4.10 AIR QUALITY

4.10.1 INTRODUCTION

This section addresses the potential air quality impacts that would occur from construction and operation of the proposed Newport Banning Ranch Project (proposed Project or Project). Appendix G of this EIR includes supporting data and calculations including *Draft Air Toxic Health Risk Assessment in Support of CEQA Documentation, Newport Banning Ranch* (CDM 2010).

Air Pollutants

Criteria Pollutants

Federal air quality regulations were first promulgated with the Clean Air Act (CAA) of 1970. Air quality in California is defined by ambient air concentrations of seven "criteria air pollutants", which are a group of common air pollutants identified by the U.S. Environmental Protection Agency (USEPA) to be of concern with respect to the health and welfare of the general public, and four additional pollutants also identified by the California Air Resources Board (CARB). Federal and State governments regulate criteria air pollutants by using ambient standards based on criteria regarding the health and/or environmental effects of each pollutant. The seven federal criteria pollutants include nitrogen dioxide (NO_2), ozone (O_3), particulate matter smaller than or equal to 10 microns in diameter (PM10), particulate matter smaller than or equal to 2.5 microns in diameter (PM2.5), carbon monoxide (CO), sulfur dioxide (SO_2), and lead. The four additional State-designated pollutants are visibility reducing particles, sulfates, hydrogen sulfide, and vinyl chloride. O_3 is a secondary pollutant, meaning that it is not directly emitted. It is a gas that is formed when volatile organic compounds (VOCs) and oxides of nitrogen (NOx) undergo photochemical reactions that occur only in the presence of sunlight. Thus, VOCs and NOx are O_3 "precursors."

In 2007, the United States Supreme Court held that greenhouse gases (GHGs) fall within the CAA's definition of an "air pollutant," and directed the USEPA to consider whether GHGs are causing climate change and thus harm to humans. GHG emissions and impacts are addressed in Section 4.11 of this EIR.

Toxic Air Contaminants

Toxic air contaminants (TACs) are a diverse group of air pollutants that may cause or contribute to an increase in deaths, that may cause serious illness, or that may pose a present or potential hazard to human health. TACs include both organic and inorganic chemical substances that may be emitted from a variety of common sources, including gasoline stations, motor vehicles, dry cleaners, industrial operations, painting operations, and research and testing facilities. TACs are different from the "criteria" pollutants in that ambient air quality standards have not been established for TACs.[1] TACs occurring at extremely low levels may still cause adverse health effects, and it is typically difficult to identify levels of exposure that do not produce adverse health effects.

There are almost 200 compounds that have been designated as TACs in California. Some of these TACs are groups of compounds which contain many individual substances (e.g., copper compounds, polycyclic aromatic compounds). The ten TACs posing the greatest known health

[1] An exception is that there are ambient standards for lead and vinyl chloride because the CARB classified these pollutants as TACs after they were identified as criteria pollutants.

risk in California are acetaldehyde, benzene, 1,3-butadiene, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, perchloroethylene, and diesel particulate matter (diesel PM). Dioxins are also considered to pose substantial health risk. TAC impacts are described by carcinogenic risk, and chronic (i.e., of long duration) and acute (i.e., severe but of short duration) adverse effects on human health.

4.10.2 REGULATORY SETTING

Federal

The USEPA is responsible for setting and enforcing the National Ambient Air Quality Standards (NAAQS) for criteria pollutants. The standards are shown in Table 4.10-1. The USEPA regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain locomotives. As part of its enforcement responsibilities, the USEPA requires each state with federal nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain and maintain federal standards. The SIP must integrate federal, State, and local plan components and regulations to identify specific measures to reduce pollution by using a combination of performance standards and market-based programs within the SIP-identified timeframe.

State of California

CARB, a part of the California Environmental Protection Agency, is responsible for the coordination and administration of both federal and State air pollution control programs in California. In this capacity, CARB conducts research; sets the California Ambient Air Quality Standards (CAAQS) shown in Table 4.10-1; compiles emission inventories; develops suggested control measures; provides oversight of local programs; and prepares the SIP. For regions that do not attain the CAAQS, CARB requires the air districts to prepare plans for attaining the standards. These plans are then integrated into the State SIP. CARB establishes emissions standards for motor vehicles sold in California, consumer products (e.g., hair spray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to reduce vehicular emissions of harmful pollutants.

South Coast Air Quality Management District

The South Coast Air Quality Management District (SCAQMD) is the agency principally responsible for comprehensive air pollution control in the South Coast Air Basin (SoCAB), which includes all of Orange County and the urbanized portions of Los Angeles, Riverside, and San Bernardino Counties. The SCAQMD develops rules and regulations; establishes permitting requirements for stationary sources; inspects emissions sources; and enforces such measures through educational programs or fines, when necessary.

TABLE 4.10-1
CALIFORNIA AND NATIONAL AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	State Standards[a,c]	Federal Standards[b]	
			Primary[c,d]	Secondary[c,f]
O_3	1 Hour	0.09 ppm (180 µg/m^3)	–	–
	8 Hour	0.070 ppm (137 µg/m^3)	0.075 ppm (147 µg/m^3)	Same as Primary
PM10	24 Hour	50 µg/m^3	150 µg/m^3	Same as Primary
	AAM[f]	20 µg/m^3	–	Same as Primary
PM2.5	24 Hour	–	35 µg/m^3	Same as Primary
	AAM[f]	12 µg/m^3	15.0 µg/m^3	Same as Primary
CO	1 Hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	None
	8 Hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	None
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)	–	–
NO_2	AAM[f]	0.030 ppm (56 µg/m^3)	0.053 ppm (100 µg/m^3)	Same as Primary
	1 Hour	0.18 ppm (338 µg/m^3)	0.100 ppm	0.053 ppm (100 µg/m^3)
SO_2[h]	24 Hour	0.04 ppm (105 µg/m^3)		–
	3 Hour	–	–	0.5 ppm (1,300 µg/m^3)
	1 Hour	0.25 ppm (655 µg/m^3)	0.075 ppm (196 µg/m^3)	–
Lead[g]	30 day Avg.	1.5 µg/m^3	–	–
	Calendar Quarter	–	1.5 µg/m^3	Same as Primary
	Rolling 3-month average	–	0.15 µg/m^3	
Visibility Reducing Particles	8 hour	Extinction coefficient of 0.23 per km – visibility ≥ 10 miles (0.07 per km – ≥30 miles for Lake Tahoe)	**No Federal Standards**	
Sulfates	24 Hour	25 µg/m^3		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)		
Vinyl Chloride[g]	24 Hour	0.01 ppm (26 µg/m^3)		

TABLE 4.10-1 (Continued)
CALIFORNIA AND NATIONAL AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	State Standards[a,c]	Federal Standards[b]	
			Primary[c,d]	Secondary[c,f]

–: No Standard; ppm: parts per million; µg/m^3: micrograms per cubic meter; mg/m^3: milligrams per cubic meter.

[a] California standards for O_3, CO (except Lake Tahoe), SO_2 (1 and 24 hour), NO_2, PM10, PM2.5, and visibility reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded.

[b] National standards (other than O_3, PM10, PM2.5, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The O_3 standard is attained when the fourth highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. For PM10, 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 1. For PM2.5, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact USEPA for further clarification and current federal policies.

[c] Concentration is 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.

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

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

[f] Annual Arithmetic Mean

[g] The CARB 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.

[h] On June 2, 2010, the USEPA established a 1-hour primary standard for SO_2. In the same action, the 24-hour and annual standards were revoked.

Source: CARB 2010

The SCAQMD is directly responsible for reducing emissions from stationary (area and point), mobile, and indirect sources. It has responded to this requirement by preparing a sequence of Air Quality Management Plans (AQMPs). Two versions (2003 and 2007) of the AQMPs are in different stages of regulatory review. The 2003 AQMP is an update to the 1997 AQMP. The 2003 AQMP updates the attainment demonstration with the federal standards for O_3 and PM10; it replaces the 1997 attainment demonstration for the federal CO standard and provides a basis for a future CO maintenance plan; and it updates the maintenance plan for the federal NO_2 standard, which the SoCAB has met since 1992. The 2003 AQMP was adopted by the SCAQMD in August 2003 and was approved, with modifications, by CARB in October 2003. CARB then submitted the 2003 State and Federal Strategy of the California SIP (which incorporates the 2003 AQMP) to the USEPA on January 9, 2004. However, this SIP has not been approved, and the 1997 AQMP with 1999 amendments remains the federally approved AQMP.

The SCAQMD Governing Board adopted the 2007 AQMP on June 1, 2007. The purpose of the 2007 AQMP for the SoCAB is to set forth a comprehensive program that will lead the region into compliance with federal 8-hour O_3 and PM2.5 air quality standards that were implemented subsequent to 2003. CARB adopted the State Strategy for the 2007 SIP, including the 2007 AQMP as part of the 2007 SIP and in November 2007, submitted a SIP revision to the USEPA for O_3, PM2.5, CO, and NO_2 in the SoCAB; this revision is identified as the "2007 South Coast SIP". The 2007 AQMP/2007 South Coast SIP demonstrates attainment of the federal PM2.5 standard in the SoCAB by 2014 and attainment of the federal 8-hour O_3 standard by 2023. The SIP also included a request to reclassify the SoCAB's O_3 attainment designation from "severe" to "extreme" (CARB 2007). The USEPA approved the redesignation to be effective June 4, 2010 (Federal Register 2010). The Extreme designation requires the attainment of the 8-hour O_3 standard in the SoCAB by June 2024. CARB approved PM2.5 SIP revisions in April 2011 and

submitted them to the USEPA for approval. The proposed ozone SoCAB SIP will go to CARB for approval in July 2011. CARB expects the USEPA to take action on both the PM2.5 and ozone SIPs (including the revisions) by September 2011 (van Ommering 2011).

City of Newport Beach

The General Plan for the City of Newport Beach was adopted in 2006. As Newport Beach is almost fully built out, the General Plan focuses on conserving the existing pattern of land uses and establishes policies for their protection and long-term maintenance. The Natural Resources Element of the General Plan provides direction regarding the conservation, development, and utilization of natural resources and addresses air quality, among many resources. The specific General Plan goals and policies that could result in reduction of air pollutant emissions for the proposed Project are addressed later in this section.

4.10.3 METHODOLOGY

Criteria Pollutants

Construction and Operations Mass Daily Emissions

Construction and operational emissions were calculated by using California Emissions Estimator Model (CalEEMod) version 2011.1.1 (SCAQMD 2011a). CalEEMod is a computer program accepted by the SCAQMD that can be used to estimate anticipated emissions associated with land development projects in California. CalEEMod has separate databases for specific counties and air districts. The Orange County database was used for the proposed Project. The model calculates emissions of CO, SO_2, PM10, and PM2.5 and the O_3 precursors VOC and NOx. For this analysis, the results are expressed in pounds per day (lbs/day) and are compared with the SCAQMD mass daily thresholds described in Section 4.10.6 to determine impact significance. Specific inputs to CalEEMod for both construction and operations include land uses and acreages. Construction input data include but are not limited to (1) the anticipated start and finish dates of each Project construction activity, such as remediation, grading, building, and paving; (2) inventories of construction equipment to be used during each activity; (3) areas to be excavated for remediation and graded for development; (4) volumes of materials to be imported to and exported from the Project site; (5) areas to be paved; and (6) areas to be painted. The input data and assumptions are discussed in Section 4.10.7 below and in Appendix G. The CalEEMod model has the capability to calculate reductions in construction emissions from the effects of dust control, diesel-engine classifications, low-emission paints, and other selected measures.

Operational inputs to CalEEMod include (1) the specific year for project operations, (2) vehicle trip generation rates, (3) fireplace types and quantities, (4) land use features that contribute to reductions in vehicle miles traveled (VMT), and (5) project criteria for energy use. Model default values for trip distances, fleet composition, and other factors may be adjusted for project-specific conditions. Output operational emissions data are separated into energy use, area sources, and mobile sources. The area sources are fireplaces, landscape maintenance equipment, consumer products, and architectural coatings used for routine maintenance. Consumer products (e.g., household cleaners, air fresheners, automotive products, and personal care products) emit VOCs. Mobile sources are the vehicles used by residents and by patrons, staff, and vendors for commercial businesses.

In August 2010, the California Air Pollution Control Officers Association (CAPCOA) published *Quantifying Greenhouse Gas Mitigation Measures, A Resource for Local Government to Assess*

Emission Reductions from Greenhouse Gas Mitigation Measures. This document provides guidance on the quantification of project-level VMT reductions associated with land use factors. The concepts in the CAPCOA document were incorporated into CalEEMod.

