4. ENVIRONMENTAL IMPACT ANALYSIS
B. AIR QUALITY

1. INTRODUCTION

This section addresses potential effects on air quality associated with air emissions generated by the development that could occur based on the proposed Planned Community Development Plan (PCDP) and a future development proposal subject to Site Development Review. To the extent possible based on current information at this legislative approval stage, the section addresses future construction and operation of the proposed Back Bay Landing mixed-use development. The analysis also addresses the consistency of the proposed project with the air quality policies set forth within the South Coast Air Quality Management District's (SCAQMD) Air Quality Management Plan, Orange County and the City of Newport Beach General Plans. The analysis of project-generated air emissions focuses on whether future construction in accordance with the proposed project legislative approvals would cause exceedance of an ambient air quality standard or SCAQMD significance threshold. Calculation worksheets, assumptions, and model outputs used in the analysis are contained in Appendix B of this Draft EIR.

2. ENVIRONMENTAL SETTING

a. Regulatory Framework

A number of statutes, regulations, plans and policies have been adopted which address air quality concerns. The proposed project site and vicinity is subject to air quality regulations developed and implemented at the federal, state, and local levels. At the federal level, the United States Environmental Protection Agency (USEPA) is responsible for implementation of the federal Clean Air Act (CAA). Some portions of the CAA (e.g., certain mobile source requirements and other requirements) are implemented directly by the USEPA. Other portions of the CAA (e.g., stationary source requirements) are implemented through delegation of authority to state and local agencies. A number of plans and policies have been adopted by various agencies that address air quality concerns. Those plans and policies that are relevant to the project are discussed below.

(1) Federal

The federal CAA was first enacted in 1955 and has been amended numerous times in subsequent years, with the most recent amendments in 1990. The CAA establishes federal air quality standards, known as National Ambient Air Quality Standards (NAAQS) and specifies future dates for achieving compliance. The CAA also mandates that the state submit and implement the State Implementation Plan (SIP) for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards will be met. The City of Newport Beach is within the South Coast Air Basin (Basin), and as such is in an area designated a non-attainment area for certain pollutants that are regulated under the CAA.

The 1990 Amendments to the CAA identify specific emission reduction goals for areas not meeting the NAAQS. These amendments require both a demonstration of reasonable further progress toward attainment and incorporation of additional sanctions for failure to attain or to meet interim milestones. Title I (Non-

attainment Provisions) and Title II (Mobile Source Provisions) of the CAA apply to the development and operations of the proposed project.

Title I provisions were established with the goal of attaining the NAAQS for the following criteria pollutants: (1) ozone (O_3) ; (2) nitrogen dioxide (NO_2); (3) carbon monoxide (CO), (4) sulfur dioxide (SO_2); (5) particulate matter (PM_{10}); and (6) lead (Pb). **Table 4.B-1**, *Ambient Air Quality Standards*, shows the NAAQS currently in effect for each criteria pollutant. The NAAQS were amended in July 1997 to include an 8-hour standard for O_3 and to adopt a NAAQS for fine particulate matter ($PM_{2.5}$). The Basin fails to meet national standards for O_3 (for both the 1-hour and 8-hour standard), PM_{10} and $PM_{2.5}$, and therefore is considered a federal non-attainment area for these pollutants. The CAA sets certain deadlines for meeting the NAAQS within the Basin including: (1) 1-hour O_3 by the year 2010; (2) 8-hour O_3 by the year 2021; and (3) PM_{10} by the year 2006. Non-attainment designations are categorized into seven levels of severity: (1) basic; (2) marginal; (3) moderate; (4) serious; (5) severe-15;[1] (6) severe-17; and (7) extreme. **Table 4.B-2**, *South Coast Air Basin Attainment Status*, lists the criteria pollutants and their relative attainment status.

The CAA also specifies future dates for achieving compliance with the NAAQS and mandates that states submit and implement a SIP for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards would be met. The 1990 amendments to the CAA identify specific emission reduction goals for basins not meeting the NAAQS. These amendments require both a demonstration of reasonable further progress toward attainment and incorporation of additional sanctions for failure to attain or to meet interim milestones.

Title II of the CAA pertains to mobile sources, such as cars, trucks, buses, and planes. Reformulated gasoline, automobile pollution control devices, and vapor recovery nozzles on gas pumps are a few of the mechanisms the USEPA uses to regulate mobile air emission sources. The provisions of Title II have resulted in tailpipe emission standards for vehicles, which have strengthened in recent years to improve air quality. For example, the standards for nitrogen oxide (NO_X) emissions have lowered substantially and the specification requirements for cleaner burning gasoline are more stringent.

(2) State

(a) California Clean Air Act

The California Clean Air Act (CCAA), signed into law in 1988, requires all areas of the state to achieve and maintain the California Ambient Air Quality Standards (CAAQS) by the earliest practical date. The CAAQS incorporate additional standards for most of the criteria pollutants and include set standards for other pollutants recognized by the state. In general, the California standards are more health protective than NAAQS. California has also set standards for $PM_{2.5}$, sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. The Basin is in compliance with the California standards for sulfates, hydrogen sulfide, and vinyl chloride, but does not meet the California standard for visibility reducing particles. Table 4.B-1 details the current NAAQS and CAAQS, and Table 4.B-2 provides the Basin's attainment status with respect to federal and state standards.

[1] *The "-15" and "-17" designations reflect the number of years within which attainment must be achieved.*

Table 4.B-1

Ambient Air Quality Standards [a]

Pollutant	Averaging Time	California Standards [1]		Federal Standards [2]		
		Concentration [3]	Method [4]	Primary [3,5]	Secondary [3,6]	Method [7]
Ozone ($O^{3)}$	1 Hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m³)		0.075 ppm (147 µg/m³)		
Respirable Particulate Matter (PM_{10})	24 Hour	50 µg/m³	Gravimetric or Beta Attenuation	150 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m³		—		
Fine Particulate Matter ($PM_{2.5}$)	24 Hour	No Separate State Standard		35[j] µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	15 µg/m³		
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10mg/m³)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m³)	None	Non-Dispersive Infrared Photometry (NDIR)
	1 Hour	20 ppm (23 mg/m³)		35 ppm (40 mg/m³)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m³)		—	—	—
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.030 ppm (56 µg/m³)	Gas Phase Chem-iluminescence	53 ppb (100 µg/m³)	Same as Primary Standard	Gas Phase Chemiluminescenc e
	1 Hour	0.18 ppm (338 µg/m³)		100 ppb (188 µg/m³)	None	
Sulfur Dioxide (SO_2)	24 Hour	0.04 ppm (105 µg/m³)	Ultraviolet Fluorescence	—	—	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)[9] —
	3 Hour	—		—	0.5 ppm (1300 µg/m³)	
	1 Hour	0.25 ppm (655 µg/m³)		75 ppb (196 µg/m³)	—	
Lead[10]	30 Day Average	1.5 µg/m³	Atomic Absorption	—	—	—
	Calendar Quarter	—		1.5 µg/m³	Same as Primary Standard	High Volume Sampler and Atomic Absorption
	Rolling 3-Month Average[11]	--		0.15 µg/m³		
Visibility Reducing Particles	8 Hour	Extinction coefficient of 0.23 per kilometer — visibility of ten miles or more (0.07 — 30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape.		**No Federal Standards**		
Sulfates (SO_4)	24 Hour	25 µg/m³	Ion Chromatography			

Table 4.B-1

Ambient Air Quality Sandards[a] (continued)

Pollutant	Averaging Time	California Standards [1]		Federal Standards [2]		
		Concentration [3]	Method [4]	Primary [3,5]	Secondary [3,6]	Method [7]
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[10]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

1 *California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter (PM_{10} and $PM_{2.5}$) and visibility reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.*

2 *National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest eight hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than one. For $PM_{2.5}$, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact U.S. EPA for further clarification and current federal policies.*

3 *Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.*

4 *Any equivalent procedure which can be shown to the satisfaction of the CARB to give equivalent results at or near the level of the air quality standard may be used.*

5 *National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.*

6 *National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.*

7 *Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.*

8 *To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 0.100 ppm (effective January 22, 2010). Note that the (ppm). To directly compare the national standards to the California standards the units can be converted from ppb to ppm. In this case, the national standards of 53 ppb and 100 ppb are identical to 0.053 ppm and 0.100 ppm, respectively.*

9 *On June 2, 2010, the US EPA established a new 1-hour SO_2 standard, effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum of 0.14 ppm and the annual primary SO_2 standard of 0.030 ppm, effective August 23, 2010.*
The secondary SO_2 standard was not revised at that time; however, the secondary standard is undergoing a separate review by EPA standards are in units of parts per million (ppm). To directly compare the new primary national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

10 *The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.*

11 *National lead standard, rolling 3-month average: final rule signed October 15, 2008.*

Source: California Air Resources Board (09/08/2010).

Table 4.B-2

South Coast Air Basin Attainment Status (Orange County)

Pollutant	National Standards	California Standards
Ozone (1-hour standard)	N/A [a]	Non-attainment (Extreme)
Ozone (8-hour standard)	Non-attainment (Extreme)	Non-attainment
Carbon Monoxide	Attainment	Attainment [b]
Nitrogen Dioxide	Attainment	Non-attainment [b]
Sulfur Dioxide	Unclassified/Attainment	Attainment [b]
PM_{10} (24-hour standard)	Non-attainment (Serious)	Non-attainment
PM_{10} (annual standard)	N/A [c]	Non-attainment
$PM_{2.5}$	Non-attainment	Non-attainment
Lead	Unclassified/Attainment	Attainment [b]
Visibility Reducing Particles	N/A	Unclassified
Sulfates	N/A	Attainment [b]
Hydrogen Sulfide	N/A	Unclassified
Vinyl Chloride	N/A	N/A [d]

N/A = not applicable

[a] *The NAAQS for 1-hour ozone was revoked on June 15, 2005 for all areas except Early Action Compact areas.*
[b] *An air basin is designated as being in attainment for a pollutant if the standard for that pollutant was not violated at any site in that air basin during a three year period.*
[c] *The NAAQS for annual PM_{10} was revoked on September 21, 2006.*
[d] *In 1990 the CARB identified vinyl chloride as a toxic air contaminant and determined that it does not have an identifiable threshold. Therefore, the CARB does not monitor or make status designations for this pollutant.*

Source: USEPA Region 9 (April 2013) and California Air Resources Board (April, 2013).

(b) California Air Resources Board Air Toxics Control Measures

In 2004, the California Air Resources Board (CARB) adopted a control measure to limit commercial heavy duty diesel motor vehicle idling in order to reduce public exposure to diesel particulate matter (DPM) and other air contaminants.[2] The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. In general, it prohibits idling for more than 5 minutes at any location.

In addition to limiting exhaust from idling trucks, CARB promulgated emission standards for off-road diesel construction equipment such as bulldozers, loaders, backhoes and forklifts, as well as many other self-propelled off-road diesel vehicles. A CARB regulation that became effective on June 15, 2008, aims to reduce emissions by installation of diesel soot filters and encouraging the replacement of older, dirtier engines with newer emission controlled models.[3] A prohibition against acquiring certain vehicles began on March 1, 2009, and a reporting requirement started on April 1, 2009. Implementation of some provisions is staggered based on fleet size, with the largest operators to begin compliance in 2010. By 2020, CARB estimates that DPM will be reduced by 74 percent and smog forming NO_X (another important pollutant emitted from diesel

[2] *Calif. Code of Regulations, Title 13, Sec. 2485. See http://www.arb.ca.gov/regact/idling/idling.htm (accessed July 2008).*

[3] *Calif. Code of Regulations, Title 13, Secs. 2449, 2449.1, 2449.2 and 2449.3.*

engines) by 32 percent, compared to what emissions would be without the regulation. In January 2010, the Associated General Contractors of America filed a petitioned requesting CARB to adopt an emergency amendment to delay the fleet average target dates of this regulation for a period of two years. Consequently, the following relief was granted: CARB will "not take any enforcement action for noncompliance with the regulation's March 1, 2010 emission standards or other emission related requirements before it receives authorization from U.S. EPA."[4]

(3) Regional

(a) South Coast Air Quality Management District

The SCAQMD has jurisdiction over an area of approximately 10,743 square miles. This area includes all of Orange County, Los Angeles County except for the Antelope Valley, the non-desert portion of western San Bernardino County, and the western and Coachella Valley portions of Riverside County. As indicated previously, the City of Newport Beach is located within the Basin. The Basin is a sub-region of the SCAQMD jurisdiction. While air quality in this area has improved, the Basin requires continued diligence to meet air quality standards.

