4.7 Air Quality

4.7.1 Abstract

This section describes the setting and impacts of the proposed project with regard to air quality. Specifically, this section focuses on the relationship between topography and climate, discusses federal and state ambient air quality standards and existing air quality conditions in the project study area, identifies land uses that could be sensitive to decreased air quality, and describes the overall regulatory framework for air quality management in California and the region. It then identifies the potential air quality impacts that would result from implementation of the 2007 General Plan and proposes mitigation measures to reduce any significant impacts to less-than-significant levels. Climate change is a related topic that is discussed in Section 4.16 of this EIR.

4.7.2 Environmental Setting

4.7.2.1 Climate and Meteorology

The project study area is located within the County of Monterey, which is in the North Central Coast Air Basin (NCCAB), where the Monterey Bay Unified Air Pollution Control District (MBUAPCD) is charged with maintaining air quality.

The NCCAB comprises 5,159 square miles along California's central coast and includes Monterey, Santa Cruz, and San Benito Counties. The northwest sector of the basin is dominated by the Santa Cruz Mountains. The Diablo Range marks the northeastern boundary and, together with the southern extent of the Santa Cruz Mountains, forms the Santa Clara Valley, which extends into the northeastern tip of the basin. Farther south, the Santa Clara Valley evolves into the San Benito Valley, which extends 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 the northwest end to King City at the southeast 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; the coastal Santa Lucia Range defines the western side of the valley.

The semi-permanent high-pressure cell in the eastern Pacific is the basic controlling factor in the climate of the air basin. 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.

The generally northwest–southeast orientation of mountain ridges tends to restrict and channel the summer 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 airflow during the afternoon and evening.

In the fall, the surface winds become weak, and the marine layer grows shallow, dissipating altogether on some days. The airflow is occasionally reversed in a weak offshore movement, and the relatively stationary air mass is held in place by the Pacific high-pressure cell, which allows pollutants to build up over a period of a few days. It is most often during this season that the north or east winds develop to transport pollutants from either the San Francisco Bay area or the Central Valley into the NCCAB.

During the winter, the Pacific High migrates southward and has less influence on the air basin. Air frequently flows in a southeasterly direction out of the Salinas and San Benito Valleys, especially during night and morning hours. Northwest winds are nevertheless still dominant in winter, but easterly flow is more frequent. The general absence of deep, persistent inversions and the occasional storm systems usually result in good air quality for the basin as a whole in winter and early spring.

4.7.2.2 Air Pollutants

The federal and state governments have established ambient air quality standards (AAQS) for six criteria pollutants: ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter smaller than or equal to 10 microns in diameter (PM_{10}), and lead. Ozone and PM_{10} are generally considered to be regional pollutants, as these or their precursors affect air quality on a regional scale. Pollutants such as CO, NO_2, SO_2, and lead are considered "local" pollutants that tend to accumulate in the air locally. PM_{10} is considered both a localized and regional pollutant. In the project study area, CO, PM_{10} and ozone (and the ozone precursors, nitrogen oxides [NO_X] and reactive organic gases [ROG]) are of particular concern. A complete summary of state and national AAQS is provided in Table 4.7-1.

Ozone

Ozone occurs in two layers of the atmosphere. The layer nearest Earth's surface is the troposphere and extends approximately 10 miles above ground level, where it meets the stratosphere. The stratosphere extends upward to approximately 30 miles above ground level and protects life on earth from the sun's harmful ultraviolet rays (UV-B).

Ozone is a photochemical pollutant and needs volatile organic compounds (VOCs), NO_X, and sunlight to form. Therefore, VOCs and NO_X are ozone precursors. The primary sources of VOC within the planning area are on- and off-road motor vehicles, cleaning and surface coatings, solvent evaporation, landfills, petroleum production and marketing, and prescribed burning. The primary sources of NO_x are on- and off-road motor vehicles, stationary source

fuel combustion, and industrial processes (MBUAPCD 2008). According to the MBUAPCD Air Quality Management Plan, rough estimates of current NCCAB VOC emissions are in the range of 100 to 125 tons per day (MBUAPCD 2008). The majority of these are thought to be produced in Monterey County's oak woodlands and coastal chaparral environments. Rough estimates of NO_x are in the range of 1 to 5 tons per day, and are the highest during wildfire events. Significant ozone formation generally requires an adequate amount of precursors in the atmosphere and several hours in a stable atmosphere with abundant sunlight. They are emitted from various sources throughout the Basin, and to reduce ozone concentrations, their emission needs to be controlled. However, high ozone concentrations can form over large regions when emissions from motor vehicles and stationary sources are carried hundreds of miles from their places of origin. Although ozone in the stratosphere protects the earth from harmful ultraviolet radiation, high concentrations of ground-level ozone in the troposphere can adversely affect the human respiratory system and other tissues. Many respiratory ailments, as well as cardiovascular disease, are aggravated by exposure to high ozone levels. Ozone also damages natural ecosystems such as forests and foothill plant communities, as well as agricultural crops and human-made materials such as rubber, paint, and plastics. Societal costs from ozone damage include increased healthcare costs, the loss of human and animal life, accelerated replacement of industrial equipment, and reduced crop yields.

On April 15, 2004, the Environmental Protection Agency (EPA) formally replaced the 1979 federal 1-hour ozone standard with a more stringent 8-hour standard (0.08 ppm, not to be exceeded) as part of the Clean Air Rules of 2004. To remain consistent with the stricter federal standards, the California Air Resources Board (CARB) approved a new 8-hour ozone standard (0.07 ppm, not to be exceeded) for ozone on April 28, 2005. Additionally, CARB retained the current 1-hour-average standard for ozone (0.09 ppm) and its current ultraviolet (uv) photometry monitoring method.

Carbon Monoxide

Carbon Monoxide is an odorless, colorless, toxic gas that is emitted by mobile and stationary sources as a result of incomplete combustion of hydrocarbons and other carbon-based fuels. In urban areas, automobile exhaust can cause as much as 95% of all CO emissions. At high concentrations, CO can reduce the oxygen-carrying capacity of blood and cause headaches, dizziness, unconsciousness, and death. State and federal standards for CO were not exceeded in the North Central Coast Air Basin between 2000 and 2005.

Nitrogen Oxide

Nitrogen oxides are a family of highly reactive gasses that are a primary precursor to the formation of ground-level ozone, and react in the atmosphere to form acid rain. Nitrogen dioxide, often used interchangeably with NO_X, is a reddish-brown gas that can cause breathing difficulties at high concentrations. Peak readings of NO_2 occur in areas that have a high concentration of

combustion sources (e.g., motor vehicles, power plants, refineries, and other industrial operations).

NO_X can irritate and damage the lungs and lower resistance to respiratory infections such as influenza. The health effects of short-term exposure are still uncertain. However, frequent or prolonged exposure to NO_X concentrations that are typically much higher than concentrations normally found in the ambient air may increase acute respiratory illness in children and the incidence of chronic bronchitis and lung irritation. Chronic exposure to NO_2 may aggravate eyes and mucus membranes and cause pulmonary dysfunction.

Particulate Matter

Particulate matter pollution consists of very small liquid and solid particles floating in the air. Particulate matter is a mixture of materials that can include smoke, soot, dust, salt, acids, and metals. Particulate matter also forms when gases emitted from motor vehicles and industrial sources undergo chemical reactions in the atmosphere. Natural sources of particulates include sea spray, forest fires, volcanic debris, etc. Human-made sources include fuel combustion and industrial processes, industrial and nonindustrial fugitive sources and transportation. PM_{10} particles are less than or equal to 10 microns in aerodynamic diameter. $PM_{2.5}$ particles are less than or equal to 2.5 microns in aerodynamic diameter and are a subset, or portion of PM_{10}.

PM_{10} and $PM_{2.5}$ are classified as primary or secondary depending on their origin. Primary particles are unchanged after being directly emitted (e.g., road dust). Secondary particulates are formed in the atmosphere largely by chemical reactions involving gases, e.g., sulfate from directly emitted sulfur oxides.

PM_{10} and $PM_{2.5}$ particles are small enough to be inhaled into, and lodge in, the deepest parts of the human lung. Health problems begin as the body reacts to these foreign particles. Acute and chronic health effects associated with high particulate levels include the aggravation of chronic respiratory diseases, heart and lung disease, coughing, bronchitis, and respiratory illnesses in children. Recent mortality studies have shown a statistically significant direct association between mortality and daily concentrations of particulate matter in the air. Non-health related effects include reduced visibility and the soiling of buildings.

Reactive Organic Gases and Volatile Organic Compounds

Hydrocarbons are organic gases that are made up of hydrogen and carbon atoms. There are several subsets of organic gases including ROGs and VOCs. ROGs are defined by state rules and regulations; VOCs are defined by federal rules and regulations. Both ROGs and VOCs are emitted from the incomplete combustion of hydrocarbons or other carbon-based fuels, or as a product of chemical processes. The major sources of hydrocarbons are combustion engine exhaust, oil refineries, and oil-fueled power plants; other common sources are petroleum fuels, solvents, dry cleaning solutions, and paint (via evaporation). Wineries also contribute hydrocarbons through their fermentation activities.

