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Draft Environmental Impact Report

Volume 2, Section 1

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2007 Monterey County General Plan

Draft Environmental Impact Report

Volume 2

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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.

4.8 Noise

4.8.1 Abstract

Existing sources of noise in Monterey County include highways, airports, railroads, industrial areas, agricultural areas and recreational venues. The predominant source of noise in the county is vehicular traffic on roads and highways. Aviation noise is emitted from the four general aviation airports, two military airstrips, and numerous private airstrips and helipads in the county. Motor sports events at Laguna Seca Raceway also produce substantial noise.

Development and land use activities associated with the 2007 General Plan would expose noise-sensitive land uses to noise from the following sources:

- **Mobile source noise**—Noise from mobile sources (traffic) would potentially exceed established noise thresholds. Implementation of 2007 General Plan policies would reduce this impact to a less than significant level.
- **Vibration**—Ground-borne vibration created by construction activities associated with the 2007 General Plan would potentially adversely affect nearby land uses. Implementation of 2007 General Plan policies would reduce this impact to a less than significant level.
- **Construction-related noise**—Noise emitted during construction activities associated with the 2007 General Plan would potentially exceed established noise thresholds. Implementation of 2007 General Plan policies would reduce this impact to a less than significant level.
- **Aviation noise**—Noise from aviation activities would potentially exceed established noise thresholds. Implementation of 2007 General Plan policies, as well as state and federal regulations, would reduce this impact to a less than significant level.
- **Stationary Source Noise**—Noise from stationary sources (e.g., industrial, agricultural, and recreational) would potentially exceed established noise thresholds. Implementation of 2007 General Plan policies would reduce this impact to a less than significant level.

All impacts would be less than significant with implementation of the 2007 General Plan, Area Plan, and Community Area policies and would not require mitigation.

4.8.2 Introduction

This section identifies and evaluates issues related to noise in the 2007 General Plan action area. The "Environmental Setting" discussion below describes the current setting of the 2007 General Plan action area. The purpose of this

information is to establish the existing environmental context by which the reader can then understand the environmental changes caused by the proposed action. The environmental setting information is intended to be relevant to the subsequent discussion of impacts.

The environmental changes associated with the implementation of the 2007 General Plan are discussed under "Impact Analysis." This section identifies impacts, describes how they would occur, and prescribes mitigation measures to reduce significant impacts, if necessary.

4.8.3 Concepts and Terminology

4.8.3.1 Noise Defined

"Sound" is mechanical energy transmitted by pressure waves in a compressible medium such as air. "Noise" is generally defined as unwanted sound. Sound is characterized by various parameters that describe the rate of oscillation of sound waves, the distance between successive troughs or crests, the speed of propagation, and the pressure level or energy content of a given sound wave. The rate of oscillation of sound waves is the frequency of the wave. High pitched sounds are high frequency and low pitched sounds are low in frequency. In particular, the sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level. The unit of sound pressure measured to the faintest sound detectable by a keen human ear is called a "decibel" (dB).

Because sound or noise levels can vary in intensity by over one million times in the range of human hearing, a logarithmic loudness scale, similar to the Richter scale used for earthquake magnitude, is used to keep sound intensity numbers at a convenient and manageable level. Because human hearing is less sensitive to low frequency sound energy than to high frequency sound energy sound levels used in environmental noise analysis are typically measured using the A-weighted scale. The A-weighted scale de-emphasizes low frequency sound energy in the overall sound level measurement. A-weighted sound levels are written as "dBA." Any further reference to decibels in this report written as "dB" should be understood to be A-weighted values.

Time variations in noise exposure are typically expressed in terms of a steady-state energy level equal to the energy content of the time varying period (called L_{eq}), or, alternately, as a statistical description of the sound pressure level that is exceeded over some fraction of a given observation period. Finally, because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, state law requires that, for planning purposes, an artificial dB increment be added to quiet time noise levels in a 24-hour noise descriptor called the Community Noise Equivalent Level (CNEL).

4.8.3.2 Measuring Noise

Many methods have been developed for evaluating community noise to account for, among other things:

- Variation in noise levels over time;
- Influence of periodic individual loud events; and
- Community response to changes in the community noise environment.

