4.3 AIR QUALITY

4.3.1 Setting

a. Climate and Topography. The Project Site is located within the North Central Coast Air Basin (NCCAB), which includes Monterey County, San Benito County, and Santa Cruz County. The Project Site is located in the northeastern corner of the NCCAB, which covers an area of approximately 5,159 square miles along the central California coast. The Monterey Bay Unified Air Pollution Control District (MBUAPCD) is responsible for local control and monitoring of criteria air pollutants throughout the NCCAB.

Climatological conditions, an area's topography, and the quantity and type of pollutants released commonly determine ambient air quality. The Project Site is approximately 3 miles southwest of the City of Hollister, approximately 3.5 miles southeast of the City of San Juan Bautista and approximately 1.0 mile south of State Route (SR) 156. The Project Site consists primarily of generally flat grazing lands situated in the valley between rolling hills to the northwest and foothills to the southwest.

Climate, or the average weather condition, affects air quality in several ways. Wind patterns can remove or add air pollutants emitted by stationary or mobile sources. Inversion, a condition where warm air traps cooler air underneath it, can hold pollutants near the ground by limiting upward mixing (dilution). Topography also affects the local climate, as valleys often trap emissions by limiting lateral dispersal.

Winds originating in the San Francisco Bay Area Air Basin often transport pollutants into the NCCAB, where surface winds move the pollutants to the eastern part of the NCCAB. For instance, the transport of ozone precursor emissions from San Francisco Bay Area Air Basin through the Santa Clara valley/San Benito River valley plays a dominant role in ozone concentrations measured in San Benito County (MBUAPCD, 2013). The transport of pollutants can often cause exceedances of air quality standards in the NCCAB. The regional temperature averages in the low 70s (Fahrenheit) for highs and the middle 40s for lows. Precipitation averages approximately 14.2 inches per year (1981 to 2010) (Western Regional Climate Center, 2013).

b. Air Pollutants of Primary Concern. The State and federal Clean Air Acts mandate the control and reduction of certain air pollutants. Under these Acts, the U.S. Environmental Protection Agency (U.S. EPA) and the California Air Resources Board (CARB) have established ambient air quality standards for certain "criteria" pollutants. Ambient air pollutant concentrations are affected by the rates and distributions of corresponding air pollutant emissions, as well as by the climactic and topographic influences discussed above. The primary determinant of concentrations of non-reactive pollutants (such as CO and PM_{10}) is proximity to major sources. Ambient CO levels in particular usually closely follow the spatial and temporal distributions of vehicular traffic. A discussion of primary criteria pollutants is provided below.

Ozone. Ozone is a colorless gas with a pungent odor. Most ozone in the atmosphere is formed as a result of the interaction of ultraviolet light, reactive organic gases (ROG), and oxides of nitrogen (NO_X). ROG (the organic compound fraction relevant to ozone formation,

and sufficiently equivalent for the purposes of this analysis to volatile organic compounds, or VOC[1]) is composed of non-methane hydrocarbons (with some specific exclusions), and NO_X is made of different chemical combinations of nitrogen and oxygen, mainly NO and NO_2. A highly reactive molecule, ozone readily combines with many different components of the atmosphere. Consequently, high levels of ozone tend to exist only while high ROG and NO_X levels are present to sustain the ozone formation process. Once the precursors have been depleted, ozone levels rapidly decline. Because these reactions occur on a regional rather than local scale, ozone is considered a regional pollutant.

Carbon Monoxide. Carbon monoxide (CO) is an odorless, colorless, gas. CO causes a number of health problems including fatigue, headache, confusion, and dizziness. The incomplete combustion of petroleum fuels in on-road vehicles and at power plants is a major cause of CO. CO is also produced during the winter from wood stoves and fireplaces. CO tends to dissipate rapidly into the atmosphere; consequently, violations of the State CO standard are generally associated with major roadway intersections during peak hour traffic conditions.

Localized carbon monoxide "hotspots" can occur at intersections with heavy peak hour traffic. Specifically, hotspots can be created at intersections where traffic levels are sufficiently high such that the local CO concentration exceeds the federal Ambient Air Quality Standards (AAQS) of 35.0 parts per million (ppm) or the State AAQS of 20.0 ppm.

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

Particulate Matter. Suspended particulate matter (airborne dust) consists of particles small enough to remain suspended in the air for long periods. Fine particulate matter includes particles small enough to be inhaled, pass through the respiratory system, and lodge in the lungs, with resultant health effects. Particulate matter can include materials such as sulfates and nitrates, which are particularly damaging to the lungs. Studies of the health effects resulted in revision of the Total Suspended Particulate (TSP) standard in 1987 to focus on particulates that are small enough to be considered "inhalable," i.e., 10 microns or less in size (PM_{10}). In July of 1997, a further revision of the federal standard added criteria for $PM_{2.5}$, reflecting recent studies that suggested that particulates less than 2.5 microns in diameter are of particular concern.

Sulfur Dioxide. SO_2 is produced by such stationary sources as coal and oil combustion, steel mills, refineries and pulp and paper mills. The major adverse health effects associated with SO_2 exposure pertain to the upper respiratory tract. SO_2 is a respiratory irritant with construction of the bronchioles occurring with inhalation of SO_2 at 5ppm or more. On contact with the moist mucous membranes, SO_2 produces sulfurous acid, which is a direct irritant.

[1] *ROG is equivalent to volatile organic compounds (VOC) per MBUAPCD Rule 101, 2.32*

Concentration rather than duration of the exposure is an important determinant of respiratory effects.

Lead. Lead is a metal found naturally in the environment, as well as in manufacturing products. The major sources of lead emissions historically have been mobile and industrial sources. As a result of the phase-out of leaded gasoline, as discussed below, metal processing currently is the primary source of lead emissions. The highest level of lead in the air is generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers.

Twenty years ago, mobile sources were the main contributor to ambient lead concentrations in the air. In the early 1970s, the U.S. EPA set national regulations to gradually reduce the lead content in gasoline. In 1975, unleaded gasoline was introduced for motor vehicles equipped with catalytic converters. U.S. EPA completed the ban prohibiting the use of leaded gasoline in highway vehicles in December 1995.[2] As a result of U.S. EPA's regulatory efforts to remove lead from gasoline, lead concentrations have declined substantially over the past several decades. The most dramatic reductions in lead emissions occurred prior to 1990 in the transportation sector due to the removal of lead from gasoline sold for most highway vehicles. Lead emissions were further reduced substantially between 1990 and 2008, with significant reductions occurring in the metals industries at least in part as a result of national emissions standards for hazardous air pollutants.[3]

CARB and the EPA establish ambient air quality standards for major pollutants at thresholds intended to protect public health. Federal and State standards have been established for ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), lead, and fine particulates (PM_{10} and $PM_{2.5}$). Table 4.3-1 summarizes the California Ambient Air Quality Standards (CAAQS) and the National Ambient Air Quality Standards (NAAQS) for each of these pollutants. Standards have been set at levels intended to be protective of public health. California standards are more restrictive than federal standards for each of these pollutants except for lead and the eight-hour average for CO.

[2] *40 CRF Part 80, http://www.epa.gov/otaq/regs/fuels/additive/lead/pbbandfr.text, assessed 2/272013.*
[3] *U.S. EPA 2013. Policy Assessment for the Review of the Lead National Ambient Air Quality Standards – External Review Draft. EPA – 452/P-13-001.*

Table 4.3-1
Current Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	Federal Primary Standards	California Standard
Ozone	1-Hour	---	0.09 ppm
	8-Hour	0.075 ppm	0.070 ppm
Carbon Monoxide	8-Hour	9.0 ppm	9.0 ppm
	1-Hour	35.0 ppm	20.0 ppm
Nitrogen Dioxide	Annual	0.053 ppm	0.030 ppm
	1-Hour	0.100 ppm	0.18 ppm
Sulfur Dioxide	Annual	---	---
	24-Hour	---	0.04 ppm
	1-Hour	0.075 ppm	0.25 ppm
PM_{10}	Annual	---	20 $\mu g/m^3$
	24-Hour	150 $\mu g/m^3$	50 $\mu g/m^3$
$PM_{2.5}$	Annual	12 $\mu g/m^3$	12 $\mu g/m^3$
	24-Hour	35 $\mu g/m^3$	---
Lead	30-Day Average	---	1.5 $\mu g/m^3$
	Rolling 3-Month Average	0.15 $\mu g/m^3$	---

ppm = parts per million;
$\mu g/m^3$ = micrograms per cubic meter
Source: California Air Resources Board, June 7, 2013. http://www.arb.ca.gov/research/aaqs/aaqs2.pdf

c. Current Ambient Air Quality. Local air districts and CARB monitor ambient air quality to assure that air quality standards are met, and if they are not met, to also develop strategies to meet the standards. Air quality monitoring stations measure pollutant ground-level concentrations (typically, ten feet aboveground level). Depending on whether the standards are met or exceeded, the local air basin is classified as in "attainment" or "non-attainment." Some areas are unclassified, which means no monitoring data are available. Unclassified areas are considered to be in attainment. Table 4.3-2 summarizes the State and federal attainment status for criteria pollutants in the NCCAB.

As shown in Table 4.3-2, although the NCCAB is in attainment or unclassifiable as to all federal ambient air quality standards (AAQS), it is designated as non-attainment with respect to the more stringent State PM_{10} standard and the State's eight-hour ozone standard.

