7.0
AIR QUALITY

This chapter evaluates the potential air quality effects of implementing the proposed 2035 San Benito County General Plan (2035 General Plan). As established in the Notice of Preparation (see Appendix A, Notice of Preparation), urban development and other activities resulting from implementation of the 2035 General Plan may degrade air quality within the County. The following analysis reviews air quality resources potentially affected by the implementation of the 2035 General Plan. The chapter includes an air quality setting section and an impacts discussion.

The air quality setting includes two sections: an environmental setting section and a regulatory setting section. The setting reviews the federal and state criteria pollutant attainment status for the North Central Coast Air Basin (NCCAB), the estimated criteria pollutant emissions in San Benito County and the NCCAB, and recent air pollutant monitoring data. The regulatory section summarizes applicable air quality regulations, requirements, plans, and policies. Rules and regulations influencing air quality were identified by a review of federal, state, and local regulations.

Potential air quality impacts were evaluated using significance criteria consistent with Appendix G to the State CEQA Guidelines, Section III, Air Quality. The methodologies used in this analysis are consistent with those methodologies found in the Monterey Bay Unified Air Pollution Control District (MBUAPCD) CEQA Thresholds (MBUAPCD 2008a).

7.1 SETTING

The County environmental and regulatory setting with respect to air quality described below is based largely on the General Plan Background Report (San Benito County 2010b). Pursuant to State CEQA Guidelines §15150, this document is incorporated into the RDEIR by reference as

though fully set forth herein. Where necessary, information originating from the Background Report has been updated with the best available and most current data, as previously discussed in Section 4.3. The Background Report is available for download at: www.sanbenitogpu.com/docs.html. Copies of the Report may be viewed during standard business hours (8:00 a.m. to 12:00 p.m. and 1:00 p.m. to 5:00 p.m.), Monday through Thursday, at the San Benito County Planning and Building Department, 2301 Technology Parkway, Hollister, California 95023. County offices are closed to the public on Fridays.

7.1.1 Environmental Setting

The Background Report discussion of the air quality setting describes the federal- and state-identified criteria pollutants, the status of these pollutants in the NCCAB, and emission sources in the County and NCCAB. The criteria pollutants evaluated include ozone (O_3), particulate matter (PM_{10} and $PM_{2.5}$), carbon monoxide (CO), nitrogen dioxide (N_2O), lead (Pb), sulfur dioxide (SO_2), sulfates, and hydrogen sulfide (H_2S).

North Coast Central Air Basin (NCCAB)

The NCCAB, comprised of Monterey, Santa Cruz, and San Benito Counties, lies along the central coast of California and covers an area of 5,159 square miles. The County is in the eastern portion of the NCCAB. The Santa Clara, San Benito, Salinas, and Carmel valleys are in the NCCAB. The northwest sector of the NCCAB is dominated by the Santa Cruz Mountains. The Diablo Range and the southern extent of the Santa Cruz Mountains form the Santa Clara Valley, which extends into the northeastern tip of the NCCAB. Farther south, the Santa Clara Valley evolves into the San Benito Valley, which runs northwest-southeast and has the Gabilan Range as its western boundary. To the west of the Gabilan Range is the Salinas Valley, which extends from Salinas at its northwestern end to King City at its southeastern end. The western side of the Salinas Valley is formed by the Sierra de Salinas, which also forms the eastern side of the smaller Carmel Valley. Pinnacles National Park, a Class I area under the Federal Clean Air Act (CAA), is located to the east of the Salinas Valley. The coastal Santa Lucia Range defines the western side of the Carmel Valley. The semi-permanent high pressure cell in the eastern Pacific is the basic controlling factor in the climate of the NCCAB.

The semi-permanent high pressure cell in the eastern Pacific is the basic controlling factor for the basin's climate. In the summer the high pressure cell is dominant and causes persistent west and northwest winds over the entire California coast. Air descends in the Pacific High forming a stable temperature inversion of hot air over a cool coastal layer of air. The onshore air currents pass over cool ocean waters to bring fog and relatively cool air into the coastal valleys. The warmer air aloft acts as a lid to inhibit vertical air movement. During the summer the generally

northwest southeast orientation of mountainous ranges in the basin tends to restrict and channel onshore air currents. Surface heating in the interior portion of the Salinas and San Benito valleys creates a weak low pressure which intensifies the onshore air flow during the afternoon and evening.

During the fall surface winds become weak and the marine layer grows shallow, dissipating altogether on some days. The air flow is occasionally reversed in a weak offshore movement and the relatively stationary air mass is held in place by the Pacific High pressure cell. This high pressure cell allows pollutants to build up over a period of a few days. This usually results in north or east winds developing that transport pollutants from either the San Francisco Bay area or the Central Valley into the basin.

During the winter the Pacific High migrates southward and has less influence on the basin. Air frequently flows in southeasterly direction out of the Salinas and San Benito valleys, especially during night and morning hours. Northwest winds are still dominant in winter, but easterly flow is more frequent. The general absence of deep, persistent inversions and the occasional storm systems usually results in good air quality for the basin as a whole in winter and early spring. The topography and climate for the basin influences air movement and air quality. The Monterey Bay, a 25 mile wide inlet, channels marine air at low levels towards the County. The prevailing air flow during the summer months originates in the Monterey Bay area and enters the northern end of the San Benito Valley through the gap created by the Pajaro River in the Gabilan Range. As a result, Hollister predominantly experiences westerly winds. This air flow pattern also frequently transports pollutants into the San Benito Valley from the Santa Clara Valley.

Attainment Status

State and federal ambient air quality standards have been set for several pollutants (see Table 7-1). The NCCAB is in "moderate" nonattainment for the state 1-hour ozone standard, nonattainment for the state 8-hour ozone standard, and unclassified/attainment for the federal 8-hour ozone standard. The NCCAB is also in attainment/classified for the PM_{10} and $PM_{2.5}$ federal standards and the $PM_{2.5}$ state standard, but is nonattainment for the state PM_{10} standards.

The NCCAB has an attainment or unclassified status for the applicable federal and state standards for carbon monoxide, nitrogen dioxide, lead, sulfur dioxide, sulfates, and hydrogen sulfide (CARB 2011a, USEPA 2011) (see Table 7-2).

Table 7-1 State and Federal Ambient Air Quality Standards

Contaminant	Averaging Time	State Standards[1]		Primary Federal Standards[2,3,4]		Secondary Federal Standards[2,3,5]	
		ppm	µg/m^3	ppm	µg/m^3	ppm	µg/m^3
Ozone	8 hour	0.07	137.0	0.075	147.00	0.075	147.00
	1 hour	0.09	180.0	-	-	-	-
Particulate Matter (PM_{10})	24 hour	-	50.0	-	150.00	-	150.00
	Annual	-	20.0	-	-	-	-
Particulate Matter ($PM_{2.5}$)	24 hour	-	-	-	35.00	-	35.00
	Annual	-	12 .0		12.00	-	15.00
Carbon Monoxide (CO)	8 hour	9.0	10,000.0	9.000	10,000.00		
	1 hour	20.00	23,000.0	35.000	40,000.00		
Nitrogen Dioxide (NO_2)	Annual	0.03	57.0	0.053	100.00	0.053	100.00
	1 hour	0.18	339.0	0.1[6]	188.00	-	-
Sulfur Dioxide (SO_2)	24 hour	0.04	105.0	-	-	-	-
	3 hour	-	-	-	-	0.500	1,300.00
	1 hour	0.25	655.0	75.000	196.00	-	-
Lead	30-Day Avg.	-	1.5	-	-	-	-
	Calendar quarter	-	-	-	1.50	-	1.50
	Rolling 3-Month Avg.	-	-	-	0.15	-	0.15
Visibility reducing particles	8 hour	-[8]	-[8]	-	-	-	-
Sulfates	24 hour		25.0	-	-	-	-
Hydrogen Sulfide	1 hour	0.03	42.0	-	-	-	-
Vinyl Chloride[7]	24 hour	0.01	26.0	-	-	-	-

Notes: [1]California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter—PM10, PM2.5, and visibility reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[2]National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest eight hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m3 is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact U.S. EPA for further clarification and current federal policies.

[3]Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected

to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

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

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

[6]To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 0.100 ppm.

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

[8]Extinction coefficient of 0.23 per kilometer -visibility of ten miles or more due to particles when relative humidity is less than 70 percent. Method: Beta attenuation and transmittance through filter tape.

ppm – parts per million by volume, ppb – parts per billion by volume, µg/m3 – micrograms per cubic meter, PM10 – particulate matter less than 10 microns in diameter, PM2.5 – particulate matter less than 2.5 microns in diameter

Source: CARB 2013a.

