smog/historicaldata.htm

See Table 4.11-3 for Air Quality Standards. Ambient concentrations of CO, NO_2, and SO_2 are not monitored at the Indio station.

Table 4.11-2 provides a summary of ambient air quality at a second SCAQMD monitoring station in the Coachella Valley, located in the City of Palm Springs, for the years 2009 through 2011. Although the Palm Springs monitoring station is located farther from the City than the Indio station, it samples a more comprehensive set of criteria air pollutants, including ozone, CO, and NO_2, PM_{10}, and $PM_{2.5}$.

Table 4.11-2: SUMMARY OF AMBIENT AIR QUALITY AT THE PALM SPRINGS MONITORING STATION (SRA 30)

Pollutant	*Air Quality Standards*	*Year*		
		2009	*2010*	*2011*
Ozone				
Maximum 1-hour concentration in ppm		0.120	0.114	0.124
Number of days exceeding State 1-hour standard	>0.09 ppm	28	23	21
Maximum 8-hour concentration in ppm		0.098	0.099	0.098
Number of days exceeding national 8-hour standard	>0.075 ppm	53	52	49
Number of days exceeding State 8-hour standard	>0.070 ppm	73	83	69
Carbon Monoxide (CO)				
Maximum 1-hour concentration in ppm		2	2	-
Number of days exceeding national 1-hour standard	>35 ppm	0	0	-
Number of days exceeding State 1-hour standard	>20 ppm	0	0	-
Maximum 8-hour concentration in ppm		0.7	0.5	0.6
Number of days exceeding national 8-hour standard	>9.0 ppm	0	0	0
Number of days exceeding State 8-hour standard	>9.0 ppm	0	0	0
Nitrogen Dioxide (NO_2)				
Maximum 1-hour concentration in ppm		0.05	0.05	0.04
Number of days exceeding State 1-hour standard	>0.18 ppm	0	0	0
Suspended Particulates PM_{10}				
Maximum 24-hour concentration in $\mu g/m^3$		140	37	42
Number of samples exceeding national 24-hour standard	>150 $\mu g/m^3$	0	0	0
Number of samples exceeding State 24-hour standard	>50 $\mu g/m^3$	1 (1.9%)	0	0
Fine Particulates $PM_{2.5}$				

Table 4.11-2: SUMMARY OF AMBIENT AIR QUALITY AT THE PALM SPRINGS MONITORING STATION (SRA 30)

Maximum 24-hour concentration in $\mu g/m^3$		21.8	12.8	26.3
Number of samples exceeding national 24-hour standard	$>35\ \mu g/m^3$	0	0	0

Source: South Coast Air Quality Management District, Historical Data by Year, 2013, http://www.aqmd.gov/smog/historicaldata.htm

See Table 4.11-3 for Air Quality Standards. Ambient concentrations of SO_2 are not monitored at the Palm Springs station. CO 1-hour data not available for year 2011.

Air Quality Management

SCAQMD is the air pollution control agency principally responsible for management of air pollution in the southern two-thirds of Los Angeles County, all of Orange County, and the western urbanized portions of Riverside and San Bernardino Counties. Within this area, SCAQMD works directly with county transportation commissions and local governments and cooperates actively with all federal and state government agencies. To control air pollution within its jurisdiction, the regional agency develops rules and regulations (as discussed below in the *Regulatory Setting*), establishes permitting requirements, inspects emissions sources, and enforces such measures through educational programs or fines, when necessary.

Under state law, the SCAQMD is required to prepare an overall plan for air quality improvement, known as the Air Quality Management Plan (AQMP), for the South Coast Air Basin and the Riverside County portion of the Salton Sea Air Basin. AQMPs are required to be updated every three years. Each iteration of the plan is an update of the previous plan and has a 20-year horizon.

2012 AQMP

The most recent AQMP was adopted in by the SCAQMD in December 2012. The purpose of the 2012 Air Quality Management Plan (AQMP or Plan) is to establish a comprehensive and integrated program that will bring the South Coast Air Basin into compliance with the federal 24-hour $PM_{2.5}$ air quality standard, and to provide an update to commitments towards meeting the federal 8-hour ozone standards. The Plan also includes specific measures to further implement the ozone strategy in the 2007 AQMP to assist attaining the 8-hour ozone standard by 2023. Although the control measures contained in the Final 2012 AQMP apply specifically to the South Coast Air Basin, they would also contribute toward the attainment of air quality standards for ozone in the Coachella Valley, due to the air pollution pathway discussed under *Current Ambient Air Quality*. These control measures for ozone can be categorized as follows:

- 8-hour Ozone Measures. Measures that provide for necessary actions to maintain progress towards meeting the 2023 8-hour ozone NAAQS, including regulatory measures, technology assessments, key investments, and incentives.
- Transportation Control Measures. Measures generally designed to reduce vehicle miles travelled (VMT) as included in SCAG's 2012 Regional Transportation Plan.

