

3.2 AIR QUALITY

This EIR section analyzes the potential for adverse impacts on air quality resulting from implementation of the proposed project. The Initial Study (Appendix A) identified the potential for impacts associated with violation of air quality standards or substantial contribution to an existing or projected air quality violation, conflict with or obstruction of implementation of the applicable air quality plan, exposure of sensitive receptors to substantial pollutant concentrations, or a cumulatively considerable net increase of criteria pollutants for which the project region is not in attainment. Additionally, the Initial Study determined that less-than-significant impacts would occur with respect to the creation of objectionable odors affecting a substantial number of people. Data used to prepare this section were taken from various sources, including the South Coast Air Quality Management District (SCAQMD) *CEQA Air Quality Handbook* and the 1997 Air Quality Management Plan (AQMP), as amended. Full bibliographic entries for all reference materials are provided in Chapter 7 (References) of this document.

3.2.1 Existing Conditions

Climate

The City of Huntington Beach is located within the South Coast Air Basin (Basin), named so because its geographical formation is that of a basin, with the surrounding mountains trapping the air and its pollutants in the valleys or basins below. This area includes all of Orange County and the nondesert portions of Los Angeles, San Bernardino, and Riverside Counties. The regional climate within the Basin is considered semi-arid and is characterized by warm summers, mild winters, infrequent seasonal rainfall, moderate daytime onshore breezes, and moderate humidity.

The City is located in northern coastal Orange County. The annual average temperature in the City ranges from 54 to 68 degrees Fahrenheit (°F). The area also experiences a typical daily wind pattern that is a daytime onshore sea breeze (from the west) and a nighttime land breeze. This regime is broken only by occasional winter storms and infrequent strong northeasterly (from the northeast) Santa Ana winds from the mountains and deserts north of the Basin. On practically all spring and early summer days, the daily wind patterns flush much of the Basin of high levels of air pollutants. From late summer through the winter months, the flushing is less pronounced because of lighter wind speeds.

Air Quality Background

Air pollutant emissions within the Basin are generated by stationary and mobile sources. Stationary sources can be divided into two major subcategories: point and area sources. Point sources are usually subject to a permit to operate from the SCAQMD, occur at specific identified locations, and are usually associated with manufacturing and industry. Examples of point sources are boilers or combustion equipment that produce electricity or generate heat, such as heating, ventilation, and air conditioning (HVAC) units. Area sources are widely distributed and produce many small emissions, and they do not require permits to operate from the SCAQMD. 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 hairspray, the area-wide use of which contributes to regional air pollution. Mobile sources refer to emissions from motor vehicles, including tailpipe and evaporative emissions, and are classified as either on-road or off-road. On-road sources are those that are legally operated on roadways and highways. Off-road sources include aircraft, ships, trains, racecars, 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, such as when fine dust particles are pulled off the ground surface and suspended in the air during high winds.

Both the federal and State governments have established ambient air quality standards for outdoor concentrations of specific pollutants, referred to as “criteria pollutants,” in order to protect public health. The federal and State ambient air quality standards have been set at concentration levels to protect the most sensitive persons from illness or discomfort with a margin of safety. Applicable ambient air quality standards are identified later in this EIR section. The SCAQMD is responsible for bringing air quality within the Basin into attainment with the national and State ambient air quality standards.

The criteria pollutants for which federal and State standards have been promulgated and that are most relevant to air quality planning and regulation in the Basin are ozone, carbon monoxide, fine suspended particulate matter, sulfur dioxide, and lead. In addition, toxic air contaminants are of concern in the Basin. Each of these is briefly described below:

- *Ozone* is a gas that is formed when volatile organic compounds (VOCs) and nitrogen oxides (NO_x), both byproducts of internal combustion engine exhaust, undergo slow photochemical reactions in the presence of sunlight. Ozone concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant.
- *Carbon Monoxide (CO)* is a colorless, odorless gas produced by the incomplete combustion of fuels. CO concentrations tend to be the highest during the winter morning, with little to no wind, when

surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike ozone, motor vehicles operating at slow speeds are the primary source of CO in the Basin. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections.

- *Fine Suspended Particulate Matter (PM10)* consists of extremely small, suspended particles or droplets 10 microns or smaller in diameter. Some sources of PM₁₀, like pollen and windstorms, occur naturally. However, in populated areas, most PM₁₀ is caused by road dust, diesel soot, combustion products, abrasion of tires and brakes, and construction activities.
- *Sulfur dioxide (SO2)* 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. When sulfur dioxide oxidizes in the atmosphere, it forms sulfates (SO₄). Together, these pollutants are referred to as sulfur oxides (SOx).
- *Lead (Pb)* 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, so the majority of such combustion emissions are associated with off-road vehicles such as race cars. Other sources of lead include the manufacturing and recycling of batteries, paint, ink, ceramics, ammunition, and secondary lead smelters.
- *Toxic Air Contaminants* refer to a diverse group of air pollutants that can affect human health, but have not had ambient air quality standards established for them.

Existing Regional Air Quality

The entire Basin is designated as a national-level extreme nonattainment area for ozone, meaning that national ambient air quality standards are not expected to be met for more than seventeen years, and a nonattainment area for CO and PM₁₀. The Basin has recently improved from nonattainment to attainment status with respect to the national standard for nitrogen dioxide (NO₂), a pure form of NOx. The Basin is a State-level nonattainment area for ozone, CO (Los Angeles County only), and PM₁₀. It is in attainment of both the national and State ambient air quality standards for SO₂ and lead.

In an effort to monitor the various concentrations of air pollutants throughout the Basin, the SCAQMD has divided the region into 27 source receptor areas (SRAs) in which 31 monitoring stations operate. The City of Huntington Beach is located within SRA 18, which covers the northern coastal area of Orange County. Of the air pollutants discussed previously, only ambient concentrations of ozone, CO, NO₂, and SO₂ are monitored in SRA 18. Table 3.2-1 identifies the national and State ambient air quality standards for relevant air pollutants along with the ambient pollutant concentrations that have been measured within SRA 18 through the period of 2000 to 2002. As shown, national ozone standards were exceeded in SRA 18 on only

one day over the last three years. The State 1-hour ozone standard was exceeded two days in three years. National and State CO standards have not been exceeded within SRA 18 during this time.