In very brief terms, the wine making process involves several steps including fermentation. Fermentation is the chemical process by which the natural sugars in the wine grapes are converted to alcohol through the action of yeast (either from the grape skins, or more commonly, cultured yeasts) introduced into the fermentation tank. Grapes are brought to the winery where they are passed through a destemmer-crusher that separates the grapes from their stems and breaks them open to release their juice. For white wine production, the resultant crushed grapes are then transferred to a press that separates the juice from the skins. The juice will then be transferred to fermentation tanks. For red wine, the crushed grapes (juice and skins, or "must") are sent directly to the fermentation tanks.

Fermentation occurs under temperature-controlled conditions in either stainless steel or wooden tanks. Temperature is important to the development of flavor and character. In general, white wine is fermented at a lower temperature than red wine. Red wines are generally allowed to ferment for up to 14 days. During fermentation, the nascent red wine will be circulated from time to time to prevent the skins from simply floating on top. White wine will be allowed to ferment for a week to two months.

During fermentation, the grape juice is converted to ethyl alcohol and carbon dioxide. This process also releases a number of organic compounds, including (but not limited to) volatile compounds such as aldehydes, hydrogen sulfide, and mercaptans, that will affect the flavor and aroma of the wine.

After the primary fermentation process is done, the wine may, depending on the variety of grapes, the results of the primary fermentation, and the objectives of the winemaker, be put through secondary or "malolactic" fermentation. In malolactic fermentation, bacteria are released into the wine to soften its character (removing bitterness or tartness).

At the end of the fermentation process, the resultant wine is removed from the tanks. Solids are removed from the liquid by a variety of processes. Then, the wine is transferred to barrels or other containers for aging. (Encarta 2008)

Although we tend to think of winemaking as taking place in one spot—the winery—its steps may actually take place in different facilities. Grapes may be crushed in one facility and the juice sold to wineries. Fermented wine may be exported for blending and aging elsewhere. Wineries may also transport fermented, aged wines to off-site bottling plants,

Winemaking is a complex chemical process that is as much an art as a science. Winemakers must balance innumerable natural and process-related factors to result in a wine that meets their expectations for color, aroma, and taste.

Ethanol and carbon dioxide are the primary compounds emitted during the fermentation step in the production of wines and brandy. Acetaldehyde, methyl alcohol (methanol), n-propyl alcohol, n-butyl alcohol, sec-butyl alcohol, isobutyl alcohol, isoamyl alcohol, and hydrogen sulfide also are emitted but in much

smaller quantities compared to ethanol emissions. In addition, a large number of other compounds are formed during the fermentation and aging process. Selected examples of other types of compounds formed and potentially emitted during the fermentation process include a variety of acetates, monoterpenes, higher alcohols, higher acids, aldehydes and ketones, and organosulfides (United States Environmental Protection Agency 1995).

During the fermentation step, large quantities of CO_2 are also formed and emitted. Fugitive ethanol emissions also occur during the screening of the red wine, pressing of the pomace cap, and later during aging in oak cooperage and the bottling process. In addition, small amounts of liquified SO_2 are often added to the grapes after harvest, to the "must" prior to fermentation, or to the wine after the fermentation is completed, as a preservative. As a result, small amounts of SO_2 emissions can occur during these steps. There is little potential for VOC emissions before the fermentation step in wine production. Except for harvesting the grapes and possibly unloading the grapes at the winery, there is essentially no potential for particulate (PM) emissions from this industry (United States Environmental Protection Agency 1995).

The harvest and crush of wine grapes is seasonal. In general, percentages of harvest take place as follows:

Table 4.7-1. Statewide Wine Fermentation Emissions Distribution (percentage)

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
3.6%	1.4%	0.8%	0.5%	0.7%	0.7%	0.6%	4.8%	28.5%	32.1%	12.3%	14.0%

The health effects of hydrocarbons result from the formation of ozone and its related health effects. High levels of hydrocarbons in the atmosphere can interfere with oxygen intake by reducing the amount of available oxygen though displacement. Carcinogenic forms of hydrocarbons are considered toxic air contaminants (air toxics). There are no separate health standards for VOCs, although some are also toxic; an example is benzene, which is both a VOC and a carcinogen.

Toxic Air Contaminants

Toxic Air Contaminants (TACs) are another group of pollutants of concern in California. There are hundreds of different types of TACs, with varying degrees of toxicity. Sources of TACS include industrial processes such as petroleum refining and chrome plating, commercial operations such as gasoline stations and dry cleaners, and motor vehicle engine exhaust. Public exposure to TACs can result from emissions from normal operations, as well as accidental releases of hazardous materials during upset spill conditions. Adverse human health effects of TACs include cancer, birth defects, neurological damage, and death.

California regulates toxic air contaminants through its Air Toxics Program. CARB, working in conjunction with the State Office of Environmental Health Hazard Assessment, identifies TACs. Air toxic control measures may then be adopted to reduce ambient concentrations of the identified TAC to below a specific threshold, based on its effects on health, or to the lowest concentration achievable through the use of Best Available Control Technology for toxics (T-BACT). The program is administered by CARB. Air quality control agencies, including MBUAPCD, must incorporate air toxic control measures into their regulatory programs or adopt equally stringent control measures, such as rules, within six months of adoption by CARB.

In 1998, CARB identified diesel engine particulate matter as a TAC. Mobile sources—including trucks, buses, automobiles, trains, ships, construction equipment, and farm equipment—are the largest sources of diesel emissions. Studies show that diesel particulate matter concentrations are much higher near heavily traveled highways and intersections. The exhaust from diesel engines includes hundreds of different gaseous and particulate components, many of which are toxic. Many of these toxic compounds adhere to the particles, and because diesel particles are very small, they penetrate deeply into the lungs. Diesel engine particulate matter is a human carcinogen. The cancer risk from exposure to diesel exhaust may be much higher than the risk associated with any other toxic air pollutant routinely measured in the region.

Prior to the listing of particulate matter as a TAC, CARB had already adopted various regulations mandating a reduction in diesel emissions. These regulations include new standards for diesel engine fuel; exhaust emissions standards for new diesel trucks, buses, autos, and utility equipment; and inspection and maintenance requirements for heavy-duty vehicles. Since the listing of particulate matter as a TAC, CARB has been evaluating what additional regulatory action is needed to reduce public exposure. Future actions by CARB may include more stringent emissions requirements for diesel fuel and engines, as well as other measures to reduce public exposure.

4.7.2.3 Local Air Quality

Attainment Status

The State of California has designated the NCCAB as being in moderate nonattainment for ozone. The California Clean Air Act states that an ozone nonattainment area becomes nonattainment transitional if the state AAQS are not exceeded more than three times at any monitoring station in the air basin. The NCCAB is designated nonattainment for PM_{10} and unclassified/attainment for CO.

The EPA has designated the NCCAB as being a moderate maintenance area for ozone. The NCCAB was redesignated from a moderate nonattainment area to a maintenance area in 1997 after meeting the federal 1-hour ozone standard in 1990. The NCCAB is designated unclassified for PM_{10} and unclassified/attainment for CO.

Air Quality Monitoring Data

The existing air quality conditions in the project study area can be characterized by monitoring data collected in the region. PM_{10}, CO, and ozone concentrations are the pollutants of greatest concentration within the MBUAPCD and, therefore, are the pollutants of most concern from the proposed project. Air quality monitoring data for the last three years is presented in Table 4.7-2. The monitoring station in Monterey County is the Salinas #3 station, located at 855 E Laurel Drive in Salinas.

As shown in Table 4.7-2, the Salinas #3 monitoring station has experienced no violations of the state 1- and 8-hour ozone standard and one violation of the state PM_{10} standard during the three most recent years for which data are available. In addition, there have been no violations of the state or federal CO or $PM_{2.5}$ standard for this time period.

Sensitive Land Uses

Sensitive receptors include land uses such as residences, schools, and hospitals where building occupants are considered to be sensitive to air pollution, such as residents, recreationists, school children, hospital patients, and the elderly. Sensitive receptors are located throughout Monterey County.

4.7.3 Regulatory Framework

4.7.3.1 Air Quality Management

Federal, state, and local agencies have jurisdiction over air quality management in the North Central Coast Air Basin. Below is a summary of their activities:

Environmental Protection Agency

The EPA Region IX office oversees compliance with the Federal Clean Air Act (FCAA) and the 1990 amendments to the FCAA. The FCAA established National Ambient Air Quality Standards (NAAQS) that set levels of criteria pollutants that are considered the maximum safe levels of ambient (background) pollutant concentration, allowing an adequate margin of safety to protect human health. The current criteria pollutants are O_3, CO, NO_2, sulfur dioxide, PM_{10}, $PM_{2.5}$, and lead. Note that sulfur dioxide and lead are present only in trace quantities in the North Central Coast Air Basin because no substantial emitters of these pollutants exist within the air basin.

The EPA has exclusive air quality jurisdiction over certain types of interstate commerce including aircraft, railroads, and interstate trucking.

California Air Resources Board

CARB, part of the California EPA, monitors compliance with the California Clean Air Act (CCAA) and the 1989 amendments to the CCAA. Similar to the federal legislation, the CCAA sets forth ambient air quality standards and legal mandates to achieve these standards by the earliest practicable date. These standards apply to the same criteria pollutants as the FCAA, and include sulfate, visibility, hydrogen sulfide, and vinyl chloride.