Ambient air quality is monitored at seven MBUAPCD-operated monitoring stations located in Salinas, Hollister, Carmel Valley, Santa Cruz, Scotts Valley, Watsonville, and Davenport. In addition, the National Park Service operates a station at the Pinnacles National Monument and an industry consortium operates a station in King City. Table 4.3-3 summarizes the representative annual air quality data for the Project vicinity over the past three years. The nearest monitoring stations to the Project Site are the Hollister – Fairview Road monitoring station (approximately 5.5 miles east of the site), and the Salinas monitoring station (approximately 12.5 miles southwest of the site).

Table 4.3-2
Attainment Status of the North Central Coast Air Basin

Pollutant	State Standard	Federal Standard
Ozone (O_3)	**Non-attainment**[1]	Attainment/Unclassified[2]
Inhalable Particulates (PM_{10})	**Non-attainment**	Attainment
Fine Particulates ($PM_{2.5}$)	Attainment	Attainment/Unclassified[3]
Carbon Monoxide (CO)	Attainment (Monterey County)/ Unclassified (San Benito County)	Attainment/Unclassified
Nitrogen Dioxide (NO_X)	Attainment	Attainment/Unclassified[4]
Sulfur Dioxide (SO_X)	Attainment	Attainment[5]
Lead	Attainment	Attainment/Unclassified[6]

[1] Effective July 26, 2007, the CARB designated the NCCAB a non-attainment area for the State ozone standard, which was revised in 2006 to include an 8-hour standard of 0.070 ppm.
[2] On March 12, 2008, U.S. EPA adopted a new 8-hour ozone standard of 0.075 ppm, while temporarily retaining the existing 8-hour standard of 0.08 ppm.
[3] In 2006, the Federal 24-hour standard for $PM_{2.5}$ was revised from 65 to 35 µg/m^3. Although final designations have yet to be made, it is expected that the NCCAB will remain designated unclassified/attainment.
[4] In 2011, EPA indicated it plans to designate the entire State as attainment/unclassified for the 2010 NO2 standard. Final designations have yet to be made by EPA.
[5] In June 2011, the CARB recommended to EPA that the entire State be designated as attainment for the 2010 primary SO_2 standard. Final designations have yet to be made by EPA.
[6] On October 15, 2008 EPA substantially strengthened the national ambient air quality standard for lead by lowering the level of the primary standard from 1.5 µg/m^3 to 0.15 µg/m^3. Final designations were made by EPA in November 2011.
*Note: Non-attainment pollutants are highlighted in **Bold**.*

Given that the NCCAB is designated as non-attainment for State standards for ozone and PM_{10}, these are the primary pollutants of concern for the NCCAB. As indicated in Table 4.3-3, there were no federal or State ozone exceedances at the nearest NCCAB monitoring station in 2011, 2012, or 2013. The State and federal standards for PM_{10} and $PM_{2.5}$ were also not exceeded in 2010, 2011, or 2012.

Table 4.3-3
Ambient Air Quality Data

Pollutant	2011	2012	2013
Ozone (ppm), Worst 1-Hour [1, 2]	0.078	0.074	0.076
Number of days of State exceedances (>0.09 ppm)	0	0	0
Ozone (ppm), 8-Hour Average [1, 2]	0.066	0.063	0.070
Number of days of State exceedances (>0.07 ppm)	0	0	0
Number of days of Federal exceedances (>0.08 ppm)	0	0	0
Carbon Monoxide (ppm), Highest 8-Hour Average[3]	0.99	1.39	*
Number of days of above State or Federal standard (>9.0 ppm)	0	0	*
Particulate Matter <10 microns, μg/m^3, Worst 24 Hours [2, 4, 5]	23.0	105.0	98.4
Number of days above State standard (>50 μg/m^3)	0	*	*
Number of days above Federal standard (>150 μg/m^3)	0	0	0
Particulate Matter <2.5 microns, μg/m^3, Worst 24 Hours [2, 5]	30.4	28.6	21.2
Number of days above Federal standard (>65 μg/m^3)	0	0	0

Source: CARB Aerometric Data Analysis and Measurement System (ADAM) Top Four Summaries from 2011 to 2013, available at:http://www.arb.ca.gov/adam/topfour/topfour1.php
ppm = parts per million; PM_{10} – particulate matter 10 microns in diameter or less; NM = not measured; μg/m^3 = micrograms per cubic meter; $PM_{2.5}$ = particulate matter 2.5 microns in diameter or less; There was insufficient (or no) data available to determine the value.*
Notes:
1. Maximum concentration is measured over the same period as the California Standards.
2. O_3, PM_{10} and $PM_{2.5}$ data from the Hollister – Fairview Road Monitoring Station.
3. CO, data from the Salinas Monitoring Station.
4. PM_{10} exceedances are based on State thresholds established prior to amendments adopted on June 20, 2002.
5. PM_{10} and $PM_{2.5}$ exceedances are derived from the number of samples exceeded, not days.

d. Hazardous Air Pollutants/Toxic Air Contaminants. Both the U.S. EPA and CARB regulate hazardous air pollutants (HAPs)/ toxic air contaminants (TACs). According to Section 39655 of the California Health and Safety Code, a toxic air contaminant is "an air pollutant which may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health." In addition, 189 substances that have been listed as federal hazardous air pollutants (HAPs) pursuant to Section 7412 of Title 42 of the United States Code are TACs under the State's air toxics program pursuant to Section 39657 (b) of the California Health and Safety Code.

TACs can cause various cancers, depending on the particular chemicals, their type and duration of exposure. Additionally, some of the TACs may cause other health effects with short or long term exposure. The ten TACs posing the greatest health risk in California are acetaldehyde, benzene, 1-3 butadiene, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, perchlorethylene, and diesel particulate matter. Mobile sources of TACs include freeways and other roads with high traffic volumes, while stationary sources include distribution centers, rail yards, ports, refineries, dry cleaners, and large gas

dispensing facilities. The Project Site is not located near any major sources of TACs. For cancer health effects, the risk is expressed as the number of chances in a population of a million people who might be expected to get cancer over a 70-year lifetime.

Asbestos and Lead-Based Paint. Asbestos is a highly crumbly material often found in older buildings (pre-1979), typically used as insulation in walls or ceilings. It was formerly popular as an insulating material; however, it can pose a health risk when very small particles become airborne.

Prior to the enactment of federal regulations limiting their use in the late 1970s, lead-based paint (LBP) was often used in residential construction. Lead is a highly toxic metal that was used for many years in products found in and around homes. Lead may cause a range of health effects, from behavioral problems and learning disabilities, to seizures and death. The primary source of lead exposure in residences is deteriorating LBP. Lead dust can form when LBP is dry scraped, dry sanded or heated. Dust also forms when painted surfaces bump or rub together. Lead-based paint that is in good condition is usually not a hazard.

e. Regulatory Setting. This analysis has been prepared pursuant to California Environmental Quality Act of 1970 and associated Guidelines (Public Resources Code 21000 *et seq*. and California Code of Regulations, Title 14, Chapter 3 sections 15000 – 15387) and in accordance with local, State and federal laws, including those administered by MBUAPCD, CARB, and the EPA. The principal air quality regulatory mechanisms include the following:

- *Federal Clean Air Act (FCAA), in particular, the 1990 amendments;*
- *California Clean Air Act (CCAA);*
- *California Health and Safety Code (H&SC), in particular, Chapter 3.5 (Toxic Air Contaminants) (H&SC Section 39650 et. seq.) and Part 6 (Air Toxics "Hot Spots" Information and Assessment) (H&SC Section 44300 et. seq.).*
- *MBUAPCD's Rules and Regulations and air quality planning documents:*
    - *Rule 400 (Visible Emissions), Rule 402 (Nuisance), Rule 425 (Use of Cutback Asphalt)*
    - *2012 Triennial Plan Revision - Adopted April 2013 to update the 2008 Air Quality Management Plan*
    - *2008 Air Quality Management Plan - Adopted August 2008 for achieving the 2006 California ozone standard*
    - *2007 Federal Maintenance Plan - Adopted May 2007 for maintaining the 1997 federal ozone standard*
    - *2005 Particulate Matter Plan - Adopted December 2005 for particulate matter made in response to Senate Bill 656.*
    - *2008 MBUAPCD California Environmental Quality Act Air Quality Guidelines most recently revised February 2008.*

Federal and State. As discussed more fully below, the federal and State governments have been empowered by the federal and State Clean Air Acts to regulate the emission of airborne pollutants and have established ambient air quality standards for the protection of public health. The U.S. EPA is the federal agency designated to administer air quality regulation, while CARB is the State equivalent in California. Local control in air quality management is provided by CARB through county-level or regional (multi-county) air pollution control districts (APCDs). CARB establishes air quality standards and is responsible

for control of mobile emission sources, while the local APCDs are responsible for enforcing standards and regulating stationary sources. CARB has established 14 air basins statewide.

Federal Clean Air Act. The U.S. EPA is charged with implementing national air quality programs. The U.S. EPA's air quality mandates are drawn primarily from the federal Clean Air Act (CAA). The CAA was passed in 1963 by the U.S. Congress and has been amended several times. The 1970 CAA amendments strengthened previous legislation and laid the foundation for the regulatory scheme of the 1970s and 1980s. In 1977, Congress again added several provisions, including non-attainment requirements for areas not meeting NAAQS and the Prevention of Significant Deterioration program. The 1990 CAA amendments represent the latest in a series of federal efforts to regulate the protection of air quality in the U.S. The CAA allows states to adopt more stringent standards or to include other pollution species.

NAAQS. As discussed above, the federal CAA requires the U.S. EPA to establish primary and secondary NAAQS for a number of criteria air pollutants. The air pollutants for which standards have been established are considered the most prevalent air pollutants that are known to be hazardous to human health. NAAQS have been established for the following pollutants: O_3, CO, SO_2, PM_{10}, $PM_{2.5}$, and lead (Pb).