Table 3.2-1 Summary of Ambient Air Quality in the Project Vicinity

<i>Air Pollutants Monitored Within SRA 18—North Coastal Orange County¹</i>	<i>Year</i>		
	<i>2000</i>	<i>2001</i>	<i>2002</i>
Ozone			
Maximum 1-hour concentration measured	0.10 ppm ²	0.10 ppm	0.09 ppm
Number of days exceeding national 0.12 ppm 1-hour standard	1	0	0
Number of days exceeding State 0.09 ppm 1-hour standard	1	1	0
Maximum 8-hour concentration measured	0.09 ppm	0.09 ppm	0.07 ppm
Number of days exceeding national 0.08 ppm 8-hour standard	1	0	0
Carbon Monoxide (CO)			
Maximum 1-hour concentration measured	8.0 ppm	6.0 ppm	NA ³
Number of days exceeding national 35.0 ppm 1-hour standard	0	0	0
Number of days exceeding State 20.0 ppm 1-hour standard	0	0	0
Maximum 8-hour concentration measured	6.3 ppm	4.6 ppm	4.3 ppm
Number of days exceeding national 9.5 ppm 8-hour standard	0	0	0
Number of days exceeding State 9.0 ppm 8-hour standard	0	0	0

1. Ambient concentrations of PM₁₀, SO₂, and lead are not monitored in SRA 8.

2. ppm = parts by volume per million of air.

3. Data not available at the time this EIR was prepared.

SOURCE: SCAQMD 2001, 2002; ARB 2003

Existing Local Air Quality

The proposed project site is located in the City’s Downtown area, as defined by the Downtown Specific Plan. Land uses in the vicinity of the site include residential, commercial, and recreational uses. Local emissions sources include stationary activities, such as space and water heating, landscape maintenance from leaf blowers and lawn mowers, consumer products, and mobile sources, primarily automobile and truck traffic. Motor vehicles are the primary source of pollutants in the local vicinity.

Traffic-congested roadways and intersections have the potential to generate localized high levels of CO. Localized areas where ambient concentrations exceed federal and/or State standards for CO are termed CO “hotspots.” Section 9.4 of the SCAQMD’s *CEQA Air Quality Handbook* identifies CO as a localized problem requiring additional analysis when a project is likely to subject sensitive receptors to CO hotspots. The SCAQMD defines typical sensitive receptors as residences, schools, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes.

The SCAQMD recommends the use of CALINE4, a dispersion model for predicting CO concentrations, as the preferred method of estimating pollutant concentrations at sensitive receptors near congested roadways and intersections. For each intersection analyzed, CALINE4 adds roadway-specific CO emissions calculated from peak-hour turning volumes to the existing ambient CO air concentrations. For this analysis, CO concentrations were calculated based on a simplified CALINE4 screening procedure developed by the Bay Area Air Quality Management District and utilized by the SCAQMD. The simplified model is intended as a screening analysis in order to identify a potential CO hotspot. This methodology assumes worst-case conditions and provides a screening of maximum, worst-case CO concentrations.

Maximum existing CO concentrations were calculated for the intersections evaluated in the project traffic impact analysis (included as Appendix B) that have receptors in close proximity to the roadways. For the purpose of this analysis, receptors are any of the sensitive receptor types identified previously, as well as any location where people would be required (as in a work site) to be located for one to eight hours. The results of these calculations are presented in Table 3.2-2 for representative receptor locations at 25, 50, and 100 feet from each roadway. These distances were selected because they represent locations where a person may be living or working for one to eight hours at a time. The National 1-hour standard is 35.0 parts per million (ppm), and the State 1-hour standard is 20.0 ppm. The 8-hour National and State standards are 9.5 ppm and 9.1 ppm, respectively.

As shown, under worst-case conditions, existing CO concentrations near the study-area do not exceed national or State 1-hour and 8-hour ambient air quality standards. Therefore, CO hotspots do not exist near these intersections.

Existing Site Emissions

Although the proposed project site has been developed with various uses since the late 1800s, it is presently vacant and does not support uses that generate air pollutant emissions on a regular basis.

3.2.2 Regulatory Framework

Air quality within the Basin is addressed through the efforts of various federal, State, regional, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through legislation, regulations, planning, policy-making, education, and a variety of programs. The agencies responsible for improving the air quality within the Basin are discussed below.