Table 7-2 NCCAB Attainment Status Designations

Pollutant	State	Federal
Ozone (O_3)	Non-attainment	Attainment/Unclassified
Inhalable Particulates (PM_{10})	Non-attainment	Attainment
Fine Particulates ($PM_{2.5}$)	Attainment	Attainment/Unclassified
Carbon Monoxide (CO)	Attainment (Monterey County) Unclassified (San Benito County)	Attainment/Unclassified
Nitrogen Dioxide (NO_2)	Attainment	Attainment/Unclassified
Sulfur Dioxide (SO_2)	Attainment	Attainment
Lead	Attainment	Attainment/Unclassified

Source: MBUAPCD 2013

Existing Emission Sources - Criteria Air Contaminants

Ozone Emissions

Ozone is not emitted directly into the environment, but is generated from complex chemical reactions between reactive organic gases (ROG) and oxides of nitrogen (NO_x) that occur in the presence of sunlight. ROG are photochemically reactive and are composed of non-methane hydrocarbons. Major ROG and NO_x generators in the NCCAB include: motor vehicles, solvent

evaporation, farming, and managed burning. Total ROG emissions in 2012 were 1,577 tons per year in the County and 17,557 tons per year in the NCCAB. Total NO_X emissions in 2012 were 2,639 tons per year in the County compared to total 19,893 tons per year in the NCCAB (CARB 2011b).

PM_{10} Emissions

Particulate matter emissions are generally monitored as either PM_{10} or $PM_{2.5}$. PM_{10} and $PM_{2.5}$ are atmospheric particulate matter having a particle size less than 10 and 2.5 micrometers (μm) in diameter, respectively. Both PM_{10} and $PM_{2.5}$ can be divided into primary and secondary forms. Primary particulate matter is in the same chemical form in which it was emitted into the atmosphere. Secondary particulate matter is formed through atmospheric reactions of gaseous sulfur dioxide (SO_2) and nitrogen oxide (NO_X) precursor emissions. Major sources of PM_{10} in the County include unpaved and paved road dust, managed burning and disposal, and windblown dust. Total PM_{10} emissions in 2012 were 2,767 tons in the County and 15,805 tons per year in the NCCAB (CARB 2011b). According to the National Emissions Trends inventory 89 percent of PM_{10} emissions are due to fugitive dust. Nationally the main sources of fugitive dusts are unpaved roads (33 percent), wind erosion of natural soils (20 percent), tillage associated with agricultural production (17 percent), construction (14 percent), paved roads (9 percent), and other (2 percent). Approximately 80 percent of fugitive dust emissions are greater than 2.5 microns.

$PM_{2.5}$ Emissions

$PM_{2.5}$ is atmospheric particulate matter that has a particle size less than 2.5 microns in diameter. There are three primary origins of $PM_{2.5}$: primary solid particulate matter that is emitted directly in the solid phase; primary condensable particulate matter that can be emitted at high temperature in the gas phase, but condenses into the solid phase upon dilution and cooling; and secondary particulate matter that is formed through atmospheric reactions of gaseous sulfur dioxide (SO_2) and nitrogen oxide (NOx) precursor emissions. These small particles can be inhaled into the lungs and have the potential to cause health related impacts in sensitive persons. Primary solid particulate matter results largely from combustion of fossil fuels, biomass, and industrial processes. Sources of primary particulate also include fugitive dust emissions from paved and unpaved roads, crustal material from construction activities, agricultural tilling, and wind erosion. Primary condensable particulate matter is largely comprised of semi volatile organic compounds that condense at ambient temperatures to form aerosols. Secondary $PM_{2.5}$ forms through chemical reactions that convert common gaseous pollutants into very small particles. Secondary $PM_{2.5}$ is dominated by sulfur and nitrogen species, but in some locations there can also be significant contributions from secondary organic aerosol. The major sources of

$PM_{2.5}$ in the County include managed burning and disposal, unpaved road dust, and fugitive wind dust. Total 2012 $PM_{2.5}$ emissions in the County were 558 tons.

San Benito County Air Quality Concentrations

Ambient pollutant concentrations measured at two monitoring stations in the County show violations of the federal 8-hour and state 1-hour ozone standards but no violations of the federal or state PM_{10} or $PM_{2.5}$ standards (CARB 2011c). The monitored values are available in Table 11-14 of the Background Report.

7.1.2 Regulatory Setting

Federal

- **Clean Air Act**. The federal 1970 Clean Air Act (CAA) authorized the establishment of national health-based air quality standards, and also set deadlines for their attainment. The federal Clean Air Act Amendments of 1990 (1990 CAAA) made major changes in deadlines for attaining National Ambient Air Quality Standards (NAAQS) and in the actions required of areas of the nation that exceeded these standards. Under the CAA, state and local agencies in areas that exceed the NAAQS are required to develop state implementation plans (SIP) to show how they will achieve the NAAQS for ozone by specific dates (42 USC 7409, 7411). The United States Environmental Protection Agency (USEPA) is responsible for enforcing the NAAQS primarily through reviewing SIP that are prepared by each state.

- **Clean Air Ozone Rules**. The Clean Air Ozone Rules of the CAA, effective June 15, 2005, replaced the NAAQS 1-hour ozone standard with the 8-hour ozone standard and outlined a process for reducing ground level ozone pollution. This new rule also issued new designations on attainment and nonattainment. Although the federal 1-hour ozone rules have been revoked, the MBUAPCD continues to implement parts of its federal *1-Hour Ozone Attainment Plan* including control measures, reasonable available control technology, and motor vehicle inspection and maintenance programs that were in effect as of June 15, 2004. Major programs that were once in effect under the 1-hour ozone standard but no longer apply include: 1-hour transportation conformity; 1-hour de minimus thresholds for general conformity; Section 185 fees formerly triggered by failure to attain the federal 1-hour ozone standard; and a requirement to retain a nonattainment new source review program in the SIP.

State

- **California Air Resources Board**. In California, the California Air Resources Board (CARB) is responsible for preparing and enforcing the federally-required SIP in an effort to achieve and maintain NAAQS and State Ambient Air Quality Standards (SAAQS), which were developed as part of the California CAA adopted in 1988. SAAQS for criteria pollutants equal or surpass NAAQS, and include other pollutants for which there are no NAAQS. In addition, CARB is responsible for assigning air basin attainment and nonattainment designations in California. Air basins are designated as being in attainment if the levels of a criteria air pollutant meet the SAAQS for the pollutant, and are designated as being in nonattainment if the level of a criteria air pollutant is higher than the SAAQS. CARB is the oversight agency responsible for regulating statewide air quality, but implementation and administration of SAAQS is delegated to several regional air pollution control districts (APCD) and air quality management districts (AQMD). These districts have been created for specific air basins, and have principal responsibility for: developing plans to meet SAAQS and NAAQS; developing control measures for non-vehicular sources of air pollution necessary to achieve and maintain SAAQS and NAAQS; implementing permit programs established for the construction, modification, and operation of air pollution sources; enforcing air pollution statutes and regulations governing non-vehicular sources; and developing employer-based trip reduction programs. The MBUAPCD is the air district with air quality oversight responsibilities in the County.

- **Air Toxics and Sensitive Receptors**. CARB research has substantiated that exposure to high levels of toxic air contaminants (TAC) poses health risks to sensitive populations. Air toxics sources include: high traffic freeways and roads, distribution centers, rail yards, ports, refineries, chrome plating facilities, dry cleaners, and large gas dispensing facilities. Air toxic sources generate high levels of diesel particulate matter emissions and other cancer causing chemicals. In its "Air Quality and Land Use Handbook: A Community Health Perspective," CARB recommends that local jurisdictions adopt land use policies so that sensitive land uses are located a minimum of 500 to 1,000 feet from sources of TACs; the goal of this Handbook is to protection children and other vulnerable populations from the potential health effects of these pollutants CARB indicates that this distance and the other recommendations in the Handbook should not be interpreted as defined "buffer zones," but are provided as guidance only. Where this minimum separation is not achievable, CARB recommends that local jurisdictions perform health risk assessments to determine the cancer risk potential of individual land use proposals locating an air toxics source (e.g., high volume freeway) close to a sensitive land use (e.g., residential uses) (CARB 2005).

Local

- **Monterey Bay Unified Air Pollution Control District**. The MBUAPCD, the lead air quality regulatory agency for the NCCAB, has jurisdiction over all point and area sources (except for mobile sources, consumer products, and pesticides). The MBUAPCD and CARB have joint responsibility for attaining and maintaining the NAAQS and SAAQS in the Air Basin. MBUAPCD's primary approach to implementing air quality plans is through adopting rules and regulations. The district has permit authority over jurisdictional stationary sources. The MBUAPCD's *CEQA Air Quality Guidelines* provides lead agencies, consultants, and project applicants with uniform procedures for addressing air quality impacts in environmental documents (MBUAPCD 2008a).