Local Concentrations of Criteria Pollutants from On-Site Sources

As part of the SCAQMD's environmental justice program, attention has focused on local air quality impacts from nearby sources. The SCAQMD developed the localized significance threshold (LST) look-up tables to allow the evaluation of localized impacts for many projects and scenarios without the complex task of dispersion modeling. The tables show the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or State ambient air quality standard. The LST methodology is recommended for project sites that are five acres or less. However, the method may be used for construction on larger sites if it is demonstrated that the area of daily disturbance is not substantially larger than five acres and calculated project emissions for the larger site would not exceed the five-acre site emissions limits; For the Newport Banning Ranch Project site, this methodology is used for the analysis in Section 4.10.7.

The concentration of PM10 at the nearest receptors was determined using the USEPA's AERMOD air dispersion model to determine site boundary concentrations. The AERMOD model is used by local, state, and national air quality agencies, including CARB and the SCAQMD, to model how pollutants disperse into the atmosphere from sources of emissions. The PM10 concentrations were modeled according to guidelines included in the SCAQMD's Modeling Guidance for AERMOD (SCAQMD 2009x) and following the SCAQMD LST methodology. The dispersion modeling was conducted with site terrain elevation data, with urban dispersion coefficients. Meteorological data from the Costa Mesa monitoring station, available from the SCAQMD web site, was used to be representative of the Project area. The worst-case on-site construction emissions were obtained from the CalEEMod analysis details (Appendix G).

CO Hotspots

A CO hotspot is an area of localized CO pollution that is caused by severe vehicle congestion on major roadways, typically near intersections. An initial screening procedure is provided in the procedures and guidelines contained in the Transportation Project-Level Carbon Monoxide Protocol (the CO Protocol) to determine whether a project poses the potential for a CO hotspot. If, according to the CO Protocol, a project poses a potential for a CO hotspot, quantitative screening is required. Various air quality agencies in California, but not the SCAQMD, have developed conservative screening methods to avoid the need for dispersion modeling for most congestion scenarios. Therefore, the screening methods of the Sacramento Metropolitan Air Quality Management District (SMAQMD) are used (SMAQMD 2011). The use of the SMAQMD methodology is appropriate for the Project because background CO concentrations in Orange County are similar to and less than those in Sacramento.

Toxic Air Contaminants

A human health risk assessment (HHRA) was conducted to determine potential exposure to TACs emitted from future oilfield operations and from the combination of emissions from the oilfield and the proposed residential and commercial development. The following methodologies were used in the HHRA. Additional details are included in Appendix G.

Estimate TAC Emissions From On-Going Oilfield Operations, Future Oilfield Operations, and Proposed On-site Land Uses

The equipment and operating characteristics for each well maintenance activity were obtained from City and West Newport Oil Company (WNOC) staff familiar with oilfield operations in order to estimate the TAC emissions from ongoing (baseline) oilfield operations on the Project site; future oilfield operations after operations are consolidated; and proposed on-site land uses (e.g., residential and commercial development) as described in the Project Description (see Section 3.). The air toxics emissions from existing permitted stationary equipment on the City and WNOC sites were obtained from SCAQMD Annual Emissions Reports (AERs), the most recently available being from 2008. For off-road mobile equipment, exhaust emission factors for VOC and PM10 were developed using CARB's OFFROAD2007 Model. Off-road load factors are from SCAQMD's CEQA Air Quality Handbook. It is assumed that all equipment operates 8 hours per day except for oil rigs, which operate 24 hours per day. On-road on-site equipment PM10 and VOC emissions generated from crew and material haul truck trips, cement trucks, and vacuum trucks were calculated using emission factors from the CARB emission factor model EMFAC2007, Version 2.3. TAC emissions were determined from PM10 and VOC emissions and source-specific speciation profiles developed by the CARB.[2] Calculations of on-road vehicle emissions include an estimate of fugitive dust from paved or unpaved on-road travel. It is assumed that all roads on the oilfield are unpaved and all off-site travel takes place on paved roads. The perimeter of the site is roughly four miles, thus it was conservatively assumed that all on-road vehicles (mainly vacuum trucks, cement trucks, and crew trucks/vans) were assumed to travel a maximum of five miles per on-site trip on unpaved roads across the Project site. Fugitive dust emissions (PM10) were calculated using the URBEMIS model, USEPA's AP-42, and SCAQMD's CEQA Air Quality Handbook.

It was assumed that future oilfield stationary source operations emissions would be the same as existing operations. It was also assumed that the level of activity associated with on-road and off-road mobile equipment that performs oilfield operations would remain the same after the consolidation. The activities would, however, be limited geographically to the consolidated oilfield sites. The level of emissions from on-road vehicles traveling on the site would decrease due to the decrease in travel distances (all oil operations consolidated at two on-site locations). These vehicles would not travel over the entire site, but would be limited to traveling to and from the two consolidated locations.

Emissions from operation of the residential, commercial, and other Project development after completion were calculated using URBEMIS. TAC emissions were determined from the generated PM10 and VOC emissions.

Compare Annual TAC Emissions to SCAQMD Risk Assessment Procedures Tier 1 Thresholds

The assessment compares annual TAC emissions to SCAQMD Risk Assessment Procedures Tier 1 thresholds and, where TAC emissions exceed Tier 1 thresholds, a Tier 4 refined air dispersion modeling analysis was conducted to determine TAC exposure concentrations at residential, commercial, and park receptors.[3] An emissions screening level HHRA was performed using the TAC emissions inventories from the consolidated oil operations and the

[2] A speciation profile provides the weight fraction of each chemical species in the PM10 and VOC.

[3] SCAQMD risk assessment procedures are defined in tiers. The tiers are designed to be used in order of increasing complexity. If compliance cannot be demonstrated using one tier, the analyst may proceed to an appropriate higher tier.

proposed Project residential and commercial operations. The Tier 1 HHRA was performed in accordance with SCAQMD air toxics risk assessment procedures for Rules 1401 and 212.

In accordance with the SCAQMD procedures, where the Tier 1 analysis indicated that TAC emissions exceeded the Tier 1 thresholds, then operational risks were modeled using the USEPA AERMOD dispersion model. Three scenarios were modeled with AERMOD:

- ***Baseline Conditions:*** The existing oilfield TAC emissions were modeled to determine the baseline TAC concentrations at the existing fence line. Receptors at the fence line were used to represent the existing nearby residential and commercial receptors.

- ***Proposed Project Conditions:*** The future TAC emissions from the proposed Project residential and commercial site operations as well as the consolidated oilfield were modeled to determine the future TAC concentrations at the fence line receptors.

- ***Future Oilfield Impact on Development Area:*** The consolidated oilfield operational emissions were modeled to determine the exposure concentration from these sources on the proposed Project's residential and commercial areas.

Apply TAC Toxicity Values and Human Inhalation Parameters Using the HARP Model to Calculate Risks

TAC emissions that are anticipated to contribute significantly to cancer/chronic or acute risk, as estimated from the screening analysis, were included in the risk assessment calculations using CARB's Hotspots Analysis Reporting Program (HARP). As required by the HARP protocol, the chronic air toxic modeling for fence line, residential, and commercial receptors is conducted for a 70-year period assuming that a person is located at each receptor grid 24-hours per day, 365 days per year for 70 years. The chronic modeling for receptors in recreational areas assumes that the maximum exposure time would be 8 hours per day, 245 days per year. The acute air toxic modeling is conducted for the peak one-hour exposure.

The potential Project impact to existing off-site receptors was calculated by subtracting the baseline risk from the future risks anticipated to occur after completion of the proposed Project's consolidated oilfield, residential, and commercial areas. Incremental chronic cancer risks and non-cancer hazards reflect the increase or decrease of potential exposures under the future conditions relative to the existing baseline. The proposed residential, commercial, and recreational uses do not currently exist on the Project site; therefore, it is assumed that the baseline risk for this case is zero (0), and the total risk from the consolidated oilfield to future on-site represents the incremental risk at these locations.

The determination of significance was made using the SCAQMD TAC Thresholds (Section 4.10.6) for maximum incremental cancer risk and project incremental hazard index (HI). The incremental cancer risk is reported as the increase in cancer cases per million people. The maximum HI is determined using a two-step calculation. First, each incremental TAC concentration at each receptor is determined by multiplying the hourly emissions of each TAC by the dispersion factor and dividing by the TAC reference exposure level set by the State. The resulting ratio for each TAC is called the hazard quotient (HQ). Second, the HQs for all TACs are added at each receptor, producing the HI for that receptor. HIs are calculated for chronic non-cancer risk (HI_C) and acute risk (HI_A). The peak HIs are compared to the SCAQMD significance thresholds. These risk calculations are generated using HARP and the TAC emission rates for each scenario.

Calculate Cancer Burden

The cancer burden is the potential increase in the number of cancer cases for the actual exposed population. SCAQMD procedures require that when the maximum individual cancer risk (MICR) is greater than one in one million, the cancer burden is calculated. To determine the cancer burden for this Project, several conservative simplifying assumptions were made. The conservative USEPA SCREEN3 model was used to determine the area of analysis, which is the area where the cancer risk would be one in one million or greater. Then, the peak cancer risk for the consolidated oilfield on the proposed new residential and commercial areas was assumed to apply to the entire population within a circular area with a radius defined by the distance at which the cancer risk dropped below one in one million.

Identify Uncertainties in the Analysis

A number of uncertainties are inherent in estimates of potential carcinogenic risk and non-carcinogenic hazard indices presented in a risk assessment. The intent of the qualitative uncertainty analyses will be to establish a level of confidence in the results of the HHRA analysis. These uncertainties are generally associated with assumptions, models, and extrapolations that comprise the risk assessment process. Uncertainties in the baseline and proposed Project HHRA are evaluated qualitatively and described. The focus of the uncertainty discussion is on diesel exhaust particulates in particular.

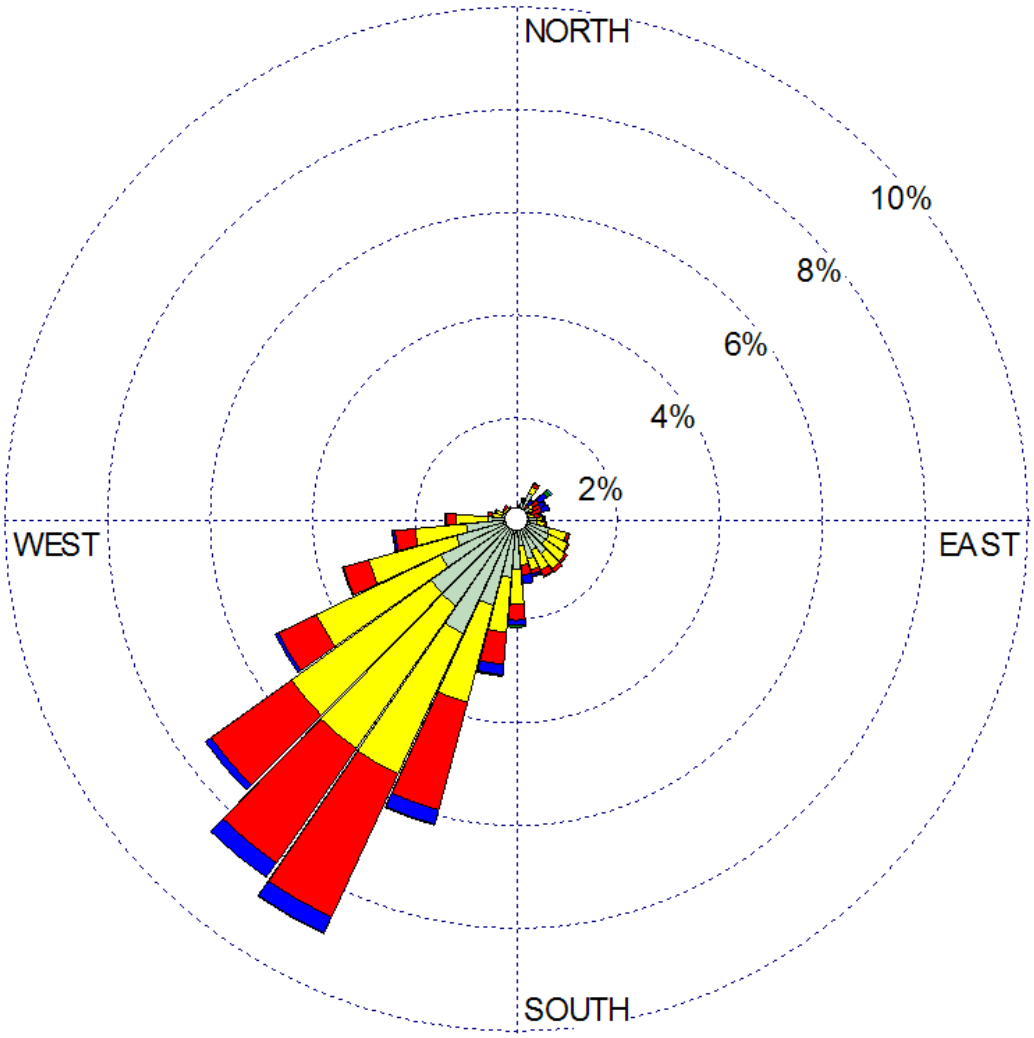
4.10.4 EXISTING CONDITIONS

Climate and Meteorology

The SoCAB is arid with abundant sunshine during the summer months. It has light winds and poor vertical mixing compared to other large urban areas in the U.S. The average wind speed for Los Angeles is the lowest of the nation's ten largest urban areas. In addition, the summertime maximum mixing height (an index of how well pollutants can be dispersed vertically in the atmosphere) in Southern California averages the lowest in the U.S. The combination of poor dispersion and abundant sunshine (which drives the photochemical reactions that form pollutants such as ozone) provides conditions especially favorable to smog formation. The SoCAB is bound to the north and east by mountains with maximum elevations exceeding 10,000 feet which trap pollutants in the basin. The unfavorable combination of meteorology, topography, and emissions from the nation's second-largest urban area result in the SoCAB having the worst air quality in the U.S. Exhibit 4.10-1 shows a wind rose from John Wayne Airport for 2008. The prevailing wind direction is south-southwest.