Table 3.2-2 Existing Localized Carbon Monoxide Concentrations

<i>Intersection</i>	<i>CO Concentrations in Parts per Million^{1, 2}</i>					
	<i>25 Feet</i>		<i>50 Feet</i>		<i>100 Feet</i>	
	<i>1-Hour</i>	<i>8-Hour</i>	<i>1-Hour</i>	<i>8-Hour</i>	<i>1-Hour</i>	<i>8-Hour</i>
Goldenwest Street & Pacific Coast Highway	10.6	6.4	10.1	6.1	9.5	5.7
17th Street & Pacific Coast Highway	10.0	6.0	9.6	5.7	9.1	5.4
9th Street & Pacific Coast Highway	9.9	6.0	9.6	5.7	9.1	5.4
6th Street & Pacific Coast Highway	9.9	5.9	9.5	5.7	9.1	5.4
Main Street & 6th Street	8.5	4.9	8.4	4.8	8.3	4.8
Main Street & Pacific Coast Highway	9.9	5.9	9.5	5.7	9.1	5.4
First Street & Atlanta Avenue	9.3	5.5	9.0	5.3	8.7	5.1
First Street & Pacific Coast Highway	10.3	6.2	9.9	5.9	9.4	5.5
Huntington Street & Atlanta Avenue	9.4	5.5	9.1	5.3	8.7	5.1
Delaware Street & Atlanta Avenue	9.4	5.6	9.1	5.4	8.8	5.2
Huntington Street & Pacific Coast Highway	9.8	5.8	9.4	5.6	9.0	5.3
Huntington Street & Pacific View Avenue	8.4	4.9	8.3	4.8	8.2	4.8
Beach Boulevard & Adams Avenue	11.0	6.7	10.5	6.3	9.8	5.9
Beach Boulevard & Indianapolis Avenue	9.4	5.6	9.1	5.4	8.8	5.2
Beach Boulevard & Atlanta Avenue	9.4	5.6	9.1	5.4	8.8	5.2
Beach Boulevard & Pacific Coast Highway	10.3	6.2	9.9	5.9	9.4	5.6
Newland Street & Atlanta Avenue	9.2	5.5	9.0	5.3	8.7	5.1
Newland Street & Pacific Coast Highway	10.3	6.2	9.8	5.9	9.3	5.5
Magnolia Street & Pacific Coast Highway	10.3	6.2	9.9	5.9	9.3	5.5
Magnolia Street & Atlanta Avenue	9.2	5.5	9.0	5.3	8.7	5.1
Pacific Coast Highway & Seapoint Avenue	10.7	6.5	10.1	6.1	9.5	5.7
Pacific Coast Highway & Warner Avenue	14.3	9.0	12.9	8.0	11.5	7.0
Pacific Coast Highway & Brookhurst Street	10.8	6.6	10.3	6.2	9.6	5.7
Main Street & Adams Avenue	9.0	5.3	8.8	5.1	8.5	5.0
Main Street & Utica Avenue	9.1	5.4	8.8	5.2	8.6	5.0
Lake Street & Adams Avenue	9.0	5.3	8.7	5.1	8.5	5.0
Lake Street & Yorktown Avenue	9.0	5.3	8.8	5.1	8.6	5.0
Beach Boulevard & Yorktown Avenue	11.1	6.7	10.5	6.3	9.8	5.9
Beach Boulevard & Garfield Avenue	11.4	6.9	10.7	6.5	10.0	6.0
Beach Boulevard & Ellis Avenue – Main Street	12.2	7.6	11.4	7.0	10.5	6.3

1. National 1-hour standard is 35.0 parts per million. State 1-hour standard is 20.0 parts per million.

2. National 8-hour standard is 9.5 parts per million. State 8-hour standard is 9.1 parts per million.

SOURCE: EIP Associates 2003. Calculation sheets are provided in Appendix B.

Federal

United States Environmental Protection Agency

The U.S. Environmental Protection Agency (EPA) is responsible for setting and enforcing the National Ambient Air Quality Standards for atmospheric pollutants. It regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain locomotives.

As part of its enforcement responsibilities, the EPA requires each state with federal nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the national standards. The SIP must integrate federal, State, and local plan components and regulations to identify specific measures to reduce pollution, using a combination of performance standards and market-based programs within the timeframe identified in the SIP.

State

California Air Resources Board

The California Air Resources Board (ARB), a part of the California Environmental Protection Agency, is responsible for the coordination and administration of both federal and State air pollution control programs within California. In this capacity, the ARB conducts research, sets California Ambient Air Quality Standards, compiles emission inventories, develops suggested control measures, provides oversight of local programs, and prepares the SIP. The ARB establishes emissions standards for motor vehicles sold in California, consumer products (e.g., hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions.

Local

South Coast Air Quality Management District

The SCAQMD is the agency principally responsible for comprehensive air pollution control in the Basin. To that end, the SCAQMD, a regional agency, works directly with the Southern California Association of Governments (SCAG), county transportation commissions, and local governments and cooperates actively with all federal and State government agencies. The SCAQMD develops rules and regulations, establishes permitting requirements for stationary sources, inspects emissions sources, and enforces such measures through educational programs or fines, when necessary.

The SCAQMD is directly responsible for reducing emissions from stationary (area and point), mobile, and indirect sources. It has responded to this requirement by preparing a sequence of AQMPs. The most recent

of these was adopted by the Governing Board of the SCAQMD on November 16, 1996. This AQMP, referred to as the 1997 AQMP, was prepared to comply with the federal and State Clean Air Acts and amendments, to accommodate growth, to reduce the high pollutant levels in the Basin, to meet federal and State ambient air quality standards, and to minimize the fiscal impact that pollution control measures have on the local economy. An amendment to the ozone portion of the 1997 AQMP was adopted by the Governing Board on December 10, 1999. Principal control measures of the AQMP focus on adoption of new regulations or enhancement of existing regulations for stationary sources and implementation/facilitation of advanced transportation technologies (i.e., telecommunication, zero emission and alternative-fueled vehicles and infrastructure, and both capital and noncapital transportation improvements). Capital improvements consist of high-occupancy vehicle (HOV) lanes; transit improvements; traffic flow improvements; park-and-ride and intermodal facilities; and urban freeway, bicycle, and pedestrian facilities. Noncapital improvements consist of rideshare matching and transportation demand management activities derived from the congestion management program. The 1997 AQMP comprises the South Coast Air Basin portion of the SIP.

The future air quality levels projected in the 1997 AQMP and the 1999 Amendment are based on several assumptions. For example, the SCAQMD assumes that general new development within the Basin will occur in accordance with population growth and transportation projections identified by SCAG in its most current version of the Regional Comprehensive Plan and Guide (RCPG), which was adopted in March 1996. The AQMP also assumes that general development projects will include feasible strategies (mitigation measures) to reduce emissions generated during construction and operation.

Southern California Association of Governments

SCAG’s Regional Comprehensive Plan and Guide (RCPG) and Regional Housing Needs Assessment (RHNA) are tools for coordinating regional planning and development strategies in southern California. Core actions contained in the Air Quality Chapter identified by SCAG as relevant to the proposed project are identified in Table 3.2-3, and this table also includes an assessment of the proposed project’s consistency with these actions.

Table 3.2-3 SCAG Regional Comprehensive Plan and Guide—Actions Applicable to Air Quality

<i>Action</i>	<i>Project Consistency</i>
Action 5.11. Through the environmental document review process, ensure that plans at all levels of government (regional, air basin, county, subregional, and local) consider air quality, land use, transportation, and economic relationships to ensure consistency and minimize conflicts.	This section of the EIR evaluates the potential air quality impacts associated with construction and operation of the proposed project and recommends measures to reduce the potentially-significant air quality impacts.