  MBUAPCD rules apply to all relevant development in the County, including demolition and removal of pre-existing underground infrastructure. Specifically, MBUAPCD Rule 424, National Emission Standards for Hazardous Air Pollutants (NESHAPS), applies to stationary sources of air pollution, including handling of asbestos during demolition under NESHAP Subpart M. MBUAPCD Rule 439, Building Removals, applies during building removals, to limit emissions of particulate matter. MBUAPDC Regulation II, Rule 200, specifies permitting requirements for stationary sources and Rule 207 includes requirements for new or modified sources. Regulation 11, Rule 209 lists the state ambient air quality standards. Regulation IV includes rules for architectural coatings (Rule 426), use of cutback asphalt (Rule 425), particulate matter (Rule 403), sulfur compounds and nitrogen oxides (Rule 404), and organic solvent cleaning (433). Regulation VIII specifies Orders for Abatement, which include air toxics emissions inventory and risk assessments (Rule 1003) and air toxic control measures (Rule 1008). Other MBUAPCD Rules will apply in specific situations in the County.

- **MBUAPCD Ozone Plan**. In April 2013, the MBUAPCD Board of Directors adopted the finalized *Triennial Plan Revision 2009-2011* to the 2008 Air Quality Management Plan (AQMP) (MBUAPCD 2013). The Triennial Plan Revision, which focuses on achieving ozone attainment, includes an updated air quality trends analysis, which reflects the 1- and 8-hour standards, as well as an emission inventory, which includes the latest information on stationary, area, and mobile emission sources. The Triennial Plan Revision to the 2008 AQMP does not include control measures, since ozone concentrations in the County are on a decreasing trend (MBUAPCD 2013).

- **MBUAPCD Federal Ozone Maintenance Plan**. The MBUAPCD prepared a federal ozone maintenance plan (2007) for maintaining the national ozone standard in the Monterey Bay Region. The plan was prepared according to the EPA's *Maintenance Plan Guidance Document for Certain 8-Hour Ozone Areas under Section 110(a)(1) of the Clean Air Act*,

dated May 20, 2005 (MBUAPCD 2007). This guidance established planning requirements for areas such as the NCCAB, which are in attainment for the 8-hour NAAQS for ozone and have an approved federal maintenance plan for the previous 1-hour standard.

- **MBUAPCD Particulate Matter Plan**. In 2005, the MBUAPCD prepared a report on achieving attainment of the California particulate matter standards in the Monterey Bay region (MBUAPCD 2005). That report included several measures designed to reduce particulate matter emissions for a wide variety of sources. In addition, the report included contingency measures to be implemented should the proposed measures be insufficient to bring the NCCAB into attainment with the state particulate matter standards.

- **San Benito County Code**. Chapter 19.21 Petroleum Code (Section 19.21.002) indicates that a goal of the chapter is to "protect the… air quality of our county, to permit and supervise the extraction of oil and gas while recognizing that San Benito County is also the home of other unique natural resources, and to protect these resources for future generations while contributing to and acknowledging our dependence on and need for oil and gas and to maintain and enhance our lifestyles." In the specific conditions of approval relating to conditional use permits for oil and gas well operations (19.21.007), there is a provision that "no… dust, odor or other harmful effects shall be created which affect materially any person living or working outside the project area." Additionally, these operations must also comply with the county's noise ordinance.

  Chapter 15.01, Solid Waste Regulations, finds that "[t]he accumulation, collection, transportation and disposal of solid waste involves substantial concerns about… air quality and public health" (15.01.001). The regulation also requires that "[d]uring intervals between collection, transportation or disposal, the storage, accumulation, collection, keeping, handling or maintaining of solid waste on premises shall be performed in such a manner so… as not to objectionably and unreasonably pollute the air" (15.01.022). Requirements for collection frequency address odor nuisances (15.01.024).

7.2 ENVIRONMENTAL EFFECTS

The air quality resources analysis evaluates whether growth under the 2035 General Plan could result in significant air quality impacts. The analysis takes into account the two growth scenarios described in Chapter 4, which are the Hollister-Centered Growth Scenario (Scenario 1) and the New Community Study Areas Plus Hollister General Plan Growth Scenario (Scenario 2).

7.2.1 Significance Criteria

According to Appendix G to the State CEQA Guidelines, Section III, Air Quality, and MBUAPCD guidance, the following criteria have been established to quantify the level of significance of an adverse effect being evaluated pursuant to CEQA. The numeration of each criterion below corresponds to the questions in the checklist in Appendix G of the CEQA Guidelines (e.g., IV.a, IV.b). Implementation of the 2035 General Plan would result in a significant impact would occur with respect to air quality if implementation of the project would:

- Conflict with or obstruct implementation of the applicable air quality plan (III.a);
- Violate any air quality standard as established by the US EPA or CARB, or contribute substantially to an existing or projected air quality violation, in comparison to the MBUAPCD thresholds below (III.b);
- Result in a cumulatively considerable net increase of any criteria air pollutant for which the NCCAB is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors) (III.c);
- Expose sensitive receptors to substantial criteria air pollutant concentrations (III.d); or
- Create or expose a substantial number of people to objectionable odors (III.e).

The MBUAPCD has developed quantifiable significance thresholds for defined projects for purposes of CEQA review. The following significance thresholds have been developed by the MBUAPCD for the five above-referenced CEQA checklist air quality questions (MBUAPCD 2008a). Implementation of a project would result in a significant impact if implementation of the project would:

a. Conflict with or obstruct implementation of the applicable air quality plan by:
   - Emitting 137 pounds per day or more of VOC or NOx
   - Being inconsistent with the AQMP

b. Violate any air quality standard or contribute substantially to an existing or project air quality violation by:
   - Emitting 137 pounds per day or more of VOC or NOx
   - Directly emitting 550 pounds per day or more of CO
   - Generating traffic that significantly affects levels of service
   - Directly emitting 82 pounds per day or more of PM_{10} on site during operation or construction
   - Generating traffic on unpaved roads that generates 82 pounds per day or more of PM_{10}

- Directly emitting 150 pounds/day or more of sulfur oxides (SOx)

c. Result in a cumulatively considerable net increase of any criteria pollutant for which the NCCAB is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)

d. Expose sensitive receptors to substantial pollutant concentrations by:
   - Causing a violation of CO, PM_{10}, or TAC standards at an existing or reasonable foreseeable sensitive receptor

e. Create or expose a substantial number of people to objectionable odors

MBUAPCD's quantitative thresholds are designed to be used with projects that consist of specific development proposals that include identified structures and land uses rather than plan-level documents such as the 2035 General Plan. Nevertheless, MBUAPCD's quantitative thresholds are used to evaluate the construction and operational emissions from buildout of the 2035 General Plan because such emissions can be reasonably forecast.

Inconsistency with an air quality plan can also result in cumulatively significant impacts if the emissions of a project under analysis are not accommodated in the air quality plan. The methodology described below is used to determine if the 2035 General Plan would violate these MBUAPCD CEQA checklist significance thresholds.

7.2.2 Analysis Methodology

As discussed in Section 4.5.7, Potential Growth Scenarios, this RDEIR analyzes two possible growth scenarios: Scenario 1 and Scenario 2. As discussed in Section 7.2.3 below, the County would apply the 2035 General Plan policies addressing potential air quality impacts equally in approving development under any growth scenario. In addition, the County would apply any mitigation measures that are required by this chapter equally in approving development under any growth scenario. The differing locations of potential development under the two potential growth scenarios analyzed in this RDEIR would result in differences to County air quality when viewed at a programmatic level. Tables 7-4a and 7-4b show quantitatively that, based on estimated operational emissions for 2035, Scenario 1 will have higher emissions of NOx, PM_{10}, $PM_{2.5}$, and SO_2 than Scenario 2. This is in large part due to differences in vehicle miles traveled (VMT), which are reduced in Scenario 2 relative to Scenario 1 in 2035, as further discussed in Section 7.2.3, Environmental Impacts. In addition to the environmental review provided by the analysis below, site-specific analysis will be required consistent with CEQA for individual development proposals that may be considered in the future. The environmental review and analysis herein was reviewed by Ascent Environmental, specialists in air quality assessment.

Criteria Pollutant Methodology - Operations

A combination of air quality assessment tools was used to estimate operational criteria emissions for the proposed 2035 General Plan. The California Emission Estimator Model (CalEEMod®) version 2013.2.2 and other approved approaches were used to estimate operational criteria pollutant emissions from both stationary and mobile (e.g. vehicle) sources. A detailed description of the methodology is included in Appendix B, Air Quality and GHG Technical Appendix.

CalEEMod® calculates daily criteria pollutant and annual greenhouse gas (GHG) emissions which can be used in support of analyses in environmental documents such as EIRs and negative declarations used to support a CEQA determination. CalEEMod® utilizes widely accepted models for emission estimates combined with appropriate default data that can be used if site-specific information is not available. These models and default estimates use sources such as the USEPA AP-42 emission factors, CARB on-road and off-road equipment emission models such as the EMissionFACtor model (EMFAC) and the Offroad Emissions Inventory Program model (OFFROAD), and studies commissioned by California agencies such as the California Energy Commission (CEC) and CalRecycle. Other approved approaches used in this analysis include use of the EMFAC2011 and OFFROAD2007 models outside of CalEEMod®, as well as California Commercial End-Use Survey (CEUS) and Residential Appliance Saturation Survey (RASS) data. Agriculture emissions were calculated outside of CalEEMod® using scaling methods, as described in the Appendix B.