Existing Development

The Project site is currently operating as a crude oil and gas production facility. Horizontal Drilling, LLC and their operating affiliate, WNOC, manage oil and gas production operations on most of the site. WNOC has approximately 85 active/idle wells spread across most of the approximate 401-acre site. In addition, the City operates 12 oil wells, 1 water injection well, and 1 oil processing facility located at the West Coast Highway entrance area. Existing oil operations are addressed in more detail in Section 3.0, Project Description, and Section 4.5, Hazards and Hazardous Materials, of this EIR.



WIND SPEED
(m/s)

- >= 11.1
- 8.8 - 11.1
- 5.7 - 8.8
- 3.6 - 5.7
- 2.1 - 3.6
- 0.5 - 2.1

Calms: 33.45%

Source: CDM 2010

2008 Wind Rose for John Wayne Airport

Exhibit 4.10-1

Newport Banning Ranch EIR

BonTerra CONSULTING

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Sensitive Air Quality Receptors

Some members of the general population are especially sensitive to air pollutant emissions and should be given special consideration when evaluating air quality impacts from projects. These people include children, the elderly, persons with preexisting respiratory or cardiovascular illness, and athletes and others who engage in frequent exercise. Structures that house these persons or places where they gather (i.e., residences, schools, playgrounds, child-care centers, convalescent centers, retirement homes, and athletic fields) are defined as sensitive receptors by the SCAQMD.

There are no existing sensitive receptors on the Project site. The nearest sensitive receptors to the Project are listed below and are included on Exhibit 4.10-2, Surrounding Land Uses.

North: Newport Terrace, a 281-unit condominium development located in the City of Newport Beach, north of 19th Street and

Canyon Community Park, a 35-acre community park located in the City of Costa Mesa, north of 19th Street.

South: Lido Sands, a single-family residential community in the City of Newport Beach, located south of West Coast Highway and

Single-family and multi-family residential units located south of Lido Sands within West Newport Beach.

East: Residential developments, including the California Seabreeze community and homes on Parkview Circle, generally located between 19th Street and 18th Street contiguous to the Project site in the City of Costa Mesa;

Carden Hall, a private school for kindergarten through 8th grade, located between 16th Street and 15th Street in the City of Newport Beach;

Additional residential uses south of 15th Street, including the condominium developments of Newport Crest and Newport Knolls in the City of Newport Beach; and

The City of Newport Beach's approved but not constructed Sunset Ridge Park, located contiguous to the Project site's southeastern boundary.

West: Newport Shores, a 440-home residential community in the City of Newport Beach abutting the Project site to the west of the Semeniuk Slough.

In addition to the existing sensitive receptors, future residences and parks constructed as part of the proposed Project would be considered sensitive receptors for long-term emissions.

Criteria Pollutants

Monitored Ambient Air Quality

Criteria air pollutant concentrations are measured at several monitoring stations in Orange County. The closest station to the Project site is the Costa Mesa Monitoring Station, located at 2850 Mesa Verde Drive East, Costa Mesa, approximately three miles north of the Project site. Equipment at the station measures O_3, CO, NO_2, and SO_2 levels. Because this monitoring

Source: FORMA 2010

Sensitive Receptors – Air Quality

Exhibit 4.10-2

Newport Banning Ranch EIR

N W E S

Bonterra CONSULTING

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station does not monitor PM10 and PM2.5, data was supplemented from the Mission Viejo Station (Saddleback Valley) for these criteria pollutants. Data from 2008 to 2010 from these stations are summarized in Table 4.10-2. The data show exceedances of the federal 8-hour O_3 standard in 2008 and the State 8-hour O_3 standard in 2008 and 2009 at the Costa Mesa Monitoring Station. At the Mission Viejo Monitoring Station, the State PM10 24-hour and annual standards were exceeded in 2009 and the federal PM2.5 24-hour standard was exceeded in 2009.

TABLE 4.10-2
AMBIENT AIR QUALITY AT COSTA MESA AND MISSION VIEJO MONITORING STATIONS

Pollutant	Averaging Time	Federal Primary Standard	California Standard	Maximum Concentrations[a]			Number of Days Exceeding Federal Standard[b]			Number of Days Exceeding State Standard[b]		
				2008	2009	2010	2008	2009	2010	2008	2009	2010
O_3 (Costa Mesa)	1 hour	none	0.09 ppm	0.094	0.087	–	–	–	–	0	0	–
	8 hour	0.075 ppm	0.07 ppm	0.079	0.072	0.069	3	0	0	5	3	0
CO (Costa Mesa)	1 hour	35 ppm	20 ppm	3	3	–	0	–	–	0	–	–
	8 hour	9 ppm	9.0 ppm	1.97	2.16	2.09	0	0	0	0	0	0
SO_2 (Costa Mesa)	24 hours	0.14 ppm	0.04 ppm	0.003	0.004	0.002	0	0	0	0	0	0
	Annual	0.03 ppm	none	0.001	0.001	*	0	0	*	–	–	*
NO_2 (Costa Mesa)	1 hour	0.100 ppm	0.18 ppm	0.081	0.065	0.070	0	0	0	0	0	0
	Annual	0.053 ppm	0.030 ppm	0.013	0.013	*	0	0	*	0	0	*
PM10 (Mission Viejo)	24 hours	150 µg/m^3	50 µg/m^3	42.0	56.0	*	0	0	*	0	1	*
	Annual	Revoked	20 µg/m^3	22.6	23.2	*	–	–	–	0	1	*
PM2.5 (Mission Viejo)	24 hours	35 µg/m^3	none	32.6	39.2	*	0	1	*	–	–	-
	Annual	15 µg/m^3	12 µg/m^3	10.3	*	*	0	*	*	0	*	*

ppm: parts per million; —: data not available or applicable; µg/m^3: micrograms per cubic meter; ***:** insufficient data to determine the value.

[a] Concentration units for O_3, CO, and NO_2 are in ppm. Concentration units for PM10 and PM2.5 are in µg/m^3.

[b] For annual standards, a value of 1 indicates that the standard has been exceeded.

Source: CARB 2011, SCAQMD 2010.

Attainment Designations

Based on monitored air pollutant concentrations, the USEPA and CARB designate an area's "attainment status" for the criteria pollutants identified above. When a region is designated as a nonattainment area, the State is required to prepare a SIP and the air district is required to prepare a regional attainment plan. When an area has been reclassified from a nonattainment to an attainment area for a federal standard, the status is identified as "maintenance", and there must be a plan and measures that will keep the region in attainment for the following ten years. Table 4.10-3 summarizes the attainment status in the SoCAB for the criteria pollutants.

TABLE 4.10-3
ATTAINMENT STATUS OF CRITERIA POLLUTANTS IN THE SOUTH COAST AIR BASIN

Pollutant	State	Federal
O_3 (1 hour)	Nonattainment	No standard
O_3 (8 hour)		Extreme Nonattainment[a]
PM10	Nonattainment	Serious Nonattainment
PM2.5	Nonattainment	Nonattainment
CO	Attainment	Attainment/Maintenance
NO_2	Nonattainment[b]	Attainment/Maintenance
SO_2	Attainment	Attainment
Lead	Attainment/Nonattainment[c]	Attainment/Nonattainment[c]
All others	Attainment/Unclassified	No standards

O_3: ozone; PM10: particulate matter 10 microns or less in diameter; PM2.5: particulate matter 2.5 microns or less in diameter; CO: carbon monoxide; NO_2: nitrogen dioxide; SO_2: sulfur dioxide.
[a] The USEPA approved redesignation from Severe 17 to Extreme Nonattainment on May 5, 2010, to be effective June 4, 2010..
[b] The SoCAB was reclassified from attainment to nonattainment for NO_2 on March 25, 2010.
[c] Los Angeles County was reclassified from attainment to nonattainment for lead in 2010; the remainder of the SoCAB is in attainment of the State and federal standards.
Source: SCAQMD 2010, USEPA 2010x.

Existing On-site Emissions – Oilfield Operations

Existing emissions data for stationary sources (e.g., drill rigs, backhoes, hydralifts) and on-road vehicles are shown in Table 4.10-4.

TABLE 4.10-4
EXISTING OILFIELD OPERATIONS CRITERIA POLLUTANTS EMISSIONS (POUNDS PER DAY)

	VOC	NOx	CO	SOx	PM10	PM2.5
Stationary Operation Emissions	35.68	5.70	1.65	14.59	0.43	0.40
Mobile Source Emissions	11.02	100.43	46.22	0.14	82.08	12.08
Total	**46.7**	**106.1**	**47.9**	**14.7**	**82.5**	**12.5**

VOC: volatile organic compounds; NOx: nitrogen oxides; CO: carbon monoxide; SOx: sulfur oxides; PM10: particulate matter 10 microns or less in diameter; PM2.5: particulate matter 2.5 microns or less in diameter.
Note: Totals are rounded to one decimal.
Source: CDM 2010.

Toxic Air Contaminants

Background Cancer Risk

The Multiple Air Toxics Exposure Study III (MATES III) is a monitoring and evaluation study conducted in the SoCAB and is part of the SCAQMD Governing Board's 2003–2004 Environmental Justice Workplan. The study focuses on the carcinogenic risk from exposure to air toxics. It does not estimate mortality or other adverse health effects from particulate exposures.

The MATES III Study consists of several elements, including a monitoring program, an updated emissions inventory of toxic air contaminants, and a modeling effort to characterize risk across the SoCAB. The MATES III study estimates that the average carcinogenic risk from air toxics in the SoCAB, is about 1,200 per 1 million. This risk refers to the expected number of additional cancers in a population of 1 million individuals that are exposed over a 70-year lifetime. Using the MATES III methodology, about 94 percent of the risk is attributed to emissions associated with mobile sources, and about 6 percent of the risk is attributed to toxics emitted from stationary sources, which include industries and businesses such as dry cleaners and chrome plating operations. The results indicate that diesel exhaust is the major contributor to air toxics risk, and accounts on average for about 84 percent of the total.

The MATES III study used monitored data to model risk throughout the SoCAB. The modeled carcinogenic risk for the area including the Project site is 400 to 600 per 1 million, which is less than or equal to half of the SoCAB average of about 1,200 per 1 million (SCAQMD 2008b).

Existing On-site Emissions – Oilfield Operations

Existing TAC emissions from oilfield operations were obtained or calculated by the methods previously described in Section 4.10.3. These data are shown in Table 4.10-5.

4.10.5 PROJECT DESIGN FEATURES AND STANDARD CONDITIONS

Project Design Features

PDF 4.10-1 The Master Development Plan provides for commercial uses, in the Mixed-Use/Residential and Visitor-Serving Resort/Residential Land Use Districts, within walking distance of the proposed residential neighborhoods and nearby residential areas to reduce vehicle trips and vehicle miles traveled.

PDF 4.10-2 The Master Development Plan provides a network of public pedestrian and bicycle trails to reduce auto-dependency by connecting proposed residential neighborhoods to parks and open space within the Project site and to off-site recreational amenities, such as the beach and regional parks and trails.

Additionally, the following PDFs, which are specifically identified for alternatives modes of transportation and greenhouse gas emission reduction, would also reduce criteria pollutant emissions; please refer to Section 4.8, Recreation and Trails, and Section 4.11, Greenhouse Gas Emissions, respectively.

PDF 4.8-3 If permitted by all applicable agencies, a pedestrian and bicycle bridge over West Coast Highway will be provided, as set forth in the Master Development Plan, from the Project site to a location south of West Coast Highway to encourage walking and bicycling to and from the beach.

PDF 4.11-1 The Newport Banning Ranch Planned Community Development Plan and the Master Development Plan require that the Project be consistent with a recognized green building program that exists at the time of final Project approval such as, but not limited to, Build It Green, the U.S. Green Building Council's (USGBC's) Leadership in Energy and Environmental Design–Neighborhood Development (LEED-ND™), California Green Builder, or National Association of Home Builders' National Green Building Standard.