Title III of the Federal CAA. As discussed above, hazardous air pollutants (HAPs) are the air contaminants identified by the U.S. EPA as known or suspected to cause cancer, other serious illnesses, birth defects, or death. The federal CAA requires the U.S. EPA to set standards for these pollutants and reduce emissions of controlled chemicals. Specifically, Title III of the CAA requires the U.S. EPA to promulgate National Emissions Standards for Hazardous Air Pollutants (NESHAP) for certain categories of sources that emit one or more pollutants that are identified as HAPs. The federal CAA also requires the U.S. EPA to set standards to control emissions of HAPs through mobile source control programs. These include programs that provide for reformulated gasoline, national low emissions vehicle standards, Tier 2 motor vehicle emission standards, gasoline sulfur control requirements, and heavy-duty engine standards.

HAPs tend to be localized and are found in relatively low concentrations in ambient air. However, they can result in adverse chronic health effects if exposure to low concentrations occurs for long periods. Many HAPs originate from human activities, such as fuel combustion and solvent use. Emission standards may differ between "major sources" and "area sources" of the HAPs/TACs. Under the federal CAA, major sources are defined as stationary sources with the potential to emit more than 10 tons per year (tpy) of any one HAP or more than 25 tpy of any combination of HAPs; all other sources are considered area sources. Mobile source air toxics (MSATs) are a subset of the 188 HAPs. Of the 21 HAPs identified by the U.S. EPA as MSATs, a priority list of six priority HAPs were identified that include: diesel exhaust, benezene, formaldehyde, acetaldehyde, acrolein, and 1,3-butadiene. While vehicle miles traveled in the United States is expected to increase by 64 percent over the period 2000 to 2020, emissions of MSATs are anticipated to decrease substantially as a result of efforts to control mobile source emissions (by 57 percent to 67 percent depending on the contaminant).[4]

[4] *Federal Highway Administration, 2006. Interim Guidance on Air Toxic Analysis in NEPA Documents.*

California Clean Air Act. The California Clean Air Act (CCAA), signed into law in 1988, requires all areas of the State to achieve and maintain the CAAQS by the earliest practical date. CARB is the State air pollution control agency and is a part of the California Environmental Protection Agency (Cal EPA). CARB is the agency responsible for coordination and oversight of State and local air pollution control programs in California, and for implementing the requirements of the CCAA. CARB overseas local district compliance with California and federal laws, approves local air quality plans, submits the SIPs to the U.S. EPA, monitors air quality, determines and updates area designations and maps, and sets emissions standards for new mobile sources, consumer products, small utility engines, off-road vehicles, and fuels.

CAAQS. The CCAA requires CARB to establish CCAQS. Similar to the NAAQS, CAAQS have been established for the following pollutants: O_3, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, Pb, vinyl chloride, hydrogen sulfide, sulfates, and visibility-reducing particulates. In most cases, the CAAQS are more stringent than the NAAQS pollutants. The CCAA requires that all local air districts in the State endeavor to achieve and maintain the CAAQS by the earliest practical date. The CCAA specifies that local air districts should focus particular attention on reducing the emissions from transportation and area-wide emission sources, and provides districts with the authority to regulate indirect sources.

Tanner Air Toxics Act and Air Toxics Hot Spots Information and Assessment Act. Toxic air contaminants (TACs)[5] in California primarily are regulated through the Tanner Air Toxics Act (AB 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588) (Hot Spots Act). As discussed above, HAPs/TACs are a broad class of compounds known to cause morbidity or mortality (cancer risk). HAPs/TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., dry cleaners). Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, State and federal level.

AB 1807 sets forth a formal procedure for CARB to designate substances as TACs. Research, public participation, and scientific peer review are necessary before CARB can designate a substance as a TAC. To date, CARB has identified more than 21 TACs and adopted the U.S. EPA's list of HAPs as TACs. In 1998, diesel particulate matter (DPM) was added to CARB's list of TACs. Once a TAC is identified, CARB adopts an Airborne Toxic Control Measure for sources that emit that particular TAC. If a safe threshold exists at which no toxic effect occurs from a substance, the control measure must reduce exposure below that threshold. If no safe threshold exists, the measure must incorporate Best Available Control Technology (BACT) to minimize emissions.

The Hot Spots Act requires for existing facilities that emit toxic substances above a specified level to prepare a toxic emissions inventory and a risk assessment if the emissions are significant, notify the public of significant risk levels, and prepare and implement risk reduction measures.

Diesel Exhaust and Diesel Particulate Matter. Diesel exhaust is the predominant TAC in urban air and is estimated to represent about two-thirds of the cancer risk from TACs (based on the statewide average). According to CARB, diesel exhaust is a complex mixture of gases,

[5] *TACs are referred to as HAPs under the federal CAA.*

vapors, and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by CARB, and are listed as carcinogens either under State Proposition 65 or under the Federal Hazardous Air Pollutants programs.

CARB reports that recent air pollution studies have shown an association that diesel exhaust and other cancer-causing toxic air contaminants emitted from vehicles are responsible for much of the overall cancer risk from TACs in California. Particulate matter emitted from diesel-fueled engines (DPM) was found to comprise much of that risk. CARB has adopted and implemented a number of regulations for stationary and mobile sources to reduce emissions of DPM. Several of these regulatory programs affect medium and heavy duty diesel trucks that represent the bulk of DPM emissions from California highways. These regulations include the solid waste collection vehicle (SWCV) rule, in-use public and utility fleets, and the heavy-duty diesel truck and bus regulations. In 2011, CARB approved the latest regulation to reduce emissions of DPM and nitrogen oxides from existing on-road heavy-duty diesel fueled vehicles.[6] The regulation requires affected vehicles to meet specific performance requirements between 2012 and 2023, with all affected diesel vehicles required to have 2010 model-year engines or the equivalent by 2023. These requirements are phased in over the compliance period and depend on the model year of the vehicle. With implementation of CARB's Risk Reduction Plan, DPM concentrations are expected to be reduced by 85 percent in 2020 from the estimated year-2000 level.[7] As emissions are reduced, risks associated with exposure to emissions also are expected to be reduced.

CARB Air Quality and Land Use Handbook. In April 2005, CARB released the final version of its *Air Quality and Land Use Handbook: A Community Health Perspective*. This guidance document is intended to encourage local land use agencies to consider the risks from air pollution before they approve the siting of sensitive land uses (e.g., residences) near sources of air pollution, particularly TACs (e.g., freeway and high traffic roads, commercial distribution centers, rail yards, ports, refineries, dry cleaners, gasoline stations and industrial facilities). These advisory recommendations include general setbacks or buffers from air pollution sources. However, unlike industrial or stationary sources of air pollution, the siting of new sensitive land uses alone does not require air quality permits or approval by air districts, and as noted above, the CARB handbook provides guidance only rather than binding regulations.

CAPCOA Health Risk Assessments for Proposed Land Use Projects. The California Air Pollution Control Officer's Association (CAPCOA) is a consortium of air district managers throughout California, which provide guidance material to addressing air quality issues in the State. As a follow up to CARB's 2005 *Air Quality and Land Use Handbook*, CAPCOA prepared the *Health Risk Assessments for Proposed Land Use Projects*.[8] This guidance document was released to ensure that the health risk of projects be identified, assessed, and avoid or mitigated, if feasible, through the CEQA process. The CAPCOA guidance document provides recommended methodologies for evaluating health risk impacts for development projects.

[6] *Title 13, Section 2205. http://www.arb.ca.gov/msprog/onrdiesel/onrdiesel. Website accessed in July 2014.*
[7] *CARB. 2000. Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles.*
[8] *CAPCOA. 2009. Health Risk Assessments for Proposed Land Use Projects.*

Regional. The MBUAPCD regulates air quality in the NCCAB, and is responsible for attainment planning related to criteria air pollutants, and for district rule development and enforcement. It also reviews air quality analyses prepared for CEQA assessments, and has published the *CEQA Air Quality Guidelines* document (last revised February 2008) for use in evaluation of air quality impacts. The purpose of these Guidelines is to assist in the review and evaluation of air quality impacts from projects which are subject to CEQA. These Guidelines are an advisory document intended to provide lead agencies, consultants, and project proponents with uniform procedures for assessing potential air quality impacts and preparing the air quality section of environmental documents. These Guidelines are also intended to help these entities anticipate areas of concern from the MBUAPCD in its role as a lead, commenting and/or responsible agency for air quality.

Air Quality Management Plan. In accordance with the California Clean Air Act, the MBUAPCD has developed the *2008 Air Quality Management Plan for the Monterey Bay Region* (2008 AQMP). The 2008 AQMP is a transitional plan shifting focus of the MBUAPCD's efforts from achieving the 1- hour component of the State ozone AAQS to achieving the 8-hour ozone requirement. The plan includes an updated air quality trends analysis, which reflects both the 1- and 8-hour standards, as well as an updated emission inventory, which includes the latest information on stationary, area and mobile emission sources.

In April 2013, the MBUAPCD adopted the *2012 Triennial Plan Revision* (2012 AQMP Revision), which assesses and updates elements of the 2008 AQMP, including the air quality trends analysis, emission inventory, and mobile source programs. The 2012 AQMP Revision only addresses attainment of the State ozone standard. In 2012, EPA designated the NCCAB as in attainment of the current national 8-hour ozone standard of 0.075 ppm.