City of Huntington Beach

Local jurisdictions, such as the City of Huntington Beach, have the authority and responsibility to reduce air pollution through its police power and decision-making authority. Specifically, the City is responsible for the assessment and mitigation of air emissions resulting from its land use decisions. The City of Huntington Beach is also responsible for the implementation of transportation control measures as outlined in the AQMP. Examples of such measures include bus turnouts, energy-efficient streetlights, and synchronized traffic signals. In accordance with CEQA requirements and the CEQA review process, the City assesses the air quality impacts of new development projects, requires mitigation of potentially significant air quality impacts by conditioning discretionary permits, and monitors and enforces implementation of such mitigation.

General Plan Air Quality Element

The Air Quality Element of the Huntington Beach General Plan includes goals, objectives, and policies for air quality in the City. Table 3.2-4 identifies goals and objectives presented in the Air Quality Element of the General Plan related to air quality that are potentially relevant to the proposed project. This table also includes an assessment of the proposed project’s consistency with the policies adopted in support of these goals and objectives.

<i>Goal, Objective, or Policy</i>	<i>Project Consistency</i>
Goal AQ 1. Improve regional air quality by (a) decreasing reliance on single occupancy vehicular trips; (b) increasing efficiency of transit; (c)shortening vehicle trips through a more efficient jobs-housing balance and a more efficient land use pattern, and (d) increasing energy efficiency.	Conformance with implementing policies, as discussed below, results in conformance with this goal.
Policy AQ 1.1.5. Encourage all new commercial, industrial, and residential structures to accommodate appropriate trip reducing activities such as alternative work schedules, on-site day-care facilities, on-site automated teller machines, “mail-in” applications, or telecommuting and/or teleconferencing facilities as technology becomes available.	The project would comply with Section 230.36 of the City Zoning and Subdivision Ordinance, which facilitates TDM programs.
Policy AQ 1.2.2. Require developers of employment centers with 100 or more employees and major activity centers to include transit amenities and transit access as an integrated part of their projects.	Bus turnout facilities are proposed as part of the project design.
Policy AQ 1.2.4. Encourage major commercial and industrial development projects located along transit routes to include integrated transit access points in the project design.	Bus turnout facilities are proposed as part of the project design.

Table 3.2-4 General Plan Air Quality Element—Policies Applicable to Air Quality

<i>Goal, Objective, or Policy</i>	<i>Project Consistency</i>
Policy AQ 1.3.2. Require that employment centers with 100 or more employees increase the availability and the “attractiveness” of parking spaces for vans and carpools.	The current development plans for the project do not identify specific parking spaces for vans and carpools. This section of the EIR recommends the provision of preferential parking spaces for carpools and vanpools to mitigate the air quality impacts of the project.
Objective AQ 1.5. Reduce the number and shorten the distance of vehicle trips through sound land use planning and improve the City’s current 0.89 jobs/housing ratio.	The project would comply with section 230.36 of the City Zoning and Subdivision Ordinance, which facilitates TDM programs. The mixed-use interaction of the proposed project and the surrounding land uses would substantially reduce the number of vehicle trips that could otherwise be generated by the proposed land uses. The effect of these reductions is discussed in this EIR section.
Policy AQ 1.5.1. Encourage residential and commercial growth to occur in and around existing activity centers and transportation corridors in accordance with the Land Use Plan Map.	Conformance with implementing policies, as discussed below, results in conformance with this objective.
Policy AQ 1.5.3. Encourage commercial-residential mixed use development in accordance with the Land Use Plan Map.	The project is proposed as a mixed-use residential and visitor-serving commercial development.
Policy AQ 1.5.4. Encourage day-care facilities to be located at work sites with 100 or more employees.	The project would comply with Section 230.36 of the City Zoning and Subdivision Ordinance, which facilitates TDM programs.
Policy AQ 1.6.3. Encourage all new residential developments to incorporate pedestrian paths that link the projects with adjacent developments and transit access points.	Pedestrian paths are included in the design of the proposed residential uses.
Policy AQ 1.6.4. Encourage commercial developments to provide facilities for employees and patrons who bicycle to the site.	The project would comply with Section 230.36 of the City Zoning and Subdivision Ordinance, which facilitates TDM programs.
Policy AQ 1.7.1. Reduce vehicle emissions through traffic flow improvements, and use of alternate fuel consuming vehicles.	The proposed project includes street improvements that would improve the traffic flow around the project site.
Objective AQ 1.8. Reduce particulate emissions from paved and unpaved roads, parking lots, and road and building construction by 50 percent by 2000 as required by Southern California Air Quality Management District.	Conformance with implementing policies, as discussed below, results in conformance with this objective.
Policy AQ 1.8.1. Continue to enforce construction site guidelines that require truck operators to minimize particulate emission.	This section of the EIR includes measures to reduce the amount of emissions generated by construction equipment.
Policy AQ 1.8.2. Require installation of temporary construction facilities (such as wheel washers) and implementation of construction practices that minimize dirt and soil transfer onto public roadways.	This section of the EIR includes measures to reduce the amount of fugitive dust generated during construction of the proposed project.
Objective AQ 1.10. Reduce the amount of energy consumed by commercial uses by 15 percent by 2000 and 30 percent by 2010. Reduce the amount of energy consumed by residential use by 4.5 percent by 1994 and 30 percent by 2010 as required by Southern California Air Quality Management District.	Conformance with implementing policies, as discussed below, results in conformance with this objective.
Policy AQ 1.10.1. Continue to require the utilization and installation of energy conservation features in all new construction.	This section of the EIR includes measures to reduce energy demand of the proposed land uses.