Numerous methods have been developed to measure sound over a specified period of time. These methods include:

- Equivalent Sound Level (L_{eq});
- Community Noise Equivalent Level (CNEL);
- Day/Night Average Sound Level (L_{dn})

These methods are described and defined below.

Equivalent Noise Level

L_{eq} is the measurement of sound energy over a specified time (usually 1 hour) and represents the amount of variable sound energy received by a receptor over a timed interval in a single numerical value. For example, a 1-hour L_{eq} noise level measurement represents the average amount of acoustical energy that occurred in 1 hour. In addition, variations in sound levels may be addressed by statistical methods. The simplest of these are the maximum (L_{max}) and minimum (L_{min}) noise levels, which are the highest and lowest levels observed. Other variations include L_{50}, which identifies the percentage of time that the noise level standard is exceeded during 50% of 1 hour (i.e., 30 minutes) or $L_{25,}$ identifies the percentage of time that the noise level standard is exceeded during 25% of 1 hour (i.e., 15 minutes), etc.

Community Noise Equivalent Level

The CNEL noise metric is based on 24 hours of measurement. It applies a time-weighted factor designed to emphasize noise events that occur during evening

hours (7 p.m. to 10 p.m.) and nighttime hours (10 p.m. to 7 a.m.). Noise produced during evening hours is penalized by 5 dBA while noise that occurs during nighttime hours is penalized by 10 dBA.

Day Night Average

L_{dn} is a measure of the 24-hour average noise level at a given location. It was adopted by the U.S. Environmental Protection Agency (EPA) for developing criteria for the evaluation of community noise exposure. It is based on a measure of L_{eq}. L_{dn} is calculated by averaging L_{eq} for each hour of the day at a given location after penalizing noise occurring during nighttime hours by 10 dBA to account for the increased sensitivity of people to noises that occur at night.

People tend to respond to changes in sound pressure in a logarithmic manner. In general, a 3 dB change in sound pressure level is considered a "just detectable" difference in most situations. A 5 dB change is readily noticeable and a 10 dB change is considered a doubling (or halving) of the subjective loudness. A 3 dB increase or decrease in the average traffic noise level is realized by a doubling or halving of the traffic volume, or by about a 7 mile per hour increase or decrease in speed.

With each doubling of distance from a point source of noise (i.e., a stationary compressor, a stationary loudspeaker, etc.), the sound level will decrease by 6 dB. In other words, if a person is 100 feet from a machine and moves 200 feet from that source, sound levels will drop by approximately 6 dB. Moving 400 feet away, sound levels will drop approximately another 6 dB. For each doubling of distance from a linear source, such as a roadway, noise levels are reduced 3 to 5 dB depending on the ground cover between the source and the receiver.

4.8.3.3 Noise Exposure

An interior CNEL of 45 dB is mandated by the State of California Noise Insulation Standards (California Code of Regulations, Title 24, Part 6, Section T25 28) for multiple-family dwellings and hotel and motel rooms. In 1988, the State Building Standards Commission expanded that standard to include all habitable rooms in residential use, including single-family dwelling units. Since normal noise attenuation within residential structures with closed windows is about 20 dB, an exterior noise exposure of 65 dB CNEL allows the interior standard to be met without any specialized structural attenuation (e.g., dual paned windows). A noise level of 65 dB is also the level at which ambient noise begins to interfere with one's ability to carry on a normal conversation at reasonable separation without raising one's voice. Table 4.8-1 summarizes typical noise sources and noise levels.

Table 4.8-1. Typical Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	— 110 —	Rock band
Jet fly-over at 300 meters (1000 feet)		
	— 100 —	
Gas lawn mower at 1 meter (3 feet)		
	— 90 —	
Diesel truck at 15 meters (50 feet) at 80 kph (50 mph)		Food blender at 1 meter (3 feet)
	— 80 —	Garbage disposal at 1 meter (3 feet)
Noisy urban area, daytime		
Gas lawn mower, 30 meters (100 feet)	**— 70 —**	Vacuum cleaner at 3 meters (10 feet)
Commercial area		Normal speech at 1 meter (3 feet)
Heavy traffic at 90 meters (300 feet)	**— 60 —**	
		Large business office
Quiet urban daytime	**— 50 —**	Dishwasher next room
Quiet urban nighttime	**— 40 —**	Theater, large conference room (background)
Quiet suburban nighttime		
	— 30 —	Library
Quiet rural nighttime		Bedroom at night
	— 20 —	
		Broadcast/recording studio
	— 10 —	
Lowest threshold of human hearing	**— 0 —**	Lowest threshold of human hearing

Source: California Department of Transportation 1998.