The following MBUAPCD rules would limit emissions of air pollutants from construction and operation of the proposed Project:

- *Rule 400 (Visible Emissions)* – Discharge of visible air pollutant emissions into the atmosphere from any emission source for a period or periods aggregating more than three minutes in any one hour, as observed using an appropriate test method, is prohibited.
- *Rule 402 (Nuisances)* - No person shall discharge from any source whatsoever such quantities of air contaminants or other materials which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; or which endanger the comfort, repose, health, or safety of any such persons or the public; or which cause, or have a natural tendency to cause, injury or damage to business or property.
- *Rule 425 (Use of Cutback Asphalt)* – The use of cutback asphalt (asphalt cement that has been blended with petroleum solvents) is restricted.
- *Rule 426 (Architectural Coatings)* – This rule limits the emissions of ROGs from the use of architectural coatings.

Local.

Current Adopted San Benito County County General Plan. Following are relevant policies and actions from the County's current (1985) General Plan:

Open Space and Conservation Element (1995):

Policy 10 *Air Quality. The County recognizes air as a natural resource and will strive to maintain air quality through proper land use planning. It shall be the County's policy to utilize land use and transportation controls for the protection and enhancement of air quality. Finally, it will be County's policy to review public and private development proposals in light of possible recreational and open space potential.*

Action 1 *The County, by resolution, will establish a policy of urban concentration for the protection of air quality. The resolution should specifically discourage the development of commercial and residential areas outside of urban centers, other than those defined in the Land Use Element, in order to reduce the impacts of air pollution caused by commuting and shopping.*

Action 2 *Require convenient pedestrian and bicycle access to parks and community facilities and the development of on-site private recreation to serve the needs of unincorporated clusters of population.*

Action 3 *Develop land use programs to reduce vehicle miles and trips, thereby reducing traffic congestion and protecting and enhancing air quality.*

Action 4 *Allow clustering and encourage conservation easements to direct population growth from natural resources to areas where services are provided.*

Draft 2035 General Plan Update. The proposed (but not yet adopted) Draft 2035 General Plan Safety Element provides the following goals, policies and objectives pertaining to air quality. Because the Draft 2035 General Plan has not yet been adopted by the Board of Supervisors, these policies are included for informational purposes only.

Goal HS-5 *To improve local and regional air quality to protect residents from the adverse effects of poor air quality.*

HS-5.1 *New Development. The County shall use the CEQA process to ensure development projects incorporate feasible mitigation measures to reduce construction and operational air quality emissions, and consult with the Monterey Bay Unified Air Pollution Control District early in the development review process.*

HS-5.2 *Sensitive Land Use Locations. The County shall ensure adequate distances between sensitive land uses and facilities or operations that may produce toxic or hazardous air pollutants or substantial odors.*

HS-5.4 *PM10 Emissions from Construction. The County shall require developers to reduce particulate matter emissions from construction from construction (e.g.,*

grading, excavation, and demolition) consistent with standards established by the Monterey Bay Unified Air Pollution Control District.

HS-5.6 *New Construction Mitigation. The County shall work in coordination with the Monterey Bay Unified Air Pollution Control District to minimize air emissions from construction activities associated with proposed development.*

HS-5.10 *Vehicle Emissions Reductions. The County shall study alternatives for improving circulation (e.g., roundabouts, one ways, etc.), when feasible, to reduce idling motor vehicle emissions.*

The consistency of the Project with applicable County General Plan and Draft 2035 General Plan Update goals, policies and objectives pertaining to air quality, including key policies listed above, is evaluated in Section 4.10, *Land Use*. However, with respect to the Draft 2035 General Plan Update, as noted above, because it has not been adopted as of the writing of this SEIR, the consistency analysis for the Draft 2035 General Plan Update is provided for informational purposes only.

f. Sensitive Receptors. Certain population groups are more sensitive to air pollution than the general population; in particular, children, the elderly, and acutely ill and chronically ill persons, especially those with cardio-respiratory diseases, are considered sensitive receptors. Sensitive receptors that are in proximity to localized sources of particulate matter, toxics, and carbon monoxide (CO) are of particular concern. As described in the MBUAPCD's *2008 CEQA Guidelines*, a sensitive receptor is defined as: any residence including single-family homes, condominiums, apartments, and other living quarters; education resources such as preschools and kindergarten through grade twelve (k-12) schools; daycare centers; and health care facilities such as hospitals or retirement and nursing homes.

CARB recommends evaluating potential impacts to sensitive receptors located within 1,000 feet of the subject site (CARB, 2005). The existing sensitive receptor closest to the Project Site is a residential unit located approximately 1,600 feet north of the site boundary. The next closest existing sensitive receptor is a single-family residential unit located approximately 2,800 feet west of the Project Site on Mission Vineyard Road. The proposed on-site residences, as well as the proposed assisted living facility, would also be sensitive receptors.

4.3.2 Previous Environmental Review

The 2003 *San Juan Oaks Golf Club General Plan Amendment/Zone Change/Vesting Tentative Subdivision Map EIR* (2003 EIR) examined the air quality setting of the Project region and the potential impacts resulting from development under the San Juan Oaks Golf Club General Plan Amendment/Zone Change/Vesting Tentative Subdivision Map Project. The 2003 EIR concluded that impacts related to dust and PM_{10} generation during construction, odor nuisance effects, impacts related to exposure of site construction workers to asbestos and lead based paint during demolition of the existing on-site residence, and consistency with the 2000 AQMP were potentially significant. Mitigation Measures included: application of best-APCD available control technology (BACT) for construction equipment; dust control measures during Project construction; covering stockpiled soils during the construction period; retention of a dust control monitor during construction activity; development and implementation of an odor

abatement plan; asbestos sampling and supervision for demolition activity on the Project Site; and lead-based paint management for demolition activity on the Project Site. These mitigation measures were determined to mitigate impacts related to dust and PM_{10} generation during construction, odor nuisance effects, and exposure of site construction workers during demolition to a significant but mitigable level. However, the impact related to consistency with the 2000 AQMP were determined to remain significant and unavoidable. Project-related mobile and stationary source emissions and CO "hotspot" emissions were determined to be Class III, less than significant impacts.

The 2003 San Juan Oaks Golf Club project included a General Plan Amendment/Zone Change/Vesting Tentative Tract Map. This previously approved project allowed for the development of 156 market rate residential units, 30 affordable units, a resort hotel, a village commercial site, a park, a permanent wildlife habitat/open space, an additional 18-hole golf course, and an additional nine-hole golf course. None of the previously approved uses have been constructed.

Although the 2003 EIR addressed impacts related to air quality, substantial changes to the previously approved 2003 San Juan Oaks Golf Club project are proposed as part of Del Webb at San Juan Oaks Specific Plan Project.

The development footprint of the 2003 San Juan Oaks Golf Club Project and the current proposed Project are substantially similar, as shown in Figure 1-1 in Section 1.0, *Introduction*. However, substantial changes to the previously approved 2003 San Juan Oaks Golf Club project are proposed as part of Del Webb at San Juan Oaks Specific Plan Project. Specifically, the Del Webb at San Juan Oaks Specific Plan Project proposes to increase the previously approved overall impervious building area from approximately 193 acres to approximately 323 acres, increase the total number of residential dwellings from 186 single-family residential dwellings to 1,084 single-family residential dwellings, increase the neighborhood commercial area from approximately seven acres to approximately 14 acres, increase roadway areas from approximately 44 acres to approximately 88 acres, increase the permanent wildlife habitat/open space from approximately 1,163 acres to approximately 1,243 acres, permanently preserve approximately 153 acres of off-site prime agricultural land, and develop an approximately 10 acre amenity center. These proposed changes have the potential to substantially increase the severity of the previously identified impacts related to air quality. Therefore, the following impact analysis has been prepared pursuant to Public Resources Code Section 21166 and CEQA Guidelines Section 15162 (a). In addition, the re-examination of air quality is necessary because MBUAPCD has updated its *CEQA Air Quality Guidelines* in June 2004 and February 2008, and due to the presence of new information about the NCCAB's attainment status.

4.3.3 Impact Analysis

a. Methodology and Significance Thresholds. The analysis of the Project's air quality impacts follows the guidance and methodologies recommended in the MBUAPCD *CEQA Air Quality Guidelines* (February 2008) as well as Appendix G of the *State CEQA Guidelines*.

According to the adopted Appendix G of the *State CEQA Guidelines*, impacts related to air quality from the proposed Project would be significant if the Project would:

1) *Conflict with or obstruct implementation of the applicable air quality plan;*
2) *Violate any air quality standard or contribute substantially to an existing or projected air quality violation;*
3) *Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed qualitative thresholds for ozone precursors);*
4) *Expose sensitive receptors to substantial pollutant concentrations; and/or*
5) *Create objectionable odors affecting a substantial number of people.*

The *State CEQA Guidelines* further state that the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the determinations above.