Many of the control measures proposed are not regulatory in form, but instead focus on incentives, outreach, and education to bring about emissions reductions through voluntary participation and behavioral changes needed to complement regulations.

2007 AQMP

The 2007 AQMP includes planning requirements for ozone pollution that are specific to the Coachella Valley. According to this document, the control of ozone in the Coachella Valley depends on two factors: implementation of SCAQMD measures in the South Coast Air Basin and compliance of locally generated emissions in the Coachella Valley with existing state and federal regulations. As discussed above, the SCAQMD measures pertaining to ozone were updated in the 2012 AQMP.

Final 2002 Coachella Valley PM10 State Implementation Plan (SIP)

This plan includes control measures for the abatement of large particulates in the Coachella Valley. These dust control measures target construction and earth movement activities, disturbed vacant lands, unpaved roads and lots, paved road dust, agriculture, and (as a contingency measure) turf overseeding. Primarily, the measures are implemented by local agencies, with AQMD rules serving as "backstop" regulations that support local dust control efforts (Laybourn, personal communications, June 25, 2013). The 2002 Coachella Valley PM_{10} SIP was revised in 2003 to incorporate the latest approved mobile source emissions estimates, planning assumptions, and fugitive dust source emission estimates. The control measures from the 2002 SIP remain in effect, regardless of the pending outcome of SCAQMD's request that the Coachella Valley be redesignated as in attainment of federal PM10 standards.

Sensitive Receptors

Ambient air quality standards have been established to represent the levels of air quality considered sufficient, with an adequate margin of safety, to protect public health and welfare. They are designed to protect that segment of the public most susceptible to respiratory distress, such as children under 14; the elderly over 65; persons engaged in strenuous work or exercise; and people with cardiovascular and chronic respiratory diseases. The majority of sensitive receptor locations are therefore schools and hospitals.

REGULATORY SETTING

The federal and state governments have been empowered by the federal and state Clean Air Acts to regulate the emission of airborne pollutants. The United States Environmental Protection Agency (U.S. EPA) is the federal agency designated to administer air quality regulation, while the Air Resources Board (ARB) is the state equivalent.

The U.S. EPA's air quality mandates are drawn primarily from the federal Clean Air Act (CAA), which required the agency to establish primary and secondary National Ambient Air Quality Standards (NAAQS), or standards to protect public health and welfare from criteria air pollutants. The current NAAQS are shown below in Table 4.11-3. In addition, the CAA required each state to prepare an air quality control plan referred to as a SIP to achieve the NAAQS by a specified date. The federal Clean Air Act Amendments of 1990 (CAAA) added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. SIPs are modified periodically to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. The U.S. EPA is responsible for reviewing all SIPs to determine if they conform to the mandates of the CAAA amendments and determine whether implementation will achieve air quality goals.

Local control in air quality management is provided by the ARB through multi-county and county-level Air Pollution Control Districts (APCDs). ARB coordinates and provides oversight of state and local air pollution control programs in California and implements the California Clean Air Act (CCAA). The CCAA, adopted in 1988, required ARB to establish California Ambient Air Quality Standards (CAAQS), which are shown below in Table 4.11-3. CAAQS are designed to protect the health and welfare of sensitive groups of people (e.g., children, the elderly, and people with respiratory conditions). The CCAA requires that all local air districts in the state endeavor to achieve and maintain the CAAQS by the earliest practical date. The CCAA specifies that local air districts should focus particular attention on reducing the emissions from transportation and area-wide emission sources and provides districts with the authority to regulate such indirect emission sources.

Both the federal and state governments have established ambient air quality standards for outdoor concentrations of various pollutants. Federal and state standards have been established for ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulates less than 10 and 2.5 microns in diameter (PM_{10} and $PM_{2.5}$), and lead (Pb). The national and state ambient air quality standards have been set at levels whose concentrations could be generally harmful to human health and welfare and to protect the most sensitive persons from illness or discomfort with a margin of safety. Table 4.11-3 illustrates the current Federal and State Ambient Air Quality Standards.

Table 4.11-3: CURRENT FEDERAL AND STATE AMBIENT AIR QUALITY STANDARDS

Pollutant	*Federal Standard*	*California Standard*
Ozone	0.075 ppm (8-hr avg)	0.07 ppm (8-hr avg) 0.09 ppm (1-hr avg)
Carbon Monoxide	9.0 ppm (8-hr avg) 35.0 ppm (1-hr avg)	9.0 ppm (8-hr avg) 20.0 ppm (1-hr avg)
Nitrogen Dioxide	100 ppb (1-hr avg) 0.053 ppm (annual avg)	0.18 ppm (1-hr avg) 0.03 ppm (annual avg)
Sulfur Dioxide	0.03 ppm (annual avg) 0.14 ppm (24-hr avg) 75 ppb (1-hr avg)	0.04 ppm (24-hr avg) 0.25 ppm (1-hr avg)
Lead	1.5 $\mu g/m^3$ (3-month avg)	1.5 $\mu g/m^3$ (30-day avg)
Particulate Matter (PM_{10})	150 $\mu g/m^3$ (24-hr avg)	20 $\mu g/m^3$ (annual avg) 50 $\mu g/m^3$ (24-hr avg)
Fine Particulate Matter ($PM_{2.5}$)	15 $\mu g/m^3$ (annual avg) 35 $\mu g/m^3$ (24-hr avg)	12 $\mu g/m^3$ (annual avg)