Regulation for In-Use Off-Road Diesel Vehicles

CARB adopted a final regulation for in-use, off-road diesel vehicles, effective June 15, 2008. The purpose of this regulation is to reduce diesel particulate matter and criteria pollutant emissions from in-use, off-road diesel-fueled vehicles. The regulation applies to any person, business or government agency who owns or operates within California any diesel-fueled or alternative diesel fueled off-road, compression ignition vehicle engine with maximum power of 24 horsepower (hp) or greater that is used to provide motive power in a workover rig or to provide motive power in any other motor vehicle that: (1) cannot be registered and driven safely on-road or was not designed to be driven on-road, and (2) is not an implement of husbandry or recreational off-highway vehicle (CARB 2008). This regulation includes various requirements for retrofits and/or repowers for heavy duty diesel emissions.

Monterey Bay Unified Air Pollution Control District

The MBUAPCD has developed an extensive PM_{10} mitigation program for construction activities. MBUAPCD CEQA guidelines state that regional impacts from ozone precursor emissions in equipment exhaust (NOx and ROG) have been incorporated into the regional emissions budget. The MBUAPCD sets forth the following mitigation measures for construction:

- Water all active construction areas at least twice daily. Frequency should be based on type of operation, soil, and wind exposure.
- Prohibit all grading activities occurring during periods of high winds (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 area.
- Require Haul trucks to maintain at least 2 feet, 0 inches of freeboard.
- Cover all trucks hauling dirt, sand, or 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 soon as possible.

- Cover inactive storage piles.
- Install wheel washers at the entrance to construction sites for all exiting trucks.
- Pave all roads at construction sites.
- Sweep streets if visible soil material is carried out from the construction site.
- Post a publicly visible sign that 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 to as small as practical.

The MBUAPCD sets forth the following mitigation measures for heavy duty equipment:

- Limit the pieces of equipment used at any one time.
- Minimize the use of diesel-powered equipment (i.e., wheeled tractor, wheeled loader, roller) by using gasoline-powered equipment.
- Limit the hours of operation for heavy-duty equipment.
- Undertake project during non-zone season.
- Off-site mitigation.
- Use PuriNOx emulsified diesel fuel in existing engines.
- Modify engine with ARB verified retrofit.
- Repower with current standard diesel technology.
- Repower with CNG/ LNG technology.

The MBUAPCD sets forth the following mitigation measures for retrofits and/or repowers for heavy duty diesel engines:

- Retrofit engine models from 1993–2002 and certain 4-stroke diesel engines with DPF from Lubrizol, Cleaire, Donaldson.
- Retrofit engine models from 1993–2003 and certain 4-stroke diesel engines with an ARB Level 3 verified DPF from ECS-Lubrizol.
- Retrofit engine models from 1993–2002 and Caterpillars with PSA bi-fuel systems with ARB Level 3 verified DPF from Clean Air Power.
- Retrofit engine models from 1993–2002 and some 4-stroke diesel engines used as emergency generators with ARB Level 3 verified DPF retrofit from Clean Air systems.

- Retrofit engines from 1991–2002 and some 4-stroke diesel engines over 150 Bhp with an ARB Level 1 verified DOC from Cleaire, Donaldson, or Lubrizol.
- Repower heavy duty diesel engines with current Tier 1 or 2 diesel engines.

MBUAPCD Air Quality Management Plan

MBUAPCD is one of 35 air pollution management districts that have prepared an Air Quality Management Plan (AQMP). The MBUAPCD adopted the 2008 AQMP for the Monterey Bay region in June 2008. The 2008 AQMP relies on a multi-level partnership of federal, state, regional, and local agencies, and proposes policies and measures to achieve federal and state air quality standards for improved air quality in its jurisdictional area.

The 2008 AQMP also addresses several federal and state planning requirements, and incorporates significant new scientific data, primarily in the form of updated emissions inventories, ambient measurements, new meteorological episodes, and new air quality modeling tools. The 2008 AQMP is consistent and builds upon the approaches taken in previous AQMPs for the attainment of the state ozone and PM_{10} standards. The AQMP outlines strategies to maintain the state 1-hour AAQS and achieve the state 8-hour AAQS for ozone.

The AQMP inventories and forecasts the emissions of ozone precursors, such as VOCs, from hundreds of man-made mobile and stationary sources on a typical weekday during the May through October ozone season. This inventory is used to assess the region's progress toward attaining California's ambient air quality standard.

The present and forecasted VOC emissions from wine production are shown below in Table 4.7-2. The total 2030 VOC emissions (1.1134 tons/day or about 2,227 pounds/day) represents the amount of emissions projected to come from the fermentation and ageing of wine in Monterey County during the summer ozone season at the planning horizon.

Table 4.7-2. MBUAPCD Air Quality Management Plan VOC Emissions from Wine Fermenting and Ageing

	2008(tons/day)	2008 (lbs/day)	2030(tons/day)	2030(lbs/day)
Wine Fermentation	0.1608	322	0.2877	575
Wine Ageing	0.3648	730	16510.8257	1651
Total	0.5256	1,051	1.1134	2,227

Source: Monterey Bay Unified Air Pollution Control District. 2008b.

Rules 201 (Sources Not Requiring Permits) and 417 (Storage of Organic Liquids)

According to the MBUAPCD's Rule 201-Sources Not Requiring Permits, the following wine-making facilities do not require air district permits in order to operate:

- Wineries in operation as of May 14, 1997 with an annual production rate less than 1.25 million gallons (4.7 megaliters), and
- New or reconstructed, as defined in District Rule 207 (Review of New or Modified Sources, wineries with an annual production rate of less than 150,000 gallons (570 kiloliters).

If the winery does not fit into Rule 201, it is subject to the MBUAPCD's Rule 417-Storage of Organic Liquids. Rule 417 lists the requirements and standards for the storage of organic liquids, seals, record keeping, and vapor controls.

4.7.4 Project Impacts

4.7.4.1 Thresholds of Significance

According to Appendix G of the State CEQA Guidelines, a project would normally have a significant effect on the environment if it would

- conflict with or obstruct implementation of the applicable air quality plan,
- violate any air quality standard or contribute substantially to an existing or projected air quality violation,
- result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or state AAQS,
- expose sensitive receptors to substantial pollutant concentrations, or create objectionable odors affecting a substantial number of people.

The 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. The MBUAPCD has specified significance thresholds within its CEQA Air Quality Guidelines (2008) to determine whether mitigation is needed for project-related air quality impacts. Based on consultation with MBUAPCD staff (Brennan pers. comm.) and the MBUAPCD's CEQA air quality guidelines, the following thresholds should be used in the analysis of significant air quality impacts:

Construction-Related Emissions (pounds per day)

- NO_X = 137
- PM_{10} = 82

Operation-Related Emissions (pounds per day)

- ROG = 137
- NO_X = 137
- CO = 550
- PM_{10} = 82

Based on the construction threshold of 82 pounds per day of PM_{10}, the MBUAPCD has identified levels of construction activity that could result in a significant impact. For construction involving grading, excavation, and other earthmoving activities, the MBUAPCD identified construction sites that disturb more than 2.2 acres per day as having the potential to exceed the 82 pounds-per-day threshold.

The MBUAPCD does not have significance thresholds for construction-related ozone precursors because they are accommodated in the emission inventories of state- and federally required air plans.

4.7.4.2 Impact Analysis

Buildout of the 2007 General Plan could result in impacts on air quality. New development would require the use of construction equipment and diesel vehicles. Increased population would result in an overall increase in vehicle trips and vehicle miles traveled (VMT). Impacts include the potential to conflict with air quality plans and standards, expose sensitive receptors to substantial pollutant concentrations, and create objectionable odors.

Consistency with Air Quality Plans

Impact AQ-1: Buildout of the 2007 General Plan would conflict with applicable Air Quality Management Plans and Standards. (Less-Than-Significant Impact.)

2030 Planning Horizon

Impact of Development with Policies

Buildout of the 2007 General Plan would result in new urban development in undeveloped areas. New development facilitates increased population growth and would result in increased vehicle trips and VMT.

2007 General Plan Policies

The 2007 General Plan and Area Plan goals and policies summarized below set forth comprehensive measures to avoid and minimize adverse impacts on air quality to the maximum extent practicable.

Open Space and Conservation Element

Open Space and Conservation Element Goal OS-10 provides for the protection and enhancement of Monterey County's air quality without constraining routine and ongoing agricultural activities. Policies OS 10.1-10.5 encourage land use and transit strategies to reduce air pollution. Policies OS-10.6 (support for MBUAPCD air pollution control strategies, air quality monitoring, and enforcement activities) and OS-10.9 (future development required to implement applicable MBUAPCD control measures) support this goal and reduce air quality impacts by standardizing air quality measures in the County.

Area Plan Policies

The North County Area Plan

North County Area Plan Policy NC-1.2 (mushroom operations) reduces air quality impacts by requiring new development to install environmental control methods for air quality.

Greater Salinas Area Plan

There are no applicable policies related to air quality in the Greater Salinas Area Plan.

Central Salinas Valley Area Plan

Central Salinas Valley Area Plan Policy CSV-3.2 (development of renewable energy sources) encourages the development and utilization of renewable energy sources such as solar, wind power generation, and biomass technologies in the Central Salinas Valley. This policy would help reduce air quality impacts by supporting nonpolluting energy sources.

Greater Monterey Peninsula Area Plan

Greater Monterey Peninsula Area Plan Policy GMP-2.7 (public transit) would help reduce air quality impacts by encouraging new development to incorporate alternate modes of transportation (buses, bicycles, walking).

Carmel Valley Master Plan

Carmel Valley Master Plan Policy CV-2.1 (circulation) emphasizes the use of public transit and stresses the importance of pedestrian access in the village, which would allow for reduced air quality impacts through reduction of traffic.