3.2.3 Thresholds of Significance

The following thresholds of significance are based on Appendix G of the 2002 CEQA Guidelines. For purposes of this EIR, implementation of the proposed project may have a significant adverse impact on air quality if it would result in any of the following:

- Conflict with or obstruct implementation of the applicable air quality plan
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation
- Expose sensitive receptors to substantial pollutant concentrations
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)

As the agency principally responsible for comprehensive air pollution control in the Basin, the SCAQMD recommends that projects should be evaluated in terms of air pollution control thresholds established by the SCAQMD and published in the *CEQA Air Quality Handbook*. These thresholds were developed by the SCAQMD to provide quantifiable levels that projects can be compared to. The City utilizes the SCAQMD's thresholds that are in effect at the time that development is proposed in order to assess the significance of quantifiable impacts. The following quantifiable thresholds are currently recommended by the SCAQMD.

Construction Emissions Thresholds

The SCAQMD currently recommends that projects with construction-related emissions that exceed any of the following emissions thresholds should be considered significant:

- 550 pounds per day of CO
- 75 pounds per day of VOC
- 100 pounds per day of NO_x
- 150 pounds per day of SO_x
- 150 pounds per day of PM₁₀

The City has identified these SCAQMD thresholds as appropriate for the determination of the significance of construction impacts.

Operational Emissions Thresholds

The SCAQMD currently recommends that projects with operational emissions that exceed any of the following emissions thresholds should be considered significant. These thresholds apply to individual development projects only; they do not apply to cumulative development:

- 550 pounds per day of CO
- 55 pounds per day of VOC
- 55 pounds per day of NO_x
- 150 pounds per day of SO_x
- 150 pounds per day of PM₁₀

The City has identified these SCAQMD thresholds as appropriate for the determination of the significance of operational impacts.

In order to assess cumulative impacts, the SCAQMD recommends that projects be evaluated to determine whether they would be consistent with AQMP performance standards and emission reduction targets. If a project shows less than a one percent per year reduction in project emissions of CO, VOC, NO_x, SO_x, and PM₁₀, then it would not result in a cumulatively considerable net increase of criteria pollutants for which the project region is in nonattainment under an applicable national or State ambient air quality standard.

3.2.4 Project Impacts

Impact AQ-1 Peak construction activities associated with the proposed project could generate emissions that exceed SCAQMD thresholds.

During construction, two basic types of activities would be expected to occur and generate emissions. First, the development site would be prepared, excavated, and graded to accommodate the new subterranean parking structure, building foundations, and roadways. Second, the buildings and roadways would be constructed and readied for use.

Because of the construction time frame and the normal day-to-day variability in construction activities, it is difficult, if not impossible, to precisely quantify the daily emissions associated with each phase of the proposed construction activities. Nonetheless, Table 3.2-5 identifies daily emissions that are estimated to occur on peak construction days, such as when the entire site is being graded and the area for the parking structure is being excavated, and when residential and commercial construction is occurring simultaneously.

These calculations assume that appropriate dust control measures would be implemented during each phase of development as required by SCAQMD Rule 403—Fugitive Dust.

As shown, construction related daily emissions would exceed SCAQMD significance thresholds for NO_x during the site excavation and grading phase, and VOC and NO_x during the peak construction phase. Therefore, this impact would be significant.

<i>Emissions Source</i>	<i>Peak Day Emissions in Pounds per Day</i>				
	<i>CO</i>	<i>VOC</i>	<i>NO_x</i>	<i>SO_x</i>	<i>PM₁₀</i>
Site Excavation and Grading Phase					
Construction Equipment	86.9	19.1	254.6	33.2	25.7
On-Road Vehicles ¹	53.0	6.9	62.6	0.5	2.0
Site Excavation and Grading	—	—	—	—	48.0
Total Emissions	140.0	26.1	317.2	33.7	75.7
SCAQMD Thresholds	550.0	75.0	100.0	150.0	150.0
Significant Impact?	No	No	Yes	No	No
Construction Phase					
Construction Equipment	81.0	17.9	161.9	8.4	40.9
On-Road Vehicles ¹	5.4	0.6	0.6	0.0	0.0
Stationary Equipment	—	0.7	0.5	—	0.0
Asphalt Paving	—	1.3	—	—	—
Architectural Coatings	—	92.5	—	—	—
Total Emissions	86.4	113.0	163.1	8.4	41.0
SCAQMD Thresholds	550.0	75.0	100.0	150.0	150.0
Significant Impact?	No	Yes	Yes	No	No

1. Includes delivery trucks and construction worker vehicles.

SOURCE: EIP Associates, 2003. Calculation sheets are provided in Appendix B.

Impact AQ-2 Daily operation of the project would generate emissions that exceed SCAQMD thresholds.

Operational emissions generated by both stationary and mobile sources would result from normal day-to-day activities on the project site after occupation. Stationary area source emissions would be generated by the consumption of natural gas for space and water heating devices, and the operation of landscape maintenance equipment. Mobile emissions would be generated by the motor vehicles traveling to and from the project site.

Chapter 11 of the *CEQA Air Quality Handbook* identifies a number of measures that can be implemented to reduce the operational impacts of new development projects. Several of these measures are included in the design of the proposed project and would help to reduce the operational emissions that would otherwise be

generated by the project. Specific measures recommended by the SCAQMD that are characteristics of the proposed project include the following:

- Provide a mix of residential and nonresidential uses that encourage pedestrian and bicycle activity between the uses and surrounding environment
- Provide transit shelters and/or benches to encourage use of public transit
- Provide street lighting to provide safety near public transit stops
- Provide route signs and displays at transit stops
- Provide bus turnouts
- Provide wide sidewalks and/or pedestrian paths, and pedestrian facilities such as benches and attractive settings
- Provide direct pedestrian connections
- Provide a safe pedestrian and bicycling environment
- Provide street lighting to provide safety along pedestrian and bicycle paths
- Provide shade trees to shade sidewalks to encourage pedestrian activity on hot days
- Provide pedestrian signalization and safety at street and driveway crossings
- Provide parking structures and/or small dispersed parking lots to minimize the amount of time that people would otherwise drive around while looking for parking spaces
- Provide articulated storefronts and display windows with visual interest to encourage pedestrian activity in commercial areas
- Provide bicycle lanes/paths that connect to an existing bikeway system
- Provide secure bicycle parking for employees and visitors to commercial areas
- Provide commercial services such as food service, banking, and shopping opportunities within walking distance for employees