MBUAPCD Thresholds of Significance. The MBUAPCD has issued criteria for determining the level of significance for Project-specific impacts within its jurisdiction in accordance with the above thresholds. Thus, this analysis also evaluates the Project's air quality impacts pursuant to MBUAPCD's recommended guidelines and thresholds of significance, as further discussed below. Specifically, the proposed Project's air quality impacts would be significant if the Project would:

- *Be inconsistent with the adopted AQMP.*
- *During construction, cause a violation of PM_{10} AAQS at nearby or upwind of sensitive receptors, based on whether the project would:*
    - *Emit greater than 82 lb/day of PM_{10} (note: projects which require minimal earthmoving on 8.1 or more acres per day or grading and excavation on 2.2 or more acres per day are assumed to exceed this threshold); or*
    - *Use equipment that is not "typical construction equipment" as specified in Section 5.3 of the MBUAPCD CEQA Guidelines.*
- *During operations:*
    - *Generate direct (area source or stationary) plus indirect (mobile) emissions of either ROG or NO_X that exceed 137 lbs/day;*
    - *Generate on-site emissions of PM_{10} exceeding 82 lbs/day;*
    - *Generate direct emissions of CO exceeding 550 lbs/day; or*
    - *Generate direct emissions of SO_2 exceeding 150 lbs/day.*
- *Cause or substantially contribute to a violation of a CO standard.*

Traffic emissions from the Project would be considered significant if the Project contributes to CO concentrations at receptor locations in excess of the ambient air quality standards. The following traffic effects should be assumed to generate a significant CO impact, unless CO dispersion modeling demonstrates otherwise*:*

- *Intersections or road segments that currently operate at LOS D or better would operate at LOS E or F with addition of the project's traffic, or*
- *Intersections that operate at LOS E or F where delay would increase by 10 seconds or more with the project's traffic.*

The MBUAPCD guidelines state that odor impacts would be significant if the Project would result in the emission of substantial concentrations of pollutants that produce objectionable odors, causing injury, nuisance, or annoyance to a considerable number of persons, or endangering the comfort, health, or safety of the public. If construction or operation of the Project would emit pollutants associated with odors in substantial amounts, the analysis should assess the impact on existing or reasonably foreseeable sensitive receptors.

Air Quality Management Plan Consistency. A project would conflict with or obstruct implementation of the *2008 Air Quality Management Plan* (2008 AQMP) and *2012 Triennial Plan Revision* (2012 AQMP Revision) for the Monterey Bay Region if it is inconsistent with the plan's growth assumptions, in terms of population, employment, or regional growth in vehicle miles traveled (VMT). These population forecasts were developed, in part, using data obtained from local jurisdictions on projected land uses and population projections identified in community plans. Projects that result in an increase in population that is inconsistent with local community plans would be considered inconsistent with the AQMP.

Methodology. The analysis of air quality impacts conforms to the methodologies recommended in the MBUAPCD's *CEQA Air Quality Guidelines* (February 2008). The handbook includes thresholds for emissions associated with both construction and operation of proposed projects.

Construction Emissions. The regional construction emissions associated with development of the proposed Project were calculated using the California Emissions Estimator Model (CalEEMod) version 2013.2.2 by using default inputs for the type and size of proposed land uses, including the types and number of pieces of equipment that would be used on-site during each construction phase and off-site vehicle trips that would result from Project construction. CalEEMod is a computer model developed by South Coast Air Quality Management District to estimate air pollutant and GHG emissions from land use development projects, and is based on parameters including the duration of construction activity, area of disturbance, and anticipated equipment use during construction. The construction activities associated with development would generate diesel emissions and dust. Construction equipment that would generate criteria air pollutants includes excavators, graders, dump trucks, and loaders. It is assumed that this type of equipment would be used during both grading and construction. It is also assumed that all of the construction equipment used would be diesel-powered. Due to the large size of the Project Site, for the purposes of this analysis it was assumed that grading would be balanced within the Project Site, and that no off-site import or export of soil would be required during Project construction. This analysis assumes that construction of the proposed Project would begin in 2015, and occur in five development phases over approximately ten years. If construction occurs later than 2016, in general emissions would be similar but slightly reduced, due to the potential for the construction fleet to include newer, more efficient equipment.

The emissions from each phase of the Project were estimated individually using CalEEMod because construction of the individual phases may occur separately. However, this analysis makes a reasonably conservative assumption that two phases of development may coincide. The five anticipated phases of the Project are described in Section 2.0, *Project Description,* and shown in Table 4.3-4. Figure 2-13 and Table 2-10 identify proposed development phasing within the Project Site. Complete results from CalEEMod and assumptions can be viewed in Appendix D.

Table 4.3-4
Phasing Plan

Phase	Gross Area (approx. acres)	Residential Units	Non-Residential
1	1,410	270	
2	85	262	25,000 sf[1]
3	82	278	
4	79	207	
5	339	67	200 rooms[2]/65,000 sf[3]
Total	**1,994 acres[4]**	**1,084 units**	

1. *Amenity Center*
2. *Resort Hotel*
3. *Neighborhood Commercial. Includes an approximately four-acre assisted living/skilled nursing/memory care facility with up to 100 beds*
4. *Due to rounding, numbers do not sum accurately*

Over the course of the five phases, related infrastructure, park and open space uses, private recreational facilities, and other amenities and improvements would be provided commensurate with the proposed residential and commercial development, pursuant to the terms of a Development Agreement, the Specific Plan and the Project's other approvals and entitlements.

The development phases are intended to occur sequentially, although portions of phases may occur concurrently. Development of each phase would include all infrastructure, services, facilities and amenities, both public and private, needed to serve the uses and structures within each phase. Development of each phase would result in a phase of the Project that could "stand alone" with suitable roadway, utility and public facility infrastructure and not require additional phases to be developed. It is anticipated that each of the development phases may include sub-phases which may result in the development and recordation of multiple Final Maps to facilitate the full implementation and build-out of the proposed Project.

Operational Emissions. Operational emissions associated with on-site development were estimated using CalEEMod and vehicle trip data provided in the traffic study prepared by Fehr & Peers (Appendix I). Operational emissions would be comprised of mobile source emissions, emissions associated with energy consumption, and area source emissions. Mobile source emissions are generated by the increase in motor vehicle trips to and from the Project Site associated with operation of the Project. Emissions attributed to energy use include electricity and natural gas consumption for space and water heating and cooling. Area source emissions are generated by, for example, landscape maintenance equipment, consumer products, and architectural coatings.

Toxic Air Contaminants. MBUAPCD provides guidance for evaluating potential impacts from toxic air contaminants (TACs) in their *CEQA Air Quality Guidelines* document (last revised February 2008). As noted therein, construction equipment or processes could result in significant impacts if emissions at any sensitive receptor would exceed the threshold that is based on the best available data or may result in a cancer risk greater than one incident per

100,000 population. As discussed above, CARB recommends evaluating potential impacts to sensitive receptors within 1,000 feet of a project site (CARB, 2005). Operational equipment or processes would not result in significant air quality impacts if they would comply with MBUAPCD Rule 1000, which applies to any source which requires a permit to construct or operate pursuant to District Regulation II and has the potential to emit carcinogenic or non-carcinogenic TACs, and requires sources of carcinogenic TACs to install best available control technology and reduce cancer risk to less than one incident per 100,000 population.

Consistent with MBUAPCD recommendations, human health risks from toxic air contaminants (TACs) are analyzed based on the presence of mobile equipment that would generate diesel particulate matter during construction and operation of the Project and on the proximity of the nearest sensitive receptors that could be exposed to TACs from the Project Site.

CO Hotspots. Based on the MBUAPCD *CEQA Air Quality Guidelines* (2008), significant CO hotspot impact may occur at:

- *Intersections or road segments that operate at LOS D or better that would operate at LOS E or F with the project's traffic, or*
- *Intersections that operate at LOS E or F where delay would increase by 10 seconds or more with the project's traffic.*

Where intersections may operate under conditions that could result in a CO hotspot, a significant impact would occur where existing or reasonably foreseeable sensitive receptors would be exposed to the CO hotspot.

b. Project Impacts and Mitigation Measures.

Impact AQ-1 Construction of the proposed Project would result in the temporary generation of air pollutants, which would affect local air quality. However, short-term emissions of PM_{10} during the construction periods would not exceed MBUAPCD thresholds. Impacts would be Class III, *less than significant*. [Threshold number 2]

As discussed in Section 2.0, *Project Description*, it is assumed that buildout of the proposed Project would occur in five phases, with full buildout assumed to occur by 2025. Construction activity and associated emissions of ozone precursors (ROG and NO_X) and dust (PM_{10}) would occur periodically during construction over the approximately 10 years.

Construction emissions are generally referred to as temporary impacts of a project, but have the potential to represent a significant impact with respect to air quality. Fugitive particulate matter dust emissions are among the pollutants of greatest concern with respect to construction activities. These emissions from construction activities can lead to adverse health effects and nuisance concerns, such as reduced visibility and soiling of exposed surfaces. General site grading operations are the primary sources of fugitive particular matter dust emissions. However, these emissions can vary greatly, depending on the level of activity, the specific operations taking place, the location of the construction area(s) in relation to sensitive receptors,

the number and types of equipment operated, vehicle speeds, local soil conditions, weather conditions, and the amount of earth disturbance (e.g., site grading, excavation, cut and fill).

Emissions of ozone precursors (ROG and NOx) are primarily generated from off-road construction equipment and mobile sources (i.e., delivery vehicles, construction worker vehicles). Generation of these emissions vary as a function of the types and number of heavy-duty, off-road equipment used and the intensity and frequency of their operation, as well as vehicle trips per day associated with delivery of construction materials, the importing and exporting of soil, vendor trips, and worker commute trips.

Buildout of the Project would develop 1,017 single-family residences on approximately 176 acres and would include an amenity center, which would be located on approximately ten acres. It would also include 67 non-age restricted single-family residential units, a 200-room resort hotel on approximately 35 acres, and an up to 65,000-square foot neighborhood commercial center on approximately 14 acres, including an approximately 4-acre assisted living/skilled nursing/memory care facility with up to 100 beds. Open space within the Development Areas would consist of approximately seven acres of private parks, approximately 114 acres of common area open space, including landscaped areas and informal trails, and approximately 17 additional acres for public passive park use near the Project entrance as part of the approximately 41-acre agricultural preserve. In addition, there would be an off-site agricultural preserve of approximately 153 acres and approximately 1,243 acres of on-site permanent wildlife habitat preserved.