Toro Area Plan

Toro Area Plan Policies T-2.9 and T-2.10 (circulation) would reduce air quality impacts by encouraging new development to incorporate designs to allow for alternate modes of transportation, and also by encouraging increased accessibility for residents to mass transit.

Cachagua Area Plan

There are no policies applicable to air quality in the Cachagua Area Plan.

South County Area Plan

There are no policies applicable to air quality in the South County Area Plan.

Agricultural Winery Corridor Plan

The AWCP overlays the Toro, Central Salinas Valley, and South County Area Plans, and policies relating to air quality are applicable to the AWCP under this plan. Implementation of these policies would reduce air quality impacts in the AWCP area.

Significance Determination

Population growth under the 2007 General Plan is consistent with the growth projected in the MBUAPCD Clean Air Plan. Table 4.7-3 shows the housing, population, employment, and VMT data for 2000, 2030, and 2092 buildout conditions under the 2007 General Plan.

Table 4.7-3. Projected population and VMT growth in Monterey County

Scenario	Housing Units	Population	Employment	VMT
2000	129,571	-	222,471	8,162,834
2000 With Project	168,904	509,692	304,388	9,846,752
2030 With Project	143,009	437,665	253,060	8,532,513
2030 Cumulative	187,022	602,790	335,362	14,290,852
Cumulative 2092 Buildout	290,631	937,373	520,531	18,822,215

Source: Kimley-Horn (2008)

As shown in Table 4.7-3, an increase in County population from 2000 to buildout is anticipated to be accompanied by a concurrent increase in VMT. However, the population increase is consistent with the MBUAPCD Clean Air Plan population projections. The MBUAPCD Clean Air Plan projects that the Monterey County population will be 602,371 in 2030. Therefore, air quality would comply with the Clean Air Plan and not be significantly impacted by the buildout of the 2007 General Plan,.
New wineries would result in increased VOC emission from wine fermenting and ageing. Table 4.7-4 summarizes VOC emissions under 2030 project conditions. The estimate of gallons per year is based on per-winery production from 10 full-scale and 40 artisan wineries of varying sizes.

Table 4.7-4. VOC Emissions for 2030 Conditions of 10 Full-Scale and 40 Artisan Wineries

	Emission Factor (lbs/1000 gallons)[1]	**Gallons per Year[2] (in 1,000s)**	**VOC Emissions (lbs/ year)**	**VOC Emissions (lbs/ day)**
Fermentation-Red	6.2	4,141.2	25,675.4	187.4
Fermentation-White	2.5	6,211.8	15,529.5	113.4
Pomace Screening-Red	0.5	4,141.2	2,070.5	15.1
Pomace Press-Red	0.1	4,141.2	414.12	3.0
Storage/Ageing-Red	0.02782[3]	4,141.2	115,250	315.8
Storage/Ageing-White	0.02583[3]	6,211.8	160,451	439.6
Total			**318,390.5**	**905.3**
MBUAPCD Threshold				**137 pounds per day**

[1] Source: United States Environmental Protection Agency 2001

[2] 1 case = 2.38 gallons

[3] Source: SBCAPCD 2008.

As shown in Table 4.7-4, VOC emissions under 2030 project conditions would be within the MBUAPCD's forecast VOC emissions inventory for 2030 (2,227 pounds per day). As such, this level of emissions would be consistent with the 2008 AQMP. Therefore, the 2007 General Plan is consistent with the MBUAPCD's 2008 AQMP, and this impact is considered less than significant.

Mitigation Measures

No mitigation beyond the 2007 General Plan policies is necessary.

Significance Conclusion

In summary, the 2007 General Plan would not conflict with the MBUAPCD Clean Air Plan. Impacts in this regard would be less than significant.

Buildout

Impact of Development with Policies

Buildout of the 2007 General Plan to the 2092 planning horizon would result in new urban development in undeveloped areas beyond 2030 levels. New development could facilitate growth, which would in turn increase vehicle trips and VMT. This could result in significant adverse affects on air quality.

2007 General Plan Policies

The same 2007 General Plan and Area Plan policies summarized above under 2030 would apply.

Significance Determination

Buildout by 2092 would result in adverse impacts on air quality due to increased population, vehicle trips, and VMT. However, the 2007 General Plan and Area Plan policies set forth comprehensive measures to avoid and minimize adverse impacts on air quality to the maximum extent practicable. These policies are summarized above. They include measures to promote sustainable land use decisions, improve and encourage the use of public transit and alternate modes of transportation. Therefore, air quality would not be significantly impacted by buildout of the 2007 General Plan. Impacts in this regard would be less than significant.

Mitigation Measures

No mitigation beyond the 2007 General Plan policies is necessary.

Significance Conclusion

In summary, buildout by 2092 would result in adverse impacts on air quality. However, the 2007 General Plan and Area Plan policies set forth comprehensive measures to avoid and minimize adverse impacts on air quality to the maximum extent practicable. Therefore, air quality would not be significantly impacted by buildout of the 2007 General Plan. Impacts in this regard would be less than significant.

Construction-Related Emissions

Impact AQ-2: Generation of significant quantities of construction-related emissions would result in greater levels of air pollution. (Less-Than-Significant With Mitigation Impact.)

2030 Planning Horizon

Impact of Development with Policies

Implementation of the 2007 General Plan would result in increased construction activity. This would impact air quality by increasing ozone precursor and particulate matter emissions for an area that already exceeds ambient air quality standards. Construction activities such as demolition, grading, deliveries, hauling, and worker trips to and from project sites would generate pollutant emissions. Construction projects may also generate exhaust emissions from primarily diesel fueled equipment. Particulate matter is the pollutant of greatest concern that is emitted from construction, particularly during site preparation and grading. Particulate matter emissions can vary daily, depending on various factors, such as the level of activity, type of construction activity taking place, type of equipment in operation, and weather conditions. Off-road construction equipment is also a large source of NO_X and diesel particulate matter. While construction projects are often linear and last for a limited time, localized emissions may be substantial.

2007 General Plan Policies

The 2007 General Plan and Area Plan goals and policies summarized below set forth comprehensive measures to avoid and minimize adverse construction impacts on air quality to the maximum extent practicable.

Open Space and Conservation Element

Open Space and Conservation Element Goal OS-10 provides for the protection and enhancement of Monterey County's air quality without constraining routine and ongoing agricultural activities. Policy OS-10.8 (air quality shall be protected from naturally occurring asbestos by requiring mitigation measures to control dust and emissions during construction, grading, quarrying, or surface mining operations) reduces air quality impacts by controlling asbestos exposure during various activities that may result in natural asbestos release. Policies OS-10.6 (support for MBUAPCD air pollution control strategies, air quality monitoring, and enforcement activities) and OS-10.9 (future development required to implement applicable MBUAPCD control measures) support this goal and reduce air quality impacts by standardizing air quality measures in the County.

Area Plan Policies

The North County Area Plan

North County Area Plan Policy NC-1.2 (mushroom operations) reduces air quality impacts by requiring new development to install environmental control methods for air quality.

Greater Salinas Area Plan

There are no policies applicable to construction-related emissions in the Greater Salinas Area Plan.

Central Salinas Valley Area Plan

There are no policies applicable to construction-related emissions in the Central Salinas Valley Area Plan.

Greater Monterey Peninsula Area Plan

There are no policies applicable to construction-related emissions in the Greater Monterey Peninsula Area Plan.

Carmel Valley Master Plan

There are no policies applicable to construction-related emissions in the Carmel Valley Master Plan.

Toro Area Plan

There are no policies applicable to construction-related emissions in the Toro Area Plan.

Cachagua Area Plan

There are no policies applicable to air quality in the Cachagua Area Plan.

South County Area Plan

There are no policies applicable to air quality in the South County Area Plan.

Agricultural Winery Corridor Plan

The AWCP overlays the Toro, Central Salinas Valley, and South County Area Plans, and policies relating to air quality are applicable to the AWCP under this plan. Implementation of these policies would reduce air quality impacts in the AWCP area.

Significance Determination

Buildout of the 2007 General Plan within the planning horizon includes increased development and roadway improvements. Construction emissions could potentially result in adverse impacts to air quality. The 2007 General Plan and Area Plan policies set forth comprehensive measures to avoid and minimize adverse impacts on air quality to the maximum extent practicable. The 2007 General Plan and Area Plan goals and policies summarized above include measures to comply with MBUAPCD's standards and regulations regarding construction emissions.

As described above in the Regulatory Setting section, the MBUAPCD has developed an extensive PM_{10} mitigation program for construction activities. MBUAPCD CEQA guidelines state that regional impacts from ozone precursor emissions in equipment exhaust (NO_X and ROG) have been incorporated into the regional emissions budget. This is a potentially significant impact because PM_{10} emissions could violate air quality thresholds. Mitigation is required to reduce this impact to a level of less than significant.

Mitigation Measure AQ-1:
The County of Monterey will update General Plan policy OS-10.5 as follows:

OS-10.5 The County of Monterey will require that future construction in accordance with the 2007 implement MBUAPCD PM_{10} control measures.

Mitigation Measure AQ-2:
Implement MBUAPCD Mitigation Measures for Off-Road Mobile Source and Heavy Duty Equipment Emissions.

General Plan Policy OS-10.6 will be revised as follows:

The County shall implement MBUAPCD measures to address off-road mobile source and heavy duty equipment emissions as conditions of approval for future development.