The SCAQMD has adopted a series of Air Quality Management Plans (AQMP) to meet the CAAQS and NAAQS. The 2012 AQMP incorporates the latest scientific and technological information and planning assumptions, including the 2012 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), and updated emission inventory methodologies for various source categories.[5] The Final 2012 AQMP was adopted by the AQMD Governing Board on December 7, 2012. Control measure IND-01 was approved for adoption and inclusion in the Final 2012 AQMP at the February 1, 2013 Governing Board meeting.

Therefore, the 2012 AQMP is the most appropriate plan to use for consistency analysis. The AQMP builds upon other agencies' plans to achieve federal standards for air quality in the Basin. It incorporates a comprehensive strategy aimed at controlling pollution from all sources, including stationary sources, and on-road and off-road mobile sources. The 2012 AQMP builds upon improvements in previous plans, and includes new and changing federal requirements, implementation of new technology measures, and the continued development of economically sound, flexible compliance approaches. In addition, it highlights the significant amount of emission reductions needed and the urgent need to identify additional strategies, especially in the area of mobile sources, to meet all federal criteria pollutant standards within the timeframes allowed under theCAA.

The 2012 AQMP's key undertaking is to bring the Basin into attainment with NAAQS for 24-hour $PM_{2.5}$ by 2014. It also intensifies the scope and pace of continued air quality improvement efforts toward meeting the 2023 8-hour ozone standard deadline with new measures designed to reduce reliance on the CAA Section 182(e)(5) long-term measures for NOx and VOC reductions. SCAQMD expects exposure reductions to be achieved through implementation of new and advanced control technologies as well as improvement of existing technologies.

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[4] *California Regulatory Notice Register, February 2010. http://www.oal.ca.gov/res/docs/pdf/notice/9z-2010.pdf (accessed April 2010).*

[5] *http://www.aqmd.gov/aqmp/2012aqmp/index.htm*

The control measures in the 2012 AQMP consist of four components: 1) Basin-wide and Episodic Short-term $PM_{2.5}$ Measures; 2) Contingency Measures; 3) 8-hour Ozone Implementation Measures; and 4) Transportation and Control Measures provided by the Southern California Association of Governments (SCAG). The Plan includes eight short-term $PM_{2.5}$ control measures, 16 stationary source 8-hour ozone measures, 10 early action measures for mobile sources and seven early action measures are proposed to accelerate near-zero and zero emission technologies for goods movement related sources, and five on-road and five off-road mobile source control measures. In general, the District's control strategy for stationary and mobile sources is based on the following approaches: 1) available cleaner technologies; 2) best management practices; 3) incentive programs; 4) development and implementation of zero- near-zero technologies and vehicles and control methods; and 5) emission reductions from mobile sources.

Several SCAQMD rules adopted to implement portions of the AQMP may apply to construction or operation of the project. For example, SCAQMD Rule 403 requires the implementation of best available fugitive dust control measures during active construction periods capable of generating fugitive dust emissions from on-site earth-moving activities, construction/demolition activities, and construction equipment travel on paved and unpaved roads. Also, SCAQMD Rule 1113 limits the amount of volatile organic compounds from architectural coatings and solvents, which lowers the emissions of odorous compounds.

The SCAQMD published a *CEQA Air Quality Handbook* (the Handbook) in November 1993 to provide local governments with guidance for analyzing and mitigating project-specific air quality impacts. The Handbook provides standards, methodologies, and procedures for conducting air quality analyses in EIRs and was used extensively in the preparation of this analysis. However, the SCAQMD is currently in the process of replacing the Handbook with the Air Quality Analysis Guidance Handbook. While this process is underway, the SCAQMD recommends that the lead agency avoid using the screening tables in the Handbook's Chapter 6, because the tables were derived using an obsolete version of CARB's mobile source emission factor inventory, and the trip generation characteristic of the land uses identified in these screening tables were based on the fifth edition of the ITE Trip Generation Manual, instead of the most current sixth edition. Additionally, the lead agency should avoid using the on-road mobile source emission factors in Table A9-5-J1 through A9-5-L in the Handbook. The SCAQMD instead recommends using other approved models to calculate emissions from land use projects, such as the California Emissions Estimator Model (CalEEMod) model. To assist the lead agency, this analysis follows SCAQMD's recommendations.

In addition, the SCAQMD has published (in June 2003) a document called "Localized Significance Threshold Methodology" that is intended to provide voluntary guidance for lead agencies in analyzing localized air quality impacts from proposed projects.[6] In October 2006, the SCAQMD adopted additional guidance regarding $PM_{2.5}$ in a document called "Final – Methodology to Calculate Particulate Matter $PM_{2.5}$ and $PM_{2.5}$ Significance Thresholds."[7] These documents were also used in the preparation of this analysis.

The SCAQMD has also adopted land use planning guidelines in the May 2005 "Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning"[8] which, like the CARB Handbook, also considers impacts to sensitive receptors from facilities that emit TACs. SCAQMD's distance

[6] *See http://www.aqmd.gov/ceqa/handbook/LST/LST.html.*

[7] *See http://www.aqmd.gov/ceqa/handbook/pm2_5/pm2_5.html.*

[8] *See http://www.aqmd.gov/prdas/aqguide/aqguide.html.*

recommendations are the same as those provided by CARB (e.g., the same siting criteria for distribution centers and dry cleaning facilities). The SCAQMD's document introduces land use-related policies that rely on design and distance parameters to manage potential health risk. These guidelines are voluntary initiatives recommended for consideration by local planning agencies.

Future construction of the Backbay Landing project pursuant to the proposed PCDP could be subject to the following South Coast Air Quality Management District rules and regulations:

Regulation IV – Prohibitions: This regulation sets forth the restrictions for visible emissions, odor nuisance, fugitive dust, various air emissions, fuel contaminants, start-up/shutdown exemptions and breakdown events.

- **Rule 402 – Nuisance:** This rule restricts the discharge of any contaminant in quantities that cause or have a natural ability to cause injury, damage, nuisance or annoyance to businesses, property, any considerable number of persons or the public.
- **Rule 403 – Fugitive Dust:** This rule requires that the applicant prevent, reduce or mitigate fugitive dust emissions from the project site. Rule 403 restricts visible fugitive dust to the project property line, restricts the net PM_{10} emissions to less than 50 ug/m3 and restricts the tracking out of bulk materials onto public roads. Additionally, the applicant must utilize one or more of the best available control measures (identified in the tables within the rule). Mitigation measures may include adding freeboard to haul vehicles, covering loose material on haul vehicles, watering, using chemical stabilizers and/or ceasing all activities. Finally, a contingency plan maybe required if so determined by the USEPA.

Regulation XI – Source Specific Standards: Regulation XI sets emissions standards for different sources.

- **Rule 1113 – Architectural Coatings:** This rule limits the amount of volatile organic compounds from architectural coatings and solvents, which lowers the emissions of odorous compounds.

(b) Southern California Association of Governments

The Southern California Association of Governments (SCAG) is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino and Imperial Counties and addresses regional issues relating to transportation, the economy, community development and the environment. SCAG is the federally designated metropolitan planning organization (MPO) for the majority of the southern California region and is the largest MPO in the nation. With regard to air quality planning, SCAG has prepared the 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), which addresses regional development and growth forecasts and form the basis for the land use and transportation control portions of the AQMP and are utilized in the preparation of the air quality forecasts and consistency analysis included in the AQMP. The RTP/SCS and AQMP are based on projections originating within local jurisdictions.

(c) Orange County Congestion Mangement Plan

The Congestion Management Plan (CMP) for Orange County was developed to meet the requirements of Section 65089(b) of the California Government Code. In enacting the CMP statute, the state legislature noted

the increasing concern that urban congestion was impacting the economic vitality of the state and diminishing the quality of life in many communities. The CMP was created to further the following objectives:

- To link land use, transportation and air quality decisions.
- To develop a partnership among transportation decision makers to encourage appropriate transportation solutions include all modes of travel.
- To propose transportation projects which are eligible for state gas tax funds.

(4) Local

(a) City of Newport Beach General Plan

Local jurisdictions, such as the City of Newport 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 Newport 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 measures. The proposed project's consistency with the applicable goals and policies of the Newport Beach General Plan is further discussed below under Impact Statement 4.B-6.

b. Existing Conditions

(1) Regional Air Quality

(a) Air Pollutants

Air pollutant emissions within the Basin are generated from 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. Examples are boilers or combustion equipment that produce electricity or generate heat. Area sources are widely distributed and produce many small emissions. 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. Construction activities that create fugitive dust such as excavation and grading also contribute to area source emissions. 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 equipment. Mobile sources account for the majority of the air pollutant emissions within the air 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.

Air pollutants are typically classified as primary or secondary pollutants. Carbon monoxide, nitrogen dioxide, particulate matter, sulfur dioxide, and lead are considered primary pollutants because they are emitted directly into the atmosphere. Ozone is considered a secondary pollutant because it is formed

through a photochemical reaction in the atmosphere with volatile organic compounds (VOCs) and NO_X which in the presence of sunlight produces O_3.

Carbon Monoxide: 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, and 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.

Nitrogen Dioxide: is a reddish-brown gas with a pungent and irritating odor. It transforms in the air to form gaseous nitric acid and toxic organic nitrates. NO_2 also plays a major role in atmospheric reactions that produce ground-level ozone, a major component of smog. It is also a precursor to nitrates, which contribute to increased respirable particle levels in the atmosphere.

Respirable Particulate Matter (PM_{10}) and Fine Particulate Matter ($PM_{2.5}$): extremely small, suspended particles or droplets 10 microns and 2.5 microns or smaller in diameter. Some sources of particulate matter, like pollen and windstorms, are naturally occurring. However, in populated areas, most particulate matter is caused by road dust, diesel soot, combustion products, abrasion of tires and brakes, and construction activities.

Sulfur dioxide: 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. Although sulfur dioxide concentrations have been reduced to levels well below state and national standards, further reductions are desirable because SO_2 is a precursor to sulfates which can also affect human health. Sulfur dioxide converts rapidly to sulfates, a particulate formed through the photochemical oxidation of SO_2, within California due to regional meteorological features.

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

Toxic Air Contaminants (TACs): TACs are a diverse group of air pollutants that can affect human health, but have not had ambient air quality standards established for them. This is not because they are fundamentally different from the pollutants discussed above, but because their effects tend to be local rather than regional. The CARB has designated nearly 200 compounds as TACs. The USEPA has assessed this expansive list of toxics and identified 21 TACs as Mobile Source Air Toxics (MSATs). MSATs are compounds emitted from highway vehicles and nonroad equipment, through fuel evaporation and combustion, engine wear, or impurities in oil and gas. USEPA also extracted a subset of these 21 MSAT compounds that it now labels as the six priority MSATs: benzene, formaldehyde, acetaldehyde, diesel particulate matter/diesel exhaust organic gases, acrolein, and 1,3-butadiene. Additionally, CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. The majority of the estimated health risks from TACs can be attributed to a relatively few compounds, the most important being particulate matter from diesel-fueled engines.

(b) Health Effects of Air Pollutants

Carbon Monoxide: Individuals with a deficient blood supply to the heart are the most susceptible to the adverse effects of CO exposure. The effects observed include earlier onset of chest pain with exercise, and electrocardiograph changes indicative of worsening oxygen supply to the heart. Inhaled CO has no direct toxic effect on the lungs, but exerts its effect on tissues by interfering with oxygen transport and competing with oxygen to combine with hemoglobin present in the blood to form carboxyhemoglobin (COHb). Hence, conditions with an increased demand for oxygen supply can be adversely affected by exposure to CO. Individuals most at risk include fetuses, patients with diseases involving heart and blood vessels, and patients with chronic hypoxemia (oxygen deficiency) as seen at high altitudes. Reduction in birth weight and impaired neurobehavioral development have been observed in animals chronically exposed to CO, resulting in COHb levels similar to those observed in smokers. Recent studies have found increased risks for adverse birth outcomes with exposure to elevated CO levels; these include pre-term births and heart abnormalities.