Table 4.3-5
Estimated Construction Emissions

Emission Source	Emissions Estimate (lbs/day)					
	ROG	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Phase I	292.0	167.4	142.7	0.2	29.7	18.7
Phase II	293.2	155.5	139.6	0.2	29.1	18.0
Phase III	297.46	141.3	131.4	0.2	28.0	17.1
Phase IV	340.8	93.9	88.9	0.1	24.0	14.4
Phase V	352.2	66.1	88.1	0.2	23.5	13.2
MBUAPCD Significance Threshold	-	-	-	-	*82*	-
Exceeds Threshold?	**N/A**	**N/A**	**N/A**	**N/A**	**NO**	**N/A**

Source: Calculations using CalEEMod 2013.2.2. See Appendix D for calculations. Applied the highest emissions from Summer or Winter results.

Total Short-Term Construction Emissions. As shown above in Table 4.3-5, temporary emissions during construction would not exceed the only applicable MBUAPCD threshold, which relates to PM_{10}. Typical construction equipment, as discussed in the MBUAPCD *CEQA Air Quality Guidelines*, would be used. The potential would exist for construction of two consecutive development phases to overlap. However, that would not result in PM_{10} emissions that could exceed the threshold, as the highest possible combined emissions shown in Table 4.3-

5 would be below 60 pounds per day, which would not exceed the MBUAPCD threshold. Furthermore, compliance with MBUAPCD Rule 400 (Visible Emissions), Rule 425 (Use of Cutback Asphalt), and Rule 426 (Architectural Coatings) would reduce emissions of dust particulates and ROGs during construction activity. Therefore, short-term air quality emissions during Project construction would be less than significant.

Mitigation Measures. No mitigation is required. However, the MBUAPCD recommends the use of the following "best management practices" for the control of short-term construction generated emissions, which would be incorporated into the Project's design. In addition, implementation of such measures would also be consistent with the Public Review Draft 2035 General Plan Goal HS-5 which requires all feasible measure to be included to reduce construction related emissions in accordance with MBUAPCD policies and regulations.

- Water all active construction areas at least twice daily. The frequency should be based on the type of operation, soil and wind exposure.
- Prohibit all grading activities during periods of high wind (over 15 mph).
- Apply chemical soil stabilizers on inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days).
- Apply non-toxic binders (e.g., latex acrylic copolymer) to exposed areas after cut and fill operations and hydroseed areas.
- Haul trucks shall maintain at least 2'0" of freeboard.
- Cover all trucks hauling soil, sand, and other loose materials.
- Plant tree windbreaks on the windward perimeter of construction projects if adjacent to open land.
- Plant vegetative ground cover in disturbed areas as quickly as possible.
- Cover inactive storage piles.
- Install wheel washers at the entrance to construction sites for all existing trucks.
- Pave all roads on construction sites.
- Sweep streets, if visible soil material is carried out from the construction site.
- Post a publicly visible sign which specifies the telephone number and person to contact regarding dust complaints. This person shall respond to complaints and take corrective action within 48 hours. The phone number of the Monterey Bay Unified Air Pollution Control District shall be visible to ensure compliance with Rule 402 (Nuisance).
- Limit the area under construction at any one time.

Implementation of the above recommended best-available control measures for the control of construction-related emissions would further reduce construction-related particulate emissions and would ensure that short-term construction emissions would be less than significant.

Significance After Mitigation. Impacts would be less than significant without mitigation.

Impact AQ-2 Operational emissions of ROG would exceed MBUAPCD's daily thresholds. Mitigation would be required to reduce this impact. Therefore, the Project would have a Class II, *significant but mitigable,* impact to regional air quality. [Threshold numbers 2 and 3]

As described, operational emissions for the proposed Project would be comprised of mobile source emissions, emissions associated with energy consumption, and area source emissions. Area source emissions include emissions from wood and gas burning hearths/fireplaces. This analysis estimates that all 67 non-age restricted residential units, as well as 25% of the 1,017 single-family residences, would include fireplaces, based on information provided by the applicant (Fisher, personal communications, July 2014). Using CalEEMod defaults to determine the number of fireplaces that would be fueled by natural gas and the number that would be fueled by wood, the analysis assumes that 26 of the fireplaces in the active adult residences (up to 40%) would be wood burning and 41 would be fueled by natural gas. The analysis also assumes that all fireplaces in the single-family residences would be fueled by natural gas. Area source emissions associated with landscaping equipment were calculated using CalEEMod defaults, based on the proposed land uses, a realistic number of days on which landscape equipment would be operated, and emissions factors for appropriate types of landscape equipment (CAPCOA, 2013). The emissions associated with all operations of the Project are shown in Table 4.3-6 below.

Mobile source emissions constitute the vast majority of operational emissions from these types of land use development projects; compared to mobile source emissions, area-source emissions and energy source emissions are negligible. Mobile source emissions associated with the operational phase of the Project are presented in Table 4.2-6. The Specific Plan is based on a land use pattern that would co-locate residential and commercial uses within the Project Site, resulting in a reduction of vehicle trips. The estimate of total daily trips associated with the proposed Project was based on vehicle trip data provided in the traffic study prepared by Fehr & Peers (refer to Section 4.13, *Transportation and Circulation* and Appendix I), which includes a 13% mixed-use development (MXD) reduction in vehicle trips.

The modeling of operational emissions also incorporates, where applicable, green building design features in the proposed Specific Plan that would reduce emissions as compared to traditional development techniques. These are described in detail in Section 2.0, *Project Description*, and include the use of recycled building materials, energy-efficient lighting, high-efficiency appliances, water-efficient fixtures, low-water use landscape irrigation, and an option for photovoltaic installation on structures. Reduced overall consumption factors were derived from the Project-specific Water Supply Assessment (Tully & Young, December 2014; refer to Section 4.14, *Utilities and Service Systems*).

Table 4.3-6
Estimated Operational Emissions

Emission Source	Emissions Estimate (lbs/day)					
	ROG	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Area	223.1	2.3	208.9	<0.1	16.2	16.2
Energy	1.1	9.5	5.6	<0.1	0.8	0.8
Mobile	26.8	61.4	314.9	0.8	55.0	15.4
***Total Emissions*[1]**	**251.0**	**73.2**	**529.4**	**0.9**	**71.9**	**32.3**
MBUAPCD Significance Threshold	*137*	*137*	*550*	*150*	*82*	*N/A*
Exceeds Threshold?	**YES**	**NO**	**NO**	**NO**	**NO**	**N/A**

Source: Calculations using CalEEMod 2013.2.2. See Appendix D for calculations. Applied the highest emissions from Summer or Winter.

1. The sum of individual emissions sources may differ slightly from total emissions due to rounding of decimals.

As shown in Table 4.3-6, operational emissions associated with buildout of the proposed Project would exceed the applicable MBUAPCD thresholds for ROG. Area sources account for the majority of ROG emissions, including an estimated 101.4 pounds per day per year from the operation of fireplaces. This is a potentially significant impact.

Mitigation Measures. In order to reduce emissions of ROG to below MBUAPCD significance thresholds, the following mitigation measures, which require fireplaces to be fueled by natural gas and the use of low-ROG architectural coatings, are required. Although the proposed Project would encourage the use of low-ROG and no-ROG paints and finishes, the Specific Plan does not require this action or specify the concentrations of ROG emissions that would be permitted. Mitigation Measure AQ-2(b) provides this specificity for paints and related coatings and ensures implementation and enforceability in this regard.

AQ-2(a) **Natural Gas Fueled Residential Fireplaces.** All residential fireplaces included in design plans for any unit or structure within the Project shall be fueled by natural gas, rather than wood. Planning and Building Inspection Services Department shall verify that fireplaces are natural gas fueled before issuance of building permits for all future development of residential uses within the Project Site.

AQ-2(b) **Low-ROG Architectural Coatings.** Low-ROG architectural coatings shall be used on all interior and exterior surfaces. Coatings shall not exceed:

- *50 g/L for residential interior surfaces;*
- *100 g/L for residential exterior surfaces; and*
- *150 g/L for non-residential interior and exterior surfaces.*

The ROG content of coatings shall be estimated using the methodology described in the MBUAPCD's Rule 426 (Architectural Coatings).

Significance After Mitigation. Table 4.3-7 shows the reduction in emissions that would result from implementation of mitigation measures AQ-2(a) and AQ-2(b). As shown, operational emissions associated with buildout of the proposed Project would not exceed MBUAPCD thresholds with both mitigation measures. Impacts would be less than significant with mitigation incorporated.

Table 4.3-7
Estimated Operational Emissions with Mitigation

Emission Source	Emissions Estimate (lbs/day)					
	ROG	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Area	84.8	1.1	97.7	0	1.0	1.0
Energy	1.1	9.5	5.6	<0.1	0.8	0.8
Mobile	26.8	61.4	314.9	0.8	55.0	15.4
***Total Emissions*[1]**	**112.7**	**72.0**	**418.2**	**0.9**	**56.7**	**17.1**
MBUAPCD Significance Threshold	*137*	*137*	*550*	*150*	*82*	*N/A*
Exceeds Threshold?	**NO**	**NO**	**NO**	**NO**	**NO**	**N/A**

Source: Calculations using CalEEMod 2013.2.2. See Appendix D for calculations. Applied the highest emissions from Summer or Winter.

1. The sum of individual emissions sources may differ slightly from total emissions due to rounding of decimals.

Impact AQ-3 The Project would not expose sensitive receptors to substantial pollutant concentrations associated with construction dust, toxic air contaminants, or naturally-occurring asbestos. Impacts related to localized pollutants would therefore be Class III, *less than significant*. [Threshold number 4]

Construction Dust. As described under Impact AQ-1, Project construction emissions would not exceed MBUAPCD daily thresholds. The nearest existing sensitive receptor to the proposed Development Areas is a residential unit located approximately 1,600 feet north of the site. As discussed above, CARB recommends evaluating potential impacts to sensitive receptors within 1,000 feet of a project site (CARB, 2005); accordingly, for purposes of this analysis, there are no existing sensitive receptors located close enough to the Project Site to trigger further evaluation. In addition, it is anticipated that the construction of proposed single-family residences within the portion of the proposed Project closest to this nearest sensitive receptor would be limited to one phase of construction, comprising a small portion of the anticipated ten-year construction schedule.