Significance Conclusion

In summary, buildout of the 2007 General Plan would result in new development, and increased emissions would result from construction activities. Mitigation Measures AQ-1 through AQ-3 would reduce this impact to a less than significant level.

Buildout

Impact of Development with Policies

Implementation of the 2007 General Plan to the 2092 planning horizon would result in increased construction activity, which would impact air quality by increasing ozone precursor and particulate matter emissions for an area that already exceeds ambient air quality standards. Construction projects may also generate exhaust emissions from primarily diesel fueled equipment. While construction projects are often linear and last for a limited time, localized emissions may be substantial.

2007 General Plan Policies

The same 2007 General Plan and Area Plan goals and policies summarized above under the 2030 planning horizon would also apply to buildout in 2092.

Significance Determination

Buildout of the 2007 General Plan includes increased development and roadway improvements. Construction emissions could potentially result in adverse impacts on air quality. The 2007 General Plan and Area Plan policies include measures to comply with MBUAPCD's standards and regulations regarding construction emissions. Mitigation Measures AQ-1 through AQ-3 are required to reduce this impact to a level of less than significant.

Mitigation Measures

Implement Mitigation Measures AQ-1 and AQ-2..

Significance Conclusion

In summary, buildout of the 2007 General Plan would result in new development, and increased emissions would result from construction activities. Mitigation Measures AQ-1 and AQ-2 are required to reduce this impact to less than significant.

Criteria Pollutants

Impact AQ-3: Net Change in Ozone Precursor (ROG and NOx) and Particulate Matter. (Significant and Unavoidable.)

2030 Planning Horizon

Impact of Development with Policies

Mobile sources are sources of emissions associated with vehicle trips, and include employees, deliveries, and maintenance activities. The primary

operational emissions associated with the proposed project are ozone precursors, CO, particulate matter (PM_{10} and $PM_{2.5}$), and carbon dioxide (CO_2), emitted as vehicle exhaust. Emission of ozone precursors, CO, and particulate matter for existing year (2007) and future year (2030) project conditions were calculated using the EMFAC 2007 model and traffic data provided by the 2007 General Plan traffic engineers. Appendix A describes the methodology and model inputs for existing year, future year, and buildout of the 2007 General Plan. Emissions of CO_2 are analyzed in Section 4.16, Climate Change.

Table 4.7-5 summarizes emissions associated with each project condition. Table 4.7-6 summarizes the differences in emissions between project conditions. As Table 4.7-6 indicates, implementation of the 2007 General Plan would result in net decreases in ROG, NO_X, CO, and $PM_{2.5}$ emissions, while PM_{10} emissions would increase. Vehicular emission rates are anticipated to lessen in future years due to continuing improvements in engine technology and the phasing out of older, higher-emitting vehicles. These decreases in emission rates are sufficient to offset the increases in VMT between existing and 2030 project conditions. PM_{10} emissions are shown to increase slightly with implementation of the proposed project due to increased VMT outpacing the reductions in emission rates that would occur for future conditions relative to existing conditions. However, these increases are below the MBUAPCD threshold of 82 pounds per day.

Table 4.7-5. Criteria Pollutant Emissions from Mobile Sources (pounds per day)

Condition	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$
2000	13,875	37,737	225,144	1,656	1,296
2000 With Project	16,737	45,522	271,589	1,997	1,563
2030 With Project	1,223	4,872	26,053	1,072	734
2030 Cumulative	2,048	8,160	43,635	1,796	1,229
2030 Cumulative Buildout	2,697	10,747	57,471	2,365	1,618

Table 4.7-6. Differences in Criteria Pollutant Emissions from Mobile Sources (pounds per day)

Project Condition	Yearly VMT	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$
Existing	8,162,834	13,875	37,737	225,144	1,656	1,296
2030 Project Increase (2030 With Project - 2000)	369,679	-12,652	-32,865	-199,091	-583	-562
2030 Cumulative	14,290,852	2,048	8,160	43,635	1,796	1,229
Buildout Project Increase (2000 With Project - 2000)	1,683,918	2,862	7,785	46,445	342	267
Cumulative Buildout	18,822,215	2,697	10,747	57,471	2,365	1,618
MBUAPCD Thresholds		137	137	550	82	N/A

In addition to mobile sources, wineries proposed under the AWCP component of the 2007 General Plan would be sources of criteria emissions. According to the EPA, ethanol and carbon dioxide are the primary compounds emitted during the wine making fermentation process (Environmental Protection Agency 2001). Ethanol is a volatile organic compound and is subject to the MBUAPCD's ROG thresholds, while carbon dioxide has no thresholds of significance. Discussions with industry representatives indicate that the harvest in Monterey County generally runs 137 days from August 1 through December 15. 2030 Buildout conditions are described in Table 4.7-2, above. Emissions from a typical single artisan and a typical single full-scale winery are depicted below in Table 4.7-7. Emission factors are available for the fermentation (both red and white wines), pomace screening (red wine only), and pomace press processes. Emission factors for other processes such as storage are not available. The estimate of gallons per year is based on a maximum production of 25,000 cases per year for a typical artisan winery, and 1,500,000 cases per year for a typical full-scale winery.

Table 4.7-7. VOC Emissions for Typical Single Full-Scale and Single Artisan Wineries)

	Emission Factor (lbs/1000 gallons)[1]	Gallons per Year[2]	VOC Emissions (lbs/year)	VOC Emissions (lbs/ day)
Single Artisan Winery				
Fermentation-Red	6.2	23,800	147.56	1.1
Fermentation-White	2.5	35,700	89.25	0.65
Storage/Ageing-Red	0.02783	23,800	662	1.81
Storage/Ageing-White	0.02583	35,700	922	2.53
Pomace Screening-Red	0.5	23,800	11.9	0.09
Pomace Press-Red	0.1	23,800	2.38	0.02
Total			**1,835.09**	**6.2**
Single Full-Scale Winery				
Fermentation-Red	6.2	1,428,000	8,853.6	64.6
Fermentation-White	2.5	2,142,000	5,355	39.1
Storage/Ageing-Red	0.02783	1,428,000	39,741	108.88
Storage/Ageing-White	0.02583	2,142,000	55,328	151.58
Pomace Screening-Red	0.5	1,428,000	714	5.2
Pomace Press-Red	0.1	1,428,000	142.8	1.04
Total			**110,134.4**	**370.37**
MBUAPCD Threshold				**137 lbs/day**

[1]Source: United States Environmental Protection Agency 2001
[2]case = 2.38 gallons

2007 General Plan Policies

The 2007 General Plan and Area Plan goals and policies summarized below set forth comprehensive measures to avoid and minimize adverse impacts on air quality to the maximum extent practicable.

Open Space and Conservation Element

Open Space and Conservation Element Goal OS-10 provides for the protection and enhancement of Monterey County's air quality without constraining routine and ongoing agricultural activities. Policies OS-10.1 through OS10.11 (land use decisions, mass transit, conservation of vegetated and forested areas, industrial and

commercial development, mixed land use, support of MBUAPCD strategies, use of technology, asbestos, future development) contain measures to improve the County's air quality and encourage sustainable development that utilizes mass transit and energy efficiency, which would result in a reduction in air quality impacts.

Circulation Element

Circulation Element Goal C-2 is to optimize the County's transportation facilities. Policies C-2.1 through C-2.7 include measures to concentrate land-use and reduce overall VMT. Circulation Element Goal C-3 encourages the minimization of negative impacts of transportation on the County. Policies C-3.1 through C-3.5 include measures to protect air quality, reduce fossil fuels, and promote alternate transportation. Circulation Element Goal C-6 entails promoting alternative transportation. Policies C-6.1 through C.6-9 include measures to promote public transportation and infrastructure for public transportation. Goal C-10 and Policies C-10.1 through C-10.7 promote improving the bicycle transportation system, which will reduce impacts to air quality.

Area Plan Policies

The North County Area Plan

North County Area Plan Policy NC-1.2 (mushroom operations) reduces air quality impacts by requiring new development to install environmental control methods for air quality.

Greater Salinas Area Plan

There are no policies applicable to air quality in the Greater Salinas Area Plan.

Central Salinas Valley Area Plan

Central Salinas Valley Area Plan Policy CSV-3.2 (development of renewable energy sources) encourages the development and utilization of renewable energy sources such as solar, wind power generation, and biomass technologies in the Central Salinas Valley. This policy would help reduce air quality impacts by supporting non-polluting energy sources.

Greater Monterey Peninsula Area Plan

Greater Monterey Peninsula Area Plan Policy GMP-2.7 (public transit) would help reduce air quality impacts by encouraging new development to incorporate alternate modes of transportation (buses, bicycles, walking).

Carmel Valley Master Plan

Carmel Valley Master Plan Policy CV-2.1 (circulation) emphasizes the use of public transit, and stresses the importance of pedestrian access in the village, which would allow for reduced air quality impacts through reduction of traffic.

Toro Area Plan

Toro Area Plan Policies T-2.9 and T-2.10 (circulation) would reduce air quality impacts by encouraging new development to incorporate designs to allow for alternate modes of transportation; it also encourages increasing mass transit accessibility for residents.

Cachagua Area Plan

There are no policies applicable to air quality in the Cachagua Area Plan.

South County Area Plan

There are no policies applicable to air quality in the South County Area Plan.