Nitrogen Dioxide: Population-based studies suggest that an increase in acute respiratory illness, including infections and respiratory symptoms in children (not infants), is associated with long-term exposure to NO_2 at levels found in homes with gas stoves, which are higher than ambient levels found in Southern California. Increase in resistance to air flow and airway contraction is observed after short-term exposure to NO_2 in healthy subjects. Larger decreases in lung functions are observed in individuals with asthma or chronic obstructive pulmonary disease (e.g., chronic bronchitis, emphysema) than in healthy individuals, indicating a greater susceptibility of these sub-groups. In animals, exposure to levels of NO_2 considerably higher than ambient concentrations results in increased susceptibility to infections, possibly due to the observed changes in cells involved in maintaining immune functions. The severity of lung tissue damage associated with high levels of ozone exposure increases when animals are exposed to a combination of ozone and NO_2.

Particulate Matter: A consistent correlation between elevated ambient fine particulate matter (PM_{10} and $PM_{2.5}$) levels and an increase in mortality rates, respiratory infections, number and severity of asthma attacks and the number of hospital admissions has been observed in different parts of the United States and various areas around the world. In recent years, some studies have reported an association between long-term exposure to air pollution dominated by fine particles and increased mortality, reduction in life span, and an increased mortality from lung cancer. Daily fluctuations in $PM_{2.5}$ concentration levels have also been related to hospital admissions for acute respiratory conditions in children, to school and kindergarten absences, to a decrease in respiratory lung volumes in normal children, and to increased medication use in children and adults with asthma. Recent studies show lung function growth in children is reduced with long-term exposure to particulate matter. The elderly, people with pre-existing respiratory or cardiovascular disease, and children appear to be more susceptible to the effects of high levels of PM_{10} and $PM_{2.5}$.

Sulfur Dioxide: A few minutes of exposure to low levels of SO_2 can result in airway constriction in some asthmatics, all of whom are sensitive to its effects. In asthmatics, increase in resistance to air flow, as well as reduction in breathing capacity leading to severe breathing difficulties, are observed after acute exposure to SO_2. In contrast, healthy individuals do not exhibit similar acute responses even after exposure to higher concentrations of SO_2. Animal studies suggest that despite SO_2 being a respiratory irritant, it does not cause substantial lung injury at ambient concentrations. However, very high levels of exposure can cause lung edema (fluid accumulation), lung tissue damage, and sloughing off of cells lining the respiratory tract. Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient SO_2 levels. In these studies, efforts to separate the effects of SO_2

from those of fine particles have not been successful. It is not clear whether the two pollutants act synergistically or one pollutant alone is the predominant factor. The effects of sulfate exposure at levels above the standard include the aggravation of asthmatic symptoms, an increased risk of cardio-pulmonary disease, and a decrease in respiratory function.

Lead: Fetuses, infants, and children are more sensitive than others to the adverse effects of exposure to Pb. Exposure to low levels of Pb can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. In adults, increased Pb levels are associated with increased blood pressure. Pb poisoning can cause anemia, lethargy, seizures, and death, although it appears that there are no direct effects of Pb on the respiratory system. Pb can be stored in the bone from early age environmental exposure, and elevated blood Pb levels can occur due to breakdown of bone tissue during pregnancy, hyperthyroidism (increased secretion of hormones from the thyroid gland) and osteoporosis (breakdown of bony tissue). Fetuses and breast-fed babies can be exposed to higher levels of Pb because of previous environmental Pb exposure of their mothers.

Ozone: Individuals exercising outdoors, children, and people with preexisting lung disease, such as asthma and chronic pulmonary lung disease, are considered to be most susceptible to ozone effects. Short-term exposure (lasting for a few hours) to ozone at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. Elevated ozone levels are associated with increased school absences. In recent years, a correlation between elevated ambient ozone levels and increases in daily hospital admission rates, as well as mortality, has also been reported. An increased risk for asthma has been found in children who participate in multiple sports and live in high ozone communities. Ozone exposure under exercising conditions is known to increase the severity of the responses described above. Animal studies suggest that exposure to a combination of pollutants that includes ozone may be more toxic than exposure to ozone alone. Although lung volume and resistance changes observed after a single exposure diminish with repeated exposures, biochemical and cellular changes appear to persist, which can lead to subsequent lung structural changes.

Volatile Organic Compounds: VOCs are carbon-containing compounds that typically evaporate into the air where they can react with other chemicals. VOCs contribute to the formation of smog, and in some cases may themselves be toxic. Because of the number of compounds that are included in the term VOC, the health effects of the individual gases are not discussed in this document. VOCs often have an odor and some examples including chemicals in gasoline, alcohol and the solvents used in paints.

Odors: The science of odor as a health concern is still new. Merely identifying the hundreds of VOCs that cause offensive odors poses a big challenge. Odors can potentially affect human health in several ways. First, odorant compounds can irritate the eye, nose, and throat, which can reduce respiratory volume. Second, the VOCs that cause odors can stimulate sensory nerves to cause neurochemical changes that might influence health, for instance, by compromising the immune system. Finally, unpleasant odors can trigger memories or attitudes linked to unpleasant odors, causing cognitive and emotional effects such as stress.

(c) Air Quality

The distinctive climate of the Basin is determined primarily by its terrain and geographical location. Regional meteorology is dominated by a persistent high pressure area which commonly resides over the eastern Pacific Ocean. Seasonal variations in the strength and position of this pressure cell cause changes in the weather patterns of the area. Warm summers, mild winters, infrequent rainfall, moderate daytime on-shore breezes, and moderate humidity characterize local climatic conditions. This normally mild climatic condition is occasionally interrupted by periods of hot weather, winter storms, and hot easterly Santa Ana winds.

The Basin is an area of high air pollution potential, particularly from June through September. This condition is generally attributed to the large amount of pollutant emissions, light winds and shallow vertical atmospheric mixing. This frequently reduces pollutant dispersion, thus causing elevated air pollution levels. Pollutant concentrations in the Basin vary with location, season and time of day. Ozone concentrations, for example, tend to be lower along the coast, higher in the near inland valleys and lower in the far inland areas of the Basin and adjacent desert.

The SCAQMD has released a final Basin-wide air toxics study (MATES III, Multiple Air Toxics Exposure Study, September, 2008)[9]. The MATES III Study represents one of the most comprehensive air toxics studies ever conducted in an urban environment. The Study was aimed at estimating the cancer risk from toxic air emissions throughout the Basin by conducting a comprehensive monitoring program, an updated emissions inventory of toxic air contaminants, and a modeling effort to fully characterize health risks for those living in the Basin. The Study concluded that the average carcinogenic risk from air pollution in the Basin is approximately 1,200 in one million. Mobile sources (e.g., cars, trucks, trains, ships, aircraft, etc.) represent the greatest contributors. Approximately 85 percent of the risk is attributed to diesel particulate emissions, approximately 10 percent to other toxics associated with mobile sources (including benzene, butadiene, and formaldehyde), and approximately 5 percent of all carcinogenic risk is attributed to stationary sources (which include industries and other certain businesses, such as dry cleaners and chrome plating operations).

As part of the MATES III study, the SCAQMD has prepared a series of maps that show regional trends in estimated outdoor inhalation cancer risk from toxic emissions, as part of an ongoing effort to provide insight into relative risks. The maps' estimates represent the number of potential risk of cancer per million people associated with a lifetime of breathing air toxics (24 hours per day outdoors for 70 years) in parts of the area. The MATES III Model Estimated Carcinogenic Risk web interactive map is the most recently available map to represent existing conditions near the project area. The estimated cancer risk is approximately 410 - 458 cancers per million, while in the vast majority of the area it is between 251 to 500 cancers per million.[10] Generally, the risk from air toxics is lower near the coastline: it increases inland, with higher risks concentrated near large diesel sources (e.g., freeways, airports, and ports).

[9] *http://www.aqmd.gov/prdas/matesIII/MATESIIIFinalReportSept2008.html.*

[10] *http://www3.aqmd.gov/webappl/matesiii.*

(2) Local Area Conditions

(a) Existing Pollutant Levels at Nearby Monitoring Stations

The SCAQMD maintains a network of air quality monitoring stations located throughout the Basin and has divided the Basin into air monitoring areas or source receptor areas. The project site is located in the North Coastal Orange County Monitoring Area (Area 18). The monitoring station for this area is the Costa Mesa Monitoring Station, which is located at 2850 Mesa Verde Drive East, Costa Mesa, approximately 4 miles northwest of the project site. Criteria pollutants, including CO, SO_2, NO_2, and O_3 are monitored at this station. The nearest representative monitoring area for PM_{10}, $PM_{2.5,}$ lead, and sulfate is the South Coastal LA County 2 Area (Area 4). The monitoring station for this area is the Long Beach South Monitoring Station, which is located at 1305 E. Pacific Coast Highway, Long Beach, approximately 20 miles northwest of the project site. The most recent data available from these monitoring stations encompassed the years 2007 to 2011. The data, shown in **Table 4.B-3**, *Pollutant Standards and Ambient Air Quality Data from Representative Monitoring Stations*, shows the following pollutant trends:

Ozone - The maximum 1-hour O_3 concentration recorded during the 2007 to 2011 period was 0.097 ppm, recorded in 2010. During this period, neither the California nor the National standard was exceeded. The maximum 8-hour O_3 concentration was 0.079 ppm recorded in 2008. The National standard was exceeded between 0 and 3 times and the California standard was exceeded between 2 and 6 times annually.

Particulate Matter (PM_{10}) - The highest recorded 24-hour PM_{10} concentration recorded was 123 µg/m^3 in 2007. During the period 2007 to 2011, the CAAQS for 24-hour PM_{10} was exceeded between 0 and 30 percent of the time; the NAAQS was not violated. The maximum annual arithmetic mean recorded was 41.7 µg/m^3 in 2007.

Fine Particulates ($PM_{2.5}$) - The maximum 24-hour $PM_{2.5}$ concentration recorded was 68.0 µg/m^3 in 2007. The 24-hour NAAQS was exceeded between 0 and 2.0 percent annually from 2007-2011. The highest annual geometric mean of 13.7 was recorded in 2007 and 2008.

Carbon Monoxide - The highest 1-hour CO concentration recorded was 5 ppm, recorded in 2007. The maximum 8-hour CO concentration recorded was 3.1 ppm recorded in 2007. As demonstrated by the data, the standards were not exceeded during the five-year period.

Nitrogen Dioxide - The highest 1-hour NO_2 concentration recorded was 0.08 ppm in 2008. The highest recorded NO_2 annual arithmetic mean was 0.0132 ppm recorded in 2007 and 2008. As shown the standards were not exceeded during the five-year period.

Sulfur Dioxide - The highest 1-hour concentration of SO_2 was 0.01 ppm recorded in all monitored years. The maximum 24-hour concentration was 0.008 ppm, recorded in 2011. As shown the standards were not exceeded during the five-year period.

Table 4.B-3

Pollutant Standards and Ambient Air Quality Data from Representative Monitoring Stations [a]

Pollutant/Standard	2007	2008	2009	2010	2011
Ozone (1-hour)					
Maximum Concentration (ppm)	0.082	0.094	0.087	0.097	0.093
Days > CAAQS (0.09 ppm)	0	0	0	1	0
Days > NAAQS (0.12 ppm)	0	0	0	0	0
Ozone (8-hour)					
Maximum Concentration (ppm)	0.072	0.079	0.075	0.076	0.077
4th High 8-hour Concentration (ppm)	0.065	0.075	0.066	0.060	0.063
Days > CAAQS (0.07 ppm)	2	6	3	2	2
Days > NAAQS (0.075 ppm) [b]	0	3	0	1	1
Particulate Matter PM_{10} (24-hour)					
Maximum Concentration ($\mu g/m^3$) [c]	123+	81	83	76	50
Number of Samples > CAAQS (50 $\mu g/m3$) [c]	17+	9	5	2	0
Number of Samples > NAAQS (150 $\mu g/m3$) [c]	0	0	0	0	0
PM_{10} (Annual Average)					
Annual Arithmetic Mean, CAAQS (20 $\mu g/m^3$)	41.7	35.8	33.2	27.3	28.7
Particulate Matter $PM_{2.5}$ (24-hour)					
Maximum Concentration ($\mu g/m^3$) [d]	68	60.9	55.8	33.7	42
Number of Samples > NAAQS (35 $\mu g/m^3$) [d]	6	7	4	0	3
$PM_{2.5}$ (Annual Average)					
Annual Arithmetic Mean [e]	13.7	13.7	12.5	10.4	10.7
Carbon Monoxide (1-hour)					
Maximum Concentration (ppm)	5	3	3	2	2
Days > CAAQS (20 ppm)	0	0	0	0	0
Days > NAAQS (35 ppm)	0	0	0	0	0
Carbon Monoxide (8-hour)					
Maximum Concentration (ppm)	3.1	2.0	2.2	2.1	2.2
Days > CAAQS (9 ppm)	0	0	0	0	0
Days > NAAQS (9 ppm)	0	0	0	0	0
Nitrogen Dioxide (1-hour)					
Maximum Concentration (ppm)	0.07	0.08	0.07	0.07	0.06
Days > CAAQS (0.18 ppm)	0	0	0	0	0
NO_2 (Annual Average—NAAQS)					
Annual Arithmetic Mean	0.0132	0.0132	0.0130	0.0113	0.0100
Days > CAAQS (0.03 ppm)	0	0	0	0	0
Days > NAAQS (0.053 ppm)	0	0	0	0	0
Sulfur Dioxide (1-hour)					
Maximum Concentration (ppm)	0.01	0.01	0.01	0.01	0.01
Days > CAAQS (0.25 ppm)	0	0	0	0	0
Sulfur Dioxide (24-hour)					
Maximum Concentration (ppm)	0.004	0.003	0.004	0.002	0.008
Days > CAAQS (0.04 ppm)	0	0	0	0	0
Days > NAAQS (0.14 ppm)	0	0	0	0	0
Sulfur Dioxide (Annual Average)					
Annual Arithmetic Mean	0.0010	0.0011	-- [f]	-- [f]	-- [f]
Days > CAAQS (0.030 ppm)	0	0	-- [f]	-- [f]	-- [f]