Source: California Air Resources Board, http://www.arb.ca.gov/research/aaqs/aaqs2.pdf, June, 2012

ppm = parts per million, ppb = parts per billion, $\mu g/m^3$ = micrograms per cubic meter

While the ARB establishes statewide air quality standards and is responsible for the control of mobile emission sources, the local APCDs are responsible for enforcing standards and regulating stationary sources. Coachella is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD), a multi-county APCD. All projects within SCAQMD's jurisdiction are subject to the agency's rules and regulations in effect at the time of construction.

Specific rules that may be applicable in the planning area include the following:

Rule 401—Visible Emissions. This rule limits the duration of emissions of any single source of air contaminants to a period or periods aggregating more than three minutes in any one hour which is as

dark or darker in shade as that designated No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines, or of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subparagraph (b)(1)(A) of this rule.

Rule 402—Nuisance. Rule 402 forbids the discharge of air contaminants 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.

Rule 403—Fugitive Dust. This rule is intended to reduce the amount of particulate matter entrained in the ambient air as a result of human-caused fugitive dust sources by requiring actions to prevent, reduce or mitigate fugitive dust emissions. Rule 403 applies to any activity or human-caused condition capable of generating fugitive dust.

Rule 403.1- Supplemental Fugitive Dust Control Requirements for Coachella Valley Sources. Rule 403.1 is additional to Rule 403 and only applies to fugitive dust sources in the Coachella Valley. This rule requires measures such as watering and stabilization of bulk materials to minimize wind-blown dust, and the cessation of earth-moving activities during high-wind events.

Rule 1113—Architectural Coatings. No person shall apply or solicit the application of any architectural coating within SCAQMD, with VOC content in excess of the values specified in a table incorporated in the Rule.

Rule 1120—Asphalt Pavement Heaters. A person shall not operate an asphalt pavement surface heater or an asphalt heater-remixer for the purpose of maintaining, reconditioning, reconstructing or removing asphalt pavement unless certain criteria are met.

In addition, SCAQMD rules 402 (Nuisance) and 410 (Odors from Transfer Stations and Material Recovery Facilities) apply to offensive odors. Any actions related to odors are based on citizen complaints to local governments and the SCAQMD.

ARB and the California Environmental Protection Agency (CalEPA) also developed the Air Quality and Land Use Handbook: A Community Health Perspective to serve as a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process. This handbook, published in April 2005, includes recommendations for the siting and design of new land uses in order to avoid exposing sensitive receptors to toxic air contaminants (CARB, 2005).

ENVIRONMENTAL IMPACTS AND MITIGATION

SIGNIFICANCE CRITERIA

The analysis of the CGPU's air quality impacts follows the guidance and methodologies recommended in the SCAQMD Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning (2005) as well as Appendix G of the State CEQA Guidelines.

The SCAQMD has adopted numeric significance thresholds for individual development projects. However, use of these thresholds would not be appropriate for a General Plan since they are for individual projects while the CGPU EIR considers the cumulative effect of all individual projects within the city.

Therefore, the criteria used to determine the significance of impacts are taken from the checklist contained in Appendix G of the State CEQA Guidelines. According to the Guidelines, General Plan implementation would result in a significant impact to air quality if it would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or project air quality violation;
- 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 qualitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations; and
- Create objectionable odors affecting a substantial number of people.

Per the SCAQMD CEQA Air Quality Handbook (1993), the following indicators address the CGPU's consistency with the 2012 AQMP:

- Whether the project would result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the 2012 AQMP; and
- Whether the project would exceed the 2012 AQMP assumptions for 2030 or yearly increments based on the year of the project buildout.

AIR QUALITY PLAN COMPLIANCE

Impact 4.11-1: Would the Project conflict with or obstruct implementation of the applicable air quality plan?

Significance: Less than significant.

An impact to air quality might occur if the CGPU conflicts with policies in an applicable air quality plan or with recommendations in ARB's Air Quality and Land Use Handbook.

The discussions that follow address the CGPU's consistency with growth and emissions forecasts upon which the AQMP is based, with applicable AQMP control measures, and with recommendations in ARB's Air Quality and Land Use Handbook.

Projects that are consistent with the projections of employment and population forecasts identified in the Regional Comprehensive Plan (RCP) prepared by the Southern California Association of Governments (SCAG) are considered consistent with the AQMP growth projections, since the RCP forms the basis of the land use and transportation control portions of the AQMP. The RCP is broken up into nine chapters that include key areas where resource management is necessary due to the urban growth the area experiences. SCAG's most recent population projections are made through SCAG's 2012 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) and are the basis for growth for the RCP.