TABLE 4.10-5
EXISTING OILFIELD OPERATIONS TAC EMISSIONS

Toxic Air Contaminant	Existing Emissions	
	lbs/hr	lbs/yr
1,3-butadiene	0.002453	0.5633
acetaldehyde	0.094807	0.2468
acrolein (2-propenal)	0.000001	0.138261
ammonia	0.146466	427.68
arsenic	0	0.0346
benzene	0.050258	74.0657
bromine	0.000011	0.0456
cadmium	0.000147	0.03
chlorine	0.000183	2.5121
chromium VI	0.000146	0.0062
copper	0.008332	0.3685
diesel particulate matter (diesel PM)	–[a]	232.7182
ethylbenzene	0.00394	1.0979
formaldehyde	0.192551	9.99
isomers of xylene	0.013455	5.0235
lead	0.000024	0.2999
manganese	0.001539	2.1149
mercury	0.001277	0.0323
methyl ethyl ketone (MEK) (2-butanone)	0.019044	–[b]
methyl t-butyl ether (MTBE)	0.000013	1.9879
m-xylene	0.007902	3.7279
n-hexane	0.002035	1.6223
nickel	0.008856	0.0894
o-xylene	0.004328	1.2956
pahs, total, with components not reported	0.000011	0.031
propylene	0.033505	3.2036
p-xylene	0.001225	–[c]
selenium	0.000151	0.0069
sulfates	0.000367	16.7476
styrene	0.000749	0.129
toluene	0.019032	6.022
vanadium	0.000034	0.1776

[a] California has only developed risk parameters for chronic exposure to diesel PM; therefore, estimate of acute emissions are not necessary for the HHRA.

[b] California has only developed risk parameters for acute exposure for MEK; therefore, estimate of chronic emissions are not necessary for the HHRA. Most MEK in the Baseline is from diesel engine exhaust, so chronic cancer/non-cancer risk is addressed as exposure to diesel PM.

[c] The only source of p-xylene in the Baseline is as a diesel component. Diesel PM is used to address all chronic cancer and non-cancer health.

Source: CDM 2010.

PDF 4.11-2 The Newport Banning Ranch Planned Community Development Plan and the Master Development Plan require the Project to exceed adopted 2008 Title 24 energy conservation requirements by a minimum of five percent.

PDF 4.11-3 The Master Development Plan and the Newport Beach Planned Community Development Plan require the Project to be coordinated with Orange County Transportation Authority (OCTA) to allow for a transit routing through the community, and will provide bus stops and/or shelters as needed in the community to accommodate the bus routing needed by OCTA.

PDF 4.11-4 The Newport Banning Ranch Planned Community Development Plan and the Master Development Plan require that all residential development incorporate the following measures, which will be reflected on and incorporated into every application for a final subdivision map that creates residential lots:

a. Builder-installed indoor appliances, including dishwashers, showers, and toilets, will be low water-use. Homeowners Association (HOA) owned and operated public and/or common area men's restrooms will be required to feature waterless urinals.

b. Smart Controller irrigation systems will be installed in all public and common area landscaping. Community landscape areas will be designed on a "hydrozone" basis to group plants according to their water requirements and sun exposure.

c. Air conditioning units will be Freon-free.

d. Concrete for paving in public infrastructure and Project common areas will not be acid-washed unless mandated by agency requirements.

e. The future homeowners association for Newport Banning Ranch will be required to provide educational information on recycling to all homeowners prior to individual purchase of property and again annually.

f. Multimetering "dashboards" will be provided in each dwelling unit to visualize real-time energy use.

g. Single-family detached residential roofs, commercial building roofs, and HOA owned public building roofs, which have adequate solar orientation shall be designed to be compatible with the installation of photovoltaic panels or other current solar power technology.

PDF 4.11-5 The Newport Banning Ranch Planned Community Development Plan and the Master Development Plan require that the following measures be implemented during initial Project grading activities and will be incorporated into all grading permit applications submitted to the City:

a. Construction waste diversion will be increased by 50 percent from 2010 requirements.

b. To the extent practical, during the oilfield clean-up and remediation process, the Landowner/Master Developer will be required to recycle and reuse

materials on site to minimize off-site hauling and disposal of materials and associated off-site traffic.

Standard Conditions and Requirements

SC 4.10-1 ***Dust Control.*** During construction of the proposed Project, the Project Developer shall require all construction contractors to comply with South Coast Air Quality Management District's (SCAQMD's) Rules 402 and 403 in order to minimize short-term emissions of dust and particulates. SCAQMD Rule 402 requires that air pollutant emissions not be a nuisance off site. SCAQMD Rule 403 requires that fugitive dust be controlled with Best Available Control Measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. This requirement shall be included as notes on the contractor specifications. Table 1 of Rule 403 lists the Best Available Control Measures that are applicable to all construction projects. The measures include, but are not limited to, the following:

a. ***Clearing and grubbing:*** Apply water in sufficient quantity to prevent generation of dust plumes.

b. ***Cut and fill:*** Pre-water soils prior to cut and fill activities and stabilize soil during and after cut and fill activities.

c. ***Earth-moving activities*****:** Pre-apply water to depth of proposed cuts; re-apply water as necessary to maintain soils in a damp condition and to ensure that visible emissions do not exceed 100 feet in any direction; and stabilize soils once earth-moving activities are complete.

d. ***Importing/exporting of bulk materials:*** Stabilize material while loading to reduce fugitive dust emissions; maintain at least six inches of freeboard on haul vehicles; and stabilize material while transporting to reduce fugitive dust emissions.

e. ***Stockpiles/bulk material handling:*** Stabilize stockpiled materials; stockpiles within 100 yards of off-site occupied buildings must not be greater than 8 feet in height, must have a road bladed to the top[4] to allow water truck access, or must have an operational water irrigation system that is capable of complete stockpile coverage.

f. ***Traffic areas for construction activities:*** Stabilize all off-road traffic and parking areas; stabilize all haul routes; and direct construction traffic over established haul routes.

Rule 403 defines large operations as projects with 50 or more acres of grading or with a daily earth-moving volume of 5,000 cubic yards at least 3 times in 1 year. The Project is considered a large operation. Large operations are required to implement additional dust-control measures (as specified in Tables 2 and 3 of Rule 403); provide additional notifications, signage, and reporting; and appoint a Dust Control Supervisor. The Dust Control Supervisor is required to:

[4] Refers to a road to the top of the pile.

- Be employed by or contracted with the Property Owner or Developer;
- Be on the site or available on site within 30 minutes during working hours;
- Have the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule 403 requirements; and
- Have completed the AQMD Fugitive Dust Control Class and have been issued a valid Certificate of Completion for the class.

SC 4.10-2 ***Architectural Coatings.*** Architectural coatings shall be selected so that the VOC content of the coatings is compliant with SCAQMD Rule 1113. This requirement shall be included as notes on the contractor specifications.

The following standard condition is included in the Project analysis of Climate Change impacts, but would also reduce criteria pollutant emissions; please refer to Section 4.11.

SC 4.11-1 ***Energy Efficiency Standards.*** The Project shall be built in accordance with the California 2008 Building Energy Efficiency Standards for Residential and Nonresidential Buildings, commonly identified as the "2008 Title 24 Energy Efficiency Standards".[5]

4.10.6 THRESHOLDS OF SIGNIFICANCE

The following significance criteria are from the City of Newport Beach Environmental Checklist. A significant impact related to air quality would occur if the proposed Project would:

Threshold 4.10-1 Conflict with or obstruct implementation of the applicable air quality plan.

Threshold 4.10-2 Violate any air quality standard or contribute substantially to an existing or projected air quality violation.

Threshold 4.10-3 Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable NAAQS or CAAQS (including releasing emissions that exceed quantitative thresholds for ozone precursors).

Threshold 4.10-4 Expose sensitive receptors to substantial pollutant concentrations.

Threshold 4.10-5 Create objectionable odors affecting a substantial number of people.

Threshold 4.10-6 Conflict with any applicable plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

Appendix G of the State CEQA Guidelines states that the significance criteria established by the applicable air quality management plan or air pollution control district may be relied upon to make the above determinations. The SCAQMD has established significance thresholds to assess the regional and localized impacts of project-related air pollutant emissions.

[5] Note that PDF 4.11-2 commits the Project to exceed the energy requirements of these standards by at least five percent.

Table 4.10-6 identifies the significance thresholds. A project with daily emission rates, risk values, or concentrations below these thresholds is generally considered to have a less than significant effect on air quality. The thresholds in the Ambient Air Quality for Criteria Pollutants section of Table 4.10-6, except for the Sulfate threshold, were used by SCAQMD to establish the emissions thresholds described in the LST methodology and impact analysis.

TABLE 4.10-6
SCAQMD AIR QUALITY SIGNIFICANCE THRESHOLDS

Mass Daily Thresholds (lbs/day)		
Pollutant	**Construction**	**Operation**
VOC	75	55
NOx	100	55
CO	550	550
PM10	150	150
PM2.5	55	55
SOx	150	150
Lead	3	3
Toxic Air Contaminants (TACs), Odor, and Greenhouse Gas (GHG) Thresholds		
TACs[a]	Maximum Incremental Cancer Risk ≥ 10 in 1 million Cancer Burden > 0.5 excess cancer cases (in areas ≥ 1 in 1 million) Chronic & Acute Hazard Index ≥ 1.0 (project increment)	
Odor	Project creates an odor nuisance pursuant to Rule 402	
GHG	10,000 MT/yr CO2eq for industrial facilities	
Ambient Air Quality For Criteria Pollutants[b]		
NO_2	1-hour average ≥ 0.18 ppm Annual average ≥ 0.03 ppm	
CO	1-hour average ≥ 20.0 ppm (State) 8-hour average ≥ 9.0 ppm (State/federal)	
PM10	24-hour average ≥ 10.4 µg/m^3 (construction) 24-hour average ≥ 2.5 µg/m^3 (operation) Annual average ≥ 1.0 µg/m^3	
PM2.5	24-hour average ≥ 10.4 µg/m^3 (construction) 24-hour average ≥ 2.5 µg/m^3 (operation)	
Sulfate	24-hour average ≥ 1.0 µg/m^3	

lbs/day: pounds per day; VOC: volatile organic compound; NOx: nitrogen oxides; CO: carbon monoxide; SOx: sulfur oxides; PM10: respirable particulate matter with a diameter of 10 microns or less; PM2.5: fine particulate matter with a diameter of 2.5 microns or less; NO_2: nitrogen dioxide

[a] TACs (carcinogenic and noncarcinogenic)

[b] Ambient air quality threshold based on SCAQMD Rule 403.

Source: SCAQMD 2011b

4.10.7 ENVIRONMENTAL IMPACTS

Threshold 4.10-1 Would the project conflict with or obstruct implementation of the applicable air quality plan?

The AQMP is based on growth projections agreed to the five affected counties and SCAG. If the total population accommodated by a new project, together with the existing population and the projected population from all other planned projects in the subarea, does not exceed the growth projections for that subarea incorporated in the most recently adopted AQMP, the completed project is consistent with the AQMP. The entire County of Orange is considered to be one

subarea. The AQMP is region-wide and accounts for, and offsets, cumulative increases in emissions that are the result of anticipated growth throughout the region.

The City of Newport Beach General Plan land use designation provides land use regulations and development standards for both the Primary Use (Open Space) and an Alternative Use (Residential Village) of the Project site.

The General Plan identifies the maximum intensity of development allowed on the property as 1,375 dwelling units, 75,000 square feet of retail commercial uses oriented to serve the needs of local and nearby residents, and 75 hotel rooms in a small boutique hotel or other type of overnight visitor accommodation. The AQMP assumptions for mobile source emissions are based on assumed trip generation and trip distances, which are, in turn, based upon existing uses and general plans. The assumptions in the AQMP are consistent with the General Plan. The proposed Project does not propose development that exceeds the quantities in the General Plan; therefore, the Project does not exceed the assumptions in the AQMP. Because implementation of the proposed Newport Banning Ranch Project would not exceed growth projections for the subarea, the Project is considered consistent with the AQMP.

Impact Summary: ***No Impact.*** The AQMP provides controls sufficient to attain the national and state ozone and particulate standards based on the long-range growth projections for the region. The Project does not exceed the assumptions in the AQMP. Therefore, the Project is in conformance with the AQMP.

Threshold 4.10-2 Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Construction Emissions

The proposed Project would be constructed over a period of approximately ten years. Construction would include the consolidation of the existing oilfields and soil remediation. Remediation is anticipated to occur from approximately February 2014 until February 2017. The first of the three phases of site development is scheduled to begin in August 2014 with construction of residences and other Project elements expected to begin in early 2015. Completion and full occupancy of the final phase is expected at the end of 2023. The schedule of construction activities used for calculating construction emissions was developed from the Conceptual Phasing Plan (see Table 3-5, in Section 3.0, Project Description). The oilfield remediation work would overlap with site development and construction of the first two building phases. The buildout of each of the first two phases would overlap with the construction of the subsequent phase. During the construction period, air pollutants would be emitted by off-road and on-road construction equipment and worker vehicles, and fugitive dust would be generated during earth-moving and grading on site.