Table 4.B-3

Pollutant Standards and Ambient Air Quality Data from Representative Monitoring Stations [a]

Pollutant/Standard	2007	2008	2009	2010	2011
Lead					
Maximum 30-day average (μg/m³)	0.02	0.01	0.01	0.01	0.013
Days > NAAQS (1.5 μg/m³)	0	0	0	0	0
Maximum calendar quarter (μg/m³)	0.01	0.01	0.01	0.01	0.009
Days > CAAQS (1.5 μg/m³)	0	0	0	0	0
Sulfate					
Maximum 24-hour Concentration (μg/m³)	11.7	13.2	12.1	12.2	5.9
Days > CAAQS (25 μg/m³)	0	0	0	0	0

ppm = parts per million; μg/m³ = micrograms per cubic meter; -- = not applicable; -- = Data not available

+= The following PM10 data samples were excluded from compliance consideration in accordance with the EPA Exceptional Event Regulation.

[a] *Data presented for O_3, CO, NO_2, and SO_2, is from the North Coastal Orange County (SRA-18) Monitoring Station (Station No. 3195). Data for PM_{10}, $PM_{2.5}$, lead, and sulfate, is from the South Coastal LA County 2 (SRA-4) Monitoring Station (Station No. 077).*

[b] *In May 2008, the federal 8-hour ozone standard was changed from 0.08 ppm to 0.075ppm. The data representing days above the standard applies to the old standard.*

[c] *PM10 samples were collected every 6 days. Measured days count the days that a measurement was greater than the level of the standard. Data is recorded as number (percentage) of samples exceeding the standard.*

[d] *PM2.5 samples were collected every 3 days at all sites except for station numbers 069, 072, 077, 087, 3176, 4144 and 4165, where samples were taken daily, and station number 5818 where samples were taken every 6 days. In September 2006, the 24-hr $PM_{2.5}$ standard was changed from 65 μg/m³ to 35 μg/m³. The data representing days above standard applies to the old standard for 2003, 2004, and 2005.*

[e] *Federal $PM_{2.5}$ standard is annual average (AAM)> 15 μg/m³; and state standard is monthly average >12 μg/m³.*

[f] *The USEPA revoked the annual SO_2 standard effective August 2, 2010. Annual SO_2 concentration data was not reported by the SCAQMD in 2009 and later years.*

Source: South Coast Air Quality Management District, California Air Resources Board, Ambient Monitoring Data 2007-2011.

Lead (Pb) – The Basin is currently in compliance with California and National standards for lead and monitoring is only conducted periodically since the primary sources of atmospheric lead, leaded gasoline and lead-based paint, are no longer available in the Basin.

Sulfates – The highest recorded 24-hour sulfate concentration recorded was 13.2 μg/m³ in 2008. During the period 2007 to 2011, the CAAQS for sulfates was not exceeded.

(b) Sensitive Receptors and Locations

Sensitive receptors are populations that are more susceptible to the effects of air pollution than are the population at large. While the ambient air quality standards are designed to protect public health and are generally regarded as conservative for healthy adults, there is greater concern to protect adults who are ill or have long-term respiratory problems, and young children whose lungs are not fully developed. According to CARB, sensitive receptors include children less than 14 years of age, the elderly over 65 years of age, athletes, and people with cardiovascular and chronic respiratory diseases. The SCAQMD identify the following as locations that may contain a high concentration of sensitive receptors; long-term health care facilities, rehabilitation centers, convalescent centers, retirement homes, residences, schools, playgrounds, childcare centers, and athletic facilities.

The proposed project is located in the City of Newport Beach, which is primarily developed by residential and commercial uses. The nearest sensitive receptors to the project site are described below:

- Mobile Home Park (known as Bayside Village Mobile Home Park) the is located adjacent to the northeast approximately 30 feet (9 meters) from the project site.
- Single-family residential uses (known as the Linda Isle Community) are located approximately 500 feet (150 meters) (at the property line) to the south of the project site.
- Single-family residential uses (known as the Dover Shores Community) are located on bluff approximately 1,300 feet (396 meters) to the northwest of the project site.
- Single-family residential uses (known as the Dover Shores Community) are located approximately 1,900 feet (579 meters) to the northeast of the project site.

3. PROJECT IMPACTS

a. Methodology

The evaluation of potential impacts to local and regional air quality that may result from the construction and long-term operations of the proposed project is conducted as follows:

(1) Construction

Mass daily emissions during construction were compiled using CalEEMod, which is an emissions estimation/evaluation model developed by the CARB that is based, in part, on SCAQMD guidelines and methodologies. The CalEEMod model separates the construction process into three phases. The first phase is building demolition, excavation and rewatering, with possible emissions resulting from demolition dust, debris hall truck trips, equipment exhaust, and worker commute exhaust. The second phase of construction is site grading with potential emissions resulting from fugitive dust, soil haul truck trips, equipment exhaust, and worker commute exhaust. The third phase is subdivided into building equipment, architectural coating, asphalt, and worker commute. Emissions from the third phase of construction include equipment exhaust from building construction and asphalt paving, VOC emissions from architectural coating and asphalt paving, and worker commute exhaust. A complete listing of the construction equipment by phase and construction phase duration assumptions used in this analysis is included within the CalEEMod printout sheets that are provided in Appendix B.

Construction of the Back Bay Landing mixed-use development is anticipated to be developed as one phase during an 18- to 24-month construction period anticipated to commence as early as mid-2015. The integrated mixed-use and parking structure combined with the relatively small site necessitates construction in a single phase. The Back Bay Landing development will necessitate the construction of a seawall/bulkhead, but does not include reconstruction of the existing Bayside Village Marina. The general sequence of construction activities is as follows, although certain activities will overlap reducing the total duration of the project: demolition (1 month), excavation and de-watering, (2 months), infrastructure and foundation installation (6 months), building construction (15 months), landscaping (3 months), roadway improvements and trail construction (4 months), and reconfiguration of Bayside Village Mobile Home Park (6 months). The proposed project is therefore anticipated to be completed by late 2016.

Construction of the proposed project has the potential to create air quality impacts through the use of heavy-duty construction equipment and through vehicle trips generated from construction workers traveling to and from the project site. In addition, fugitive dust emissions would result from grading and construction activities. Mobile source emissions, primarily NO_X and PM, would result from the use of construction equipment such as bulldozers, wheeled loaders, and cranes. During the finishing phase, the application of architectural coatings (i.e., paints) and other building materials would release reactive organic compounds. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation and, for dust, the prevailing weather conditions. The assessment of construction air quality impacts considers each of these potential sources. The equipment mix and construction duration for each stage is detailed in Appendix B. Since newer vehicles are typically more energy efficient and lower polluting than their predecessors, emissions from future model years would be lower than those calculated in accordance with this optimized schedule.

The amount of construction equipment used and the duration of construction activity could have a substantial effect upon the amount of construction emissions, concentrations and the resulting impacts occurring at any one time. As such, the emission forecasts provided reflect a specific set of conservative assumptions based on the expected construction scenario wherein a relatively large amount of construction is occurring in a relatively intensive manner.

The localized effects from the on-site portion of daily emissions were evaluated at sensitive receptor locations potentially impacted by the project according to the SCAQMD's LST methodology, which utilizes on-site mass emission rate look up tables and, where appropriate, project specific modeling. LSTs are only applicable to the following pollutants: NO_x, CO, PM_{10}, and $PM_{2.5}$. LSTs represent the maximum emissions from a project that would not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard, and are developed based on the ambient concentrations of that pollutant for each source receptor area (SRA) and distance to the nearest sensitive receptor. For PM_{10} and $PM_{2.5,}$ LSTs were derived based on requirements in SCAQMD Rule 403, Fugitive Dust. The mass rate look-up tables were developed for each SRA and can be used to determine whether or not a project may generate significant adverse localized air quality impacts. The SCAQMD's LST methodology was developed for project sites that are five acres or smaller. Although the project site is larger than five acres, it is not substantially larger. Thus, the localized emissions were compared to the LST screening tables for a five-acre project site. The maximum allowable daily emissions in the screening tables generally increase as project size increases. Therefore, if the project's localized construction emissions do not exceed the LST thresholds for a five-acre project, the project would be considered to have a less than significant impact on localized air quality.

(2) Operations

The CalEEMod software was also used to compile the mass daily emissions estimates from mobile (vehicular traffic), stationary (natural gas usage), and area (landscape equipment) sources that would occur during long-term project operations. In calculating mobile-source emissions, the CalEEMod default trip length assumptions were applied to the average daily trip estimates provided by the Traffic Impact Analysis by Kunzman Associates, Inc., to arrive at vehicle miles traveled. Emissions from project vehicle operations were calculated using the CalEEMod emissions inventory model, which incorporates on-road emissions factors from CARB. Emissions from boat staging, including emissions from the boat lift, were estimated based on off-road emission factors from CARB. Stationary-source and area source emissions were also calculated

using CalEEMod default assumptions. Natural gas usage factors in CalEEMod are derived from the California Commercial End Use Survey (CEUS)[11] for non-residential energy usage and the Residential Appliance Saturation Survey (RASS) for residential uses. Landscape equipment emissions are based on off-road emissions factors from CARB. Emissions from the use of consumer products (e.g., detergents; cleaning compounds; polishes; floor finishes; cosmetics; personal care products; home, lawn, and garden products; disinfectants; sanitizers; aerosol paints; and automotive specialty products) are calculated based on emission factors from CARB and usage data collected by the SCAQMD and used in CalEEMod. Architectural coating emissions from periodic reapplication are based on emission limits from surface coating pursuant to SCAQMD rules and regulations.

The localized effects from the on-site portion of daily emissions were evaluated at sensitive receptor locations potentially impacted by the project according to the SCAQMD's LST methodology for NO_X, CO, PM_{10}, and $PM_{2.5}$. Sources of on-site emissions include natural gas combustion for heating or hot water, and architectural coatings.

Localized CO concentrations are evaluated based on prior dispersion modeling of the four busiest intersections in the Basin that has been conducted by the SCAQMD for its CO Attainment Demonstration Plan in the AQMP. The analysis compares the intersections with the greatest peak-hour traffic volumes that would be impacted by the project to the intersections modeled by the SCAQMD. Project-impacted intersections with peak-hour traffic volumes that are lower than the intersections modeled by the SCAQMD, in conjunction with lower background CO levels, would result in lower overall CO concentrations compared to the SCAQMD modeled values in its AQMP. All emissions calculation worksheets and air quality modeling output files are provided in Appendix B of this Draft EIR.

b. Significance Thresholds

Appendix G of the *CEQA Guidelines* provides a checklist of questions to assist in determining whether a proposed project would have a significant impact related to various environmental issues including air quality. Based on the following issue areas identified in Appendix G of the *CEQA Guidelines*, a significant impact to air quality would occur if the project would result in one or more of the following:

Threshold 1: Conflict with or obstruct implementation of the applicable air quality plan (refer to Impact Statement 4.B-1);

Threshold 2: Violate any air quality standard or contribute substantially to an existing or projected air quality violation (refer to Impact Statement 4.B-2);

Threshold 3: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors) (refer to Impact Statement 4.B-3 below);

[11] *California Energy Commission, California Commercial End-Use Survey Results, Data available from Itron Inc., http://capabilities.itron.com/ CeusWeb/Chart.aspx. Accessed March 2013.*

Threshold 4: Expose sensitive receptors to substantial pollutant concentrations (refer to Impact Statement 4.B-4 below);

Threshold 5: Create objectionable odors affecting a substantial number of people (refer to Impact Statement 4.B-5 below); or

Threshold 6: Comply with any applicable plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan and municipal code) adopted for the purpose of avoiding or mitigating an environmental effect (refer to Impact Statement 4.B-6 below).