As stated in Policy 2.1 in the Land Use + Community Design Element of the CGPU, the City's population is intended to grow to a maximum of 135,000 by 2035. By contrast, SCAG's 2012 RTP/SCS forecasts that the City will have a population of only 128,700 in 2035. Thus, the CGPU anticipates a maximum of 6,300 more residents than does the 2012 RCP/SCS by this time horizon, or approximately 4.9% more growth. Nevertheless, the maximum theoretical buildout under the proposed land use designations likely overstates the amount of growth that is likely to occur within the CGPU's planning horizon. The SCAG forecasts are considered a reasonable estimate of the likely level of growth in Coachella through 2035. Because the AQMP growth projections are based on SCAG population levels, the increase in population growth associated with the CGPU is therefore be roughly similar to the population growth assumption in the AQMP.

Furthermore, even with anticipated population growth in Coachella, goals and policies in the CGPU have the potential to reduce per capita emissions of air pollutants.

The CGPU includes policies to reduce vehicle use through land use and design. For example, Neighborhood Center development should have wide sidewalks and buildings near the edge of sidewalks to create a walkable shopping environment. In Coachella's Downtown Center, mid-block paseos are recommended to provide pedestrian connectivity, and the geometry of intersections and crosswalks should favor the pedestrian in all cases. Furthermore, the Industrial District would include pedestrian and bicycle routes to enable convenient commuting by bicycle or transit and safe walking conditions.

Numerous policies in the CGPU, including the following from the Land Use + Community Character Element, would facilitate a reduction in vehicle miles traveled.

2.9 **Infill development.** Promote and provide development incentives for infill development and redevelopment of existing properties.

2.10 **Contiguous development pattern.** Encourage and incentivize development to occur contiguous to, or proximate to, existing built areas to facilitate delivery of City services and minimize "leapfrog" development not connected to existing urbanized areas.

3.2 **Walkable streets.** Regulate new development to ensure new blocks encourage walkability by maximizing connectivity and route choice, create reasonable block lengths to encourage more walking and physical activity and improve the walkability of existing neighborhood streets.

3.3 **Pedestrian barriers.** Discourage physical barriers to walking and bicycling between and within neighborhoods and neighborhood centers. If physical barriers are unavoidable, provide safe and comfortable crossings for pedestrians and cyclists. Physical barriers

may include arterial streets with speed limits above 35 mph, transit or utility rights-of-way, very long blocks without through-streets, and sound walls, among others.

5.7 **Walkable neighborhoods.** Require that all new neighborhoods are designed and constructed to be pedestrian friendly and include features such as short blocks, wide sidewalks, tree-shaded streets, buildings that define and are oriented to streets or public spaces, traffic-calming features, convenient pedestrian street crossings, and safe streets that are designed for pedestrians, cyclists and vehicles.

5.8 **Provision of sidewalks.** Except within designated rural areas, require sidewalks of at least six feet in width on both sides of streets in neighborhoods.

5.11 **Connections to key destinations.** Require direct pedestrian connections between residential areas and nearby commercial areas.

5.24 **Infill neighborhoods.** In existing developed areas of the City, encourage repair-oriented development that creates complete neighborhoods (as defined above). Such activities include:

- Enhancing connectivity and reducing block size, including reasonable and related improvements in off-site locations.
- Completing abandoned subdivisions with building types identified in this General Plan.
- Making pedestrian-oriented blocks out of large scale superblocks through the addition of new streets.

6.5 **Access to transit.** Promote the development of commercial and mixed use centers that are located on existing or planned transit stops in order to facilitate and take advantage of transit service, reduce vehicle trips and allow residents without private vehicles to access services.

6.6 **Redevelopment of existing retail into neighborhood centers.** Provide incentives to transform existing, auto-dominated suburban centers into neighborhood destinations by adding a diversity of uses, providing new pedestrian connections to adjacent residential areas, reducing the visual prominence of parking lots, making the centers more pedestrian-friendly and enhance the definition and character of street frontage and associated streetscapes.

9.6 **Trip Chaining.** Prioritize complementary land uses to encourage trip chaining and reduce automobile use.

The CGPU's Mobility Element would also promote reduced dependence on automobiles, including but not limited to the following policies.

1.1 **Complete streets for new construction.** Require that the planning, design and construction of all new transportation projects consider the needs of all modes of travel to create safe, livable and inviting environments for pedestrians, bicyclists, motorists and public transit users of all ages and abilities.

1.2 **Complete streets for existing roadways.** Require that the planning, design and reconstruction of any existing transportation projects consider the needs of all travel modes to the extent feasible.

3.1 **Pedestrian network.** Improve health outcomes by creating a safe and convenient circulation system for pedestrians that focuses on crosswalks, improves the connections between neighborhoods and commercial areas, provides places to sit or gather, pedestrian-scaled street lighting, buffers from moving vehicle traffic, and includes amenities that attract people of all ages and abilities.