Construction emissions were calculated using CalEEMod, as described in the Methodology section, and based on the scenario described above and information provided in Section 3.0, Project Description. Compliance with SCAQMD Rules is required; specifically, it is assumed that construction would be performed in accordance with Rule 403, Fugitive Dust, and Rule 1113, Architectural Coatings (SC 4.10-1 and SC 4.10-2, respectively). Therefore, emissions reductions consistent with those rules have been included in the estimation of construction emissions prior to mitigation. The details of phasing, selection of construction equipment, and other input parameters are included in Appendix G of this EIR.

Mass Emissions Thresholds

The results of the URBEMIS calculations for Project construction are shown in Table 4.10-7, which shows the estimated maximum daily emissions for each construction year. Appendix G of the EIR includes the CalEEMod model output details, including unmitigated and mitigated emissions on site and off site for each construction activity for each year; Table 4.10-7 summarizes the findings. The data are compared with the SCAQMD mass daily thresholds.

TABLE 4.10-7
ESTIMATED MAXIMUM DAILY
CONSTRUCTION EMISSIONS: UNMITIGATED[a]

Year	VOC	NOx	CO	SOx	PM10	PM2.5
2014	20	157	93	<0.5	44	11
2015	29	178	123	<0.5	48	13
2016	25	145	108	<0.5	29	10
2017	31	165	151	<0.5	37	11
2018	27	82	87	<0.5	15	5
2019	32	103	128	<0.5	22	6
2020	17	53	87	<0.5	17	3
2021	12	25	45	<0.5	9	1
2022	11	23	44	<0.5	9	1
2023	11	22	42	<0.5	9	1
SCAQMD Thresholds (Table 4.10-6)	75	100	550	150	150	55
Exceed Threshold?	**No**	**Yes**	**No**	**No**	**No**	**No**

VOC: volatile organic compounds; NOx: nitrogen oxides; CO: carbon monoxide; SOx: sulfur oxides; PM10: particulate matter 10 microns or less in diameter; PM2.5: particulate matter 2.5 microns or less in diameter.
Notes: Detailed data in Appendix G.

[a] In pounds per day

Table 4.10-7 shows that the estimated maximum daily construction NOx emissions would exceed the SCAQMD significance threshold in the years 2014 through 2017 and 2019. Emissions of all other criteria pollutants and NOx emissions in 2018 and 2020 through 2023 would not exceed the SCAQMD CEQA significance thresholds. The exceedance of the NOx threshold would occur when remediation in one area of the site would occur concurrently with grading in an area where remediation was completed or not required. Thus, the exceedance would not be continuous for the entire year but limited to periods when the two activities using multiple pieces of heavy equipment would overlap.

In order to reduce NOx emissions, Mitigation Measures (MM) 4.10-1 through 4.10-4 have been incorporated into the Project. MM 4.10-1 requires the use of advanced design diesel-engine driven construction equipment with Tier 3 and Tier 4 certification. The use of Tier 3 equipment is mandatory and the use of Tier 4 equipment is required where available. MMs 4.10-2 through 4.10-4 are measures commonly recommended by the SCAQMD as good practice on large construction projects for NOx emissions reduction; these measures principally require efficient operations of construction equipment and construction traffic. Emissions reductions with Tier 3 and Tier 4 equipment can be estimated with the CalEEMod model. Table 4.10-8 shows estimated construction emissions with the assumption that approximately 50 percent Tier 3 and 50 percent Tier 4 diesel engine equipment would be used. Emission reductions achieved with

MMs 4.10-2 through 4.10-4 are not quantifiable in the model but would potentially reduce pollutant emissions below those shown in Table 4.10-8.

TABLE 4.10-8
ESTIMATED MAXIMUM DAILY
CONSTRUCTION EMISSIONS: MITIGATED[a]

Year	VOC	NOx	CO	SOx	PM10	PM2.5
2014	8	42	93	<0.5	40	7
2015	17	60	128	<0.5	43	8
2016	16	57	118	<0.5	26	7
2017	21	83	165	<0.5	34	8
2018	23	44	95	<0.5	13	4
2019	28	68	139	<0.5	22	6
2020	17	48	92	<0.5	18	3
2021	11	24	47	<0.5	10	2
2022	11	24	46	<0.5	10	2
2023	11	23	45	<0.5	10	2
SCAQMD Thresholds (Table 4.10-6)	75	100	550	150	150	55
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

VOC: volatile organic compounds; NOx: nitrogen oxides; CO: carbon monoxide; SOx: sulfur oxides; PM10: particulate matter 10 microns or less in diameter; PM2.5: particulate matter 2.5 microns or less in diameter.
Notes: Detailed data in Appendix G.
[b] In pounds per day

As shown in Table 4.10-8, the use of approximately 50 percent Tier 3 and 50 percent Tier 4 diesel engine equipment would reduce NOx emissions below the SCAQMD CEQA threshold value. It is noted that the use of all Tier 3 equipment and no Tier 4 equipment would not reduce NOx emissions below the SCAQMD thresholds for all construction years. Estimated emissions for the all-Tier 3 scenario are shown in Appendix G.

Although the data in Table 4.10-8 shows that emissions of all pollutants would be less than the SCAQMD CEQA thresholds with approximately 50 percent Tier 3 and 50 percent Tier 4 diesel engine equipment, the availability of sufficient numbers of Tier 4 equipment in 2014 and the following years cannot be assured. Therefore, the Project construction emissions would be a potentially significant and unavoidable impact.

SCs 4.10-1 and 4.10-2 require compliance with SCAQMD dust control and low VOC architectural coatings rules, respectively. Although unmitigated construction emissions would not exceed the CEQA significance thresholds for pollutants other than NOx, MMs 4.10-5 through 4.10-7 would provide additional emissions reductions; these measures require dust control, street sweeping, and early road paving to minimize fugitive dust, PM10, and PM2.5 emissions. MMs 4.10-8 and 4.10-9 provide notices to nearby residents of planned grading work and a complaint resolution process.

Ambient Air Quality – Local Significance Thresholds

Local pollutant concentrations are initially addressed using the SCAQMD LST look-up table methodology previously described in Section 4.10-3. The closest sensitive receptors to the Project site are the Newport Crest residences adjacent to the southeastern boundary of the site

in the City of Newport Beach; the Carden Hall School, adjacent to the site on the east at 16th Street in the City of Newport Beach; and the California Seabreeze community, located generally between 19th Street and 18th Street contiguous to the Project site in the City of Costa Mesa. Each of these receptors is within 25 meters (82 feet)[6] of a part of the Project site that would have construction activity.

Table 4.10-9 identifies the emissions thresholds for local pollutants with receptors at a distance of 25 meters for 1-, 2-, and 5-acre sites. The table shows that emissions thresholds increase with the size of the site. Therefore, thresholds for sites larger than 5 acres, if they were developed, would be greater than the 5-acre SCAQMD thresholds. Although the Project site is much larger than 5 acres, the maximum area of daily disturbance during concurrent remediation and grading operations would be approximately 7 acres. This area is consistent with the anticipated intensity of construction and based on the number of pieces of construction equipment to be used. Table 4.10-9 shows the maximum daily on-site emissions for the Project's construction activities, without mitigation. Emissions shown in Table 4.10-9 are less than those shown in Table 4.10-7 because the sources of local concentration include only on-site emitters. The emissions of each of the pollutants analyzed would be less than the five-acre thresholds shown in Table 4.10-8, and would therefore be less than the thresholds for larger sites. Therefore, the local pollutant impacts from on-site construction over the Project site would be less than significant.

TABLE 4.10-9
LOCAL SIGNIFICANCE THRESHOLD CONSTRUCTION EMISSIONS FOR RECEPTORS AT 25 METERS

	NOx	CO	PM10	PM2.5
	Emissions (lbs/day)			
LST Thresholds – 1-acre site	92	639	4	3
LST Thresholds – 2-acre site	131	945	7	5
LST Thresholds – 5-acre site	197	1,711	14	9
Project Maximum daily on-site emissions	170	108	7	4
Exceed 5-acre threshold?	**No**	**No**	**No**	**No**

lbs – pounds
Thresholds are for SCAQMD Source Receptor Area 18 – North Coastal Orange County.
Source: SCAQMD 2010.

As shown on the table, emissions of the four pollutants would not exceed the LST 5-acre thresholds. However, because more than five acres could be disturbed in one day, a dispersion model analysis using the AERMOD model (see Methodology section) was conducted for PM10. The principal source of the PM10 emissions would be fugitive dust from grading activities. The highest on-site PM10 emission rate would occur during concurrent remediation and grading in the Phase 1 Project areas (see Appendix G). The nearest affected receptors during Phase 1 construction would be the Newport Crest Condominium residences adjacent to the southeastern boundary of the Project site and Carden Hall School. The model results indicate that the highest 24-hour PM10 concentration, 9.0 micrograms per cubic meter ($\mu g/m^3$), would occur at the southwestern corner of the Newport Crest Condominium development. At the western property line at Carden Hall School, the concentrations would not exceed 6 $\mu g/m^3$. The concentration would decrease at receptors farther from the property line. The estimated 24-hour concentration at the property lines and nearest sensitive receptors would be less than the State ambient air

[6] Metric units are used in this discussion to be consistent with SCAQMD methodology.

quality standard of 50 µg/m^3 and the local threshold of 10.4 µg/m^3 established by the SCAQMD (Table 4.10-6), confirming that local PM10 concentrations would be less than significant.

Operational Emissions

Mass Emissions Thresholds

Proposed Development

Operational emissions would begin as the proposed residences are occupied, which is anticipated to start in 2015. Between 2015 and the anticipated completion of the Project in 2023, the occupancy and use of residences, retail uses, and other Project components would continue to increase. Over the same period, vehicle emission factors for most gaseous pollutants are anticipated to diminish because of improved vehicle fleet emissions. Proposed Project operational emissions were analyzed for years 2017, 2020, and 2023, corresponding to the anticipated completion of occupancy for the first three phases of the Project.

Operational emissions for the proposed Project were calculated using the CalEEMod model. Inputs to the model for energy and area source emissions include the number of residential units and resort inn rooms, park acreage, and commercial use square footage. It was assumed that 90 percent of the residential units would have gas fireplaces[7]. Based on PDF 4.11-2, it was assumed that energy efficiency would exceed Title 24 building standards by five percent. The model also included adjustments for provision of affordable housing units. PDFs 4.11-1 and 4.11-4 would also provide additional energy reductions not included in the model inputs.

Inputs to the model for mobile sources include vehicle trip generation data from the Project traffic impact analysis for Phase 1 completion and Project completion (Kimley-Horn 2011). The CalEEMod model calculates reductions in VMT and vehicle emissions that would result from the diversity of land uses (PDF 4.10-1), the connectivity of neighborhoods (PDF 4.10-2), the inclusion of below market rate housing, and residential density. PDF 4.8-3, the proposed pedestrian bridge over West Coast Highway, could provide additional reduction, but the effect on overall VMT would be small. Trip generation for 2020 was estimated using the Project buildout methodology.

The results of the calculations are shown in Tables 4.10-10, 4.10-11, and 4.10-12. The details of the calculations (including land use, trip generation, and emissions of the individual energy and area sources) are included in Appendix G. The results are compared with SCAQMD CEQA significance thresholds. Project significance is assessed later in this section and includes consideration of future oilfield emissions, which are added to the values in Tables 4.10-11 and 4.10-12 and baseline emissions, which are then subtracted from the totals.

As shown in the tables, operational emissions of all criteria pollutants in 2017 and 2020 would be less than the SCAQMD CEQA significance thresholds. In 2023, calculated regional emissions of VOC, NOx, and CO resulting from Project operation would exceed the SCAQMD CEQA significance thresholds. The emissions of SOx, PM10, and PM2.5 would not exceed the thresholds. Vehicle operations would be the principal source of pollutant emissions, with consumer products as a secondary contributor to the total VOC emissions.

[7] SCAQMD Rule 445 prohibits the installation of permanently installed wood-burning devices in new developments.

TABLE 4.10-10
YEAR 2017: ESTIMATED DAILY OPERATIONAL PROJECT EMISSIONS (POUNDS/DAY)

Emissions Source	VOC	NOx	CO	SOx	PM10	PM2.5
Area Sources[a]	32	1	95	<0.5	12	12
Energy Sources[b]	<0.5	2	1	<0.5	<0.5	<0.5
Vehicles	10	17	86	<0.5	23	2
Total	*42*	*21*	*182*	*<0.5*	*35*	*14*
SCAQMD Thresholds (Table 4.10-6)	55	55	550	150	150	55
Exceeds SCAQMD Thresholds?	**No**	**No**	**No**	**No**	**No**	**No**

VOC: volatile organic compounds; NOx: nitrogen oxides; CO: carbon monoxide; SOx: sulfur oxides; PM10: particulate matter 10 microns or less in diameter; PM2.5: particulate matter 2.5 microns or less in diameter.