The State CEQA Guidelines (Section 15064.7) provide that, when available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make determinations of significance. The potential air quality impacts of the proposed project are, therefore, evaluated according to thresholds developed by SCAQMD in the *CEQA Air Quality Handbook, Air Quality Analysis Guidance Handbook*, and subsequent guidance, discussed below. These thresholds generally incorporate the checklist questions contained in Appendix G of the State *CEQA Guidelines*.

Greenhouse Gas Emissions and related "climate change" issues are addressed in Section 4.F, *Greenhouse Gasses*, of this Draft EIR.

Threshold 1: Would the project conflict with or obstruct implementation of the applicable air quality plan?

SCAQMD is required, pursuant to the federal CAA, to reduce emissions of criteria pollutants for which the Basin is in non-attainment for the NAAQS (i.e., O_3, PM10, and PM2.5). The proposed project would be subject to the SCAQMD's 2012 AQMP, which contains a comprehensive list of pollution control strategies directed at reducing emissions and achieving ambient air quality standards. These strategies are developed, in part, based on regional population, housing, and employment projections prepared by the SCAG.

A project is consistent with the AQMP if it is consistent with the population, housing, and employment assumptions that were used in the development of the AQMP. The most recent AQMP adopted by SCAQMD incorporates SCAG's 2012–2035 RTP/SCS socioeconomic forecast projections of regional population and employment growth. The 2012–2035 RTP/SCS projects that the population of the region will grow as approximately 1.5 million new households move to the area between now and 2035. As the regional planning agency, SCAG addresses regional issues related to transportation, the economy, community development, and the environment. As part of its air quality planning, SCAG has prepared the Regional Comprehensive Plan and Guide (RCPG), which provides the basis for the land use and transportation components of the AQMP and are used in the preparation of the air quality forecasts and the consistency analysis included in the AQMP. Both the RCPG and AQMP are based, in part, on projections originating with county and city general plans.[12] A project is consistent with the AQMP if it is consistent with the applicable rules and regulations and the population, housing and employment assumptions which were used in the development of the AQMP.

[12] *SCAG serves as the federally designated MPO for the Southern California region.*

Threshold 2: Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

The City of Newport Beach has not adopted specific significance thresholds for air quality impacts. However, because of the SCAQMD's regulatory role in the Basin, the significance thresholds and analysis methodologies in the SCAQMD CEQA Air Quality Handbook guidance document will be used in evaluating project impacts.

(1) Construction Emission Thresholds

Based on criteria set forth in the SCAQMD CEQA Air Quality Handbook, construction of a specific development project in the future pursuant to the PCDP would have a significant impact with regard to construction emissions if any of the following would occur:

- Regional emissions from both direct and indirect sources would exceed any of the following SCAQMD prescribed threshold levels shown in **Table 4.B-4**, *Regional Construction Emissions Significance Thresholds*.

Table 4.B-4

Regional Construction Emissions Significance Thresholds

	Maximum Daily Emissions (pounds per day)					
Regional Thresholds	**VOC**	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Construction	75	100	550	150	150	55

Source: South Coast Air Quality Management District, Air Quality Significance Thresholds, March 2011.

In addition, the SCAQMD has developed methodology to assess the potential for localized emissions to cause an exceedance of applicable ambient air quality standards. Impacts would be considered significant if the following would occur:

- Maximum daily localized emissions are greater than the Localized Significance Thresholds (LST), resulting in predicted ambient concentrations in the vicinity of the project site greater than the most stringent ambient air quality standards for CO and NO_2.[13]
- Maximum localized PM_{10} or $PM_{2.5}$ emissions during construction are greater than the applicable LSTs, resulting in predicted ambient concentrations in the vicinity of the site to exceed 50 $\mu g/m^3$ over five hours (SCAQMD Rule 403 control requirement).

Exceedance of SCAQMD mass emission thresholds does not explicitly mean an exceedance of applicable air quality standards is expected. In the event that such an exceedance is forecast to occur, refined air quality dispersion modeling may be performed to predict impacts to ground level ambient pollutant levels.

[13] *South Coast Air Quality Management LST Methodology: http://www.aqmd.gov/ceqa/handbook/lst/Method_fina.pdf.*

(2) Operation Emission Thresholds

Based on criteria set forth in the SCAQMD CEQA Air Quality Handbook, operation of a specific development project in the future pursuant to the PCDP would have a significant impact with regard to operational emissions if any of the following would occur:

- Regional emissions from both direct and indirect sources would exceed any of the following SCAQMD prescribed threshold levels shown in **Table 4.B-5**, *Regional Operational Emissions Significance Thresholds*.

Table 4.B-5

Regional Operational Emissions Significance Thresholds

	Maximum Daily Emissions (pounds per day)					
Regional Thresholds	**VOC**	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Operational	55	55	550	150	150	55

Source: South Coast Air Quality Management District, Air Quality Significance Thresholds, March 2011.

- The project causes an exceedance of the California 1-hour or 8-hour CO standards of 20 or 9.0 parts per million (ppm), respectively, at an intersection or roadway within one-quarter mile of a sensitive receptor.
- The project would not be compatible with City of Newport Beach, SCAQMD and SCAG air quality policies.

Exceedance of SCAQMD mass emission thresholds does not explicitly mean an exceedance of applicable air quality standards is expected. In the event that such an exceedance is forecast to occur, refined air quality dispersion modeling may be performed to predict impacts to ground level ambient pollutant levels.

Threshold 3: Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

The Basin fails to meet national and state standards for O_3 (for both the 1-hour and 8-hour standard), PM_{10} (24 hour and annual), and $PM_{2.5}$, and the state standard for NO_2 and therefore is considered a federal and/or state non-attainment area for these pollutants. A significant impact may occur if a project would add a cumulatively considerable contribution of a federal or state non-attainment pollutant.

Threshold 4: Would the project expose sensitive receptors to substantial pollutant concentrations?

The SCAQMD CEQA Air Quality Handbook states that the determination of the significance of TACs shall be made on a case-by-case basis, considering the following factors:

- The regulatory framework for the toxic material(s) and process(es) involved;
- The proximity of the Toxic air contaminants to sensitive receptors;
- The quantity, volume and toxicity of the contaminants expected to be emitted;
- The likelihood and potential level of exposure; and
- The degree to which the design of the proposed project will reduce the risk of exposure.

Based on these guidelines, the project would have a significant impact from toxic air contaminants, if:

- On-site stationary sources emit carcinogenic or toxic air contaminants that individually or cumulatively exceed the maximum individual cancer risk of ten in one million or an acute or chronic hazard index of 1.0.[14]
- Hazardous materials associated with on-site stationary sources result in an accidental release of air toxic emissions or acutely hazardous materials posing a threat to public health and safety.
- The project would be occupied primarily by sensitive individuals within 0.25 mile of any existing facility that emits air toxic contaminants which could result in a health risk for pollutants identified in District Rule 1401.[15]

Threshold 5: Would the project create objectionable odors affecting a substantial number of people?

The SCAQMD CEQA Air Quality Handbook contains secondary thresholds consistent with Appendix G CEQA guidelines regarding odors. Based on these guidelines, the project would have a significant impact from odors, if:

- The project would create objectionable odors affecting a substantial number of people.

c. Project Design Features

As discussed in Chapter 2, *Project Description*, of this Draft EIR, future development on-site would be designed as a sustainable community which will allow residents, tenants and visitors to enjoy a high quality of life while minimizing their impact on the environment. A wide range of project design features would be incorporated into future development on-site as part of the PCDP with the aims of reducing GHG emissions and improving the sustainability of the proposed project. The following Project Design Feature (PDF) commitments are intended to reduce air pollutant emissions from construction, energy consumption, and transportation sources as well as to reduce the potential for nuisance odors.

PDF B-1: The City of Newport Beach shall require a Sustainability Plan that addresses topics such as water and energy efficiency, indoor environmental quality and waste reduction would be submitted with a future Site Development Review application.

[14] *SCAQMD Risk Assessment Procedures for Rules 1401 and 212, November 1998.*

[15] *SCAQMD, CEQA Air Quality Handbook, Chapter 6 (Determining the Air Quality Significance of a Project), 1993.*

PDF B-2: The City of Newport Beach shall require the project applicant to reduce waste and energy consumption and to increase the efficiency of its operations in order to minimize impacts to the environment and enhance the sustainability of its operations. Toward that end, the City shall require the following commitments into the Sustainability Plan:

1. The project applicant shall commit to evaluating and implementing energy efficiency programs and procedures, including the use of solar photovoltaic panels on new structures where feasible, use of energy-efficient light fixtures, implementation of energy-saving devices and equipment, and energy-efficient design of new facilities.
2. The project applicant shall commit to evaluating and implementing transportation reduction measures, including a walkable community design to promote walking and bicycling. The walkable community design shall include development of a multi-use trail across the property, construction of new Class 1 (off-road) and Class 3 (shared use) bicycle lanes on Bayside Drive, and providing a connection to existing regional trails.
3. The project applicant shall commit to evaluating and implementing vehicle emission reduction measures, including such measures as requiring that the parking structure include electric vehicle charging stations and providing a boat storage facility that would reduce the need for boat owners to tow their boats to a launching site resulting in fewer vehicle emissions compared with a vehicle towing a boat due to the increased weight.
4. The project applicant shall commit to the installation of odor filters, such as activated carbon filters or similar, to filter the indoor air in air conditioned spaces within the development.

d. Analysis of Project Impacts

(1) Air Quality Plan Conflicts

Threshold	Would the project conflict with or obstruct implementation of the applicable air quality plan?

Impact 4.B-1 Project implementation would result in less than significant air quality impacts and would not conflict with or obstruct implementation of any applicable air quality plan.

The 2012 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 consistent with the AQMP would not interfere with attainment because this growth is included in the projections utilized in the formulation of the AQMP. Therefore, project, 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.

The proposed project consists of legislative approvals that would allow for a future mixed-use development on the project site, subject to subsequent project entitlements. If approved, these legislative changes would modify the existing Coastal Land Use Plan (CLUP) Land Use designations for Planning Areas 1, 3, and 4 of the project site from CM-B (0.5 floor-to-area ratio [FAR]) (and RM-C within the proposed Lot Line Adjustment

[LLA] area) to MU-H,[16] which would allow for the proposed range of land uses and densities. Planning Area 2 would retain its existing CLUP Land Use designation of CM-A (0.3 FAR). Planning Areas 1, 3, and 4 total approximately 6.332 acres (275,821 square feet). The proposed project would allow for total non-residential floor area in Planning Areas 1, 3, and 4 of 85,644 square fleet. The total allowed non-residential floor area for Planning Areas 1, 3, and 4 would result in a 0.31 FAR, which would not exceed the 0.5 FAR for the existing CM-B designation. Planning Area 2 is approximately 0.642 acres (27,966 square feet). The proposed project would allow for total non-residential floor area in Planning Area 2 of 8,390 square fleet. The total allowed non-residential floor area for Planning Area 2 would result in a 0.30 FAR, which would not exceed the 0.3 FAR for the existing CM-A designation.

The proposed project would allow up to 49 residential units, which would generate a new direct (new on-site residents) population increase of approximately 107 persons.[17] The project would result in an indirect (residents that may potentially move to the area due to employment) increase in residential population of approximately 120 persons. Therefore, the total residential population increase would be estimated as approximately 227 residents to the City, which would represent an increase of 3.721 percent, 0.053 percent, and 0.005 percent of the population growth projected by SCAG for the local, subregional, and regional areas, respectively, between the years of 2008 and 2035 (refer to Section 4.K, *Population, Housing, and Employment*, of this Draft EIR for details regarding population projections). These percent increases would not exceed the forecasted growth set forth by SCAG and would not substantially alter the location or growth rate of the population projected and forecasted for the City of Newport Beach, the Orange County subregion, and SCAG region.