In addition to these measures, the existing environment around the project site provides amenities that would help to encourage non-motor vehicle transportation by future residents, customers, and employees of the proposed project. These amenities include the following:

- Sidewalks and walking paths through the surrounding area
- Street trees that provide moderate coverage of the sidewalks and pedestrian paths
- Most destinations within the vicinity accessible by pedestrians
- A large number and variety of visually interesting uses that encourage pedestrian activity

- Some streets have enhanced safety for pedestrians (e.g., separations between streets and pedestrian paths)
- A moderate degree of pedestrian safety from crime
- Visually interesting walking paths
- Existing transit service within walking distance of the project site
- Moderate coverage of the area with interconnected bikeways
- Some bicycle routes have paved shoulders to provide increased safety
- Safe speed limits of 30 mph or less along some bicycle routes
- A large number and variety of visually interesting uses that encourage bicycle activity
- A parking ordinance that requires unprotected bike racks at all new commercial uses

The analysis of daily operational emissions has been prepared utilizing the URBEMIS 2002 computer model recommended by the SCAQMD. The results of these calculations are presented in Table 3.2-6 and take into consideration the internal trip reduction and mode-shift reduction characteristics of the mixed-use interaction of the proposed project and the surrounding land uses, and the design features of the proposed project discussed above. As shown, the proposed project would generate daily emissions of VOC and NO_x that exceed the thresholds of significance recommended by the SCAQMD. Therefore, this is a significant impact.

<i>Emissions Source</i>	<i>Emissions in Pounds per Day</i>				
	<i>CO</i>	<i>VOC</i>	<i>NO_x</i>	<i>SO_x</i>	<i>PM₁₀</i>
Water and Space Heating	3.27	0.59	7.92	0.00	0.01
Landscape Maintenance	1.10	0.13	0.02	0.00	0.00
Consumer Products	—	25.24	—	—	—
Motor Vehicles	482.76	44.98	51.05	0.34	63.53
Total Emissions	487.13	70.94	58.99	0.34	63.55
Thresholds (lb/day)	550.00	55.00	55.00	150.00	150.00
Significant Impact	No	Yes	Yes	No	No

SOURCE: EIP Associates 2003. Computer sheets are provided in Appendix B.

Impact AQ-3 The proposed project would generate increased local traffic volumes, but would not cause localized CO concentrations at nearby intersections to exceed national or State standards.

As was done to assess existing localized CO concentrations, the simplified CALINE4 screening procedure was used to predict future CO concentrations at the study-area intersections in 2010 when the project is

expected to be completed. The results of these calculations are presented in Table 3.2-7. As shown, future CO concentrations near these intersections would not exceed national or State ambient air quality standards. Therefore, CO hotspots would not occur near these intersections in the future, and the contribution of project traffic-related CO at these intersections would be less than significant.

Table 3.2-7 Future (2010) With Project Localized Carbon Monoxide Concentrations

Intersection	CO Concentrations in Parts per Million ^{1, 2}					
	25 Feet		50 Feet		100 Feet	
	1-Hour	8-Hour	1-Hour	8-Hour	1-Hour	8-Hour
Goldenwest Street & Pacific Coast Highway	7.8	6.1	7.4	5.8	7.0	5.5
17th Street & Pacific Coast Highway	7.2	5.7	6.9	5.5	6.6	5.3
9th Street & Pacific Coast Highway	7.2	5.7	6.9	5.5	6.6	5.3
6th Street & Pacific Coast Highway	7.3	5.7	7.0	5.5	6.6	5.3
Main Street & 6th Street	6.2	5.0	6.1	4.9	6.0	4.9
Main Street & Pacific Coast Highway	7.7	6.0	7.3	5.8	6.9	5.5
First Street & Atlanta Avenue	6.7	5.3	6.5	5.2	6.3	5.1
First Street & Pacific Coast Highway	7.6	6.0	7.3	5.7	6.8	5.4
Huntington Street & Atlanta Avenue	6.8	5.4	6.6	5.3	6.5	5.1
Delaware Street & Atlanta Avenue	6.9	5.4	6.6	5.3	6.4	5.1
Huntington Street & Pacific Coast Highway	7.7	6.0	7.3	5.8	6.9	5.5
Huntington Street & Pacific View Avenue	6.5	5.2	6.4	5.1	6.2	5.0
Beach Boulevard & Adams Avenue	8.0	6.2	7.6	5.9	7.1	5.6
Beach Boulevard & Indianapolis Avenue	6.9	5.4	6.7	5.3	6.4	5.1
Beach Boulevard & Atlanta Avenue	6.9	5.5	6.7	5.3	6.5	5.2
Beach Boulevard & Pacific Coast Highway	8.0	6.3	7.6	6.0	7.1	5.6
Newland Street & Atlanta Avenue	6.7	5.3	6.5	5.2	6.3	5.0
Newland Street & Pacific Coast Highway	7.4	5.8	7.1	5.6	6.7	5.4
Magnolia Street & Pacific Coast Highway	7.4	5.8	7.1	5.6	6.7	5.4
Magnolia Street & Atlanta Avenue	6.6	5.3	6.4	5.2	6.3	5.0
Pacific Coast Highway & Seapoint Street	8.3	6.4	7.7	6.0	7.2	5.6
Pacific Coast Highway & Warner Avenue	10.4	7.9	9.4	7.2	8.3	6.5
Pacific Coast Highway & Brookhurst Street	8.3	6.5	7.8	6.1	7.3	5.7
Main Street & Adams Avenue	6.5	5.2	6.3	5.1	6.2	5.0
Main Street & Utica Avenue	6.5	5.2	6.4	5.1	6.2	5.0
Lake Street & Adams Avenue	6.4	5.1	6.3	5.0	6.2	4.9
Lake Street & Yorktown Avenue	6.5	5.2	6.3	5.1	6.2	5.0
Beach Boulevard & Yorktown Avenue	8.0	6.2	7.6	5.9	7.1	5.6
Beach Boulevard & Garfield Avenue	8.1	6.3	7.7	6.0	7.2	5.7
Beach Boulevard & Ellis Avenue– Main Street	8.7	6.7	8.1	6.3	7.5	5.9
First Street & Pacific View Avenue	6.1	4.9	6.0	4.8	5.9	4.8
Beach Boulevard & Pacific View Avenue	6.5	5.2	6.3	5.1	6.2	5.0

1. National 1-hour standard is 35.0 parts per million. State 1-hour standard is 20.0 parts per million.

2. National 8-hour standard is 9.5 parts per million. State 8-hour standard is 9.1 parts per million.

SOURCE: EIP Associates 2003. Calculation sheets are provided in Appendix B.