Agricultural Winery Corridor Plan

The AWCP overlays the Toro, Central Salinas Valley, and South County Area Plans, and policies relating to air quality are applicable to the AWCP under this plan. Implementation of these policies would reduce air quality impacts in the AWCP area.

Significance Determination

Implementation of the 2007 General Plan would result in increased emissions of criteria pollutants and VOCs. Implementation of the 2007 General Plan would result in increased mobile and area source emissions due to increased vehicle trips and VMT, and increased development.

As indicated in Table 4.7-5, 2030 conditions (2030 With Project - 2000 conditions) would result in a net decrease in ROG, NO_X, CO, $PM_{2.5}$, and PM_{10} emissions. Vehicular emission rates are anticipated to lessen in future years due to continuing improvements in engine technology and the phasing out of older, higher-emitting vehicles. These decreases in emission rates are sufficient to offset the increases in VMT seen between 2000 and 2030 project conditions, resulting in the decreased ROG, NO_X, CO, $PM_{2.5}$, and PM_{10} emissions observed in Table 4.7-5. Additionally, the 2007 General Plan and Area Plan goals and policies set forth comprehensive measures to avoid and minimize adverse impacts on air quality to the maximum extent practicable.

The 2007 General Plan and Area Plan policies summarized above include measures to increase the use of public transit and alternate modes of transportation, and to promote sustainable development. The 2007 General Plan also encourages concepts such as sustainable development and preservation of natural areas that would further reduce single passenger vehicle trips. In addition, the MBUAPCD has developed mitigation for commercial, industrial, institutional, and residential land uses, and for alternative fuels. Criteria pollutant impacts (with the exception of VOC emissions from wineries) are considered less than significant with implementation of Mitigation Measures AQ-3 through AQ-5 below. Also, please refer Mitigation Measures CC-2, and CC-3. These policies will add new general plan policies OS-10.12 and OS-10.13, which involve adopting a green building ordinance and promoting alternative energy development. Mitigation Measures CC-2 and CC-3 would further reduce this impact.

As shown above in Table 4.7-7, estimated project-level VOC emissions from individual artisan wineries would be under the MBUAPCD threshold of 137 lbs/day, while emissions from individual full-scale wineries would exceed the threshold. In addition to wine fermentation, emissions occur from wine ageing.

Although the combined VOC production of the wineries would not exceed the 2008 AQMP's forecast emissions inventory, typical full-scale wineries would individually exceed the daily VOC standard (137 pounds per day) and, taken together the 50 new wineries would produce more than 137 lbs/day of VOC emissions, and cumulatively exceed the MBUAPCD's thresholds. To be conservative, this impact is considered considerable.

Substantial amounts of grape juice and must from wine grapes harvested in Monterey County are currently being shipped to Napa County for fermentation and ageing. In concept, implementation of the AWCP would allow much of those products to remain in Monterey County for fermentation and ageing, thereby avoiding the mobile emissions from truck trips to and from Napa County. However, the amount of this offset and its permanence cannot be determined. The San Joaquin Valley is another of California's major wine grape producing areas. There is no way to ensure that the Napa County truck trips avoided by the AWCP would not be replaced by truck trips between the San Joaquin Valley and future Monterey County wineries, should winery capacity and market forces make that economically viable. Because the avoided emissions cannot be quantified with reasonable accuracy, this offset is not considered in the analysis of VOC emissions.

Mitigation Measures

Mitigation Measure AQ-3: Implement MBUAPCD Mitigation Measures for Commercial, Industrial, and Institutional Land Uses (MBUAPCD 2008).

The following measures will be added to General Plan Policy OS-10.10:

- Provide preferential carpool/vanpool parking spaces
- Implement a parking surcharge for single occupant vehicles
- Provide for shuttle/mini bus service
- Provide bicycle storage/parking facilities and shower/locker facilities
- Provide onsite child care centers
- Provide transit design features within the development
- Develop park-and-ride lots
- Employ a transportation/rideshare coordinator
- Implement a rideshare program
- Provide incentives to employees to rideshare or take public transportation
- Implement compressed work schedules
- Implement telecommuting program

Mitigation Measure AQ-4: Implement MBUAPCD Mitigation Measures for Residential Land Uses (MBUAPCD 2008).

General Plan Policy OS-10.10 will be revised to include the following measures to address residential land use:

- Provide bicycle paths within major subdivisions that link to an external network
- Provide pedestrian facilities within major subdivisions

Mitigation Measure AQ-5: Implement MBUAPCD Mitigation Measures for Alternative Fuels (MBUAPCD 2008).

The following measures will be added to General Plan Policy OS-10.2 to address alternative fuels:

- Utilize electric fleet vehicles
- Utilize Ultra Low-Emission fleet vehicles
- Utilize methanol fleet vehicles
- Utilize liquid propane gas fleet vehicles
- Utilize compressed natural gas fleet vehicles

Significance Conclusion

In summary, implementation of the 2007 General Plan would result in a decrease in ROG, NO_X, CO, $PM_{2.5}$, and PM_{10} emissions. The 2007 General Plan and Area Plan goals and policies set forth comprehensive measures to

avoid and minimize adverse impacts on air quality to the maximum extent practicable, and the MBUAPCD has established mitigation measures for operational emissions. Therefore, with the implementation of Mitigation Measures AQ-3 through AQ-5, the impact from criteria pollutants is considered less than significant for most sources.

As seen from Table 4.7-5, the VOC emissions that would occur under 2030 project conditions would exceed the District's threshold of 137 pounds per day. Consequently, VOC impacts from winery operations are considered significant and unavoidable.

There is no feasible mitigation that would reduce these emissions. As noted above, wine making is as much art as science. The San Joaquin Valley Air Pollution Control District (SJVAPCD) established Rule 4694 in December 2005 to regulate VOC emissions from wine fermentation and storage tanks through temperature controls, emissions controls, and process restrictions. (San Joaquin Valley Air Pollution Control District. 2006) However, during preparation of its 2007 Ozone Plan, the SJVAPCD further evaluated whether there is a Reasonably Available Control Technology (RACT) for wine fermentation and storage and found that there is none. Upon research, the SJVAPCD found that Rule 4694 is the only one of its kind in the world. After extensive research into a number of potential approaches, the SJVAPCD concluded that for a variety of reasons, technologically feasible control options are not economically feasible. Accordingly, Rule 4694 is not eligible for inclusion in the State Implementation Plan. (San Joaquin Valley Air Pollution Control District 2007)

Buildout

Impact of Development with Policies

Emission factors are not currently available for future year 2092, and as such a qualitative analysis is required for this condition. As indicated above, buildout of the 2007 General Plan would result in net decreases in ROG, NO_X, CO, $PM_{2.5}$, and PM_{10} emissions. Vehicular emission rates are anticipated to lessen in future years due to continuing improvements in engine technology and the phasing out of older, higher-emitting vehicles. These decreases in emission rates would likely offset the increases in VMT between existing and 2092 project conditions.

2007 General Plan Policies

The same 2007 General Plan and Area Plan goals and policies summarized above under 2030 would also apply to 2092.

Significance Determination

The 2007 General Plan and Area Plan goals and policies set forth comprehensive measures to avoid and minimize adverse impacts on air

quality to the maximum extent practicable. The 2007 General Plan and Area Plan goals and policies summarized above include measures to increase the use of public transit and alternate modes of transportation, and to promote sustainable development. The 2007 General Plan also encourages concepts such as sustainable development and preservation of natural areas that would further reduce single passenger vehicle trips. However, because emission factors are not available for future year 2092, emission levels for 2092 are purely speculative. Therefore, this impact is considered potentially significant and Mitigation Measures AQ-3 through AQ-5 are required.

Mitigation Measures

Implement Mitigation Measures AQ-3, AQ-4, and AQ-5.

Significance Conclusion

In summary, the 2007 General Plan and Area Plan goals and policies set forth comprehensive measures to avoid and minimize adverse impacts on air quality to the maximum extent practicable. However, there is not sufficient information to determine whether emission levels would exceed thresholds in 2092. Therefore, this impact is considered potentially significant.

Diesel Exposure Health Risk

Impact AQ-4: Buildout of the 2007 General Plan would expose sensitive receptors to increased diesel exhaust. (Less-Than-Significant With Mitigation)

2030 Planning Horizon

Impact of Development with Policies

Within the last decade, health effects studies have demonstrated that toxic air contaminants for which there is no safe exposure level are an equally critical concern. The bulk of this concern is related to diesel particulate matter (DPM) generated by heavy equipment during facility construction and by heavy truck traffic during transportation system operations. DPMs are released in their already toxic form near the source, and then cumulatively disperse throughout the region. They are both a local and a regional issue.

CARB has identified diesel exhaust particulate matter as a toxic air contaminant. However, the assessment of diesel-related cancer risks is typically based upon a 70-year exposure period. Roadway construction activities, especially linear projects, expose receptors to possible diesel exhaust for a very limited number of days out of the “70-year, 365 day per year, 24-hour per day, outside of one’s residence” assumption in the overall risk assignment. Because exposure to diesel exhaust will be well below the 70-year exposure period, and exposure will be minimal due to types of proposed projects, construction of any individual project is not anticipated to result in an elevated cancer risk to exposed persons. Consequently, the local

diesel exposure risks associated with construction activities is considered to be less than significant. CARB adopted a new regulation for in-use off-road diesel vehicles in 2008 that applies to off-road diesel fleets and includes measures such as retrofits (CARB 2008).