Plan-specific data including County-specific VMT and projected new land uses were used as inputs to CalEEMod as discussed in Appendix B. Plan-specific energy use data were input to CalEEMod based on data collected in the California Commercial End-Use Survey (CEUS) and Residential Appliance Saturation Survey (RASS). A mitigated scenario was also considered which relies on the restriction on new developments to include only natural-gas fireplaces and not wood-burning fireplaces, as specified in mitigation measure AIR-1.

Annual emissions were estimated for the criteria pollutants ROG, NO_x, SO_2, CO, and PM_{10} because these are the pollutants for which the MBUAPCD has established operational significance thresholds. No modeling for CO emissions for intersections from idling traffic was conducted for this evaluation since this is a plan-level analysis. Various screening thresholds were considered, but for a local impact such as a CO hot spot, project-level analyses would typically be conducted to ensure that there is no exceedance of the CO ambient air quality standards for individual projects. In addition, with cleaner cars anticipated in the future, CO hot spots at intersections are unlikely as more stringent car emissions standards are implemented.

Criteria Pollutant Methodology – Construction

While CalEEMod can estimate criteria air pollutants from construction, actual emissions associated with the 2035 General Plan will depend on project phasing, implementation of CARB's tier standards for off-road equipment, and the size of individual development projects. With these uncertainties in magnitude and timing, the quantitative estimate of construction emissions of criteria air pollutants presented here aims to make a worst-case estimate by assuming construction begins in 2015. With the implementation of regulations for off-road equipment, the emission factors for construction equipment are higher in 2015 than in later years. The analysis presented here assumes a steady construction rate between 2015 and 2035. A portion of construction representing roughly one year of construction is modeled in CalEEMod with the maximum daily emissions tabulated for each pollutant.

Odor and Toxic Air Contaminants Methodology

General plans can potentially expose sensitive receptors to odors or TACs if residential land uses or other sensitive receptors are located adjacent to potential sources of odors or TACs. Proposed land use designations were reviewed to identify the potential locations of any such conflicts.

7.2.3 Environmental Impacts

This section examines the potential impacts of the proposed project based on the significance criteria and methodology described above. Table 7-3 summarizes 2035 General Plan policies that would mitigate environmental impacts associated with air quality, including an explanation of how the policy would avoid or reduce impacts, thereby serving as mitigation for such impacts.

Table 7-3 2035 General Plan Goals and Policies that Mitigate Air Quality Impacts

Goals and Policies	How the Goal/Policy Avoids or Reduces Impacts	Impact AIR-#
Land Use Element		
Goal LU-3: Agricultural and Rangeland To ensure the long-term preservation of the agricultural industry, agricultural support services, and rangeland resources by protecting these areas from incompatible urban uses and allowing farmers to manage their land and operations in an efficient, economically viable manner	Includes specific policies (as described below) to implement this goal, which would improve efficiency while reducing air emissions. Encourages sustainability and energy efficiency, which will reduce air emissions in the agricultural sector.	1,3

Goals and Policies	How the Goal/Policy Avoids or Reduces Impacts	Impact AIR-#
Policy LU-3.3: Increased Agricultural Sustainability and Energy Efficiency The County shall encourage and support farms, vineyards, and ranches that seek to implement programs that increase the sustainability of resources, conserve energy, and protect water and soil in order to bolster the local food economy, increase the viability of diverse family farms and improve the opportunities for farm workers.	Supports farms that implement programs to conserve energy. Energy conservation measures would likely reduce emissions associated with the combustion of fossil fuels.	1,3
Health and Safety Element		
Goal HS-5: Air Quality To improve local and regional air quality to protect residences from the adverse effects of poor air quality.	Includes several policies designed to reduce or minimize air quality impacts, including PM_{10}, TAC, and odor impacts.	1,2,3, 4,5,6
Policy 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.	Requires that the County use the CEQA process to ensure feasible mitigation is incorporated during construction and operation.	1,2,3,4
Policy 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.	Requires that adequate distances be maintained between sensitive receptors and PM_{10}, TAC, and odor sources, and that predominate wind patterns be considered. Requires that sensitive land uses be located at adequate distances from substantial sources of odors. By requiring that adequate distances be maintained between sensitive receptors and odor sources, and that predominate wind patterns be considered, reduces the potential for odor conflicts.	3,5,6

Goals and Policies	How the Goal/Policy Avoids or Reduces Impacts	Impact AIR-#
Policy HS-5.3: Early Coordination with the Air Quality Control District The County shall notify and coordinate with the Monterey Bay Unified Air Pollution Control District when industrial developments are proposed within the county to ensure applicants comply with applicable air quality regulations and incorporate design features and technologies to reduce air quality emissions.	Ensures adequate review of a proposed industrial project's construction and operational emissions by the MBUAPCD.	1,2,3,4
Policy HS-5.4: PM_{10} Emissions from Construction The County shall require developers to reduce particulate emissions from construction (e.g., grading, excavation, and demolition) consistent with standards established by the Monterey Bay Unified Air Pollution Control District.	Requires that developers reduce particulate emissions from construction consistent with MBUAPCD standards, which reduces potential impacts on any nearby sensitive receptors. Would assist in reducing PM_{10} and $PM_{2.5}$ emissions associated with construction, including consistency with MBUAPCD's dust mitigation requirements.	1,2,3, 4,5
Policy HS-5.5: PM_{10} Emissions from Industrial Facilities The County shall require industrial facilities to incorporate best management practices to reduce $PM_{2.5}$ and PM_{10} emissions consistent with standards established by the Monterey Bay Unified Air Pollution Control District.	Requires industrial facilities to use best management practices to reduce particulate matter emissions, which reduces potential impacts on any nearby sensitive receptors. Reduces PM_{10} and $PM_{2.5}$ emissions by requiring industrial facilities to incorporate best management practices.	3,5

Goals and Policies	How the Goal/Policy Avoids or Reduces Impacts	Impact AIR-#
Policy 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.	Requires the County to work in coordination with the MBUAPCD to ensure air emissions associated with development meet standards, thereby reducing construction emissions. Requires the County to use air quality mitigation measures to reduce the impacts of new development. This measure would assist in reducing the effects of PM_{10} and $PM_{2.5}$ emissions associated with construction.	1,2,3,4
Administrative Element		
Goal AD-2: Inter-Agency Coordination To cooperate and coordinate with applicable local, regional, State, and Federal jurisdictions and agencies in order to achieve mutually beneficial development, environmental, and economic goals	Includes policies designed to ensure coordination with the MBUAPCD and other applicable agencies.	1,3
Policy AD-2.3: Federal and State Agency Coordination The County shall continue to coordinate discretionary project review and permitting activities with applicable Federal and State regulatory agencies as required by law.	Avoids conflict with applicable air quality plans by ensuring coordination between federal and state air quality agencies, such as the US EPA and CARB.	1

Goals and Policies	How the Goal/Policy Avoids or Reduces Impacts	Impact AIR-#
Policy AD-2.5: Air Quality Management Coordination The County shall continue to coordinate with the Monterey Bay Unified Air Pollution Control District (MBUAPCD) and affected agencies and neighboring jurisdictions in the North Central Coast Air Basin to ensure regional cooperation on cross- jurisdictional and regional transportation and air quality issues, and to establish parallel air quality programs and implementation measures.	Requires coordination between San Benito County, MBUAPCD, and other affected agencies. Ensures that population and employment associated with buildout will be incorporated into future air quality plans.	1,3
Circulation Element		
Goal C-1: Roadways To provide an adequate road system that is safe, efficient, reliable, and within the County's ability to finance and maintain.	Goal includes policies designed to reduce vehicle miles traveled. Reductions in VMT have a direct air quality benefit.	1,3
Policy C-1.1: Intermodal Connectivity The County shall ensure that, whenever possible, roadway, highway, public transit systems, and pedestrian and bicycle trails are interconnected with other modes of transportation.	Encourages that transportation modes be connected. Intermodal connections improve transportation efficiency and reduce air emissions.	1,3
Policy C-1.2: Complete Streets To promote a road and street network that accommodates cars without requiring car-dependence, the County shall plan for use of roadways by all vehicle types and users, including automobiles, trucks, alternative energy vehicles, agricultural equipment, transit, bicyclists, and pedestrians, when constructing or modifying roadways. Additionally, the County shall plan its road and street network to reflect a context-sensitive approach to the design of thoroughfare assemblies, where the allocation of right-of-way and the facilities provided are based on the intended character, whether urban or rural, of a	Includes several provisions, including multi-model connections, pedestrian and bike facilities, traffic calming, and coordination with other agencies to promote a complete road and street network that reduces air emissions. Discourages car dependence while encouraging other forms of travel that will reduce air emissions.	1,3