Impact AQ-4 The proposed project would provide new sources of regional air emissions, but would not impair implementation of the Air Quality Management Plan.

The 1997 AQMP, discussed previously, was prepared to accommodate growth, to reduce the high levels of pollutants within the areas under the jurisdiction of SCAQMD, to return clean air to the region, and to minimize the impact on the economy. Projects that are considered to be consistent with the AQMP would not interfere with attainment, because this growth is included in the projections used to formulate the AQMP. Therefore, projects, uses, and activities that are consistent with the applicable assumptions used in the development of the AQMP would not jeopardize attainment of the air quality levels identified in the AQMP, even if they exceed the SCAQMD's recommended daily emissions thresholds.

Projects that are consistent with the projections of employment and population forecasts identified in the Growth Management Chapter of the RCPG are considered consistent with the AQMP growth projections. This is because the Growth Management Chapter forms the basis of the land use and transportation control portions of the AQMP.

The project site is located within the Orange County subregion of the RCPG. SCAG estimates that employment for Orange County will increase from 1,558,000 persons in 2000 to 1,886,000 persons by 2010. The project would contribute an incremental portion to this growth in employment. In addition, SCAG estimates that the population for Orange County will increase from 1,005,000 persons in 2000 to 1,092,000 persons by 2010. As discussed in Section 3.11 (Population and Housing), implementation of the proposed project would not directly or indirectly induce substantial population or employment growth beyond current growth projections established by the City and SCAG. Therefore, the proposed project would be consistent with the AQMP employment forecasts for the Orange County subregion or City of Huntington Beach, and it would not jeopardize attainment of State and Federal ambient air quality standards in Orange County.

Another measurement tool in determining consistency with the AQMP is to determine how a project accommodates the expected increase in population or employment. Generally, a project's planning is consistent with the AQMP if it minimizes vehicle miles traveled (VMT), within both the project and the community in which it is located, and consequently minimizes air pollutant emissions.

The mixed-use nature of the proposed project and project's proximity to other commercial, residential, and tourist uses means that local residents could walk or ride bicycles to and from the project site, guests of the hotel could walk to nearby commercial and tourist areas, thereby reducing the distance that people would otherwise need to drive to and from these areas. Section 3.14 (Transportation/Traffic) indicates that the internal trip reduction and mode-shift reduction characteristics of the proposed project would reduce by

4,501 the number of potential daily vehicle trips generated by the proposed land uses. The project also includes several design features that are recommended by the SCAQMD to reduce the operational impacts of new development projects. All of these features are consistent with the goals of the AQMP for reducing the emissions associated with the new development.

Based on this information, the proposed project would not impair implementation of the AQMP, and this impact would be less than significant.

Impact AQ-5 Implementation of the proposed project could release toxic air contaminants, but not in significant amounts.

Toxic or carcinogenic air pollutants are not expected to occur in any meaningful amounts in conjunction with operation of the proposed land uses within the project site. Only small quantities of common forms of hazardous or toxic substances, such as cleaning agents, which are typically used, stored, or sold in conjunction with commercial and restaurant/bar uses, would be present. Most uses of such substances would occur indoors. Based on the common uses expected on the site, impacts would be less than significant.

3.2.5 Cumulative Impacts

The SCAQMD's *CEQA Air Quality Handbook* identifies possible methods to determine the cumulative significance of land use projects. These methods differ from the methodology used in other cumulative impact analyses in which all foreseeable future development within a given service boundary or geographical area is predicted and its impacts measured. The SCAQMD has not identified thresholds to which the total emissions of all cumulative development can be compared. Instead, the SCAQMD's methods are based on performance standards and emission reduction targets necessary to attain the federal and State air quality standards as predicted in the AQMP.

As discussed previously, the 1997 AQMP was prepared to accommodate growth, to reduce the high levels of pollutants within the Basin, to meet federal and State air quality standards, and to minimize the fiscal impact that pollution control measures have on the local economy. According to the *CEQA Air Quality Handbook*, projects which are consistent with the AQMP performance standards and emission reduction targets should be considered less-than-significant unless there is other pertinent information to the contrary. Since the proposed project is consistent with the AQMP, cumulative impacts related to this plan would be less than significant.

With respect to operational emissions, the method employed for this analysis is if the project shows a one percent per year reduction in project emissions of CO, VOC, NO_x, SO_x, and PM₁₀. To demonstrate this, the potential emissions for the proposed uses were calculated without the internal trip reduction and mode-shift reduction characteristics of the mixed-use interaction of the proposed project and the surrounding land uses. These emissions are compared with the daily project emissions identified previously in Table 3.2-6. This comparison is provided in Table 3.2-8. As shown, the reduction of each pollutant type ranges from 27.1 to 38.2 percent. Based on this, project implementation would meet the performance standard for annual emissions reductions and not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard. Therefore, the emissions generated by the proposed project would not be cumulatively considerable.

Table 3.2-8 Daily Reduced Operational Emissions

<i>Emissions Source</i>	<i>Emissions in Pounds per Day</i>				
	<i>CO</i>	<i>VOC</i>	<i>NO_x</i>	<i>SO_x</i>	<i>PM₁₀</i>
Total Unreduced Emissions	787.40	97.29	90.85	0.55	102.91
Total Reduced Emissions	487.13	70.94	58.99	0.34	63.55
Total Reduction	300.27	26.35	31.88	0.21	39.36
Percent Reduction	38.1%	27.1%	35.1%	38.2%	38.2%

SOURCE: EIP Associates, 2003. Computer sheets are provided in Appendix B.