Because of the phasing of the proposed Project, new sensitive receptors (the proposed residences and assisted living/skilled nursing/memory care facility) on the Project Site also could be exposed to construction dust during subsequent phases of construction. However, as discussed in Impact AQ-1, the highest possible PM_{10} emissions would not exceed the MBUAPCD's threshold of 60 pounds per day. Therefore, the Project would not have a significant impact on any sensitive receptors through an exposure to substantial pollutant concentrations relating to construction dust.

Short-Term Construction Toxic Air Contaminants. Exposure to localized concentrations of TACs was qualitatively assessed based on the Project's potential to result in increased exposure of sensitive receptors to new or existing TAC emission sources. Construction emission estimates shown in Impact AQ-1 are based on a reasonable "worst-case" scenario and conservatively assume that all equipment would be running simultaneously during each phase. The health risk associated with diesel exhaust PM_{10} from construction equipment has a carcinogenic and chronic effect, but no short-term acute effect is currently recognized. The Project could potentially expose sensitive receptors to temporary health hazards associated with TACs due to the operation of construction equipment; however, the nearest existing sensitive receptor to the Development Areas is a residential unit located approximately 1,600 feet north of the Project Site. Although the distance of construction-related activities relative to the location of the nearest sensitive receptor would vary depending on the location of construction-related activities, the majority of construction-related activities would not occur within close proximity to the receptor. Moreover, concentrations of mobile source diesel PM emissions are typically reduced by 70% at a distance of approximately 500 feet (CARB, 2005); accordingly, any diesel PM emissions from construction equipment would substantially decrease before reaching the nearest existing sensitive receptor 1,600 feet away. Therefore, the health risk associated with construction emissions would be less than significant.

Operational Toxic Air Contaminants. DPM would be emitted from diesel-fueled vehicles and equipment during construction activities and from diesel trucks generated by the proposed Project during operation. The particulate matter component of diesel exhaust has been classified as a TAC by CARB based on its potential to cause cancer and other adverse health effects. As discussed above, CARB recommends evaluating potential impacts to sensitive receptors within 1,000 feet of a project site (CARB, 2005). Therefore, given the location of the nearest existing sensitive receptor – more than 1,000 feet away from the Project Site – a health risk evaluation was not conducted to assess the potential health effects of the proposed Project's DPM. MBUAPCD Rule 1000 applies to any source which requires a permit to construct or operate pursuant to District Regulation II and has the potential to emit carcinogenic or non-carcinogenic TACs. The Project does not include any source requiring a permit to construct or operate pursuant to District Regulation II; therefore MBUAPCD Rule 1000 would not apply to the Project. Additionally, the proposed Project would be consistent with the existing General Plan Policy 10 and Draft 2035 General Plan Policy HS-5.2 which requires adequate distances between sensitive land uses and TAC sources, as shown in more detail in the Specific Plan.

Naturally Occurring Asbestos. Pursuant to guidance issued by the Governor's Office of Planning and Research, State Clearinghouse, lead agencies are encouraged to analyze potential impacts related to naturally occurring asbestos (NOA). NOA can be released from serpentinite and ultramafic rocks when the rock is broken or crushed. At the point of release, the asbestos

fibers may become airborne, causing air quality and human health hazards. These rocks are commonly used for unpaved gravel roads, landscaping, fill projects, and other improvement projects in some localities. Asbestos may be released to the atmosphere due to vehicular traffic on unpaved roads during grading.

The U.S.EPA issued the Clear Creek Management Area (CCMA) Asbestos Exposure and Human Health Risk Assessment in 2008 for areas of San Benito County that are exposed to NOA. The report concluded that adults and children visiting the CCMA more than once per year could be exposed to carcinogens, such as asbestos, above EPA-acceptable levels. According to the Department of Conservation's" Reported Historic Asbestos Mines, Historic Asbestos Prospects, and other Natural Occurrences of Asbestos in California, Map Sheet 59," NOA is found only in the southern part of San Benito County (2011). The Project Site encompasses approximately 1,994 acres located in the central northern portion of San Benito County, and there is no NOA located within the Project Site. Therefore, due to the location of the Project Site, NOA is not expected to pose a significant hazard in connection with the Project and impacts associated therewith would be less than significant.

Based on the above discussion related to dust, TACs, and NOA, impacts related to exposure of sensitive receptors to substantial pollutant concentrations are less than significant.

Mitigation Measures. No mitigation measures are required.

Significance After Mitigation. Impacts would be less than significant without mitigation.

Impact AQ-4 The Project would result in the degradation of service levels at four intersections in the vicinity of the Project Site and would have the potential to create carbon monoxide hotspots (CO hotspots) at these intersections. However, impacts related to CO hotspots are Class III, *less than significant*. [Threshold number 4]

As shown in Table 4.3-7, the Project's operational emissions of CO would be below the applicable MBUAPCD threshold of 550 pounds per day with mitigation incorporated. However, CO hotspots can occur at intersections with heavy peak hour traffic. Specifically, hotspots may be created at intersections where traffic levels are sufficiently high such that the local CO concentration exceeds the State AAQS of 20.0 ppm.

According to the MBUAPCD *CEQA Air Quality Guidelines* (2008), a significant CO hotspot impact may occur at:

- *Intersections or road segments that operate at LOS D or better that would operate at LOS E or F with the project's traffic, or*
- *Intersections that operate at LOS E or F where delay would increase by 10 seconds or more with the project's traffic.*

Where intersections may operate under conditions that could result in a CO hotspot, a significant impact would occur where existing or reasonably foreseeable sensitive receptors would be exposed to the CO hotspot.

As shown in Tables 4.13-11, 4.13-14, and 4.13-17 in Section 4.13, *Transportation and Circulation*, the proposed Project would meet the above criteria under Existing Conditions, Background Conditions, and/or Cumulative Conditions at four intersections. These four intersections include Bixby Road/SR 156-San Juan Road (Intersection #4), Union Road /SR 156-San Juan Road (Intersection #5), Union Road/San Juan Oaks Drive (Intersection #8), and SR 25-Airline Highway/Union Road (Intersection #11).

At the SR 25-Airline Highway/Union Road intersection, intersection operations would cause delay to increase by four seconds or less during both Existing Conditions and Background Conditions. Therefore, the Project would not cause delay to increase by 10 seconds or more, and would not generate a CO hotspot or exacerbate an existing CO hotspot at this intersection.

The other three intersections are in rural areas characterized by agricultural uses. The nearest sensitive receptors to the intersection of Bixby Road/SR 156-San Juan Road are the homes located on SR 156 approximately 400 feet west of the intersection and 600 feet east of the intersection. The nearest sensitive receptor to the Union Road/SR 156-San Juan Road intersection is a residence over 600 feet to the northeast. The nearest sensitive receptor to the Union Road/San Juan Oaks Drive is a residence approximately 800 feet northeast of the intersection. Due to the rural nature of the area surrounding these intersections and the lack of sidewalks on SR 56, Bixby Road, and Union Road, few pedestrians use these roadways, limiting the potential effect of localized CO concentrations. In addition, the area is rural and there are no surrounding buildings to prevent dispersal of pollutant concentrations at the affected intersection. CO emitted by vehicles queuing at these intersections would not be expected to exceed the State AAQS, and would further disperse and dilute to low levels before affecting sensitive receptors, which are a minimum of 400 feet away. Therefore, based on the lack of sensitive receptors near the intersections of Bixby Road/SR 156-San Joan Road, Union Road/SR 156-San Juan Road, and Union Road/San Juan Oaks Drive and the dispersal of localized pollutants, CO hotspot impacts would not occur even without signalization, and impacts would be less than significant.

Mitigation Measures. No mitigation measures are required.

Significance After Mitigation. Impacts would be less than significant without mitigation measures.

Impact AQ-5 The Project may involve the development of an optional on-site wastewater treatment plant (WWTP), which has the potential to generate odor nuisance effects. Other components of the project would not create objectionable odors that would affect neighboring properties. Impacts related to odors from the optional on-site WWTP would be Class II, *significant but mitigable*. [Threshold number 5]

Construction of the Project would typically require re-fueling of vehicles, the application of paints and the paving of roads, all of which could generate odors. However, there are no existing residences located within 1,000 feet of the proposed Project Site. In addition, while odors may be perceptible to new residences on the Project Site during construction of later

phases of development, the generation of odors during painting, paving of roads, and other construction activities would be temporary. Further, as these odors are relatively short term and quickly disperse into the atmosphere, this is not considered significant.

In general, from an operational perspective, land uses typically producing objectionable odors include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. In addition, as part of the future operations of the Project, it would likely involve minor odor-generating activities, such as lawn motor exhaust and application of exterior paints for building improvements. However, these types and concentrations of odors are typical of developments, and are not considered to constitute significant odor impacts. Restaurants are also not considered significant odor generators.