Goals and Policies	How the Goal/Policy Avoids or Reduces Impacts	Impact AIR-#
particular location (urban context). Roads and streets within communities shall be designed to support and encourage walkability as a response to their context, whereas roads in open areas of the County shall be designed primarily for vehicular circulation. As such, thoroughfares that serve both open areas and communities in the County shall change as the surrounding urban context varies. This includes: a. Encouraging thoroughfare designs that are context sensitive, such as those recommended in Designing Walkable Urban Thoroughfares: A Context Sensitive Approach by the Institute of Transportation Engineers (ITE); b. Supporting urban design principles that promote walkability within communities to include: i. A mix and variety of land uses designed to be relatively compact and in proximity to one another; ii. Buildings that are oriented toward streets, with appropriately narrow setbacks and functional entries directly fronting onto sidewalks; iii. Pedestrian-scaled architecture, landscape, and thoroughfares designed to provide engaging sidewalk views and comfort to pedestrians traveling at slow speeds; and iv. Circulation networks that provide an interconnected system of streets and open spaces with relatively small block lengths; c. Creating multi-modal street connections in order to establish a comprehensive, integrated, and connected transportation network; d. Incorporating pedestrian and bicycle facilities,		

Goals and Policies	How the Goal/Policy Avoids or Reduces Impacts	Impact AIR-#
where appropriate and feasible, that promote safety and maximize access; e. Planting street trees adjacent to curbs and between the street and sidewalk to provide a buffer between the pedestrian and the automobile, where appropriate; f. Incorporating traffic calming devices such as roundabouts, bulb-outs at intersections, and traffic tables; and g. Coordinating with other agencies and cities to ensure connections are made between jurisdictions.		
Policy C-1.11: Discourage Cul-de-Sacs The County shall encourage developers to minimize the use of cul-de-sac streets in new development. Cul-de-sac streets shall not exceed 800 feet in length and no portion of the cul-de-sac street shall be more than 400 feet from an intersecting street or public accessway unless physical constraints make it impracticable.	Discourages development patterns that favor dependence on cars. By discouraging cul-de-sacs, reduces car travel and associated air emissions.	1,3
Goal C-2: Pedestrian, Equestrian, and Bicycle Trails To provide a safe, continuous, and accessible system of facilities for bicycle and pedestrian travel in appropriate areas of the county.	Encourages bicycle travel. By encouraging bicycle travel, discourages car trips and the emissions associated with those trips.	1,3
Policy C-2.1: Bicycle, Pedestrian, and Equestrian Systems The County shall encourage complete, safe, and interconnected bicycle, pedestrian, and equestrian systems that serve both commuter travel and recreational use, and provide access to major destinations in the county.	Encourages transportation interconnections that are non-polluting. Reduces air emissions through incorporation of bicycle and pedestrian connections.	1,3

Goals and Policies	How the Goal/Policy Avoids or Reduces Impacts	Impact AIR-#
Policy C-2.2: Pedestrian and Bike Path Construction The County shall plan, design, and construct pedestrian routes and bikeways consistent with the County Bikeway and Pedestrian Master Plan or its succeeding plan. Priority shall be given to bicycle commuting routes, routes to schools, bike lanes on all new streets classified as arterials or collectors, and bike lanes on or adjacent to existing heavily traveled roads.	Encourages transportation interconnections that are non-polluting. Reduces air emissions through incorporation of bicycle and pedestrian connections.	3
Policy C-2.3: Bicycle Parking Facilities The County shall provide or encourage the provision of secure bicycle parking facilities at transit facilities, private and public facilities, and park-and-ride lots.	Requires bicycle parking facilities that encourage bicycle travel. By encouraging bicycle travel, reduces on-road travel and its associated emissions.	1,3
Goal C-3: Public Transit To promote a safe and efficient public transit system that provides a viable travel alternative to automobiles, maximizes mobility, and reduces roadway congestion and greenhouse gas emissions	Sets forth several policies to encourage the development of a viable transit system. By encouraging transit, reduces air emissions associated with motor vehicle emissions.	1,3
Policy C-3.1: Transit- Supportive Land Use The County shall encourage transit lines, stops, and facilities in locations planned for land uses and densities and intensities that support transit use.	Encouraging transit-supporting land uses would increase non-single occupant vehicle trips and thereby decrease air emissions.	3
Policy C-3.2: Future Connections to High-Speed Rail The County shall pursue potential opportunities to connect to future high-speed rail if a high- speed rail station is built in Gilroy.	Minimizes air emissions by providing future opportunities for a County connection to high-speed rail that would result in fewer single occupant vehicle trips and thereby decrease air emissions.	3

Goals and Policies	How the Goal/Policy Avoids or Reduces Impacts	Impact AIR-#
Policy C-3.3: Transit to Major Destinations The County shall encourage transit service to all education and health care facilities in the county and to provide additional bus service to key commercial centers and major employment centers in the county and cities.	Transit service connections to major destinations would reduce vehicle trips and thereby reduce air emissions.	3
Policy C-3.4: Transit in New Development The County shall require new development at densities of one unit per acre or greater to provide funding for or construct transit stops and signs in appropriate locations and facilitate access to existing or future public transit through project design, consistent with the Local Transportation Authority Transit Design Guidelines.	Requiring new development to provide funding for transit stops would facilitate better accessibility and reliance on public transportation systems, reducing emissions associated with vehicle trips.	3
Policy C-3.6: Transit to Recreational Areas The County shall work with the Local Transportation Authority, Caltrans, and the State and Federal parks to establish transit access to recreational areas within the county.	Would reduce air emissions related to vehicle trips by establishing transit access to recreational areas.	3
Policy C-3.12: Commuter Rail in Hollister The County shall support efforts to extend Caltrain service from Gilroy to Hollister to link San Benito County to San Jose and San Francisco.	Extending Caltrain service to provide links to San Benito County would reduce emissions related to commuter trips to San Jose and San Francisco by reducing single occupant vehicle trips.	
Goal C-4: Transportation Demand Management To encourage alternative transportation modes to reduce the demand for vehicular trips, especially during congested commute times	Encourages non-automobile forms of travel during peak travel periods, which reduces emissions.	1,3

Goals and Policies	How the Goal/Policy Avoids or Reduces Impacts	Impact AIR-#
Policy C-4.1: Transportation System Management The County shall consider transportation system management (TSM) measures to increase the efficiency of the existing roadway network prior to constructing new traffic lanes. Such measures may include traffic signal synchronization and signal timing improvements.	Exploring transportation system management measures before constructing new traffic lanes would reduce traffic congestion and related air emissions.	3
Policy C-4.2: Ridesharing Promotion The County shall support SBCOG programs that promote the use of ridesharing, vanpooling, and carpooling to decrease vehicle trips on road systems in the county.	Ridesharing, vanpooling, and carpooling would decrease vehicle trips and associated air emissions.	3

Source: San Benito County 2011, 2014; EMC Planning Group 2014; Planning Partners 2012.

Impact AIR-1: Conflict with or obstruct implementation of the applicable air quality plan (III.a).

Level of Significance: Significant and unavoidable for both Scenario 1 and Scenario 2.

Implementation of the 2035 General Plan could result in inconsistencies with adopted regional air quality attainment plans, or result in the emissions of ozone precursors in amounts higher than forecast by the air quality attainment plans. The MBUAPCD defines a conflict with an air quality plan as one in which a project is inconsistent with the air quality plan and/or emits 137 pounds or more per day of VOC or NOx.

Implementation of the 2035 General Plan with either Scenario 1 or 2 would not induce emissions above MBUAPCD thresholds, which would be a less-than-significant impact. However, differences in the horizon years and therefore population estimates of the 2035 General Plan and the MBUAPCD air quality plans make this a potentially significant impact. For a discussion of the differences, see Chapter 4, Introduction to the Environmental Analysis.

Evaluation of Consistency with the Air Quality Plan

MBUAPCD prepares air quality plans for nonattainment area pollutants. Those plans include the steps and the actions that it will take to reach attainment. The Association of Monterey Bay Area Governments (AMBAG) prepares the population, employment, and housing unit forecasts used by MBUAPCD to develop the air quality plans. Consistency with an air quality plan is

measured by whether the number of housing units proposed by a project or in a plan are consistent with the total number of housing units projected by AMBAG and included in the relevant air quality plan (MBUAPCD 2011).

MBUAPCD's most recent air quality plans include a 2005 PM_{10} plan, a 2007 federal ozone maintenance plan, and the *Triennial Plan Revision* to the 2008 ozone AQMP (MBUAPCD 2005, 2007, 2013). The number of housing units associated with the 2035 General Plan differ from the amounts estimated by AMBAG for the County. In the baseline year of 2010, the 2035 General Plan housing values, based on 2010 U.S. Census data, are lower for unincorporated County than they are in the AMBAG *Monterey Bay Area 2008 Regional Forecast* (AMBAG 2008). However, the 2035 General Plan estimates, based on U.S. Census data trends, that by 2035 there will be more housing in unincorporated areas of the County than the AMBAG plan estimates for unincorporated areas.