Although the proposed General Plan Amendment would result in an increase in density of 49 units on the project site, these units would be reallocated from unbuilt density on the adjacent mobile home property and which was already assumed in the General Plan growth projections. Therefore, as s the proposed project's non-residential uses would not exceed the FAR for the existing designations and the project's residential uses would not exceed the growth projections for the City or region, the proposed project would be consistent with the growth projections incorporated into the AQMP. Thus, if the City approves the General Plan Amendment, the appropriate approvals will be granted and the project would be consistent with the General Plan and, therefore, would be consistent with the RCPG and AQMP. As discussed later in this section, the proposed project would not conflict with applicable policies contained in the City's General Plan regarding air quality. Future development pursuant to the PCDP would co-locate residential and commercial uses, which may provide a range of job opportunities, services, and entertainment. Future development would also include a multi-use trail across the property and construction of new Class 1 (off-road) and Class 3 (shared use) bicycle lanes on Bayside Drive, providing a connection to existing regional trails. Future development would also include provisions for the use of energy efficient lighting, fixtures, appliances, and other energy efficient equipment. Hence, the project would not conflict with or obstruct implementation of the AQMP and impacts would be less than significant.

[16] *For mixed-use development, residential floor area shall not exceed a 1:1 ratio to nonresidential floor area.*

[17] *Direct residential population increase is estimated based on the following: 49 residential units X 2.19 persons = 107.31 direct residents (per the average household size of 2.19 persons/household for the City of Newport Beach, U.S. Census Bureau, 2010 Census).*

(2) Violation of Air Quality Standards

Threshold	Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Impact 4.B-2 *Implementation of the proposed project would not violate air quality standards or contribute substantially to an existing or projected air quality violation. Therefore, impacts related to regional emissions from operation of the proposed project would be less than significant.*

(a) Construction

The worst-case daily emissions were calculated for each phase of construction. Detailed emissions calculations are provided in Appendix B. Results of the criteria pollutant calculations are presented in **Table 4.B-6**, *Estimate of Unmitigated Construction Emissions*. As shown therein, construction-related daily (short-term) emissions for all criteria and precursor pollutants studied (VOC, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$) would not exceed SCAQMD significance thresholds. These calculations assume that appropriate dust control measures would be implemented during each phase of development, as required by SCAQMD Rule 403 - Fugitive Dust. Therefore, with respect to regional emissions from construction activities, this impact would be less than significant.

(b) Operation

The Back Bay Landing mixed-use development would include retail, restaurant, and marine boat sales, rental and service repair. It will also include recreation commercial uses, enclosed dry stack boat storage with racks or bays and launching facilities; as well as a maximum of 49 residential units and parking. The project is designed, and includes features that result in fewer vehicular trips than traditional single use developments. For example, the mixed-use nature of the PCDP (and later specific development pursuant to the PCDP) would result in reduced vehicle trips in comparison to a typical retail/commercial/recreation use. In addition, by expanding the boat storage, the project will reduce the need for boat owners to tow their boats to a launching site, which results in fewer vehicle emissions compared with a vehicle towing a boat due to the increased weight. The traffic study includes a 30-trip per day reduction for the mixed-use design of the project. The site would be occupied and operational as early as late 2016.

Operational emissions were assessed for mobile and stationary sources. Operational criteria pollutant emissions were calculated for the proposed project for the buildout year (2016). Based on the nature of the Back Bay Landing mixed-use development and associated residents/users/patrons, it is expected that the traffic trips would increase in the area. Daily trip rates for the project were provided by the Traffic Impact Analysis by Kunzman Associates, Inc. Emissions from boat traffic, including emissions from the boat lift, were estimated based on off-road emission factors from CARB. The emissions from the boat lift are based on a Wiggins model diesel-powered 4-wheel lift tractor system (model W5.6MB2-360) with three 160 horsepower engines. Maximum daily emissions from boat traffic are based on approximately 30 percent of the total storage capacity in use on a summer weekend day (approximately 42 boats out of a total capacity of 140 boats). CalEEMod was used to assess stationary and area source emissions. As discussed previously, natural gas usage factors are based on commercial and residential data from the California Energy Commission and landscape equipment emissions are based on off-road emission factors from CARB. Emissions from the use of consumer products and reapplication of architectural coatings are based on data provided in CalEEMod. Detailed emissions calculations are provided in Appendix B of this Draft EIR.

Table 4.B-6

Estimate of Unmitigated Construction Emissions [a]
(pounds/day)

Activity (Grouped by Overlapping Activities)	VOC	NO_X	CO	SO_X	PM_{10} [b]	$PM_{2.5}$ [b]
REGIONAL EMISSIONS						
Demolition	6	50	37	<1	16	5
Excavation & De-watering	9	82	48	<1	33	11
Infrastructure/Foundations	5	30	26	<1	3	2
Vertical Construction (2015)	7	47	36	<1	4	3
Vertical Construction (2016)	6	44	35	<1	4	3
Coating	22	3	3	<1	<1	<1
Reconfigure Mobile Home Park	2	14	11	<1	1	1
Bayside Dr. Roadway Improvements	3	29	22	<1	2	1
Final Landscaping	4	29	22	<1	2	2
Paving	2	14	11	<1	1	1
Maximum Regional Daily Emissions	**33**	**90**	**71**	**<1**	**33**	**11**
Regional Daily Significance Threshold	75	100	550	150	150	55
Over/(Under)	(42)	(10)	(479)	(150)	(117)	(44)
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
LOCALIZED EMISSIONS						
Demolition	4	40	29	<1	6	3
Excavation & De-watering	7	68	36	<1	6	4
Infrastructure/Foundations	3	28	19	<1	2	2
Vertical Construction (2015)	5	45	28	<1	3	3
Vertical Construction (2016)	5	42	28	<1	3	3
Coating	22	3	3	<1	<1	<1
Reconfigure Mobile Home Park	2	14	10	<1	1	1
Bayside Dr. Roadway Improvements	3	29	21	<1	2	1
Final Landscaping	2	27	16	<1	1	1
Paving	1	14	10	<1	1	1
Maximum Localized Emissions	**32**	**88**	**62**	**<1**	**6**	**5**
Localized Significance Threshold (LST)[c]	–	197	1,711	–	14	9
Over/(Under)	–	(109)	(1,649)	–	(8)	(4)
Exceed Threshold?	**–**	**No**	**No**	**–**	**No**	**No**

[a] *Compiled using the CalEEMod emissions inventory model. The equipment mix and use assumption for each phase is provided in Appendix B.*

[b] *PM_{10} emissions estimates are based on compliance with SCAQMD Rule 403 requirements for fugitive dust suppression.*

[c] *The SCAQMD LSTs are based on Source Receptor Area 18 (North Coastal Orange County) for a five-acre site with sensitive receptors located within 25 meters from the construction activity.*

Source: PCR Services Corporation, 2013.

Existing site criteria pollutant emissions were estimated based on 39 daily trips from the existing RV/Boat Storage and Kayak Launch facilities, as provided in the Traffic Impact Analysis.[18] The net change in emissions is based on the operational criteria pollutant emissions for the project minus the emissions from the existing site. The net criteria pollutant emissions were compared against the SCAQMD regional thresholds of signficance. Results of the criteria pollutant calculations are shown in **Table 4.B-7**, *Estimate of Unmitigated Operational Emissions*. As shown, net regional emissions resulting from the typical operation of the proposed project would not exceed regional SCAQMD thresholds for all pollutants studied (VOC, NO_X, SO_X, CO, $PM_{10,}$ or $PM_{2.5}$). Thus, regional operations emissions from project operation would not result in a significant long-term regional air quality impact.

(3) Cumulative Pollutant Increases

Threshold	Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Impact 4.B-3 *Implementation of the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the region is non-attainment under applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors). Therefore, impacts would be less than significant.*

The proposed project would result in the emission of criteria pollutants for which the region is in non-attainment during both construction and operation. The Orange County portion of the Basin is designated non-attainment for the state and federal ozone, PM_{10}, and $PM_{2.5}$ ambient air quality standards and NO_2 for the state ambient air quality standards. However, as stated above, worst-case emissions from construction and operation of the proposed project would not exceed applicable mass emission thresholds for regional or local impacts. Therefore, construction and operation of the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the region is non-attainment and therefore, project impacts would be less than significant

(4) Exposure to Substantial Pollutant Concentrations

Threshold	Would the project expose sensitive receptors to substantial pollutant concentrations?

Impact 4.B-4 *Implementation of the proposed project would not expose sensitive receptors to substantial pollutant concentrations. On-site construction and operational emissions would not exceed the LSTs thresholds and would result in less than significant impacts. The proposed project would not contribute to the formation of CO hotspots or Toxic Air Contaminant emissions and would result in less than significant impacts with respect to CO hotspots and TACs.*

[18] *Kunzman Associates, Inc.,* Back Bay Landing Traffic Impact Analysis*, (2013).*

Table 4.B-7

Estimate of Unmitigated Operational Emissions [a]
(pounds/day)

Stage	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
REGIONAL EMISSIONS						
Project Emissions						
Area Source (e.g., landscaping equipment, reapplication of architectural coating, consumer products)	4	<1	4	<1	0.09	0.09
Energy (e.g., natural gas)	<1	1	1	<1	0.06	0.06
Mobile	20	19	79	<1	12	3
Boat (Lift/Traffic)	10	11	59	<1	1	1
Total Project Emissions	**34**	**31**	**143**	**<1**	**13**	**4**
Existing Site[b]	**<1**	**<1**	**1**	**<1**	**<1**	**<1**
Net Total	**34**	**31**	**142**	**<1**	**13**	**4**
Regional Daily Significance Threshold	55	55	550	150	150	55
Over/(Under)	**(21)**	**(23)**	**(407)**	**(150)**	**(137)**	**(51)**
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
LOCALIZED EMISSIONS						
Total Localized Emissions	14	12	64	<1	1	1
Localized Significance Threshold[c]	–	197	1,711	–	4	2
Over/(Under)	–	**(185)**	**(1,647)**	–	**(3)**	**(1)**
Exceed Threshold?	**–**	**No**	**No**	**–**	**No**	**No**

[a] *Compiled using the CalEEMod emissions inventory model. Mobile Source emissions based on the Traffic Impact Analysis prepared by Kunzman Associates, Inc. Emission calculations are provided in Appendix B.*

[b] *Existing emissions were estimated based on the ratio of existing trips to project trips multiplied by the project's on-road mobile source criteria pollutant emissions (i.e., for VOCs, the formula is as follows: 39 / 2,760 × 20 = <1). Existing emissions may be slightly greater than those shown in this table because mobile source emissions at project buildout are based on a fleet mix with future model year vehicles that meet more stringent emissions standards compared to existing conditions. However, because existing emissions are subtraceted from the project emissions to obtain the net total emissions, this does not materially affect the analysis or conclusions.*

[c] *The SCAQMD LSTs are based on Source Receptor Area 18 (North Coastal Orange County) for a five-acre site with sensitive receptors located within 25 meters from the project site.*

Note: Numbers may not add up exactly due to rounding
Source: PCR Services Corporation, 2013.

(a) Construction Impacts

(1) LST Construction

As previously mentioned, the localized construction air quality analysis was conducted using the methodology promulgated by the SCAQMD. Look up tables provided in the LST document were used to

determine localized construction emissions thresholds for the project. The maximum daily localized emissions for each of the construction phases and localized significance thresholds are also presented in Table 4.B-1. The SCAQMD LSTs are based on Source Receptor Area 18 (North Coastal Orange County) for a 5-acre site with sensitive receptors located adjacent to the project site. The shortest distance available in SCAQMD's LST lookup threshold is 25 meters, therefore localized construction emissions are evaluated using the LST lookup threshold at a 25-meter distance. As mentioned previously, the SCAQMD's LST Methodology was developed for project sites that are five acres or smaller. Although the project site is larger than five acres, it is not substantially larger than 5 acres. Thus, the localized construction emissions were compared to the LST screening tables for a five-acre project. Since the maximum allowable daily emissions in the screening tables generally increase as project size increases, if the project's localized construction emissions do not exceed the LST thresholds for a five-acre project, the project would be considered to have a less than significant impact on localized air quality. As shown therein, maximum localized construction emissions for sensitive receptors would not exceed the localized thresholds for NO_X CO, PM_{10} and $PM_{2.5}$. Therefore, with respect to localized construction emissions, impacts would be less than significant.