Notes: Values shown are the higher of summer or winter emissions.
Totals may not add due to rounding.
Details of calculations are included in Appendix G.

[a] Total area sources are the sums of hearth/fireplace, landscape maintenance, consumer products, and architectural coatings.

[b] Energy sources are natural gas uses.

TABLE 4.10-11
YEAR 2020: ESTIMATED DAILY OPERATIONAL PROJECT EMISSIONS (POUNDS/DAY)

Emissions Source	VOC	NOx	CO	SOx	PM10	PM2.5
Area Sources[a]	20	1	45	<0.5	1	1
Energy Sources[b]	1	5	2	<0.5	<0.5	<0.5
Vehicles	28	47	232	1	71	3
Total	48	52	*280*	*1*	*73*	*5*
SCAQMD Thresholds (Table 4.10-6)	55	55	550	150	150	55
Exceeds SCAQMD Thresholds?	**No**	**No**	**No**	**No**	**No**	**No**

VOC: volatile organic compounds; NOx: nitrogen oxides; CO: carbon monoxide; SOx: sulfur oxides; PM10: particulate matter 10 microns or less in diameter; PM2.5: particulate matter 2.5 microns or less in diameter.

Notes: Values shown are the higher of summer or winter emissions.
Totals may not add due to rounding.
Details of calculations are included in Appendix G.

[a] Total area sources are the sums of hearth/fireplace, landscape maintenance, consumer products, and architectural coatings.

[b] Energy sources are natural gas uses.

TABLE 4.10-12
YEAR 2023: ESTIMATED DAILY OPERATIONAL PROJECT EMISSIONS (POUNDS/DAY)

Emissions Source	VOC	NOx	CO	SOx	PM10	PM2.5
Area Sources[a]	48	1	115	<0.5	2	2
Energy Sources[b]	1	11	5	<0.5	1	1
Vehicles	146	97	463	1	121	6
Total	***195***	***110***	***583***	*1*	*125*	*9*
SCAQMD Thresholds (Table 4.10-6)	55	55	550	150	150	55
Exceeds SCAQMD Thresholds?	**Yes**	**Yes**	**Yes**	**No**	**No**	**No**

VOC: volatile organic compounds; NOx: nitrogen oxides; CO: carbon monoxide; SOx: sulfur oxides; PM10: particulate matter 10 microns or less in diameter; PM2.5: particulate matter 2.5 microns or less in diameter.
Notes: Values shown are the higher of summer or winter emissions.
Totals may not add due to rounding.
Bold values indicate exceedance of SCAQMD threshold.
Details of calculations are included in Appendix G.
[a] Total area sources are the sums of hearth/fireplace, landscape maintenance, consumer products, and architectural coatings.
[b] Energy sources are natural gas uses.

Oilfield Operations

Stationary and mobile source criteria pollutant emissions anticipated for the consolidated oilfield operations are shown in Table 4.10-13; TAC emissions are discussed under Threshold 4.10-4 below. It is assumed that future stationary source operations and emissions would be the same as the existing conditions. Future mobile source emissions from oilfield operations would be less than existing emissions because consolidation would result in fewer VMTs. The emission reductions would be greatest for PM10 and PM2.5 with the reduction of travel on unpaved roads.

TABLE 4.10-13
ESTIMATED FUTURE CONSOLIDATED OILFIELD OPERATIONAL CRITERIA POLLUTANT EMISSIONS (POUNDS/DAY)

Source	VOC	NOx	CO	SOx	PM10	PM2.5
Stationary Sources	35.68	5.70	1.65	14.59	0.43	0.40
Mobile Sources	5.69	42.49	37.65	0.13	17.40	3.12
Total	**41.4**	**48.2**	**39.3**	**14.7**	**17.8**	**3.5**

VOC: volatile organic compounds; NOx: nitrogen oxides; CO: carbon monoxide; SOx: sulfur oxides; PM10: particulate matter 10 microns or less in diameter; PM2.5: particulate matter 2.5 microns or less in diameter
Note: Totals are rounded to one decimal.
Source: CDM 2010.

Total Operational Emissions

Tables 4.10-14 and 4.10-15 show the combined net future development and oilfield emissions for the 2020 and Project buildout analyses. For this analysis, it is assumed that oilfield consolidation may not be complete by 2017, but would be by 2020. Therefore, no credit is taken for the reduction in oilfield-related emissions in 2017 (the emissions shown in Table 4.10-10 represent the total Project operational emissions in 2017). As shown in Table 4.10-14, emissions of criteria pollutants in 2020 would be less than the SCAQMD CEQA significance thresholds. The emission reductions that would result from oilfield consolidation would offset

some emissions resulting from Project development; NOx and PM2.5 emissions would be less than existing values.

As shown in Table 4.10-15, forecasted Project buildout emissions of VOCs and CO in 2023 would exceed the SCAQMD CEQA significance thresholds.

TABLE 4.10-14
YEAR 2020: COMBINED FUTURE DEVELOPMENT AND OILFIELD OPERATIONAL EMISSIONS (POUNDS/DAY)

	VOC	NOx	CO	SOx	PM10	PM2.5
Development (Table 4.10-11)	***48***	***52***	*280*	*1*	*73*	*5*
Future Oilfield (Table 4.10-13)	41	48	39	15	18	4
Less: Existing Oilfield (Table 4.10-4)	(47)	(106)	(48)	(15)	(83)	(13)
Total Increase (Decrease)	*42*	*(6)*	*271*	*1*	*8*	*(4)*
SCAQMD Thresholds (Table 4.10-6)	55	55	550	150	150	55
Exceeds SCAQMD Thresholds?	**No**	**No**	**No**	**No**	**No**	**No**
VOC: volatile organic compounds; NOx: nitrogen oxides; CO: carbon monoxide; SOx: sulfur oxides; PM10: particulate matter 10 microns or less in diameter; PM2.5: particulate matter 2.5 microns or less in diameter,						

TABLE 4.10-15
YEAR 2023: TOTAL FUTURE DEVELOPMENT AND OILFIELD OPERATIONAL EMISSIONS (POUNDS/DAY)

	VOC	NOx	CO	SOx	PM10	PM2.5
Development (Table 4.10-12)	***195***	***110***	***583***	*1*	*125*	*9*
Future Oilfield (Table 4.10-13)	41	48	39	15	18	4
Less: Existing Oilfield (Table 4.10-4)	(47)	(106)	(48)	(15)	(83)	(13)
Total	**189**	52	**574**	1	60	0
SCAQMD Thresholds (Table 4.10-6**)**	55	55	550	150	150	55
Exceeds SCAQMD Thresholds?	**Yes**	**No**	**Yes**	**No**	**No**	**No**
VOC: volatile organic compounds; NOx: nitrogen oxides; CO: carbon monoxide; SOx: sulfur oxides; PM10: particulate matter 10 microns or less in diameter; PM2.5: particulate matter 2.5 microns or less in diameter Note: **Bold** values indicate exceedance of SCAQMD threshold.						

The analysis of anticipated operational emissions shows that Project emissions would be less than the SCAQMD CEQA significance thresholds in 2017 and 2020, as shown in Tables 4.10-10 and 4.10-14; the impact over that period would be less than significant. As Project development continues beyond 2020, the continuing growth would result in emissions of VOCs and CO that would exceed the significance thresholds and the impact would be significant.

PDFs 4.10-1, 4.10-2, and 4.11-3 require mixed-use development, a network of pedestrian and bicycle trails, and coordination with OCTA to reduce VMT and associated vehicle emissions. PDF 4.8-3 requires a bridge over West Coast Highway that, if approved, would further reduce VMT. PDFs 4.11-1 and 4.11-4 require project designs that reduce energy consumption for heating, ventilating, and air conditioning (HVAC), appliances, and water use. SC 4.11-1 requires construction in accordance with the 2008 Title 24 standards. However, PDF 4.11-2 sets a minimum standard for energy efficiency requiring the exceedance of 2008 Title 24 requirements

by at least five percent. In order to reduce long-term operational emissions, MM 4.10-10, MM 4.10-11, and MM 4.10-12 would be implemented. MM 4.10-10 would encourage the use of bicycles instead of cars by providing adequate bicycle support facilities at residences, parks, the resort inn, and commercial areas. MMs 4.10-11 and 4.10-12 would provide education to residents relative to mobile sources and consumer products, respectively.

Concurrent Construction and Operations Emissions

From the beginning of occupancy of the first residences (estimated for late 2015) until the completion of construction (estimated for late 2023), there would be concurrent construction and operational emissions. For impact analysis, construction and operational emissions are not added together because the SCAQMD has separate thresholds for each type of emissions.

Ambient Air Quality – Carbon Monoxide Hotspots

According to the CO Protocol, projects may make air quality worse if they (1) increase the percentage of vehicles in cold start modes by two percent or more; (2) increase traffic volumes by five percent or more over existing volumes; or (3) make traffic flow worse, which is defined for signalized intersections as increasing average delay at intersections that operate at Level of Service (LOS) E or F, or causing an intersection that would operate at LOS D or better without a project to operate at LOS E or F with a project.

Existing Plus Project Scenario

The Project traffic analysis forecasts four intersections at LOS E or F under the Existing Plus Project scenario and Project traffic would increase delay at the following three intersections (peak times are listed in parentheses) (Kimley-Horn 2011):

- Newport Boulevard and Harbor Boulevard (PM peak hour),
- Newport Boulevard and 18th Street/Rochester Street (PM peak hour),
- Superior Avenue and 17th Street (PM peak hour).

General Plan Buildout Plus Project

The Project traffic analysis forecasts that there would be seven intersections at LOS E or F in the General Plan Buildout With Project scenario and Project traffic would increase delay at the following four intersections (peak times are listed in parentheses):

- Newport Boulevard and 19th Street (AM and PM peak hours),
- Newport Boulevard and Harbor Boulevard (PM peak hour),
- Newport Boulevard and 18th Street/Rochester Street (PM peak hour),
- Newport Boulevard and 17th Street (PM peak hour).

These findings indicate that quantitative screening is required. Simple conservative screening criteria for local CO impacts developed by the SMAQMD were used. The SMAQMD states that a project would result in a less than significant impact to air quality for local CO if it:

- Would result in an affected intersection experiencing less than 31,600 vehicles per hour;

- Would not contribute traffic to a tunnel, parking garage, bridge underpass, urban street canyon, below-grade roadway, or other location where horizontal or vertical mixing of air would be substantially limited; and

- The intersection, which includes a mix of vehicle types, is not anticipated to be substantially different from the County average.

Table 4.10-16 shows the traffic volumes at each of the LOS E or F intersections where the proposed Project would increase delay.

TABLE 4.10-16
TRAFFIC VOLUMES AT LOS E AND F INTERSECTIONS

Intersection (Peak Hour)	Peak Hour Total Traffic Volume
Existing Plus Project	
Newport Blvd and Harbor Blvd (PM)	7,714
Newport Blvd and 18th St/Rochester St (PM)	6,810
Superior Ave. and 17th St (PM)	3,471
General Plan Buildout Plus Project	
Newport Blvd and 19th St (AM)	9,461
Newport Blvd and 19th St (PM)	10,670
Newport Blvd and Harbor Blvd (PM)	8,310
Newport Blvd and 18th St/Rochester St (PM)	8,030
Newport Blvd and 17th St (PM)	8,880
Source: Kimley-Horn 2011.	

As shown in Table 4.10-16, the highest traffic volumes at the affected LOS E or F intersections would occur at the Newport Boulevard/19th Street intersection at the PM peak hour and the traffic volume is forecasted at 10,670 vehicles per hour. None of the analyzed intersections are located in a tunnel, urban canyon or similar area where mixing of air would be limited, nor is the vehicle mix anticipated to be substantially different than the County average. Because the maximum traffic volumes would be substantially less than the 31,600 vehicles per hour screening level, congested intersections are located where mixing of air would not be limited, and because vehicle mix would not be extraordinary, there would be no potential for a CO hotspot or exceedance of State or federal CO ambient air quality standard. The impact would be less than significant and no mitigation measures are required.