The result of these discrepancies is the 2035 General Plan considers fewer dwelling units in the baseline year of 2010 and more housing units in the buildout year of 2035 than does the 2008 AMBAG forecast, based on County-specific estimates. For a discussion of the differences, see Chapter 4, Introduction to the Environmental Analysis. From an air quality perspective, lower baseline and higher future estimates do not necessarily contradict the AMBAG plans because net impacts anticipated under the 2035 General Plan would be higher than those under AMBAG plans. The County-specific population projections used in the 2035 General Plan are based on more recent data than the AMBAG forecast, including actual data for 2010. The policies listed in Table 7-2 would help ensure that the 2035 General Plan assumptions (for population and employment) are incorporated into future air quality planning efforts initiated by the MBUAPCD, including Goal AD-2 and Policies AD-2.3 and AD-2.5; and Goal HS-5 and Policy HS-5.3.

Determination of Emissions Exceeding 137 Pounds of ROG or NOx per Day

Buildout of the 2035 General Plan would generate emissions from both construction and operation of land uses. Construction and operational emissions with regard to this significance threshold are discussed separately below.

Construction

The MBUAPCD *CEQA Air Quality Guidelines* states that construction exhaust emissions of ozone precursors (ROG and NO_x) "are accommodated in the emission inventories of state- and federally-required air plans and would not have a significant impact on the attainment and maintenance of ozone AAQS." Consequently, ROG and NO_x emissions associated with construction would not be considered a significant source of ozone precursor emissions. Although there are no daily mass emissions construction thresholds for ROG and NO_x, for

informational purposes, the worst-case maximum daily emissions estimated in CalEEMod for construction beginning in 2015 are 1,070 lbs/day ROG and 292 lbs/day NO_x. This analysis assumes that construction activity associated with the General Plan is evenly distributed over the years 2015 to 2035.

Operation

Buildout of the 2035 General Plan would generate operational emissions from on-road vehicles, agricultural sources, and area sources. Agricultural sources include exhaust and fugitive dust emissions from agricultural operations. Area sources include natural gas and wood combustion used for space and water heating, gasoline combustion used in landscape maintenance equipment, and evaporative emissions from consumer products, including architectural coatings.

Emissions for 2010 and 2035 General Plan buildout were estimated using the methodology described in Section 7.2.2. Additional detail on the methodology and detailed modeling results are available in Appendix B. Table 7-4 shows operational emissions associated with baseline 2010 conditions, while Table 7-5 shows operational emissions for 2035 General Plan buildout for Scenario 1. Table 7-6 shows the emissions for Scenario 2.

Tables 7-7 and 7-8 show that buildout of the 2035 General Plan would result in lower NO_x emissions by 2035 compared to 2010 emissions. This is primarily because decreases in on-road vehicle emissions between 2010 and 2035 would outweigh increases from area sources. On-road vehicle emissions of NO_x decrease during this period due to improvements in motor vehicle exhaust controls mandated by the CARB. This results in a net decrease in average vehicle NO_x emissions that outweighs the increase in VMT between 2010 and 2035. With mitigation measure AIR-1 restricting new residential developments to only natural-gas fireplaces, both NO_x and CO emissions are lower by 2035 than in 2010.

Table 7-4 Existing General Plan Criteria Pollutant Emissions (lbs/day)

Existing Conditions (2010)	ROG	NO_X	PM_{10}	$PM_{2.5}$	CO	SO_2
On-Road Vehicle Travel	1,494	4,332	618	235	16,977	9.7
Area Source Emissions	2,768	36	402	402	3,253	1.1
Energy Emissions	8	71	5	6	35	0.4
Agricultural Emissions	188	1,091	2,986	566	1,318	1.2
Totals	**4,458**	**5,531**	**4,011**	**1,209**	**21,583**	**12.5**

Source: Detailed emission estimates included in Appendix B.

Table 7-5 2035 General Plan Buildout Criteria Pollutant Emissions, Scenario 1 (lbs/day)

General Plan Buildout Conditions Scenario 1 (2035)	ROG	NO_x	PM_{10}	$PM_{2.5}$	CO	SO_2
On-Road Vehicle Travel	817	2,648	1,125	338	12,392	23.0
Area Source Emissions, without mitigation	8,177	149	1,212	1,212	9,744	3.4
Area Source Emissions, with mitigation	3,601	115	522	522	4,702	3.4
Energy Emissions	18	158	13	13	75	1.0
Agricultural Emissions	49	212	2,406	406	1,267	1.2
Totals, without mitigation	**9,062**	**3,167**	**4,756**	**1,969**	**23,478**	**28.0**
Totals, with mitigation	**4,486**	**3,133**	**4,066**	**1,279**	**18,436**	**28.0**

Source: Detailed emission estimates included in Appendix B.

Table 7-6 2035 General Plan Buildout Criteria Pollutant Emissions, Scenario 2 (lbs/day)

General Plan Growth Conditions, Scenario 2 (2035)	ROG	NO_x	PM_{10}	$PM_{2.5}$	CO	SO_2
On-Road Vehicle Travel	819	2,595	1,073	323	12,469	22.0
Area Source Emissions, without mitigation	8,190	149	1,212	1,212	9,744	3.4
Area Source Emissions, with mitigation	3,614	115	522	522	4,702	3.4
Energy Emissions	18	159	13	13	76	1.0
Agricultural Emissions	49	212	2,406	406	1,267	1.2
Totals, without mitigation	**9,076**	**3,115**	**4,705**	**1,954**	**23,556**	**27.0**
Totals, with mitigation	**4,500**	**3,081**	**4,014**	**1,264**	**18,514**	**27.0**

Source: Detailed emission estimates included in Appendix B.

Table 7-7 Net Change in Criteria Pollutant Emissions, Scenario 1 (lbs/day)

General Plan Buildout, Scenario 1 Minus Existing Conditions	ROG	NO_x	PM_{10}	$PM_{2.5}$	CO	SO_2
On-Road Vehicle Travel	-677	-1,685	507	103	-4,586	13.0
Area Source Emissions, without mitigation	5,409	113	810	810	6,491	2.3
Area Source Emissions, with mitigation	833	79	120	120	1,449	2.3
Energy Emissions	10	87	7	7	41	0.6
Agricultural Emissions	-139	-879	-580	-160	-51	-0.002
Total Emissions, without mitigation	4,604	-2,364	745	761	1,895	16.0
Total Emissions, with mitigation	28	-2,398	55	71	-3,147	16.0
MBUAPCD Significance Threshold[1]	137	137	82	N/A	550	150.0
Exceed Threshold, without mitigation	Yes	No	Yes	N/A	Yes	No
Exceed Threshold, with mitigation	No	No	No	N/A	No	No

Source: Detailed emission estimates included in Appendix B.

Note: [1]MBUAPCD (2008a).

Table 7-8 Net Change in Criteria Pollutant Emissions, Scenario 2 (lbs/day)

General Plan Growth, Scenario 2, Minus Existing Conditions	ROG	NO_x	PM_{10}	$PM_{2.5}$	CO	SO_2
On-Road Vehicle Travel	-675	-1,737	455	88	-4,508	12.00
Area Source Emissions, without mitigation	5,422	113	810	810	6,491	2.30
Area Source Emissions, with mitigation	846	79	120	120	1,449	2.30
Energy Emissions	10	88	7	7	41	0.60
Agricultural Emissions	-139	-879	-580	-160	-51	-0.002
Total Emissions, without mitigation	4,618	-2,416	693	746	1,973	15.00
Total Emissions, with mitigation	42	-2,450	3	55	-3,069	15.00
MBUAPCD Significance Threshold[1]	137	137	82	N/A	550	150.00
Exceed Threshold, without mitigation	Yes	No	Yes	N/A	Yes	No
Exceed Threshold, with mitigation	No	No	No	N/A	No	No

Source: Detailed emission estimates included in Appendix B.

Note: [1]MBUAPCD (2008a).

Tables 7-7 and 7-8 show that both Scenario 1 and Scenario 2 exceed the MBUAPCD thresholds of significance for ROG, PM_{10}, and CO before mitigation. Neither Scenario exceeds the MBUAPCD thresholds of significance for NO_x and SO_2. However, after mitigation measure AIR-1 is applied, neither Scenario 1 nor Scenario 2 exceeds any MBUAPCD threshold of significance.