3.2 **Pedestrian improvement prioritizations.** Prioritize pedestrian improvements in existing areas of the City with supportive land use patterns and those facilities that provide connectivity to other modes of travel such as bicycling and transit.

3.3 **Sidewalks for roadways.** Require that the City provide wide sidewalks along all roadways which are built or reconstructed in the City except in those instances in which there is insufficient right-of-way or other physical limitations.

3.4 **Pedestrian connections for development.** Require that all development or redevelopment projects provide pedestrian connections to the external pedestrian network.

3.6 **Pedestrian only areas.** Promote the closure of streets on a recurring basis to create temporary pedestrian zones for Community Events, such as farmers markets, community events, ciclovías (bicycle and pedestrian events), and other events consistent with the walking and biking environment policies of the Mobility Element. Leverage the momentum of other regional bike events, such as Tour de Palm Springs, to create events locally.

4.1 **Bicycle networks.** Require that the City provide additional bicycle facilities along all roadways in the City which are built or reconstructed in the City except in those instances in which there is insufficient right-of-way or other physical limitations.

5.4 **Transit accessible development.** Encourage new large residential or commercial developments to locate on existing and planned transit routes.

8.1 **Regional transit.** Collaborate with Sun Line Transit to identify regional connections for City residents and employees.

8.2 **Regional park and ride.** Collaborate with CVAG to identify potential park and ride locations in Coachella.

8.3 **Regional non-motorized connections.** Prioritize provide connections between the City's bicycle and pedestrian network to regional facilities such as CV Link and other regional trail facilities.

As indicated by the above goals, policies, and design standards, the CGPU's prioritization of walkability and multi-modal transportation would reduce reliance on the drive-alone automobile. A reduction in vehicle use and vehicle miles traveled can result in a reduction in fuel consumption and in air pollutant emissions. Research indicates that infill development reduces vehicle miles traveled (VMT) and

associated air pollutant emissions as compared to development on sites at the periphery of metropolitan areas, also known as "greenfield" sites. For example, a 1999 simulation study conducted for the U.S. EPA comparing infill development to greenfield development found that infill development results in substantially fewer VMT per capita (39% to 52%) and generates fewer emissions of most air pollutants and greenhouse gases (see Table 4.11-4). Similarly, a 2007 study prepared by the Urban Land Institute (Ewing et al., 2007) found that compact development has the potential to reduce VMT per capita by anywhere from 20-40% relative to sprawl.

TABLE 4.11-4

COMPARISON OF VMT AND EMISSIONS:

INFILL VERSUS GREENFIELD DEVELOPMENT

Case Study	Per Capita Daily VMT, Infill as a Percentage of Greenfield	Emissions, Infill as a Percentage of Greenfield	
San Diego, CA	52%	CO	88%
		NO_x	58%
		SO_x	51%
		PM	58%
		CO_2	55%
Montgomery County, MD	42%	CO	52%
		NO_x	69%
		SO_x	110%
		PM	50%
		CO_2	54%
West Palm Beach, FL	39%	CO	75%
		NO_x	72%
		SO_x	94%
		PM	47%
		CO_2	50%

Source: Allen, E., Anderson, G., and Schroeer, W., "The Impacts of Infill vs. Greenfield Development: A Comparative Case Study Analysis," U.S. Environmental Protection Agency, Office of Policy, EPA Publication #231-R-99-005, September 2, 1999.

Although the substantial population growth expected in Coachella through 2035 would result in increased emissions of criteria air pollutants, it is unlikely to conflict with applicable air quality plans. As discussed under *Current Ambient Air Quality*, SCAQMD has not imposed control measures on the Coachella Valley targeting the region's primary air quality concern, ozone pollution, since the area's

ozone exceedances are mainly due to emissions from the South Coast Air Basin. Emissions modeling in the 2012 AQMP projects that, even as the Coachella Valley's population doubles between 2000 and 2030, ozone pollution in SCAQMD's jurisdiction will be brought into attainment with federal ozone standards due to existing control measures. Thus, growth facilitated by the CGPU would not be expected to impede progress toward ozone attainment.

In 2002, SCAQMD instituted five control measures targeting PM_{10} emissions in the Coachella Valley. The control measures address fugitive dust emissions from construction/earth-movement activities, activities on disturbed vacant lands, unpaved roads and parking lots, paved roads, and agricultural activities. Several policies in the Sustainability + Natural Environment Element of the CGPU are consistent with these control measures. Policy 11.8 requires construction activities, including on-site building and the transport of materials, to limit emissions and dust. Policy 11.1 calls for minimizing the creation of new sources of air pollutants within the City. In addition, Policy 5.8 would require new developments adjacent to agricultural uses to maintain a protective buffer, which could reduce exposure of sensitive receptors to fugitive dust emissions from farm activities.

ARB's Air Quality and Land Use Handbook, published in April 2005, also contains the following applicable recommendations on the siting of sensitive land uses near major sources of air pollutants.

- Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day.
- Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating TRUs per day, or where TRU unit operations exceed 300 hours per week).
- Take into account the configuration of existing distribution centers and avoid locating residences and other new sensitive land uses near entry and exit points.
- Do not site new sensitive land uses in the same building with perc dry cleaning operations.
- Avoid siting new sensitive land uses within 300 feet of a large gasoline dispensing facility (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50 foot separation is recommended for typical gas dispensing facilities.

Consistent with the Air Quality and Land Use Handbook's recommendation on siting near freeways, Policy 8.12 in the Land Use + Community Character Element of the CGPU would lead to zoning changes to prevent schools and other sensitive receptors from being located within approximately 500 feet of busy roadways, highways, and known or expected new stationary sources of pollution. In the Safety Element, Policy 5.9 would promote and incentivize environmentally friendly dry cleaning processes, which would reduce potential exposure to perc (perchloroethylene), a solvent used in most dry cleaning operations (SCAQMD, 2010). Furthermore, Policy 5.4 adopts the same language as the Air Quality and Land Use Handbook's recommendation on siting near gasoline dispensing facilities. In addition, Policy 11.3 in the Sustainability + Natural Environment Element generally prohibits the siting of land uses in locations that would result in adverse impacts on existing sensitive receptors, while Policy 11.11 would result in the development of thresholds of significance for sensitive receptors in proximity to state highways and the mitigation of potential impacts. Therefore, the CGPU would be consistent with ARB's handbook.

As the CGPU would generally be consistent with SCAG's growth forecast for 2035, and would not conflict with applicable control measures and recommended standards for siting of sensitive receptors, it would have a less than significant impact on applicable air quality plans.

Mitigation Measures

With incorporation of the CGPU policies described above, impacts on applicable air quality plans would be less than significant, and no mitigation is required.

Impact 4.11-2: Would the Project generate construction-related emissions that may result in temporary adverse impacts to local air quality?

Significance: Less than significant.

Construction activity facilitated by the proposed CGPU would create a significant effect if it resulted in substantial emissions of air pollutants in areas near sensitive receptors.

Construction activity that would be facilitated by the CGPU would cause temporary emissions of various air pollutants. Sources of air pollution during construction include heavy-duty construction equipment, material delivery trucks, soil disturbance activities, construction worker vehicles, and architectural coatings, among other activities. Ozone precursors NO_x and CO would be emitted by the operation of construction equipment, while fugitive dust (PM_{10}) would be emitted by activities that disturb the soil, such as grading and excavation, road construction and building construction.

As previously stated, the Coachella Valley is currently in non-attainment for both the federal and state standards for ozone and PM_{10}. As discussed under Current Ambient Air Quality, the Coachella Valley is in attainment of federal and state standards for NO_x, CO, and $PM_{2.5}$. Although no specific attainment goal has been established, the potential release of asbestos or other toxic air contaminants could also occur within the city, especially during building demolition. Information regarding specific development projects, soil types, and the locations of receptors would be needed in order to specifically quantify the level of emissions associated with construction activity. This information is not available given the programmatic nature of the proposed CGPU. Therefore, a more qualitative approach to characterizing construction related air emissions has been employed.

Construction activity that could be facilitated by the CGPU is largely focused between Avenues 50 and 52, with the highest densities in the Downtown Center, Urban Employment Center, and Urban Neighborhood subareas. Significant amounts of new development would also occur in new growth areas east of SR-86S. Individual developments in these and other areas of the city would be subject to independent environmental review under CEQA. Depending upon the development type, size, and development timeframe, maximum daily construction emissions associated with individual projects could potentially exceed SCAQMD significance thresholds. Implementation of the proposed CGPU would generate construction-related emissions. However, future construction activity within the city would be subject to the following CGPU policies in the Sustainability + Natural Environment Element.

11.3 **Sensitive receptors.** Prohibit the siting of land uses that adversely impact existing sensitive receptors, including schools, childcare centers, senior housing, and subsidized affordable housing. The minimum distance separating these uses should be 500 feet.

11.8 **Construction-related emissions.** Requires construction activities, including on-site building and the transport of materials, to limit emissions and dust.

These policies would reduce the overall level of air quality impacts related to construction during the CGPU buildout period. In addition, SCAQMD has established throughout its jurisdiction rules 402 and 403, which strive to eliminate emissions of airborne pollutants and require project specific control measures designed to reduce the level of fugitive dust entrainment, respectively. Rule 403 specifically requires the use of best available control measures for all construction activities. The major construction phases or elements specifically addressed by Rule 403 to reduce fugitive dust include earth moving, disturbed surface areas, unpaved roads, open storage piles, demolition, and other various construction activities. Rule 403 compliance by individual property owners, developers, or contractors would reduce temporary construction-related air pollutant emissions.