PDFs 4.8-3, 4.10-1, 4.10-2, and 4.11-3, and MM 4.10-10, would reduce vehicle miles traveled by promoting alternative modes of transportation are applicable to this impact. Specifically, MM 4.10-10 would encourage the use of bicycles instead of cars by requiring adequate bicycle support facilities at residences, parks, the resort inn, and commercial areas. MM 4.10-11 would provide education to residents relative to mobile sources. PDFs 4.11-1, 4.11-2 and 4.11-4 require the implementation of energy saving systems that exceed adopted standards. This would reduce operational emissions. PDF 4.11-5 would reduce vehicle miles traveled by reducing waste exported off-site and requiring the use of alternative fuels. (See Section 4.11 Greenhouse Gas Emissions for PDFs 4.11-1 through 4.11-5)

Impact Summary: ***Significant and Unavoidable.*** Without mitigation, regional (mass) emissions of NOx are forecasted to exceed applicable thresholds in some construction years. MM 4.10-1 would reduce the emissions to less than

significant. However, the availability of sufficient Tier 4 diesel engine construction equipment cannot be assured; thus the impact is potentially significant and unavoidable.

Localized concentrations of CO, NO_2, PM10, and PM2.5 due to construction activities would not exceed the applicable CEQA thresholds.

Long-term operational emissions of criteria pollutants would not exceed the SCAQMD mass emissions thresholds from initial occupancy through 2020. However, as Project development continues beyond 2020, emissions of VOC and CO would exceed the significance thresholds, principally due to vehicle operations. The impacts would be significant and unavoidable even with implementation of the PDFs, compliance with Standard Conditions, and implementation of identified mitigation measures. Localized concentrations of CO at congested intersections would not exceed ambient air quality standards or CEQA significance thresholds.

Threshold 4.10-3 ***Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable NAAQS or CAAQS (including releasing emissions that exceed quantitative thresholds for ozone precursors)?***

The Project region is in nonattainment for O_3, NO_2, PM10, and PM2.5. As described above, after 2020, implementation of the Project could result in long-term emissions of the O_3 precursor VOC and short-term emissions of the O_3 precursor NO_x, which would exceed the SCAQMD mass emissions thresholds for those pollutants. Long-term NOx emissions would not exceed the threshold but are forecasted to be just less than the threshold. Therefore, emissions of VOC and NOx would be cumulatively considerable and the proposed Project would have a significant cumulative air quality impact.

Previously described PDFs 4.8-3, 4.10-1, 4.10-2, 4.11-2, 4.11-3, and 4.11-4 are applicable. PDF 4.8-3 requires a bridge over West Coast Highway that, if approved, would further reduce VMT. SC 4.11-1 requires construction in accordance with the 2008 Title 24 standards. In order to reduce long-term operational emissions, MM 4.10-10, MM 4.10-11, and MM 4.10-12 would be implemented.

Impact Summary: ***Significant and Unavoidable.*** The Project would have a significant cumulative air quality impact because its contribution to regional pollutant concentrations of O_3 would be cumulatively considerable.

Threshold 4.10-4 ***Would the project expose sensitive receptors to substantial pollutant concentrations?***

Human Health Risk Assessment

The HHRA is performed according to the SCAQMD's *Risk Assessment Procedures for Rules 1401 and 1402* following the tiered analysis approach.

Tier 1 Analysis. Tier 1 involves a simple look-up table in which the Project's emissions are compared to Screening Emission Levels. The Screening Emission Levels are pollutant emission

thresholds which are not expected to produce a maximum individual cancer risk (MICR) greater than one in one million or a hazard index (acute or chronic) greater than one. The screening methodology develops factors from annual and hourly emission rates. The annual emission rate factors are combined to produce an Application Screening Index (ASI) for cancer and chronic hazard risk; the hourly emission rate factors produce an ASI for acute hazard risk. If the cumulative cancer/chronic hazard or acute screening index exceeds 1.0, the screening step failed, and a more detailed Tier 4 health risk assessment is required.

The Tier 1 analysis was performed for two cases: (1) Net emissions increase (i.e., future conditions minus the baseline) from the consolidated oilfield and the proposed Project's residential, commercial, and hotel development to off-site receptors 100 meters from the Project fence line and (2) emissions from the future consolidated oilfield to receptors within the Project site (the baseline for this case is zero.) The results of the Tier 1 analyses are shown in Table 4.10-17; screening analysis details can be found in Appendix G. The results of the Tier 1 analysis indicate that at least one ASI is greater than 1.0 for each scenario. Therefore a Tier 4 analysis was performed. It is noted that there is no relationship between the two scenarios because different sources are considered, nor is there a relationship between the cancer/chronic and the acute data because the sources for each analysis are comprised of different TACs.

TABLE 4.10-17
TIER 1 HUMAN HEALTH RISK SCREENING ANALYSIS

	Scenario	
	Project/Oilfield Impact to Off-site Receptors	**Oilfield Impact to Project Residents**
$ASI_{cancer/chronic}$	37.31	75.04
Is $ASI_{cancer/chronic}$ Greater than 1.0?	Yes	Yes
ASI_{acute}	12.31	0.54
Is ASI_{acute} Greater than 1.0?	**Yes**	**No**
ASI – Application Screening Index Source: CDM 2010 (see Appendix G).		

Tier 4 Analysis. The Tier 4 analysis was performed using the AERMOD and HARP models. The scenarios considered were similar to those used for the Tier 1 analysis with the following parameters:

- For the impact from the Project and oilfield emissions to off-site receptors, the receptors were located at the Project site boundary (fence line). The exposure time for these receptors, in accordance with HARP protocol, is assumed to be 24 hours per day, 350 days per year, for 70 years.

- For the impact from the oilfield emissions to on-site receptors, separate analyses were made for (1) residential and commercial receptors and (2) recreational areas. The exposure time for the residential and commercial receptors is assumed to be 24 hours per day, 350 days per year, for 70 years. The exposure time for recreation area receptors is assumed to be 8 hours per day, 245 days per year, for 70 years.

The results of the Tier 4 analysis are shown in Table 4.10-18. The Tier 4 analysis indicates that, for all three scenarios, the MICR would be less than 10 in 1 million and the chronic non-cancer

and acute hazard indices (HIs) would be less than 1.0. Thus, none of the TAC impact indicators would exceed the SCAQMD CEQA significance thresholds.

TABLE 4.10-18
HARP HHRA ACUTE, CHRONIC, AND CANCER
MAXIMUM INCREMENTAL RISKS

Scenario	Maximum Incremental Risk		
	Cancer	**Chronic Non-cancer**	**Acute**
SCAQMD Significance Thresholds	Risk ≥ 10 in 1 million	$HI_C \geq 1.0$	$HI_A \geq 1.0$
Proposed Project Impact on Existing Fence line Receptors	**Peak = 4 in 1 million** (Range -8 to +4 in 1 million) Avg = -0.7 in 1 million	**Peak HI = 0.08** (Range -0.02 to +0.08) Average HI = 0.02	**Peak HI = 0.09** (Range -0.02 to +0.09) Average HI = 0.04
Significant?	**No**	**No**	**No**
Consolidated Oilfield Impact on Proposed Project Residential/ Commercial Areas	**Peak = 3 in 1 million** (Range 0.1 to 3 in 1 million) Avg = 0.7 in a million	**Peak HI = 0.01** (Range 0.0002 to 0.01) Average HI = 0.003	**Peak HI = 0.03** (Range 0.01 to 0.03) Average HI = 0.02
Consolidated Oilfield Impact on Proposed Project Recreational Areas	**Peak = 1 in a million** (Range 0.06 to 1 in 1 million) Avg = 0.4 in 1 million	**Peak HI = 0.01** (Range 0.0003 to 0.01) Average HI = 0.006	**Peak HI = 0.05** (Range 0.02 to 0.05) Average HI = 0.03
Significant?	**No**	**No**	**No**

HI – hazard index
A negative value indicates a reduction in risk compared to Baseline conditions.
Source: CDM 2010.

The proposed oilfield consolidation would provide reductions of cancer risk at 40 percent of the fence line receptors, and reduction of the chronic non-cancer health risk at 29 percent of the receptors. The reductions are due to the relocation of oilfield activities away from most of the receptors, as well as the decreases in emissions due to the reduction in mobile equipment traveling for the oilfield operations. Decreases in travel time and distance would reduce emissions from diesel engine exhaust and unpaved road dust.

Cancer Burden

Although all calculated MICR values are less than the 10 in 1 million SCAQMD threshold, SCAQMD procedures require that when the MICR is greater than one in one million, the cancer burden is calculated. The cancer burden is the potential increase in the number of cancer cases for the actual exposed population. The USEPA SCREEN3 model was used to determine the area of analysis, which is the area where the cancer risk would be one in one million or greater. The approximate distance from the 20-acre oil consolidation area of the site to the 1 in 1 million cancer risk isopleths (based on SCREEN3 modeling) is roughly 1.25 miles. Drawing a rough boundary around the outer edge of the entire Project site (not just the 20-acre consolidated oilfields) captured 19 census tracts in the Cities of Newport Beach, Costa Mesa, and Huntington Beach. These census tracts have a combined population of just over 86,000. Assuming that everyone in these tracts was exposed to a 4 in 1 million incremental cancer risk, the cancer burden would be 0.34, which is less than the SCAQMD significance threshold of 0.5. It should be noted that for the purposes of this analysis, very conservative assumptions were used. Specifically, the cancer burden has been substantially overstated in this analysis since peak cancer risk for the new, on-site residential area was used to represent cancer risk to those much

farther from the site with much lower incremental risk. There are no PDFs, SCs, or MMs applicable to this impact.

Impact Summary: ***Less than Significant.*** Analysis of TAC emissions to both off-site and on-site receptors demonstrates that the cancer risk, the cancer burden, the chronic hazard risk and the acute hazard risk would be less than significant. No mitigation is required.

Threshold 4.10-5 Would the project create objectionable odors affecting a substantial number of people?

Project construction equipment and activities could generate odors from diesel exhaust and roofing, painting, and paving operations that may be noticeable by nearby residents. As these odors are typical with construction, they would not be unfamiliar or necessarily objectionable. The odors would be temporary and would dissipate rapidly from the source with an increase in distance. Therefore, the construction odor impacts would be short-term, would not likely be objectionable, and would be less than significant.

During long-term Project operations, some odors associated with residential uses (such as from cooking and gardening) would be expected to occur. Additional odors may come from the commercial uses if a restaurant occupies one or more of the commercial spaces, or is included within the resort inn. The odors would be no different than in any other residential or mixed-use area with supporting services and would not be considered objectionable by a substantial number of people.

Field observation at the existing oilfield operations did not detect objectionable odors between 50 and 100 feet from oilfield machinery. Future residences, parks, and other areas where substantial groups of people would gather would be 200 feet or further from the oilfields. Therefore, odor impacts from oilfield operations would be few or none. Long-term odor impacts would be less than significant. There are no PDFs, SCs, or MMs applicable to this impact.

Impact Summary: ***Less than Significant.*** Odors may be perceived from both construction and long-term operations, but these odors would be typical for the land use and operations. Odors from the oilfields are not anticipated to be perceptible at nearby developed sites. No mitigation is required.

Threshold 4.10-6 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, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Tables 4.10-19, 4.10-20, and 4.10-21[8] evaluate the consistency of the proposed Project with the applicable goals and policies of SCAG, the City's General Plan, and the Coastal Act, respectively. PDFs, SCs, or MMs applicable to this impact are included in Tables 4.10-19 through 4.10-21.

Impact Summary: ***No Impact.*** As identified in the tables, the proposed Project would not conflict with the intent of applicable goals or policies adopted to avoid or mitigate impacts related to air quality.

[8] For ease of reading, the policy tables are located at the end of this section.

4.10.8 MITIGATION PROGRAM

Project Design Features

The following Project Design Features (PDFs) are applicable to the reduction of criteria pollutant emissions: PDF 4.10-1, PDF 4.10-2, PDF 4.8-3, PDF 4.11-1, PDF 4.11-2, PDF 4.11-3, PDF 4.11-4, and PDF 4.11-5.

Standard Conditions and Requirements

The following Standard Conditions (SCs) are applicable: SC 4.10-1, SC 4.10-2, and SC 4.11-1.

Mitigation Measures

MM 4.10-1 ***Off-road Construction Equipment Engines.*** Prior to issuance of a grading permit, the Applicant/Master Developer shall demonstrate to the City of Newport Beach that construction documents require the construction contractors to implement the following measures:

a. Prior to December 31, 2014: All off-road diesel-powered construction equipment greater than 50 horsepower (hp) shall meet Tier 3 off-road emissions standards.

b. After January 1, 2015: All off-road diesel-powered construction equipment greater than 50 horsepower (hp) shall meet Tier 4 off-road emissions standards, where available.

c. A copy of each unit's certified Tier specification shall be provided at the time of mobilization of each applicable unit of equipment.