As set forth in Table 7-2, the 2035 General Plan includes several policies that would result in substantial pollutant reductions during the implementation of the 2035 General Plan, including Goal HS-5 and Policies HS-5.1 to HS-5.4 and HS-5.6; Goal AD-2 and Policy AD2.5; Goal LU-3 and Policy LU-3.3; Goal C-1and Policies C-1.1, C-1.2, and C-1.11; Goal C-2 and Policies C-2.1 to C-2.3; and Goals C-3 and C-4. Specifically, the policies aim to reduce air emissions from new development projects by incorporating feasible mitigation measures to reduce both construction- and operational-related emissions and by requiring developers to reduce construction emissions (e.g., PM_{10}). The policies also include measures for the County to encourage emission reductions from the agricultural sector, by pledging to work with local farms to decrease energy use, thereby reducing combustion emissions. Finally, the policies targeted at the transportation sector will reduce pollutant emissions by improving transportation system efficiency, which will ultimately reduce fuel use and combustion emissions. Emissions credits are applied only for project conditions described above, so the emissions reductions from other policies may reduce emissions further than what is shown here.

Using the MBUAPCD thresholds of significance, the potential for Scenario 1 to result in a cumulatively considerable net increase of ROG, PM_{10}, and CO would be significant before mitigation. The potential impact of Scenario 2 is also significant for ROG, PM_{10}, and CO before mitigation using the same thresholds. In addition, because the 2035 General Plan uses population and housing data that differs from that used by MBUAPCD, both scenarios have potentially significant impacts. The impacts evaluated here depend on the maximum gap between 2010 and 2035 population estimates and as such are conservative when compared to individual pollutant thresholds.

Mitigation Measure:

AIR-1. Add the following policies to the 2035 General Plan Health and Safety Element:

> *HS-5.9 Air Quality Management Plans*
>
> *The County shall encourage regional planning agencies to consider the County's population projections during the preparation of future Air Quality Management Plans.*
>
> *HS-5.10: Reduce Air Pollution from Wood Burning*

No permanently installed wood-burning devices shall be allowed in any new development, except when necessary for food preparation in a restaurant or other commercial establishment serving food.

The preparation of future Air Quality Management Plans using the County's population projections along with General Plan Policy HS-5.9 would mitigate Impact AIR-1 from potentially significant to less than significant because future applicable air quality plans would be consistent with the County's projections and emissions would be reduced. The proposed Policy HS-5.9 would also conform to the MBUAPCD's 2011 CEQA consistency procedures, which state that when an EIR finds an inconsistency between a proposed project and regional air quality attainment plans because of a difference in population, housing, or jobs projections, the EIR should "request AMBAG to add the [new projection] number of persons and dwelling units to its next forecast" (MBUAPCD 2011). However, the County does not have control of whether the Air Quality Management Plans will come into consistency with the General Plan population projections. Therefore, the impacts of both Scenario 1 and Scenario 2 after mitigation would remain **significant and unavoidable.**

Impact AIR-2: Violate any air quality standard as established by the US EPA or CARB, or contribute substantially to an existing or projected air quality violation, in comparison to the MBUAPCD thresholds (III.b).

Level of Significance: Less than significant with mitigation for both Scenario 1 and Scenario 2.

MBUAPCD (2008a) defines a violation of an air quality standard or a substantial contribution to an existing or project air quality violation as one where a project or plan:

- Emits 137 pounds per day or more of VOC or NOx,
- Emits 550 pounds per day or more of CO,
- Generates traffic that significantly affects levels of service,
- Directly emits 82 pounds per day or more of PM_{10} on site during construction or operation,
- Generates traffic on unpaved roads that results in 82 pounds per day or more of PM_{10}, or
- Directly emits 150 pounds per day of SOx.

Except for the PM_{10} threshold, the MBUAPCD daily mass emission thresholds are limited to operations and are not intended to measure construction impacts.

Emits 137 Pounds Per Day or More of VOC or NOx. As discussed under Impact AIR-1, buildout of the 2035 General Plan would result in emissions that exceed 137 pounds per day of VOC for both Scenario 1 and Scenario 2 before mitigation, but after mitigation measure AIR-1, emissions

of both VOC and NOx are below the thresholds. As emissions from the 2035 General Plan buildout after mitigation do not exceed 137 pounds per day of VOC or NOx, implementation of the 2035 General Plan would not violate air quality standards for this emissions category after mitigation.

Although the MBUAPCD does not provide daily mass emissions construction thresholds for VOC and NOx, for informational purposes, the worst-case maximum daily emissions estimated in CalEEMod for construction beginning in 2015 are 1,070 lbs/day ROG and 292 lbs/day NOx. This analysis assumes that construction activity associated with the General Plan is evenly distributed over the years 2015 to 2035.

Emits 550 Pounds Per Day or More of CO. Tables 7-7 and 7-8 show that both 2035 General Plan buildout scenarios would result in CO emissions that exceed the MBUAPCD threshold of 550 pounds per day. However after incorporating mitigation measure AIR-1, each Scenario shows a net decrease in CO emissions (by over a ton per day) as compared to existing conditions, thus not exceeding the MBUAPCD threshold for this air contaminant after mitigation. Implementation of either Scenario in the 2035 General Plan with mitigation measure AIR-1 would not violate air quality standards for this emissions category, nor would it contribute to an existing or future violation based on the MBUAPCD thresholds of significance. Although there are no daily mass emissions construction thresholds for CO, for informational purposes, the worst-case maximum daily emissions estimated in CalEEMod for construction beginning in 2015 are 188 lbs/day CO. This analysis assumes that construction activity associated with the General Plan is evenly distributed over the years 2015 to 2035.

Generate Traffic that Significantly Affects Levels of Service. No modeling for CO emissions for intersections from idling traffic was conducted for this evaluation since this is a plan-level analysis. Instead, project-level analyses would typically be conducted to ensure that there is no exceedance of the CO ambient air quality standards for individual projects. For comparison, screening thresholds for CEQA significance in three large air districts were considered:

- The Bay Area Air Quality Management District (BAAQMD) proposed a screening threshold of an increase of 44,000 vehicles per hour at an affected intersection.
- In the South Coast Air Quality Management District (SCAQMD), the 2003 Air Quality Management Plan estimated that the most stringent 1-hour CO standard (20.0 ppm) would likely not be exceeded until the daily traffic at an intersection exceeded more than 400,000 vehicles per day.
- The Sacramento Metropolitan Air Quality Management District (SMAQMD) screening thresholds for CO hot spots are 31,600 vehicles per hour or 758,400 vehicles per day.

Increases in vehicle traffic of this magnitude are not anticipated in the County at any intersection due to the growth projected in the General Plan. In addition, CO hot spots at intersections are unlikely once more stringent car emissions standards are in effect. Please refer to Chapter 19 for analysis of whether the project would generate traffic that would significantly affect levels of service.

Directly Emits 82 Pounds Per Day or More of PM_{10} on Site During Construction or Operation. As shown in Tables 7-7 and 7-8, both Scenario 1 and Scenario 2 2035 General Plan buildout would result in a net operational increase of more than 82 pounds of PM_{10} per day before mitigation. However, by applying mitigation measure AIR-1 to ban wood-burning fireplaces, operational PM_{10} emissions are well below the MBUAPCD threshold of significance. PM_{10} exhaust emissions during construction are primarily generated by diesel construction equipment, while fugitive dust would be generated by equipment operating on exposed soils. The worst-case maximum daily PM_{10} emissions estimated in CalEEMod for construction beginning in 2015 are 78 lbs/day during site preparation, which is below the MBUAPCD threshold of significance. This analysis assumes that construction activity associated with the General Plan is evenly distributed over the years 2015 to 2035, however construction emissions depend on the characteristics of each individual project, so this is a general estimate.

According to MBUAPCD, the construction mitigation requirements listed in the *CEQA Air Quality Guidelines* (2008a) are sufficient to reduce construction impacts to a less-than-significant level (Nunes 2012). Table 7-2 shows the 2035 General Plan policies that address construction emissions, including Goal HS-5 and Policies HS-5.1, HS-5.3, HS-5.4, and HS-5.6. Policy HS-5.4 shown in Table 7-2 states:

> The County shall require developers to reduce particulate emissions from construction (e.g., grading, excavation, and demolition) consistent with standards established by MBUAPCD.

Consequently, to reduce PM_{10} emissions from construction of individual projects under the 2035 General Plan, each project must apply the required emissions control measures to meet the MBUAPCD thresholds for construction emissions. Accordingly, implementation of the 2035 General Plan would not violate air quality standards for this emissions category, nor would it contribute to an existing or future violation.

Generates Traffic on Unpaved Roads of 82 Pounds Per Day or More of PM_{10}. The traffic report prepared for the 2035 General Plan does not report travel on unpaved roads. Travel on unpaved roads may result from private agricultural and other uses and thus should be treated at the project level, not the plan level. Although there is some anticipated expansion of agricultural lands in the County, any change in the quantity of unpaved roads would be addressed at the project level.