4.8.3.4 Noise Attenuation

A solid barrier, such as a concrete masonry wall, located between a noise source and a receiver will typically provide about 5 dB of noise reduction; additional reduction may be achieved by increasing the length and/or height of the barrier. A row of buildings located between a source and a receiver may provide up to 5 dB of noise reduction with up to a 1.5-dB reduction for each additional row up to a maximum reduction of approximately 10 dB. The exact degree of noise

attenuation depends on the nature and orientation of the structure and intervening barriers.

4.8.3.5 Changes in Noise

In community noise assessments, changes in noise levels greater than 3 dB are typically treated as the threshold of a perceptible change, while changes less than 1 dB will typically not be discernible to most people. In the range of 1 to 3 dB, residents who are very sensitive to noise may perceive a slight change. In laboratory testing situations, humans are able to detect noise level changes of slightly less than 1 dB. In a community noise situation, however, noise exposures are over a long period and changes in noise levels occur over years. The level at which changes in community noise levels become discernible is likely to be some value greater than 1 dB; 3 dB appears to be appropriate for most people.

4.8.4 Environmental Setting

4.8.4.1 Existing Noise Sources and Conditions

Major sources of noise in the county include roadways, aviation facilities, railroads, industrial/agricultural land uses, and recreational venues, such as the Laguna Seca Raceway. Noise from each of the sources is discussed below.

Roadways

The predominant source of noise in the county is vehicular traffic on roads and highways. Roadway noise is a function of traffic levels, vehicle mix, and traffic speeds. High traffic volumes generate more noise than low volumes. A vehicle mix with a high percentage of trucks is noisier than a mix composed of mostly passenger automobiles. Higher traffic speeds generate more noise that lower speeds. These variables indicate that roads with high volumes of mixed traffic traveling at high speeds are prime sources of roadway noise.

The roadways with the highest noise levels in the county include:

- U.S. 101
- Highway 1
- Highway 68
- Highway 156
- Blanco Road
- Davis Road

Noise contours greater than 60 dB CNEL extend beyond these roadways onto adjacent land uses. Residential land uses adversely affected by roadway noise of 60 dB CNEL or greater are located along:

- U.S. 101
- Highway 68
- Highway 156
- Laureles Grade Road

Other sensitive land uses exposed to roadway noise in excess of 60 dB CNEL include Toro Regional Park and open space areas along U.S. 101 and Highway 68.

The following exhibits represent existing traffic noise contours in the County. These contours are from the 2006 GP EIR (Monterey County 2006) and are representative of 2008 conditions:

- Exhibit 4.8.3a, Existing Noise Contours Roadways, South County
- Exhibit 4.8.3b, Existing Noise Contours Roadways, North County
- Exhibit 4.8.3c, Existing Noise Contours Roadways, Greater Salinas
- Exhibit 4.8.3d, Existing Noise Contours Roadways, Greater Monterey Peninsula, Carmel Valley and Toro
- Exhibit 4.8.3e, Existing Noise Contours Roadways, Central Salinas Valley

In additional traffic noise modeling along selected roadway segments in the County has been conducted based on updated existing (2008) traffic data. Refer to Table 4.8-3 and the related discussion for a summary of the modeling results.

Aviation Facilities

Four general aviation and commercial airports, two military airstrips, and numerous private airstrips and helipads are located in the county. Below is a description of these facilities.

Monterey Peninsula Airport, located in Monterey, is the largest and busiest commercial airport in the county. The most recent information from the Federal Aviation Administration (FAA) indicates that 91,911 aircraft operations occur annually at the airport. The 65 CNEL runway contour extends into residential areas in Monterey and Del Rey Oaks on the west sides of the airport and commercial areas of Del Rey Oaks on the east side of the airport. These impacts do not extend to unincorporated residential areas.