(2) Toxic Air Contaminants

The greatest potential for TAC emissions would be related to diesel particulate emissions associated with heavy equipment operations during grading and excavation activities. In addition, incidental amounts of toxic substances such as oils, solvents, and paints would be used. These substances would comply with all applicable SCAQMD rules for their manufacture and use. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of individual cancer risk. "Individual Cancer Risk" is the likelihood that a person exposed to concentrations of TACs over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment methodology. Given the relatively short-term construction schedule of 18 to 24 months, the proposed project would not result in a long-term (i.e., 70 years) substantial source of TAC emissions with no residual emissions after construction and corresponding individual cancer risk. As such, project-related toxic emission impacts during construction would be less than significant.

(b) Localized Operation Impacts

(1) LST Operation

The SCAQMD has established LSTs to analyze the potential for on-site emissions from long-term operation of the proposed changes to impact nearby sensitive land uses. The SCAQMD LSTs are based on Source Receptor Area 18 (North Coastal Orange County) for a five acre site with sensitive receptors located within 25 meters of operation activity. As mentioned previously, the SCAQMD's LST Methodology was developed for project sites that are five acres or smaller. Although the project site is larger than five acres, it is not substantially larger than five acres. Thus, the localized construction emissions were compared to the LST screening tables for a five-acre project. Since the maximum allowable daily emissions in the screening tables generally increase as project size increases, if the project's localized construction emissions do not exceed the LST thresholds for a five-acre project, the project would be considered to have a less than significant impact on localized air quality. As shown in Table 4.B-7, on-site emissions will be below the applicable LST thresholds for all pollutants studied.

(2) CO Hotspot

Within an urban setting, vehicle exhaust is the primary source of CO. Consequently, the highest CO concentrations are generally found within close proximity to congested intersection locations. Under typical

meteorological conditions, CO concentrations tend to decrease as distance from the emissions source (i.e., congested intersection) increase. For purposes of providing a conservative, worst-case impact analysis, CO concentrations are typically analyzed at congested intersection locations, because if impacts are less than significant in close proximity of the congested intersections, impacts will also be less than significant at more distant sensitive receptor locations.

Project traffic, during the operational phase of the proposed Project, would have the potential to create local area CO impacts. As shown in Table 4.B-3, CO levels in the project area are substantially below the federal and state standards. Carbon monoxide decreased dramatically in the Basin with the introduction of the catalytic converter in 1975. No exceedances of CO have been recorded at monitoring stations in the Basin for some time and the Basin is currently designated as a CO attainment area for both the CAAQS and NAAQS. Table 4.B-3 indicates that the maximum CO levels in recent years are 5 ppm (1-hour average) and 3.2 ppm (8-hour average) compared to the thresholds of 20 ppm (1-hour average) and 9.0 (8-hour average). Thus, it is not expected that CO levels at project-impacted intersections would rise to such a degree as to cause an exceedance of these standards.

Localized areas where ambient concentrations exceed state and/or federal standards are termed CO hotspots. Emissions of CO are produced in greatest quantities from motor vehicle combustion and are usually concentrated at or near ground level because they do not readily disperse into the atmosphere, particularly under cool, stable (i.e., low or no wind) atmospheric conditions. The potential for the proposed project to cause or contribute to CO hotspots is evaluated by comparing impacted project intersections (both intersection geometry and traffic volumes) with prior studies conducted by the SCAQMD in support of their AQMPs. As discussed below, this comparison provides evidence that the project would not cause or contribute to the formation of CO hotspots, that CO concentrations at project impacted intersections would remain well below the ambient air quality standards, and that no further CO analysis is warranted or required.

The SCAQMD conducted CO modeling for the 2003 AQMP for four intersections considered the worst-case intersections in the South Coast Air Basin. These intersections included: (a) Wilshire Boulevard and Veteran Avenue; (b) Sunset Boulevard and Highland Avenue; (c) La Cienega Boulevard and Century Boulevard; (d) Long Beach Boulevard and Imperial Highway.

In the 2003 AQMP, the SCAQMD noted that the intersection of Wilshire Boulevard and Veteran Avenue is the most congested intersection in Los Angeles County with an average daily traffic volume of about 100,000 vehicles per day.[19] This intersection is located near the on- and off-ramps to Interstate 405 in West Los Angeles. The evidence provided in Table 4-10 of Appendix V of the 2003 AQMP shows that the peak modeled CO concentration due to vehicle emissions at these four intersections was 4.6 ppm (1-hour average) and 3.2 (8-hour average) at Wilshire Boulevard and Veteran Avenue.[20] When added to the maximum existing background CO concentrations in the project area, these values would be 9.6 ppm (1-hour average) and 6.3 ppm (8-hour average).

[19] *South Coast Air Quality Management District,* 2003 Air Quality Management Plan*, Appendix V: Modeling and Attainment Demonstrations, (2003) V-4-24.*

[20] *The 8-hour average is based on a 0.7 persistence factor, as recommended by the SCAQMD.*

None of the intersections in the project area have peak hour traffic volumes that exceed those at the intersections modeled in the 2003 AQMP nor do the intersections have any geometric qualities, such as enclosed tunnels, that would result in higher concentrations than the intersections modeled by the SCAQMD. According to the CO attainment demonstration in the AQMP, Wilshire Boulevard and Veteran Avenue is the most congested intersection in Los Angeles County with daily traffic volumes of about 100,000 per day. The Traffic Impact Analysis by Kunzman Associates, Inc., shows that the maximum traffic volume for project intersections in the project area would be approximately 69,000 vehicles per day.[21] As a result, CO concentrations are expected to be less than 9.6 ppm (1-hour average) and 6.3 ppm (8-hour average), which would not exceed the thresholds. Thus, this comparison provides evidence that the project would not contribute to the formation of CO hotspots and no further CO analysis is warranted or required. Therefore, the project would result in less than significant impacts with respect to CO hotspots.

(3) Toxic Air Contaminants

The SCAQMD recommends that health risk assessments be conducted for substantial sources of diesel particulates (e.g., truck stops and warehouse distribution facilities) and has provided guidance for analyzing mobile source diesel emissions.[22] The CARB siting guidelines, *Air Quality and Land Use Handbook*,[23] which the SCAQMD cites in its own guidelines, *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning* (May 2005), defines a warehouse as having more than 100 truck trips or 40 refrigerated truck trips per day. The proposed project would generate minor amounts of diesel emissions from the proposed boat lift and incidental maintenance activities. However, the project would not not generate diesel emissions equivalent to 100 or more truck trips (or 40 or more refrigerated truck trips) per day. Therefore, the proposed project would not be considered a substantial source of diesel particulates.

In addition, typical sources of acutely and chronically hazardous toxic air contaminants include industrial manufacturing processes, automotive repair facilities, and dry cleaning facilities. Minimal emissions of air toxics may result from the proposed land uses (e.g., architectural coating). 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. In addition, most uses of such substances would occur indoors. Based on the uses expected on the site, potential impacts associated with the release of toxic air contaminants would be less than significant.

(5) Odors

Threshold	Would the project create objectionable odors affecting a substantial number of people?

Impact 4.B-5 *Implementation of the proposed project would not create objectionable odors affecting a substantial number of people. Therefore, implementation of the project would have a less than significant impact.*

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[21] *Kunzman Associates, Inc.,* Back Bay Landing Traffic Impact Analysis*, (2013). Intersection 8 (Dover Drive and West Coast Highway) would have a combined peak hour volume of less than 6,900. The peak hour volume typically represents approximately 10% of the daily traffic volume and was used to extrapolate the daily traffic volume of approximately 69,000 vehicles a day.*

[22] *SCAQMD, Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Emissions, December 2002.*

[23] *CARB,* Air Quality and Land Use Handbook: A Community Health Perspective*, (2005).*

Potential sources that may emit odors during construction activities include the use of architectural coatings and solvents and diesel-powered on- and off-road equipment. SCAQMD Rule 1113 limits the amount of volatile organic compounds from architectural coatings and solvents. Via mandatory compliance with SCAQMD Rules, no construction activities or materials are proposed which would create objectionable odors. Therefore, no impact would occur during construction of the proposed project and no mitigation measures would be required.

According to the SCAQMD CEQA Air Quality Handbook, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The proposed project does not include any uses identified by the SCAQMD as being associated with odors. None of the uses in the PCDP would discharge any contaminants in quantities to cause injury or annoyance to the public or property pursuant to SCAQMD Rule 402. Therefore, the project would not create adverse odors as discussed above and would have no impact related to objectionable odors.

Since the project site is adjacent to the OCSD wastewater pump station, the PCDP requires that the future development project be required to install odor filters, such as activated carbon filters or similar, to filter the indoor air in air conditioned spaces within the development and alleviate any potential odors associated with the facility. This requirement would reduce the potential for nuisance odors in indoor air to a less than significant level.

(6) Consistency With Regulatory Framework

Threshold	Would the project conflict with any applicable plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan and municipal code) adopted for the purpose of avoiding or mitigating an environmental effect?

Impact 4.B-6 *Implementation of the proposed project would not conflict with any applicable plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the General Plan and Municipal Code). This impact is considered less than significant.*

(a) Newport Beach General Plan

The proposed project would not conflict with applicable policies contained in the City's General Plan regarding air quality, as discussed below in **Table 4.B-8**, *General Plan Consistency Analysis*. As shown in Table 4.B-8, impacts related to consistency with the Newport Beach General Plan regarding air quality would be less than significant.

Table 4.B-8

General Plan Consistency Analysis

Applicable Policies	General Project Consistency Statement
Natural Resources Element	
Policy NR 6.1: Walkable Neighborhoods - Provide for walkable neighborhoods to reduce vehicle trips by siting amenities such as services, parks, and schools in close proximity to residential areas.	**Consistent.** The proposed project would provide for development of a mixed-use project on the project site, which is situated in close proximity to various recreational amenities and services. The future development of the site would provide residential uses and supporting retail and restaurant uses that would serve both on-site residents and residents in neighboring communities, including the adjacent Bayside Village Mobile Home Park.
Policy NR 6.2: Mixed-Use Development - Support mixed-use development consisting of commercial or office with residential uses in accordance with the Land Use Element that increases the opportunity for residents to live in proximity to jobs, services, and entertainment.	**Consistent.** The proposed legislative approvals would allow for the future development of a mixed-use commercial and residential project on the project site, which may provide a range of job opportunities, services, and entertainment.
Policy NR 6.3: Vehicle-Trip Reduction Measures - Support measures to reduce vehicle-trip generation such as at-work day care facilities, and on-site automated banking machines.	**Consistent.** While the specific mix of land uses to be constructed on-site as part of a future development is not currently known, on-site banking machines, and other measures that result in reduced vehicle trips may be implemented on-site to the extent deemed appropriate by the applicant and/or City at the Site Development Review stage.. As noted earlier, boaters will be able to access the site by boat, and the dry stack boat storage will reduce the number of trailered boat trips..
Policy NR 6.4: Transportation Demand Management Ordinance - Implement the Transportation Demand Management (TDM) Ordinance, which promotes and encourages the use of alternative transportation modes, and provides those facilities such as bicycle lanes that support such alternate modes.	**Consistent.** The TDM ordinance in Chapter 20.44 of the Newport Beach Municipal Code only applies to nonresidential developments that are estimated to employ over 250 persons. Based on the standard employment generation factors in the Code, the proposed project is not anticpated to exceed 250 employees. However, the final determination will be made at Site Development Review. If found to apply, a program that reduces vehicle trips, encourage alternative modes of transportation, and provides facilities for alternative modes of transportation shall be provided. Future development pursuant to the PCDP would require the provision of non-vehicular transportation improvements, such as the proposed multi-use bayfront access and trail, and future development of the site would be carried out in conformance with the requirements of the Orange County Transportation Authority (OCTA) regarding existing and future public transit facilities (including the existing bus stop on East Coast Highway adjacent to the project site). The proposed project, therefore, would encourage and promote the use of alternative transportation modes.