3.2.6 Mitigation Measures and Residual Impacts

The following standard City requirements (CR) would apply to the project. CR AQ-A through CR AQ-C shall be completed prior to issuance of a grading permit.

<i>CR AQ-A</i>	<i>The name and phone number of an on-site field supervisor hired by the developer shall be submitted to the Departments of Planning and Public Works prior to issuance of grading permits. In addition, clearly visible signs shall be posted on the perimeter of the site every 250 feet indicating who shall be contacted for information regarding this development and any construction/grading-related concerns. This contact person shall be available immediately to address any concerns or issues raised by adjacent property owners during the construction activity. He/She will be responsible for ensuring compliance with the conditions herein, specifically, grading activities, truck routes, construction hours, noise, etc. Signs shall include the Applicant's contact number regarding grading and construction activities, and "1-800-CUTSMOG" in the event there are concerns regarding fugitive dust and compliance with AQMD Rule No. 403.</i>
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CR AQ-B *The Applicant shall notify all property owners and tenants within 300 feet of the perimeter of the property of a tentative grading schedule at least 30 days prior to such grading.*

CR AQ-C *The Applicant shall demonstrate that the grading/erosion control plan will abide by the provisions of AQMD's Rule 403 as related to fugitive dust control, prior to issuance of grading permits.*

CR AQ-D through CR AQ-F shall be implemented during grading and construction operations:

CR AQ-D *The construction disturbance area shall be kept as small as possible.*

CR AQ-E *Wind barriers shall be installed along the perimeter of the site and/or around areas being graded.*

CR AQ-F *Remediation operations, if required, shall be performed in stages concentrating in single areas at a time to minimize the impact of fugitive dust and noise on the surrounding areas.*

In addition to the standard City requirements listed above, mitigation measures (MM) would be required to address project impacts. The following mitigation measures would be required to address potentially significant air quality impacts associated with construction activities, as described under Impact AQ-1.

MM AQ-1 *The project developer(s) shall require by contract specifications that construction equipment engines will be maintained in good condition and in proper tune per manufacturer's specification for the duration of construction. Contract specification language shall be reviewed by the City prior to issuance of a grading permit.*

MM AQ-2 *The project developer(s) shall require by contract specifications that construction-related equipment, including heavy-duty equipment, motor vehicles, and portable equipment, shall be turned off when not in use for more than five minutes. Contract specification language shall be reviewed by the City prior to issuance of a grading permit.*

MM AQ-3 *The project developer(s) shall encourage contractors to utilize alternative fuel construction equipment (i.e., compressed natural gas, liquid petroleum gas, and unleaded gasoline) and low-emission diesel construction equipment to the extent that the equipment is readily available and cost effective. Contract specification language shall be reviewed by the City prior to issuance of a grading permit.*

MM AQ-4 *The project developer(s) shall require by contract specifications that construction operations rely on the electricity infrastructure surrounding the construction sites rather than electrical generators powered by internal combustion engines to the extent*

feasible. Contract specification language shall be reviewed by the City prior to issuance of a grading permit.

MM AQ-5

The project developer(s) shall implement dust control measures consistent with SCAQMD Rule 403—Fugitive Dust during the construction phases of new project development. Contract specification language shall be reviewed for inclusion of this language by the City prior to issuance of a grading permit. The following actions are currently recommended to implement Rule 403 and have been quantified by the SCAQMD as being able to reduce dust generation between 30 and 85 percent depending on the source of the dust generation:

- *Apply water and/or approved nontoxic chemical soil stabilizers according to manufacturer's specification to all inactive construction areas (previously graded areas that have been inactive for 10 or more days)*
- *Replace ground cover in disturbed areas as quickly as possible*
- *Enclose, cover, water twice daily, or apply approved chemical soil binders to exposed piles with 5 percent or greater silt content*
- *Water trucks will be utilized on the site and shall be available to be used throughout the day during site grading to keep the soil damp enough to prevent dust being raised by the operations. Water active grading sites at least twice daily*
- *Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 miles per hour over a 30-minute period*
- *All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard (i.e., minimum vertical distance between top of the load and the top of the trailer), in accordance with Section 23114 of the California Vehicle Code*
- *Sweep streets at the end of the day*
- *Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip on a gravel surface to prevent dirt and dust from impacting the surrounding areas.*
- *Apply water three times daily or chemical soil stabilizers according to manufacturers' specifications to all unpaved parking or staging areas or unpaved road surfaces*
- *Post and enforce traffic speed limits of 15 miles per hour or less on all unpaved roads*

The following mitigation measures would be required to address potentially significant operational air quality impacts, as described under Impact AQ-2.

MM AQ-6

The project developer shall include in construction and sales contracts the following requirements or measures shown to be equally effective to reduce project-related stationary and area source emissions:

- *Use solar or low-emission water heaters in the residential, office, and visitor-serving commercial buildings*
- *Provide energy-efficient heating with automated controls in the residential, office, and visitor-serving commercial buildings*
- *Use energy-efficient cooking appliances in the in the residential and visitor-serving commercial buildings*
- *If fire places are provided in new residential units, install the lowest-emitting fireplaces commercially available at the time of development*
- *Require that contract landscapers providing services at the project site use electric or battery-powered equipment, or internal combustion equipment that is either certified by the California Air Resources Board or is three years old or less at the time of use.*

Contract specification language shall be reviewed by the City prior to issuance of a grading permit.

MM AQ-7

The project developer shall include in construction and sales contracts for the commercial and offices uses on site that preferential parking spaces be provided for carpools and vanpools. Contract specification language shall be reviewed by the City prior to issuance of a grading permit. A minimum of 7'2" of vertical clearance shall be provided in the parking structure for vanpool access. Inclusion of the vertical clearance shall be verified on building plans prior to issuance of a building permit.

These measures would ensure that construction emissions are not greater than predicted in this analysis. They would also reduce the operational emissions of the proposed project by approximately 0.01 pound per day of VOC and 0.17 pound per day of NOx. The daily emissions associated with construction and operational activities, as described under Impact AQ-1 and Impact AQ-2, would remain significant and unavoidable. Impact AQ-3 through Impact AQ-5 would be less than significant, as described above.