Salinas Municipal Airport is the second busiest airport in the county and serves commercial and general aviation aircraft. The most recent information from the FAA indicates that 86,657 aircraft operations occur annually at the airport. The

60 CNEL runway contours extend into two residential areas in Salinas on the north and west sides of the airport. These impacts do not extend to unincorporated residential areas.

Marina Municipal Airport is a former Army airfield located near Fort Ord that primarily serves general aviation aircraft. The most recent information from the FAA indicates that 40,000 aircraft operations occur annually at the airport. The 60 CNEL runway contour is mostly contained within the airport's boundaries and does not affect any nearby residential areas.

Mesa del Rey Airport, located near King City, primarily serves general aviation aircraft. The most recent information from the FAA indicates that 3,500 aircraft operations occur annually at the airport. The 60 CNEL runway contour is mostly contained within the airport's boundaries and does not affect any nearby residential areas.

The Schoonver Tactical Air Strip at Fort Hunter Liggett is capable of supporting C-130 Hercules and C-12 Huron operations. Fort Hunter Liggett also contains the Tusi Helipad and the Doolittle Aircraft Training Area, which is used for Close Air Support training by Navy aircraft from Naval Air Station Lemoore in Kings County.

McMillan Airfield at Camp Roberts is capable of supporting C-130 operations. McMillan Airfield is currently used for Unmanned Aerial Vehicle operations and testing.

There are also more than 30 private airstrips, agricultural landing fields, and helipads in the county. Locations of these aviation facilities include Salinas Valley State Prison; the San Ardo oil fields; and hospitals in Monterey, Salinas, and King City.

Exhibit 4.8.1 represents existing aircraft noise contours in the County for Monterey Municipal Airport, Mesa Del Rey Airport, Marina Municipal Airport, Salinas Municipal Airport. These contours are from the 2006 GP EIR (Monterey County 2006) and remain representative of 2008 conditions.

Railroads

The Union Pacific Railroad's Coast Line spans the length of the county, north to south. The Coast Line traverses the unincorporated communities of Aromas, Pajaro, Castroville, Chualar, San Lucas, San Ardo, and Bradley and the cities of Salinas, Gonzales, Soledad, Greenfield, and King City. This line is used primarily for freight traffic, though Amtrak operates a daily train in each direction.

The 14-mile Monterey Branch Line diverges from the Coast Line in Castroville and serves the Monterey Peninsula. This line is currently inactive. A branch line

also diverges off the Coast Line north of Castroville to serve the industrial uses in the Moss Landing area.

Industrial/Agricultural Land Uses

Industrial and/or agricultural processing areas in the unincorporated county include Castroville, Moss Landing, and Pajaro; incorporated cities with industrial areas include Marina, Salinas, Seaside, Soledad, and King City. These areas include a mix of industrial uses and agricultural processing plants. Nearby residential areas and other noise-sensitive uses in these communities may currently experience noise impacts from industrial activities including associated truck traffic. Isolated agricultural processing plants also exist in the Salinas Valley. The San Ardo oil field is also a source of noise. Other potential noise sources include the four landfills in the county, which are located near Marina, Prunedale, Soledad, and King City. The relatively isolated locations of the oil field and the landfills currently limit their impacts on surrounding land uses.

Exhibits 4.8.2a and 4.8.2b provide noise contours for several major stationary noise sources in the County (Monterey County 2006). These contours remain representative of existing 2008 conditions.

Recreational Venues

Laguna Seca Raceway, located near Fort Ord on Highway 68, is an internationally renowned motor sports venue that hosts a number of major racing events on an annual basis. Racing events involve competition between high performance vehicles that emit substantial noise. In addition, these events can attract more than 150,000 spectators and participants over the course of a typical 3-day event, with a corresponding level of spectator and vehicular noise. Exhibit 4.8.2a provides noise contours for Laguna Seca Raceway (Monterey County 2006). These contours are representative of existing 2008 conditions.

The Pebble Beach Resorts, located in the Del Monte Forest, is a world-renowned golf venue that hosts a number of major golf tournaments annually. The Pebble Beach Resorts consist of four 18-hole golf courses: Pebble Beach, Spanish Bay, Spyglass Hill, and Del Monte. Major golf events at Pebble Beach can attract more than 100,000 spectators and participants over a 4-day tournament, with a corresponding level of spectator and vehicular noise.