As stated in Section 2.0, *Project Description,* in the event that Project wastewater cannot be conveyed to the City of Hollister's wastewater treatment plant/water reclamation facility (DWWTP/WRF) for treatment and disposal, the Project applicants propose the construction of an optional on-site WWTP within a portion of the neighborhood commercial area. The optional on-site WWTP has the potential to create odors that may be a nuisance to adjoining residents. If constructed, the on-site WWTP would be located on three acres within a portion of the Neighborhood Commercial area. The on-site WWTP would be a stand-alone facility that would serve the proposed land uses. The estimated wastewater flow (average dry weather flow) of the system would be approximately 0.16 million gallons per day (mgd), designed to provide tertiary-quality effluent that meets all State Title 22 Recycling Criteria for unrestricted irrigation uses.

The Monterey Bay Unified Air Pollution Control District (MBUAPCD) regulates air quality and pollution in the region include air contaminants such as odors and their potential effect on sensitive receptors such as residences and commercial uses. Per Rule 402 – Nuisances, Part 3 Requirements and Standards, "No person shall discharge from any source whatsoever such quantities of air contaminants or other materials which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; or which endanger the comfort, repose, health, or safety of any such persons or the public; or which cause, or have a natural tendency to cause, injury or damage to business or property."

The nearest proposed businesses and residences would be located about 800 feet south of the potential on-site WWTP. To ensure complete capture of all odors, the on-site WWTP would be constructed within a covered structure(s) over the sources where odor can be emitted. This includes such areas as the holding tanks, aeration basins, clarifiers, and sludge thickeners. The collected odorous air would then be treated using wet air scrubbers and/or activated carbon adsorption system.

Wet air scrubbing is the most flexible and reliable technology for wastewater odor control and can be used to treat virtually any water-soluble contaminant. In a wet air scrubber, the odor contaminants are solubilized from the vapor phase into an aqueous chemical solution. The chemical balance is automatically and continuously maintained, even under changing loading conditions, minimizing the chance for odor break-through. The application of a multi-stage

scrubber would minimize the use of chemical solutions in each of the processing stages. Any use of chemicals would be strictly controlled and utilized per all applicable regulations.

In an activated carbon adsorption system, the air stream is passed over a bed of adsorbent (carbon) and the odor-causing compounds are attracted to and adhere to the surface of the adsorbent. There is no on-going chemical supply to the system and there are no biological processes to be upset. Adsorption is applicable to a wide range of compounds including hydrogen sulfide and related sulfur-based compounds, but ammonia and other nitrogen-based compounds are not effectively treated. Various carbon type systems including activated and impregnated carbon adsorption systems can be used independently or in combination to effectively remove many, if not all, contaminants.

With the above odor controlling systems in place, normal operations of small wastewater treatment plants such as this do not typically result in perceptible off-site odor nuisances. These technologies, in addition to the separation in distance from the commercial area receptors, would adequately disperse the concentrations of odors. Nevertheless, in the event of a system failure, the proposed adjacent uses could be exposed to potential odor nuisances, which would be considered a potentially significant impact.

It should be noted that if the on-site WWTP is not constructed and wastewater from development of the Project Site would be conveyed to the City of Hollister's DWWTP/WRF, odor emissions from wastewater would not occur, and odors from the proposed Project would be limited to odors associated with vehicle and engine exhaust and idling, which would not be significant.

Mitigation Measures. If the optional on-site WWTP is constructed, the following mitigation measure is required. If the WWTP is not constructed, no mitigation is required.

AQ-5 **Odor Abatement Plan**. The applicant shall develop an Odor Abatement Plan (OAP) which shall include the following:

a. Name and telephone number of contact person(s) responsible for logging and responding to odor complaints;
b. Policy and procedure describing the actions to be taken when an odor complaint is received, including the training provided to the responsible party on how to respond to an odor complaint;
c. Description of potential odor sources at the facility;
d. Description of wind patterns in the area of the facility;
e. Description of methods for reducing odors; and
f. Contingency measures to curtail emissions in the event of a continuous public nuisance.

This plan shall be prepared by the applicant and approved by the Planning and Building Inspection Services Department and MBUAPCD prior to approval of the final building permit for the treatment facility. MBUAPCD shall be responsible for overseeing implementation of the OAP if odor complaints are received.

Significance After Mitigation. With implementation of the above mitigation, impacts would be less than significant.

Impact AQ-6 The Project Site has a few existing structures such as the Golf Clubhouse (which would be remodeled), the driving range, and supporting structures. The upgrades to these structures would not expose site occupants and/or workers to health hazards associated with hazardous asbestos and/or lead-based paint. This would be a Class III, *less than significant*, impact. [Threshold number 4]

There only existing on-site structures are the existing golf clubhouse, driving range, and support facilities. As noted in Section 2.0, *Project Description*, the existing clubhouse would be remodeled and upgraded as part of the proposed Project. The clubhouse was constructed in 1996. Due to its age, the existing structure is not anticipated to contain asbestos and/or lead-based paint. Therefore, the proposed Project would not result in any hazards associated with such materials. This impact is less than significant.

Mitigation Measures. No mitigation measures are required.

Significance After Mitigation. Impacts would be less than significant without mitigation.

Impact AQ-7 The proposed Project would contribute to population growth that is consistent with the growth assumptions in the *Air Quality Management Plan* (AQMP). This impact is Class III, *less than significant*. [Threshold number 1]

CEQA Guidelines § 15125(b) requires that an EIR evaluate a project's consistency with applicable regional plans, in this instance the 2008 AQMP and 2012 AQMP Revision. The applicable MBUAPCD Thresholds of Significance also require analysis of whether the project at issue would be inconsistent with any applicable air quality control plan. Accordingly, if the Project's emissions were not consistent with the AQMP (i.e., the growth contemplated under the Project was not accounted for in the AQMP), this would represent a potentially significant impact.

As noted in Section 4.3.3(a) (Methodology and Significance Thresholds), a project would conflict with or obstruct implementation of the AQMP if it is inconsistent with the growth assumptions included in the AQMP, in terms of population, employment, or regional growth in VMT (MBUAPCD, 2008, revised 2012). The proposed Project involves future development on approximately 1,994 acres in the central northern portion of San Benito County. Specifically, the Project would allow for the development of up to 1,084 residential units, approximately 25,000 square feet of non-residential space, 200 hotel rooms, and up to approximately 65,000 square feet of commercial mixed use. Based on the Project's projected population of 1.67 persons per household for the active adult community (1,017 units) and 3.51 persons per household for the conventional housing (67 units), and the proposed assisted living facility which would serve up to 100 people, the proposed Project would generate approximately 2,033 residents.

The 2003 EIR found that the previously approved San Juan Oaks Golf Club project would generate a population of approximately 605 residents. As currently proposed, the Project would generate an estimated 2,033, residents, which represents an increase of 1,428 residents over the previously anticipated population on-site. Nevertheless, as shown in Table 4.3-8 below, the Project's contribution to population growth as projected by the Association of Monterey Bay Area Governments, and included in the MBUAPCD AQMP, would be 2.5% or less of the 2020, 2030, and 2035 projected population. Furthermore, based on the MBUAPCD's Consistency Determination Procedure, version 4.0, residential buildout on the Project Site would not result in an exceedance of regional growth projections.

Table 4.3-8
Project's Contribution to Population Projections

Area	2020 Population	2030 Population	2035 Population
Hollister	49,064	59,259	62,756
San Juan Bautista	2,356	2,743	2,907
Unincorporated San Benito County	24,720	27,429	29,068
Total	**76,140**	**89,431**	**94,731**
Project's Projected Population % Contribution	**2.5%**	**2.2%**	**2.0%**

Source: MBUAPCD, AQMP, 2008

At full buildout, it is estimated that a total of approximately 547 ongoing jobs would be generated by the retail operations, hotel space, and household spending under the Project (see the Specific Plan in Appendix B). Additionally, another approximately 80 jobs would be created and/or supported by the operations of Del Webb Amenity Center, AHOA/MHOA, and San Juan Oaks Golf Club (golf course jobs exist currently). Although some jobs generated by implementation of the Project would likely be filled by current residents of San Benito County, some of the new job opportunities would likely be filled by people commuting or relocating to the area as well. In this way, the proposed Project may indirectly generate population growth in the area. The number of people who would relocate as a result of the Project and the location where they would reside cannot be predicted; however, conservatively assuming that all 627 employees generated by the Project were coming from outside of the County and therefore would be creating additional population growth, they would account for less than 3.4% of the population growth (18,591 persons) projected for the County between 2020 and 2035.

The anticipated increase in population (from both residents and employees) would therefore be consistent with long-term growth projections for the County. Therefore, the Project would not exceed growth assumptions in the AQMP directly (through population growth) or indirectly (through employment or regional growth in VMT). Therefore, implementation of the Project would not obstruct implementation of an air quality plan and the Project would have a less than significant impact related to conflicts with or obstruction of implementation of the MBUAPCD air quality management plans.

Mitigation Measures. No mitigation measures are required.

Significance After Mitigation. Impacts would be less than significant without mitigation.

c. Cumulative Impacts. Buildout of the proposed Project would result in an additional 1,084 residential units, a 200-room resort hotel, approximately 65,000 square feet of commercial uses (including an approximately 100-bed assisted care facility), approximately 25,000 square feet of commercial, mixed uses, approximately seven acres of private parks, approximately 114 acres of common open space, and approximately 17 acres of community parks within the proposed on-site agricultural preserve. In San Benito County, impact thresholds have been established to assess a project's effect on the regional air quality. In accordance with the MBUAPCD *CEQA Air Quality Guidelines* document, a project that does not exceed applicable thresholds and is consistent with the applicable AQMP is considered to have a less than significant cumulative impact on the airshed. Cumulative impacts related to CO hotspots are discussed in Impact AQ-5. Since the proposed Project would be consistent with long-term regional air quality planning efforts and does not exceed County thresholds, the Project is expected to have a Class III, *less than significant*, cumulative impact on air quality.

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