Table 4.B-8 (Continued)

General Plan Consistency Analysis

Applicable Policies	General Project Consistency Statement
Policy NR 6.5: Local Transit Agency Collaboration - Collaborate with local transit agencies to: develop programs and educate employers about employee rideshare and transit; establish mass transit mechanisms for the reduction of work-related and non-work-related vehicle trips; promote mass transit ridership through careful planning of routes, headways, origins and destinations, and types of vehicles; and develop bus shelters, bicycle lanes, and other bicycle facilities.	**Consistent.** Future development of the project site with proposed uses would be carried out in collaboration with local transit agencies to the extent necessary and appropriate. Future development pursuant to the PCDP would include development of a multi-use trail across the property and construction of new Class 1 (off-road) and Class 3 (shared use) bicycle lanes on Bayside Drive, providing a connection to existing regional trails.
Policy NR 6.6: Traffic Signal Synchronization - Encourage synchronization of traffic signals throughout the City and with adjoining cities and counties to allow free flow of traffic.	**Consistent.** To the extent feasible and appropriate, as determined by the City, traffic signal synchronization would be implemented in the project area to minimize traffic congestion. The proposed project would not adversely affect the City's (or other affected transportation agencies') efforts to synchronize traffic signals.
Policy NR 6.8: Accessible Alternative Fuel Infrastructure - Support the development of alternative fuel infrastructure that is available and accessible to the public, and provide incentives for alternative fuel vehicles.	**Consistent.** The project does not interfere with the implementation of this policy. While unlikely to be relevant to the future development, the City would evaluate any specific relevant requirements as part of future Site Development Review. In addition, the PCDP includes design guidelines requiring that the parking structure include electric vehicle charging stations.
Policy NR 7.1: Fuel Efficient Equipment - Support the use of fuel efficient heating equipment and other appliances.	**Consistent.** The proposed project includes provisions for the use of energy efficient lighting, fixtures, appliances, and other equipment as part of a future development project. To the extent feasible, fuel efficient heating equipment and other appliances would be incorporated into the future development on-site. In addition, the PCDP requires the preparation of a Sustainability Plan that addresses topics such as water and energy efficiency, indoor air quality, and waste reduction which would be reviewed in conjunction with Site Development Review.
Policy NR 7.2: Source Emission Reduction Best Management Practices - Require the use of Best Management Practices (BMP) to minimize pollution and to reduce source emissions.	**Consistent.** To the extent feasible and appropriate to minimize air pollution, BMPs would be implemented as part of future development on-site.

Table 4.B-6 (Continued)

General Plan Consistency Analysis

Applicable Policies	General Project Consistency Statement
Policy NR 7.3: Incentives for Air Pollution Reduction - Provide incentives to promote siting or to use clean air technologies and building materials (e.g., fuel cell technologies, renewable energy sources, UV coatings, hydrogen fuel).	**Consistent.** To the extent feasible and appropriate, clean air technologies and building materials would be employed as part of future on-site development. As required by mitigation provided in Section 4.F. Greenhouse Gas Emissions, of this Draft EIR, project buildings would be designed to accommodate solar photovoltaic panels in order to allow for on-site energy generation. In addition, the PCDP requires the preparation of a Sustainability Plan that addresses topics such as water and energy efficiency, indoor air quality, and waste reductionm which would be reviewed in conjunction with Site Development Review.
Policy NR 8.1: Management of Construction Activities to Reduce Air Pollution - Require developers to use and operate construction equipment, use building materials and paints, and control dust created by construction activities to minimize air pollutants.	**Consistent.** As required by SCAQMD Rules and other regulations, construction activities would be carried out in a manner that minimizes air pollutant emissions, including emissions from off-road construction equipment, construction vehicles, worker commute vehicles, fugitive dust, and architectural coatings and other building materials.

Source: PCR Services Corporation, 2013

(b) SCAG Regional Plans

The proposed project's consistency with the applicable goals, policies, and principles of the SCAG *Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS) and SCAG *Southern California Compass Blueprint* (Compass Blueprint) relative to air quality is evaluated below in **Table 4.B-9**, *SCAG Regional Plan Consistency Analysis*. As discussed in Table 4.B-9, the proposed project would not conflict with the applicable goals, policies, and principles of the RTP/SCS and Compass Blueprint, and as such impacts in this regard would be less than significant.

Table 4.B-9

SCAG Regional Plan Consistency Analysis

SCAG RTP/SCS Goals	General Project Consistency Statement
Goal 6: Protect the environment and health of our residents by improving air quality and encouraging active transportation (non-motorized transportation, such as bicycling and walking).	**Consistent.** Future development on-site would include a variety of energy- and water-conserving features that would effectively reduce air pollutant emissions from off-site energy production sources. The project would include a number of non-vehicular transportation improvements and convenient access to public transit facilities, and would be a mixed-use development with

Table 4.B-9 (Continued)

SCAG Regional Plan Consistency Analysis

SCAG RTP/SCS Goals	General Project Consistency Statement
	complementary uses located on the project site; these features would reduce project-related vehicle trips and associated air pollutant emissions. In addition, the PCDP requires the preparation of a Sustainability Plan that addresses topics such as water and energy efficiency, indoor air quality, and waste reduction which would be reviewed in conjunction with Site Development Review.
Goal 7: Actively encourage and create incentives for energy efficiency, where possible.	**Consistent.** Future development on-site would incorporate various sustainability features such as water- and energy efficient buildings, lighting, and landscaping. Future development of the project site would be required to implement various energy conservation features, such as energy efficient lighting fixtures, lighting timers, Energy Star®-rated heating, cooling, and appliances. In addition, the PCDP requires the preparation of a Sustainability Plan that addresses topics such as water and energy efficiency, indoor air quality, and waste reduction which would be reviewed in conjunction with Site Development Review.
Goal 8: Encourage land use and growth patterns that facilitate transit and non-motorized transportation.	**Consistent.** Refer to Goal 6 above.

SCAG RTP/SCS Policies	General Project Consistency Statement
Policy 4: Transportation demand management (TDM) and non-motorized transportation will be focus areas, subject to Policy 1.	**Consistent.** The TDM ordinance in Chapter 20.44 of the Newport Beach Municipal Code only applies to nonresidential developments that are estimated to employ over 250 persons. Based on the standard employment generation factors in the Code, the proposed project is not anticpated to exceed 250 employees. However, the final determination will be made at Site Development Review. If found to apply, a program that reduces vehicle trips, encourage alternative modes of transportation, and provides facilities for alternative modes of transportation shall be provided. Notwithstanding the above, the proposed project would result in a future development on the project site that provides a number of non-vehicular transportation options such as pedestrian and bicycle access and trails that connect to other off-site facilities, as well as convenient access to public transit facilities along East Coast Highway. Additionally, a future mixed-use project would reduce vehicle trips by locating complementary land uses such as residential, retail, restaurant, and recreational facilities on the same property.

Table 4.B-9 (Continued)

SCAG Regional Plan Consistency Analysis

SCAG Compass Blueprint Growth Visioning Principles	General Project Consistency Statement
Principle #1: Improve mobility for all residents.	**Consistent.** The proposed project would foster increased mobility for adjacent and on-site residents through the provision of new public pedestrian and bicycle facilities on-site.
• Locate new housing near existing jobs and new jobs near existing housing.	**Consistent.** Future development on-site would consist of a mixed-use commercial and residential project, which would locate jobs and housing opportunities in close proximity to one another.
• Promote a variety of travel choices.	**Consistent.** The proposed project would provide a range of transportation options, including automobile, pedestrian, bicycle, public transit, and boating opportunities.
Principle #2: Foster livability in all communities.	**Consistent.** Future development on-site would provide all necessary facilities and services for future on-site residents and would not adversely affect the livability of existing communities in the project area.
• Promote infill development and redevelopment to revitalize existing communities.	**Consistent.** The project site is surrounded by existing urban development, and as such, a future development project on-site would be considered an infill development.
• Promote developments that provide a mix of uses.	**Consistent.** The proposed project would allow for the future development of a mixed-use project that includes residential, retail, restaurant, and other marine-related uses.
• Promote "people-scaled," pedestrian-friendly communities.	**Consistent.** Future development on-site would provide various pedestrian-friendly improvements, including a new public bayfront access path and multi-use pedestrian and bicycle trail that connects to off-site regional facilities.
Principle #4: Promote sustainability for future generations.	**Consistent.** The proposed project includes a variety of sustainability features that would be implemented as part of a future development project in order to promote sustainability and the long-term conservation of natural resources.
• Focus development in urban centers and existing cities.	**Consistent.** The project site is located in the City of Newport Beach in an area characterized by urban development. The project does not involve the conversion of vacant, undeveloped land to urban uses.
• Develop strategies to accommodate growth that use resources efficiently, eliminate pollution, and significantly reduce waste.	**Consistent.** The proposed project incorporates a number of features intended to minimize resource consumption, pollution, and waste through water and energy efficiency, mixed-use development, water quality BMPs, and other sustainability features. In addition, the PCDP requires the preparation of a Sustainability Plan

Table 4.B-9 (Continued)

SCAG Regional Plan Consistency Analysis

SCAG Compass Blueprint Growth Visioning Principles	General Project Consistency Statement
	that addresses topics such as water and energy efficiency, indoor air quality, and waste reduction which would be reviewed in conjunction with Site Development Review.
• Utilize "green" development techniques.	**Consistent.** Future development on-site would implement a Sustainability Plan that requires a wide range of "green" development features, including efficient water fixtures and irrigation systems, drought-tolerant landscaping, energy efficient appliances and heating/cooling equipment, provision of non-vehicular transportation facilities, alternative energy capabilities, and water quality BMPs.

Source: PCR Services Corporation, 2013

(c) California Coastal Act

Additionally, the proposed project's consistency with the applicable policies of the California Coastal Act relative to air quality is evaluated below in **Table 4.B-10**, *California Coastal Act Consistency Analysis*. As discussed in Table 4.B-10, the proposed project would not conflict with the applicable policies of the CCC, and as such impacts in this regard would be less than significant.

4. CUMULATIVE IMPACTS

As displayed in Table 4.B-6 and Table 4.B-7, regional burden emissions calculated for project construction and operations are less than the applicable SCAQMD daily significance thresholds, which are designed to assist the region in attaining the applicable state and national ambient air quality standards. These standards apply to both primary (criteria and precursor) and secondary pollutants (ozone). Although the project site is located in a region that is in non-attainment for ozone and PM_{10}, the emissions associated with the project would not be cumulatively considerable as the emissions would fall below SCAQMD daily significance thresholds. In addition, the project would be consistent with the growth projections incorporated into the AQMP, which is intended to bring the Basin into attainment for all criteria pollutants, and would reduce vehicle miles traveled through its mixed-use and urban infill design. The project site is surrounded by existing urban development, and itself is an underutilized developed commercial property. As such, future development of the project site would be considered infill development. The proposed project provides for a variety of uses including residential units, retail stores, restaurants, and marine-related commercial uses, as well as public recreational amenities. The proposed project includes a number of pedestrian and bicycle-related facilities that offer several non-vehicular transportation options within the project area. Furthermore, the project site is located in close proximity to an existing public transit stop on the north side of East Coast Highway. Refer to Section 4.F, *Greenhouse Gas Emissions*, of this Draft EIR for details regarding the proposed project's consistency with greenhouse gas reduction plans. In summary, the project would be consistent with strategies that would reduce vehicle miles traveled and would reduce mobile and stationary/area source greenhouse gas and criteria pollutant emissions. As such, cumulative

impacts would be less than significant and the project's contribution to such impacts would not be considerable.

Table 4.B-10

California Coastal Act Consistency Analysis

Coastal Act Policy	General Project Consistency Statement
Development	
Section 30253: Minimization of adverse impacts. New development shall do all of the following: (c) Be consistent with requirements imposed by an air pollution control district or the State Air Resources Board as to each particular development. (d) Minimize energy consumption and vehicle miles traveled.	**Consistent.** Future development of allowable uses on-site would be consistent with all applicable requirements of the SCAQMD and would not conflict with the regional AQMP. The proposed legislative approvals will allow for the future development of a mixed-use commercial and residential project, which would provide complementary uses such as residential, retail, and restaurant uses on the same site, thereby reducing the need for off-site trips for many goods and services. Additionally, the future development of the site would incorporate various sustainability features such as water- and energy efficient buildings, lighting, and landscaping, and efficient recreational boat access. Future development of the project site would be required to implement various energy conservation features, such as energy efficient lighting fixtures, lighting timers, Energy Star®-rated heating, cooling, and appliances. In addition, the PCDP requires the preparation of a Sustainability Plan that addresses topics such as water and energy efficiency, indoor air quality, and waste reduction which would be reviewed in conjunction with Site Development Review.

Source: PCR Services Corporation, 2013.

5. MITIGATION MEASURES

There are no additional mitigation measures proposed for the project, beyond what is already required by SCAQMD to reduce impacts.

6. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Project impacts are less than significant and no mitigation measures are required.