Local operational DPM impacts around any individual transportation source depend upon the number of diesel sources and the setback distance between the source and the nearest sensitive receivers. Recently developed state and federal guidelines have identified operational characteristics that would be a possible concern. The CARB's recent land use recommendation is that sensitive receptors should not be located any closer than 500 feet of a freeway carrying more than 100,000 vehicles per day. This policy is not included in the 2007 General Plan. EPA/FHWA guidelines do not require a $PM_{2.5}$-diesel hot spot analysis for any roadway that carries less than 10,000 diesel-fueled vehicles per day. These levels of traffic and diesel exhaust are not realized in Monterey County. Transportation projects envisioned with buildout of the 2007 General Plan would reduce idling and queuing at congestion points. Their implementation will reduce diesel exposure by improving system efficiency at existing bottlenecks. While maximizing the setback distances and minimizing truck impacts to any sensitive receptors should be incorporated into the final design of all planned improvements, plan implementation is not expected to worsen air toxics exposures near any plan elements.

Diesel particulate matter exposure is, however, also a regional issue. Exposure in Monterey County is much less than in heavily developed areas of the state with generally poorer dispersion meteorology. Nevertheless, prudent avoidance to cumulative long-term regional diesel exhaust exposure is recommended because there is no absolute safe exposure level to this pollutant. This is a potentially significant impact. Mitigation is required to reduce this impact to a level of less than significant.

2007 General Plan Policies

The 2007 General Plan and Area Plan goals and policies summarized below set forth comprehensive measures to avoid and minimize adverse impacts on air quality to the maximum extent practicable.

Open Space and Conservation Element

Open Space and Conservation Element Goal OS-10 provides for the protection and enhancement of Monterey County's air quality without constraining routine and ongoing agricultural activities. Policies OS-10.6 (support for MBUAPCD air pollution control strategies, air quality monitoring, and enforcement activities) and OS-10.9 (future development required to implement applicable MBUAPCD control measures) support this goal and reduce air quality impacts by standardizing air quality measures in the County.

Area Plan Policies

The North County Area Plan

North County Area Plan Policy NC-1.2 (mushroom operations) reduces air quality impacts by requiring new development to install environmental control methods for air quality.

Greater Salinas Area Plan

There are no policies applicable to air quality in the Greater Salinas Area Plan.

Central Salinas Valley Area Plan

Central Salinas Valley Area Plan Policy CSV-3.2 (development of renewable energy sources) encourages the development and utilization of renewable energy sources such as solar, wind power generation, and biomass technologies in the Central Salinas Valley. This policy would help reduce air quality impacts by supporting non-polluting energy sources.

Greater Monterey Peninsula Area Plan

Greater Monterey Peninsula Area Plan Policy GMP-2.7 (public transit) would help reduce air quality impacts by encouraging new development to incorporate alternate modes of transportation (buses, bicycles, walking).

Carmel Valley Master Plan

Carmel Valley Master Plan Policy CV-2.1 (circulation) emphasizes the use of public transit, and stresses the importance of pedestrian access in the village, which would allow for reduced air quality impacts through reduction of traffic.

Toro Area Plan

Toro Area Plan Policies T-2.9 and T-2.10 (circulation) would reduce air quality impacts by encouraging new development to incorporate designs to allow for alternate modes of transportation, and also by encouraging increased accessibility for residents to mass transit.

Cachagua Area Plan

There are no policies applicable to air quality in the Cachagua Area Plan.

South County Area Plan

There are no policies applicable to air quality in the South County Area Plan.

Agricultural Winery Corridor Plan

The AWCP overlays the Toro, Central Salinas Valley, and South County Area Plans, and policies relating to air quality are applicable to the AWCP under this plan. Implementation of these policies would reduce air quality impacts in the AWCP area.

Significance Determination

Implementation of the 2007 General Plan within the 2030 planning horizon could potentially result in health risks due to diesel exhaust. Mitigation Measure AQ-6 and AQ-7 would be consistent with the 2008 CARB regulation for in-use off-road diesel fueled fleets, and would reduce this impact to a less than significant level. The 2007 General Plan contains no specific proposals for sensitive land uses near highways carrying 100,000 cars per day or other air pollution sources listed in the *Air Quality and Land Use Handbook: A Community Health Perspective* prepared by the California Air Resources Board in April 2005. Buffers between non-agricultural developments and agricultural fields that might be sources of dust will be required under Policy AG-1.2. Policy LU-2.2 will limit residential development in areas that are unsuited for more intensive development due to physical hazards and development constraints. Therefore, there would be no significant impacts from this quarter.

Mitigation Measure AQ-6: The County of Monterey shall require that construction contracts be given to those contractors who show evidence of the use of soot traps, ultra-low sulfur fuels, and other diesel engine emissions upgrades that reduce PM_{10} emissions to less than 50% of the statewide PM_{10} emissions average for comparable equipment.

Mitigation Measure AQ-7: The following language should be included in General Plan policy OS-10.10:

- Development of new sensitive land uses (schools, hospitals, facilities for the elderly) should not be located any closer than 500 feet of a freeway carrying more than 100,000 vehicles per day.

Significance Conclusion

In summary, buildout of the 2007 General Plan would result in health risks from diesel exhaust. In addition to the above General Plan goals and policies, Mitigation Measures AQ-6 and AQ-7 are required to reduce this impact to less than significant.

Buildout

Impact of Development with Policies

Buildout of the 2007 General Plan to the 2092 planning horizon would result in similar health risk impacts due to diesel exhaust as those described for the 2030 planning horizon.

2007 General Plan Policies

The same 2007 General Plan and Area Plan goals and policies summarized above for 2030 would also apply to 2092.

Significance Determination

Buildout of the 2007 General Plan within the planning horizon would result in health risks due to diesel exhaust. Implementation of Mitigation Measures AQ-6 and AQ-7 will reduce this impact to less than significant.

Mitigation Measures

Implement Mitigation Measure AQ-6 and AQ-7.

Significance Conclusion

In summary, buildout of the 2007 General Plan would result in health risks from diesel exhaust. In addition to the above General Plan goals and policies, Mitigation Measures AQ-6 and AQ-7 are required to reduce this impact to less than significant.

Carbon Monoxide Concentrations

Impact AQ-5: Future traffic growth would cause increases in CO levels along County roadways. (Less-Than-Significant Impact.)

2030 Planning Horizon

Impact of Development with Policies

Air quality impacts may occur locally in close proximity to a transportation source from air pollutants that are released in their already unhealthy form. CO exposure in close proximity to major intersections or freeways has traditionally been a local air quality concern. With much cleaner cars and low local background levels, CO hot spot potential has all but disappeared in Monterey County.

2007 General Plan Policies

The 2007 General Plan and Area Plan goals and policies summarized below set forth comprehensive measures to avoid and minimize adverse impacts on air quality to the maximum extent practicable.

Open Space and Conservation Element

Open Space and Conservation Element Goal OS-10 provides for the protection and enhancement of Monterey County's air quality without constraining routine and ongoing agricultural activities. Policies OS-10.2, 10.4, 10.5, 10.9, and 10.11 all encourage mass transit or alternate modes of transportation, which would help alleviate congestion and delay, both of which lead to CO concentrations. These policies would, therefore, result in a reduction of air quality impacts from CO concentrations.

Area Plan Policies

The North County Area Plan

North County Area Plan Policy NC-1.2 (mushroom operations) reduces air quality impacts by requiring new development to install environmental control methods for air quality.

Greater Salinas Area Plan

There are no policies applicable to air quality in the Greater Salinas Area Plan.

Central Salinas Valley Area Plan

Central Salinas Valley Area Plan Policy CSV-3.2 (development of renewable energy sources) encourages the development and utilization of renewable energy sources such as solar, wind power generation, and biomass technologies in the Central Salinas Valley. This policy would help reduce air quality impacts by supporting non-polluting energy sources.

Greater Monterey Peninsula Area Plan

Greater Monterey Peninsula Area Plan Policy GMP-2.7 (public transit) would help reduce air quality impacts by encouraging new development to incorporate alternate modes of transportation (buses, bicycles, walking).

Carmel Valley Master Plan

Carmel Valley Master Plan Policy CV-2.1 (circulation) emphasizes the use of public transit, and stresses the importance of pedestrian

access in the village, which would allow for reduced air quality impacts through reduction of traffic.

Toro Area Plan

Toro Area Plan Policies T-2.9 and T-2.10 (circulation) would reduce air quality impacts by encouraging new development to incorporate designs to allow for alternate modes of transportation, and also by encouraging increased accessibility for residents to mass transit.

Cachagua Area Plan

There are no policies applicable to air quality in the Cachagua Area Plan.

South County Area Plan

There are no policies applicable to air quality in the South County Area Plan.

Agricultural Winery Corridor Plan

The AWCP overlays the Toro, Central Salinas Valley, and South County Area Plans, and policies relating to air quality are applicable to the AWCP under this plan. Implementation of these policies would reduce air quality impacts in the AWCP area.

Significance Determination

Areas of CO concentration are typically associated with areas of significant traffic congestion. CO emission rates from motor vehicles have been declining and are expected to continue to decline in the future because of CARB's Mobile Source Program, which supports replacement of older, higher emitting vehicles with newer vehicles, and increasingly stringent inspection and maintenance programs. For this analysis, the effects of CO "hot spot" emissions were evaluated through CO dispersion modeling for existing year (2008) and 2030 project conditions using the EMFAC 2007 and CALINE models and traffic data provided by the project traffic engineer.