MM 4.10-2 ***Construction Site Design and Operation.*** Prior to issuance of a grading permit, the Landowner/Master Developer shall demonstrate to the City of Newport Beach that construction documents require the construction contractors to implement the following measures or provide information and data that demonstrates that implementation would not be feasible:

a. Electricity shall come from power poles rather than diesel- or gasoline-fueled generators, compressors, or similar equipment;

b. Construction parking shall be configured to minimize traffic interference;

c. Construction trucks shall be routed away from congested streets and sensitive receptors;

d. Construction activities that affect traffic flow on the arterial system shall be scheduled to off-peak hours to the extent practicable;

e. Temporary traffic controls, such as a flag person(s), shall be provided where necessary to maintain smooth traffic flow; and

f. Dedicated turn lanes for movement of construction equipment on- and off-site and signal synchronization shall be provided as necessary to maintain smooth traffic flow.

MM 4.10-3 ***Construction Equipment Operation.*** Prior to issuance of a grading permit, the Landowner/Master Developer shall demonstrate to the City of Newport Beach

that construction documents require the construction contractors to implement the following measures:

a. All construction equipment shall be tuned and maintained in accordance with the manufacturer's specifications;

b. Diesel truck idling time shall be five minutes or less, both on- and off-site; and

c. Work crews shall shut off diesel equipment when not in use.

MM 4.10-4 ***Construction Ridesharing and Transit Incentives.*** Prior to issuance of a grading permit, the Landowner/Master Developer shall provide copies of construction documents to the City of Newport Beach showing that these documents include a statement that the construction contractors shall support and encourage ridesharing and transit incentives for the construction crews.

MM 4.10-5 ***Fugitive Dust – Supplementary Measures.*** Prior to issuance of each grading permit, the Landowner/Master Developer shall demonstrate to the City of Newport Beach that construction documents and grading plans include the following:

a. The contractor shall suspend grading operations when wind gusts exceed 15 miles per hour;

b. The contractor shall take measures (such as additional watering or the application of chemical suppressants) to stabilize disturbed areas and stockpiles prior to non-work days if windy conditions are forecasted for a weekend, holiday, or other day when site work is not planned.

c. The contractor shall re-apply water as necessary during grading and earth-moving to ensure that visible emissions do not extend to residences or schools.

MM 4.10-6 ***Paving of Bluff Road.*** Prior to issuance of a grading permit, the Landowner/Master Developer shall demonstrate to the City of Newport Beach that construction plans and schedule require the construction and paving of Bluff Road between West Coast Highway and 15th Street as early as feasible in order to minimize dust generation by vehicles using the roadway.

MM 4.10-7 ***Fugitive Dust – Street Sweeping.*** Prior to issuance of a grading permit, the Landowner/Master Developer shall demonstrate to the City of Newport Beach that construction documents require the construction contractors to sweep paved roads within and adjacent to the Project site if visible soil materials are carried to the streets. Street sweepers or roadway washing trucks shall comply with SCAQMD Rule 1186 and shall use reclaimed water, if available.

MM 4.10-8 ***Notification of Receptors.*** The Landowner/Master Developer shall distribute a notice to all residents, schools, and other facilities within 100 feet of the Project site that states the following or similar "the environmental analysis identifies a potential for excess dust pollution for short periods during heavy grading. Extra measures shall be taken to prevent the dust from leaving the Project site, but persons should be aware of the potential for pollution". This notice may be combined with the notice described in MM 4.10-9.

MM 4.10-9 ***Construction Complaint Resolution.*** The Landowner/Master Developer shall appoint a person as a contact for complaints relative to construction impacts to the adjacent neighborhoods. A contact telephone number and email address shall be posted on signs at the construction site and shall be provided by mail to all residents within 500 feet of the Project site. Upon receipt of a complaint, the designated contact person shall investigate the complaint and shall develop corrective action, if needed. The designated contact person shall respond to the complainant within two working days to describe the results of the investigation, and submit a report of the complaint and action taken to the City of Newport Beach. The designated contact person shall maintain a log of all complaints and resolutions.

MM 4.10-10 ***Bicycle Facilities.*** Prior to the issuance of building permits for the following specific components of the Project, the Applicant shall demonstrate to the City of Newport Beach that:

a. The plans for multi-family residences shall identify the provision of a minimum of one on-site bicycle space per ten dwelling units.

b. The plans for commercial development in the Mixed-use/Residential District shall identify the provision of a minimum of 1 on-site bicycle space per 2,500 gross square feet (gsf) of commercial area.

c. The plans for resort inn and support commercial areas in the Visitor-Serving Resort District (or visitor-serving commercial if the resort is not built) within the Visitor-Serving Resort/Residential: Provide on-site bicycle rack(s) with a minimum of 1 bicycle space per 2,500 gsf of the resort inn building (or commercial square footage if the resort inn is not built).

d. Bicycle racks shall support the frame of the bike and not just one wheel; shall allow the locking of the frame and one wheel to the rack; shall be easily usable by both cable and U-locks; and shall be usable by a wide variety of bikes, including those with water bottle cages and with and without kickstands.

e. There shall be clear access routes from bike lanes to bicycle racks in order to avoid riding through parking lots.

MM 4.10-11 ***Conservation Education – Mobile Sources.*** The future homeowners associations for Newport Banning Ranch shall be required to provide educational information on mobile source emission reduction techniques (such as use of alternative modes of transportation and zero- or low-emission vehicles) to all homeowners as part of purchase closing documents for the purchase of a property and annually after the close of escrow. The homeowners associations shall provide an annual report of conservation educational materials distributed to homeowners to the City of Newport Beach.

MM 4.10-12 ***Conservation Education – Consumer Products.*** The future homeowners associations for Newport Banning Ranch shall be required to provide educational information on the positive benefits of using consumer products with low or no-volatile organic compounds (VOCs) (such as paint thinners and solvents) to all homeowners as part of purchase closing documents for the purchase of a property and annually after the close of escrow.

4.10.9 LEVEL OF SIGNIFICANCE AFTER MITIGATION

The impacts listed below would be significant and unavoidable.

- Without mitigation, regional (mass) emissions of NOx are forecasted to exceed applicable thresholds in some construction years. Though MM 4.10-1 would reduce the emissions to less than significant, the availability of sufficient Tier 4 diesel engine construction equipment cannot be assured. Therefore, for purposes of this EIR, the impacts are found to be significant and unavoidable.

- Long-term operational emissions of criteria pollutants would not exceed the SCAQMD mass emissions thresholds from initial occupancy through 2020. However, as Project development continues beyond 2020, emissions of VOC and CO would exceed the significance thresholds, principally due to vehicle operations. Therefore, the impacts remain significant and unavoidable. (Threshold 4.10-2)

- The Project would have cumulatively considerable contributions to regional pollutant concentrations of O3. (Threshold 4.10-3)

All other impacts would be less than significant.

TABLE 4.10-19
SCAG REGIONAL POLICY CONSISTENCY ANALYSIS

Relevant Goals and Policies	Consistency Analysis
Regional Transportation Plan Core Goals	
RTP G5 Protect the environment, improve air quality and promote energy efficiency.	The Project is consistent with this goal. To the degree feasible, the Project would reduce mobile emissions during construction and mobile emission sources. PDF 4.10-1 provides for commercial uses in the Mixed-Use/Residential and Visitor-Serving Resort/Residential Land Use Districts within walking distance of the proposed residential neighborhoods and nearby residential areas to reduce vehicle trips and vehicle miles traveled PDF 4.10-2 provides a network of public pedestrian and bicycle trails to reduce auto-dependency by connecting proposed residential neighborhoods to parks and open space within the Project site and to off-site recreational amenities, such as the beach and regional parks and trails**.**. MM 4.10-10 would supplement those facilities by mandating the provision of bicycle facilities on the Project site. PDF 4.8-3 provides a pedestrian bridge from the Project site to a location south of west coast highway to encourage walking and bicycling to and from the beach. The Project also includes provisions to promote energy efficiency. For instance, PDF 4.11-1 provides that the Project will be consistent with a recognized green building program.

TABLE 4.10-20
CITY OF NEWPORT BEACH GENERAL PLAN CONSISTENCY ANALYSIS

City of Newport Beach General Plan Relevant Goals, Policies, and Programs	Consistency Analysis
Natural Resources Element	
Natural Resources Element Goal NR 6	
Reduced mobile source emissions.	The Project is consistent with this goal. To the degree feasible, the Project would reduce mobile emissions during construction and mobile emission sources. The measures described for policies NR 6.1, NR 6.2, NR 6.5, NR 6.9, and CE 6.2.1 all contribute to vehicle trip reduction during construction and operations.
Policies	
NR Policy 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	The Project is consistent with this policy. PDF 4.10-1 provides for commercial uses in the Mixed-Use/Residential and Visitor-Serving Resort/Residential Land Use Districts within walking distance of the proposed residential neighborhoods and nearby residential areas. PDF 4.10-2 provides a network of public pedestrian and/or bicycle trails to reduce auto dependency, thereby creating walkable neighborhoods. MM 4.10-10 would supplement those facilities by mandating the provision of bicycle facilities. PDF 4.8-3 provides a pedestrian bridge over West Coast Highway if permitted by governing agencies, which would further improve walkability.

TABLE 4.10-20 (Continued)
CITY OF NEWPORT BEACH GENERAL PLAN CONSISTENCY ANALYSIS

City of Newport Beach General Plan Relevant Goals, Policies, and Programs	Consistency Analysis
NR Policy 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.	The Project is consistent with this policy. The Project's Urban Colony is a mixed-use development. See PDF 4.10-1.
NR Policy 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.	The Project is consistent with this policy. The measures described for policies NR 6.1, NR 6.2, NR 6.5, NR 6.9, and CE 6.2.1 all contribute to vehicle trip reduction. In addition, the Project would provide opportunities for advanced communications technology (telecommuting) since fiber-optic lines would be installed to all homes as part of the Green and Sustainable Program included in the Newport Banning Ranch Master Development Plan on file at the City of Newport Beach and available for review during regular business hours.
Policy NR 6.9 Education on Mobile Source Emission Reduction Techniques Provide education to the public on mobile source emission reduction techniques such as using alternative modes of transportation.	The Project is consistent with this policy. MM 4.10-11 would provide educational materials about mobile source trip reduction and emissions reduction to homeowners at least annually.
Natural Resources Element Goal NR 7	
Reduced air pollutant emissions from stationary sources.	The Project is consistent with this goal. PDFs 4.11-1, 4.11-2, and 4.11-4 require obtaining LEED or National Green Building certification or equivalent, exceeding 2008 Title 24 energy requirements, and installing visual energy metering in residential units. These strategies would reduce emissions from stationary sources consistent with NR policies 7.1 and 7.2 (below).
Policies	
NR Policy 7.1: Fuel Efficient Equipment Support the use of fuel efficient heating equipment and other appliances.	The Project is consistent with this policy. Please refer to Goal NR 7 and Section 4.11, Climate Change, of this EIR.
NR Policy 7.2: Source Emission Reduction Best Management Practices Require the use of Best Management Practices (BMP) to minimize pollution and to reduce source emissions.	The Project is consistent with this policy. Please refer to Goal NR 7 and Section 4.11, Climate Change, of this EIR.
NR Policy 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).	The Project is consistent with this policy. PDFs 4.11-1, 4.11-2, and 4.11-4 that the Project be consistent with recognized green building programs that exist at the time of final Project approval such as, but not limited to, Build It Green, the U.S. Green Building Council's (USGBC's) Leadership in Energy and Environmental Design–Neighborhood Development (LEED-ND™), California Green Builder, or National Association of Home Builders' National Green Building Standard™, exceeding 2008 Title 24 energy requirements, and installing visual energy metering in residential units. These strategies would reduce emissions from stationary sources. Please also refer to Section 4.11 of this EIR

TABLE 4.10-20 (Continued)
CITY OF NEWPORT BEACH GENERAL PLAN CONSISTENCY ANALYSIS

City of Newport Beach General Plan Relevant Goals, Policies, and Programs	Consistency Analysis
Natural Resources Element Goal NR 8	
Reduced air pollutant emissions from construction activities.	The Project is consistent with this goal. SC 4.10-1 requires compliance with SCAQMD Rule 403, which provides extensive construction dust control. SC 4.10-2 and PDF 4.11-4 require building materials and coatings with low VOC emissions. MMs 4.10-1 through 4.10-8 provide additional measures for construction equipment selection and operations, site operations, ride sharing, and dust control to minimize emissions of NOx, PM10, PM2.5, and other pollutants.
Policies	
NR Policy 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.	The Project is consistent with this policy. Please refer to Goal NR 8.

TABLE 4.10-21
CALIFORNIA COASTAL ACT CONSISTENCY ANALYSIS

Relevant California Coastal Act Policies	Consistency Analysis
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.	The Project is consistent with this policy. With respect to air quality requirements, the Project would be required to comply with all mandated air district requirements. Additional measures are set forth in this EIR to further reduce short-term and long-term air quality emissions associated with this Project. Please refer to the Mitigation Program. As noted above, the Project includes several measures to minimize air quality impacts, reduce VMT and to reduce energy consumption. See, e.g. Natural Resources (NR) goals 7 and 8 and the associated policies.

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