Furthermore, any construction activity of at least 5,000 square feet would be required to prepare a fugitive dust control plan, pursuant to SCAQMD's Rule 403.1 for the Coachella Valley. Any fugitive dust control plan would contain a listing of all sources of fugitive dust within the property lines, a description of the control measures from the Rule 403.1 Implementation Handbook as applied to these dust sources, and a description of contingency control measures in the event of visible dust crossing property lines. Moreover, each individual project facilitated by the proposed CGPU would be required to implement additional mitigation if site-specific analysis identifies the potential to exceed the applicable thresholds for construction-related emissions. Adherence to applicable CGPU policies and SCAQMD rules would reduce potential construction-related impacts to a **less than significant** level.

Mitigation Measures

With adherence to applicable CGPU policies and SCAQMD rules regarding emissions from construction activities, impacts would be less than significant, and no mitigation is required.

LONG-TERM EMISSIONS

Impact 4.11-3: Would long-term emissions associated with future development facilitated by the CGPU exceed levels in regional forecasts?

Significance: Less than significant.

Future development facilitated by the CGPU would result in a significant impact if long-term emissions associated with development are inconsistent with regional growth or emissions forecasts.

Future development in accordance with the CGPU would generate long-term emissions from mobile sources (vehicle trips) and stationary sources (electricity and natural gas). Emissions associated with the operation of individual projects, depending on project type and size, could exceed project-specific thresholds established by the SCAQMD. However, such projects would be required to undergo independent project-level CEQA review and, where necessary and feasible, they would include mitigation measures to reduce potentially significant project-level impacts.

To assess the impacts of long-term emissions at a programmatic level, this discussion will compare the forecasted population at buildout of the proposed CGPU to growth forecasts upon which the 2012 AQMP and 2012 RTP/SCS are based. In addition, estimated long-term emissions of air pollutants in Coachella will be compared to estimates of future regional emissions from the 2012 AQMP.

As discussed under Impact 4.2-1 above, maximum potential buildout under the CGPU would result in a city population that exceeds SCAG's regional growth forecast upon which regional air quality planning is based. Nevertheless, the expected level of growth would be roughly consistent with SCAG's forecast, which is considered a reasonable estimate of future population in Coachella. Measures in the CGPU to

reduce dependence on automotive transportation would lead to reductions in per capita vehicle miles traveled. Furthermore, goals, policies, and design standards in the CGPU are consistent with applicable SCAQMD control measures and ARB recommendations.

For the purpose of comparison with the greater SCAQMD region, future emissions of air pollutants in the City at buildout of the proposed CGPU were estimated for the year 2035 using SCAQMD's CalEEMod air quality model. Annual operational emissions were estimated in terms of tons per year. Table 4.11-5 shows estimated long-term emissions in Coachella, in tons per day, assuming the incorporation of measures in the CGPU to increase density, improve walkable design, and increase transit accessibility, among others. Table 4.11-5 also compares estimated emissions in Coachella to estimated District-wide regional emissions for the year 2030 for all air pollutants reported in SCAQMD's 2012 AQMP.

TABLE 4.11-5
COMPARISON OF ESTIMATED FUTURE COACHELLA AND SCAQMD REGIONAL EMISSIONS

Air Pollutant	Coachella Emissions (tons per day)[1]	SCAQMD Regional Emissions (tons per day)[2]	Percentage of Regional Emissions
VOCs	2.38	407	0.59%
NO_x	2.82	289	0.98%
CO	13.06	1,501	0.87%
SO_x	0.01	20	0.06%
$PM_{2.5}$	0.23	73	0.32%

Sources: Appendix 11.5; SCAQMD, 2012 AQMP.

1. City emissions were estimated in CalEEMod for the year 2035, representing the planning horizon of the CGPU.

2. Regional emissions were estimated in the 2012 AQMP for the year 2030.

As shown in Table 4.11-5, estimated future operational emissions in Coachella would comprise a small portion of total emissions across the SCAQMD region. Emissions of the criteria air pollutants listed above would be less than one percent of total regional emissions. This comparison can be considered conservative because regional emissions would increase incrementally between 2030 and 2035, the year for which the city's emissions were modeled in CalEEMod. Furthermore, the numerous policies discussed under Impact 4.11-1 would improve walkability and multi-modal transportation networks, effectively reducing the city's contribution to regional emissions. Therefore, long-term emissions would be generally consistent with regional forecasts, and impacts would be less than significant.

Mitigation Measures

With implementation of applicable policies in the CGPU, as discussed under Impact 4.11-1, the impact from long-term emissions would be less than significant, and no mitigation is required.

Impact 4.11-4: Would the Project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Significance: Less than significant.

The CGPU would have a significant impact on air quality standards if increased traffic at intersections would generate CO "hotspots."

CO emissions are a function of vehicle idling time, meteorological conditions, and traffic flow. Under certain extreme meteorological conditions, CO concentrations near a congested roadway or intersection may reach unhealthful levels (i.e., adversely affecting residents, school children, hospital patients, the elderly, etc.).