As such, implementation of the 2035 General Plan would not violate air quality standards for this emissions category, nor would it contribute to an existing or future violation**.**

Directly Emits 150 Pounds Per Day of Sox. As shown in Tables 7-7 and 7-8, the emissions of SOx in both scenarios would be substantially less than 150 pounds per day. Consequently, the project would have a less-than-significant effect on SOx ambient standards. Thus, implementation of the 2035 General Plan would not violate air quality standards for this emissions category, nor would it contribute to an existing or future violation. Although there are no daily mass emissions construction thresholds for SOx, for informational purposes the worst-case maximum daily emissions estimated in CalEEMod for construction beginning in 2015 are 0.23 lbs/day SOx. This analysis assumes that construction activity associated with the General Plan is evenly distributed over the years 2015 to 2035.

Before mitigation, the operation at full buildout of 2035 General Plan would exceed the MBUAPCD thresholds of significance for ROG, PM_{10}, and CO. However, after mitigation the 2035 General Plan would not exceed any of the items that the MBUAPCD uses to define a violation of an air quality standard or a substantial contribution to an existing or future air quality violation. As such, the 2035 General Plan would have a less-than-significant impact after mitigation by not contributing to violation of any air quality standards.

Impact AIR-3: Result in a cumulatively considerable net increase of any criteria air pollutant for which the NCCAB is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors) (III.c).

Level of Significance: Less than significant with mitigation for Scenario 1 and Scenario 2.

As previously discussed, existing air quality in the NCCAB exceeds state 8-hour ozone standards and PM_{10} standards. Given the ozone and PM_{10} attainment status of the NCCAB, most new development projects would need to comply with MBUAPCD plans and regulations to reduce these air pollutant emissions to meet state 8-hour ozone standards and PM_{10} standards. The MBUAPCD has set thresholds for ROG and PM_{10} that demonstrate consistency with the plans.

Tables 7-7 and 7-8 compare emissions from Scenarios 1 and 2 to the MBUAPCD thresholds of significance for ROG and PM_{10}. Based on estimated pre-mitigation emissions, the potential impact of both scenarios of the 2035 General Plan to result in a cumulatively considerable net increase of ozone and particulate matter would be significant (see analysis for Impact AIR-2, above). After mitigation, though, neither scenario of the 2035 General Plan would result in a cumulatively considerable new increase of ozone or PM_{10}, which is a less-than-significant impact after mitigation.

In addition, the County has incorporated several policies into its 2035 General Plan that will reduce the project's contribution to cumulative air emissions, as shown in Table 7-2, including Goal HS-5 and Policies HS-5.1 to 5.6; Goal AD-2 and Policy AD2.5; Goal LU-3 and Policy LU-3.3; Goal C-1and Policies C-1.1, C-1.2, and C-1.11; Goal C-2 and Policies C-2.1 to C-2.3; Goal C-3 and Policies C-3.1 to C-3.6; and Goal C-4 and Policies C-4.1 and C-4.2.

Impact AIR-4: Generate construction-related emissions that may expose sensitive receptors to temporary substantial pollutant concentrations (III.d).

Level of Significance: Less than significant for Scenario 1 and Scenario 2.

PM_{10} exhaust emissions during construction are primarily generated by diesel construction equipment, while fugitive dust would be generated by equipment operating on exposed soils. Table 7-2 shows the 2035 General Plan policies that address construction emissions, including Goal HS-5 and Policies HS-5.1, HS-5.3, HS-5.4, and HS-5.6. According to the MBUAPCD, the construction mitigation requirements listed in their CEQA Air Quality Guidelines (2008a) are sufficient to reduce construction impacts to a less-than-significant level on sensitive receptors (Nunes 2012). Estimates of PM_{10} emissions from 2035 General Plan Update buildout will depend on project phasing and the implementation of CARB tier standards for off-road equipment, and making general assumptions for typical construction are estimated at 78 pounds per day, which is below the MBUAPCD significance threshold for construction. In addition, Policy HS-5.4, listed in Table 7-2, states that "The County shall require developers to reduce particulate emissions from construction (e.g., grading, excavation, and demolition) consistent with standards established by MBUAPCD." Policy HS-5.6, listed in Table 7-2, states "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." Consequently, the policies shown in Table 7-2, which include Policies HS-5.4 and HS-5.6, would reduce construction fugitive dust emissions and other pollutants, respectively. These are consistent with regional air quality planning assumptions and requirements.

Implementation of the 2035 General Plan for both Scenario 1 and Scenario 2 would not violate air quality standards for this emissions category, nor would it contribute to an existing or future violation.

Impact AIR-5: Expose sensitive receptors to substantial criteria air pollutant concentrations (III.d).

Level of Significance: Less than significant for Scenario 1 and Scenario 2.

According to MBUAPCD, all residences, education centers, daycare facilities, and health care facilities are considered "sensitive receptors" (MBUAPCD 2008a). MBUAPCD defines a significant impact to a sensitive receptor as one that would cause a violation of CO, PM_{10}, or TAC standards at an existing or reasonably foreseeable receptor. Implementation of the 2035

General Plan has the potential to expose County residents or other sensitive receptors to substantial pollutant concentrations via the addition of new roadways and subsequent traffic emissions, as well as construction and operation emissions from new development projects. However, because the 2035 General Plan proposes Policy HS-5.2 to ensure adequate distances between sensitive receptors and sources of toxic or hazardous air emissions, this would be a less-than-significant impact under both construction and operation. Additionally, as described in Impact AIR-4, the project would not expose sensitive receptors to substantial concentrations of air pollutants during construction, which will still be the case in Scenario 1. As indicated in the 2035 General Plan's Land Use Diagram, light industrial land uses would be designated to an area south of San Juan Road/4th Street and to the south of Union Road, near Hollister, as well as in areas surrounding the north part of Hollister. Heavy Industrial land uses are designated in the community of Aromas, northeast of the Highway 101/129 intersection, as well as north and south of 4th Street, outside of Hollister. Light and heavy industrial areas could be designated near the new community study areas and residential uses near Hollister in unincorporated County, as well.

If residential land uses are developed adjacent to the locations cited above, potential land use conflicts could expose residents to PM_{10} and TAC emissions. However, the 2035 General Plan Health and Safety Element, Goal HS-5 and Policies HS-5.2, HS-5.4, and HS-5.5, shown in Table 7-2, are designed to protect County residents from PM_{10} and TACs generated by facilities or operations that may produce substantial emissions of TACs. The goals and policies listed in Table 7-2 would minimize PM_{10} and TAC impacts associated with buildout of the 2035 General Plan by, for example, establishing appropriate buffer areas between sensitive receptors and substantial TAC sources, and by minimizing particulate matter emissions from construction and industrial facilities.

Additionally, no freeways in San Benito County have average annual daily traffic (AADT) above 100,000 vehicles per day (Caltrans 2014), which is the value above which the CARB (2005) recommends a 500-foot buffer between the freeway and sensitive land uses. In rural areas, the CARB recommends a 500-foot buffer between sensitive land uses and a rural road with over 50,000 vehicles per day. There are no rural roads within the County with AADT above 50,000 vehicles per day. The highway AADT of 100,000 vehicles per day and the rural road AADT of 50,000 AADT will not be exceeded by 2035.

As described above, the 2035 General Plan includes several policies that will result in substantially limiting the impact of pollutants on sensitive receptors through emissions reductions or strategic zoning during the Plan's buildout. Consequently, the project would not result in a significant CO, PM_{10} or TAC impact for both Scenario 1 and Scenario 2.

Impact AIR-6: Create or expose a substantial number of people to objectionable odors (III.e).

Level of Significance: Less-than-significant for Scenario 1 and Scenario 2.

The 2035 General Plan has the potential to expose a substantial number of people to objectionable odors because it allows such people in the County to be located in close proximity to potential odor sources. As indicated in the 2035 General Plan's Land Use Diagram, light industrial land uses would be designated to an area south of San Juan Road/4th Street and to the south of Union Road, near Hollister, as well as in areas surrounding the north part of Hollister. Heavy Industrial land uses are designated in the community of Aromas, northeast of the Highway 101/129 intersection, as well as north and south of 4th Street, outside of Hollister. Light and heavy industrial areas could be designated near the new community study areas, as well.

If residential land uses are developed adjacent to or directly downwind of the locations with objectionable odors, potential land use conflicts could expose a substantial number of people to objectionable odors. However, the 2035 General Plan Health and Safety Element Goal HS-5, Policy HS-5.2 is designed to protect County residents from noxious odors generated by facilities or operations that may produce substantial odors. This goal and policy, which are listed in Table 7-2, would minimize odor impacts associated with buildout of the 2035 General Plan by establishing appropriate buffer areas between sensitive receptors, including all residences, and substantial odor sources. Impacts from construction odors depend on proximity, meteorology, and detailed project construction plans, among other factors. Accordingly, it is anticipated that site-specific odors impacts that may occur in connection with individual development projects pursued under the 2035 General Plan would be evaluated as part of a project-level environmental review, taking into consideration the above-referenced issues and identifying feasible mitigation tied to site-specific issues that are identified during that process. For these reasons, this would be a less-than-significant impact for both Scenario 1 and Scenario 2.

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