Table 4.7-8. Projected Carbon Monoxide Levels

Receptor	2008		2030 With Project		2030 Cumulative		Buildout	
	1-hour Average (ppm)	8-hour Average (ppm)	1-hour Average (ppm)	8-hour Average (ppm)	1-hour Average (ppm)	8-hour Average (ppm)	1-hour Average (ppm)	8-hour Average (ppm)
1	20.3	13.8	3.9	3.9	6.7	5.6	7.5	6.1
2	19.5	13.3	3.7	3.8	6.4	5.4	7.2	5.9
3	20.3	13.8	3.9	3.9	6.7	5.6	7.5	6.1
4	20.3	13.8	3.9	3.9	6.7	5.6	7.5	6.1
5	19.5	13.3	3.7	3.8	6.4	5.4	7.2	5.9
6	20.3	13.8	3.9	3.9	6.7	5.6	7.5	6.1
7	22.4	15.0	4.7	4.4	5.8	5.1	7.0	5.8
8	21.5	14.5	4.5	4.3	5.6	5.0	6.8	5.7
9	22.4	15.0	4.7	4.4	5.8	5.1	7.0	5.8
10	22.4	15.0	4.7	4.4	5.8	5.1	7.0	5.8
11	21.5	14.5	4.5	4.3	5.6	5.0	6.8	5.7
12	22.4	15.0	4.7	4.4	5.8	5.1	7.0	5.8
13	25.1	16.7	5.0	4.6	5.8	5.1	7.0	5.8
14	24.1	16.1	4.9	4.5	5.6	5.0	6.8	5.7
15	25.1	16.7	5.0	4.6	5.8	5.1	7.0	5.8
16	25.1	16.7	5.0	4.6	5.8	5.1	7.0	5.8
17	24.1	16.1	4.9	4.5	5.6	5.0	6.8	5.7
18	25.1	16.7	5.0	4.6	5.8	5.1	7.0	5.8
CAAQS Threshold	20	9.0	20	9.0	20	9.0	20	9.0

Table 4.7-8 presents the results of the CO "hotspot" modeling, and indicates that implementation of the 2007 General Plan would reduce CO emissions over existing conditions. Implementation of the 2007 General Plan would not result in violations of the state or the federal 1- or 8-hour CO standards. Consequently, the impact of the 2007 General Plan traffic conditions on ambient CO levels in the Project Area is considered less-than-significant.

Mitigation Measures

No mitigation beyond the 2007 General Plan policies is necessary.

Significance Conclusion

In summary, implementation of the 2007 General Plan would result in increased concentrations of CO but not above MBUAPCD thresholds. Therefore, this impact is considered less than significant.

Buildout

Impact of Development with Policies

Buildout of the 2007 General Plan to the 2092 planning horizon would result in similar CO concentrations as those described above under the 2030 planning horizon.

2007 General Plan Policies

The same 2007 General Plan and Area Plan goals and policies summarized for 2030 would also apply to 2092.

Significance Determination

As shown above in Table 4.7-8, CO levels would not exceed MBUAPCD thresholds under the buildout of the 2007 General Plan. Although the 2007 General Plan will cause an increase in VMT, the marked increase in system efficiency would offset the relatively minor VMT increase. In addition, vehicles excessively idling at congestion points or traveling at slow, inefficient travel speeds are fuel wasters and create possible air pollution hotspots. The 2007 General Plan buildout will create a substantial reduction in delay idling times and in level of service (LOS) F travel segments. Accordingly, impacts in this regard would be less than significant.

Mitigation Measures

No mitigation beyond the 2007 General Plan policies is necessary.

Significance Conclusion

In summary, buildout of the 2007 General Plan would result in increased concentrations of CO but not above MBUAPCD thresholds. Therefore, this impact is considered less than significant.

Odor Impacts

Impact AQ-6: Buildout of the 2007 General Plan would result in the emission of objectionable odors. (Less-Than-Significant Impact.)

2030 Planning Horizon

Impact of Development with Policies

Buildout of the 2007 General Plan would introduce multiple odor issues. Urban uses would occur in areas currently used for agriculture. Accordingly, it is expected that odors associated with agricultural operations (e.g., chemicals, fertilizers, manure) would be considered objectionable by residents and tenants of new urban development in these areas. In addition, the AWCP would allow up to 10 full scale and 40 artisan wineries along the Winery Corridor. The greatest potential for odor generation could result from anaerobic decomposition of grape waste (pomace). Furthermore, odor impacts from landfills could affect future development.

2007 General Plan Policies

The 2007 General Plan and Area Plan goals and policies summarized below set forth comprehensive measures to avoid and minimize adverse impacts on air quality to the maximum extent practicable.

Open Space and Conservation Element

Open Space and Conservation Element Goal OS-10 provides for the protection and enhancement of Monterey County's air quality without constraining routine and ongoing agricultural activities. Policy OS-10.1 (land use policy and development decisions shall be consistent with the natural limitations of the County's air basins) supports this goal and reduces air quality impacts by protecting the County's air basin.

Public Services Element

The Public Services Element Goal PS-6 is to ensure the disposal of solid waste in a safe and efficient manner. Policy PS-6.2 restricts new and expanded solid waste facilities to areas where potential environmental impacts can be mitigated and where the facilities will be compatible with surrounding land uses. Policy PS-6.3 and PS 6.4 require buffer zones within the vicinity of new, current, and closed landfills, and restricts development within buffer zones to protect public health.

Area Plan Policies

The North County Area Plan

North County Area Plan Policy NC-1.2 (mushroom operations) reduces air quality impacts by requiring new development to install environmental control methods for air quality.

Greater Salinas Area Plan

There are no policies applicable to air quality in the Greater Salinas Area Plan.

Central Salinas Valley Area Plan

Central Salinas Valley Area Plan Policy CSV-3.2 (development of renewable energy sources) encourages the development and utilization of renewable energy sources such as solar, wind power generation, and biomass technologies in the Central Salinas Valley. This policy would help reduce air quality impacts by supporting non-polluting energy sources.

Greater Monterey Peninsula Area Plan

Greater Monterey Peninsula Area Plan Policy GMP-2.7 (public transit) would help reduce air quality impacts by encouraging new development to incorporate alternate modes of transportation (buses, bicycles, walking).

Carmel Valley Master Plan

Carmel Valley Master Plan Policy CV-2.1 (circulation) emphasizes the use of public transit, and stresses the importance of pedestrian access in the village, which would allow for reduced air quality impacts through reduction of traffic.

Toro Area Plan

Toro Area Plan Policies T-2.9 and T-2.10 (circulation) would reduce air quality impacts by encouraging new development to incorporate designs to allow for alternate modes of transportation, and also by encouraging increased accessibility for residents to mass transit.

Cachagua Area Plan

There are no policies applicable to air quality in the Cachagua Area Plan.

South County Area Plan

There are no policies applicable to air quality in the South County Area Plan.

Agricultural Winery Corridor Plan

The AWCP overlays the Toro, Central Salinas Valley, and South County Area Plans, and policies relating to air quality are applicable to the AWCP under this plan. Implementation of these policies would reduce air quality impacts in the AWCP area.

Significance Determination

Odor impacts from landfills could affect future development. However general plan policies require new solid waste facilities to be located in areas where potential impacts can be mitigated. Existing and closed facilities will have buffer zones to prevent incompatible land uses, such as residential development. Odor impacts from landfills are considered less than significant.

Odor impacts from agriculture could also affect future development. The County's "Right to Farm" ordinance requires disclosure of the presence of objectionable agricultural odors and exempts agricultural operations from nuisance lawsuits based on alleged harm from such odors. Enforcement of the Right to Farm ordinance would ensure that the presence of agricultural odors is fully disclosed to perspective residents and tenants. Odors arising from the storage of grape waste from the crushing process (pomace) and from the fermentation process do have the potential to result in significant odor impacts.

The following mitigation is required to reduce odor impacts to less-than-significant levels.

Mitigation Measures

Mitigation Measure AQ-8: The following measures should be added as General Plan Policy OS-10.12:

OS-10.12. Provide for the proper storage and disposal of pomace resulting from winery operations.

- To minimize odors resulting from the storage of pomace, all residue shall be removed from the site or spread in the vineyards as a soil amendment by the winery.
- To prevent complaints resulting from burning of pomace, burning of pomace as a disposal method shall be prohibited.

- All wineries shall incorporate best management practices and technologies to prevent fugitive emissions and odors from escaping the winery during production.

Significance Conclusion

In summary, odors associated with agricultural operations under the 2030 planning horizons would be considered objectionable by residents and tenants of new urban development in these areas. Mitigation measure AQ-8 is required to reduce this impact to less than significant.

Buildout

Impact of Development with Policies

Buildout of the 2007 General Plan to the 2092 planning horizon would result in similar odor impacts as those described above under the 2030 planning horizon.

2007 General Plan Policies

The same 2007 General Plan and Area Plan goals and policies summarized above for 2030 would also apply to 2092.

Significance Determination

Under the 2092 planning horizon, odors associated with agricultural operations under the 2030 planning horizons would be considered objectionable by residents and tenants of new urban development in these areas. Mitigation measures AQ-8is required to reduce this impact to less-than-significant levels.

Mitigation Measures

See Mitigation Measure AQ-9 above.

Significance Conclusion

In summary, odors associated with agricultural operations under the 2092 planning horizon would be considered less than significant with implementation of Mitigation Measure AQ-8.