As discussed under Current Ambient Air Quality, the Coachella Valley is in attainment of state and federal CO standards and has not exceeded them in nearly three decades. Three major control programs have contributed to the reduced per-vehicle CO emissions: exhaust standards, cleaner burning fuels, and motor vehicle inspection and maintenance programs. At the Palm Springs monitoring station, the maximum 8-hour CO level recorded in 2011 was 0.6 parts per million (ppm), which is well below the state and federal 8-hour standards of 9.0 ppm. In addition, the long-term trend is a decline in CO emissions across the Salton Sea Air Basin; between 1989 and 2007, maximum 8-hour CO levels in the Basin steadily declined from 2.9 ppm 0.8 ppm (CARB, 2009). This decline is largely due to the use of cleaner operating vehicles.

Although CO is not expected to be a major air quality concern in the Coachella Valley over the planning horizon, elevated CO levels can occur at or near intersections that experience severe traffic congestion. A project's localized air quality impact is considered significant if the additional CO emissions resulting from the project create a "hot spot" where the California 1-hour standards of 20.0 ppm or the 8-hour standard of 9 ppm is exceeded. This typically occurs at severely congested intersections. Screening for possible elevated CO levels should be conducted for severely congested intersections experiencing levels of service E or F with project traffic where a significant project traffic impact may occur. The SCAQMD recommends a quantified assessment of CO hot spots when a project increases the volume-to-capacity ratio (also called the intersection capacity utilization) by 0.02 (2%) for any intersection with an existing LOS D or worse (SCAQMD, 2003).

Based on the traffic impact analysis prepared for the proposed CGPU (Section 4.8, Circulation), predicted roadway capacity and traffic volumes following Plan implementation (Future Conditions) suggest that the following 13 intersections would experience congestion at LOS E or LOS F in either or both the AM or PM peak periods:

- Jackson Street at Avenue 48
- Van Buren Street at Avenue 48
- Van Buren Street at Avenue 52
- SR-86S southbound ramps at Dillon Road

- SR-86S northbound ramps at Dillon Road
- SR-86S at Avenue 52
- Dillon Road at I-10 eastbound ramps
- Dillon Road at I-10 westbound ramps
- Harrison Street at Avenue 50
- Harrison Street at Avenue 52
- Harrison Street at Avenue 54
- Harrison Street at Airport Boulevard
- Polk Street at Avenue 50

As discussed in Section 4.8, *Circulation*, a number of mitigation measures are proposed to provide additional capacity at these intersections and to reduce the impacts to LOS. Additional mitigation is provided by policy language in the General Plan which is oriented towards reducing vehicle usage through increases in density, provision of mixed use, improving the design of development, and the provision of alternative mode facilities. The potential traffic impacts at impacted intersections would be less than significant after incorporation of mitigation measures and implementation of CGPU policies. Consequently, even though the CGPU would generate more vehicle trips than under existing conditions, additional traffic would not degrade conditions at intersections to the extent that mobile-source emissions exceed the 1-hour or 8-hour ambient air quality standards for CO.

Mitigation Measures

With implementation of the proposed mitigation measures for intersections projected to operate at LOS E or LOS F, as discussed in Section 4.8, *Circulation*, impacts related to CO hotspots would be less than significant, and no additional mitigation is required.

CUMULATIVE IMPACTS

Because the proposed project is a CGPU, which takes into account existing and potential development over approximately the next twenty years, the analysis of air quality impacts contained within this chapter of the EIR is already cumulative in nature. Implementation of the proposed CGPU would generate emissions of criteria air pollutants from the construction and operation of projects, which would contribute to regional emissions within SCAQMD's jurisdiction. However, adherence to policies in the proposed Land Use + Community Character, Mobility, and Sustainability + Natural Environment Elements, and compliance with existing SCAQMD rules, would reduce the generation of ozone precursors and particulates for which the Coachella Valley is in nonattainment. Furthermore, as shown above in Table 4.11-5, the city's contribution to regional emissions is minimal; attainment of ozone standards in the Coachella Valley depends predominantly on the application of control measures in the South Coast Air Basin. Assuming continued compliance with state and federal air quality regulations in the Coachella Valley and implementation of control measures targeting ozone in the South Coast Air Basin, the 2012 AQMP finds that the Coachella Valley will reach attainment of federal air quality standards. Since emissions of air pollutants from the city will not be cumulatively considerable in the SCAQMD region, the proposed CGPU will not have a significant cumulative impact, and no mitigation is

required. A discussion of the project's cumulative effect with respect to greenhouse gas emissions (GHG) is contained in Section 4.12 of this EIR.

SIGNIFICANT AND UNAVOIDABLE IMPACTS

The proposed CGPU has no significant and unavoidable impacts on air quality. Individual projects facilitated by the CGPU could generate future emissions in excess of project-specific thresholds established by the SCAQMD; however, such projects would be required to undergo independent project-level CEQA review and where necessary and feasible, they would include mitigation measures to reduce potentially significant project-level impacts.

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