Regulatory Framework

Monterey County Noise Standards

The County requires that all residential dwelling units, as well as hotels and motels, be designed to meet 45 dB CNEL interior noise standards, as specified in the California Noise Insulation standards.

The existing 1982 General Plan established exterior noise standards for land use compatibility. These standards are summarized in Table 4.8-2.

Table 4.8-2. Existing 1982 General Plan Land Use Compatibility for Exterior Community Noise

	Noise Ranges (Ldn or CNEL), dB			
Land Use Category	I	II	III	IV
Passively used open spaces	50	50-55	55-70	70+
Auditoriums, concert halls	45-50	50-65	65-70	70+
Residential: low-density single family	50-55	55-70	70-75	75+
Residential: multi-family	50-60	60-70	70-75	75+
Transient lodging	50-60	60-70	70-80	80+
Schools, libraries, churches, hospitals	50-60	60-70	70-80	80+
Actively used open spaces: playgrounds, parks	50-67	—	67-73	73+
Golf courses, riding stables, water recreation	50-70	—	70-80	80+
Office buildings, business commercial, professional	50-67	67-75	75+	—
Industrial, manufacturing, utilities, agriculture	50-70	70-75	75+	—

Noise Range I: Normally Acceptable—Specified land use is satisfactory, based on the assumption that any buildings are of normal conventional construction.

Noise Range II: Conditionally Acceptable—New construction or development should be undertaken only after a detailed analysis of noise reduction is made and noise insulation features are included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

Noise Range III: Normally Unacceptable—New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of noise reduction must be made and noise insulation features must be included in the design

Noise Range IV: Clearly Unacceptable—New construction or development should generally not be undertaken.

Source: County of Monterey 1982.

Section 10.60.030 of the Monterey County Municipal Code relates to the operation of noise-producing devices. This codes section limits noise from any machine, mechanism, device, or contrivance to 85 dBA as measured at a distance of 50 feet. This limit does apply to aircraft or to equipment that is operated in excess of 2,500 feet from any occupied dwelling unit.

4.8.5 Project Impacts

This section describes the CEQA impact analysis relating to noise for the 2007 General Plan. It describes the methods used to determine project impacts and lists the thresholds used to conclude whether an impact would be significant. Measures to mitigate (i.e., avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany each impact discussion. The analysis will address implementation of the 2007 General Plan to the 2030 planning horizon, as well as build out in 2092. Development under these two scenarios is described in the Project Description.

4.8.5.1 Thresholds of Significance

The State CEQA Guidelines provide guidance that can be used in determining the significant of noise impacts. The guidelines state that a project would result in a significant noise impact is it would result in:

- Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels;
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;
- Exposure of persons living or working the project area to excessive noise levels (for a project located within an airport land use plan, or where such a plan has not been adopted, within 2 miles of a public airport); or
- Exposure of persons living or working in the project area to excessive noise levels for a project within the vicinity of a private airstrip.

For this impact assessment the following specific thresholds of significance were used.

- Noise from construction activity is considered significant if it would:
  - exceed 85 dBA as measured at 50 feet where the activity is located within 2,500 feet of an occupied dwelling unit.
  - Result in a 10 dB increase at an occupied dwelling unit during daytime hours (7:00 a.m. to 10:00 p.m.)
  - Result in any increase at an occupied dwelling unit during nighttime hours (10:00 p.m. to 7:00 a.m.)
- Where new sources of noise (i.e., new freeway or new industrial facility) are proposed or where new noise sensitive uses (i.e., new residential subdivision)

are proposed , noise from permanent sources of noise such as transportation and industrial sources is considered significant if it would exceeds the "normally acceptable" land use compatibility noise standards in Table 4.8-2.

- A project-related increase in noise are considered significant if project-related increase in noise greater than 3 dB where the with-project noise level is in excess of a "normally acceptable" land use compatibility noise standards in Table 4.8-2. Project-related increases in noise are determined by comparing project conditions to no-project conditions in the same time frame.

4.8.5.2 Impact Analysis

Implementation of the 2007 General Plan to the 2030 and 2092 planning horizons would result in the exposure of noise-sensitive land uses (i.e., noise-sensitive receptors) to new sources of noise from mobile, aviation, construction, and stationary sources. Sensitive receptors would also be exposed to ground-borne vibration from construction activities.

New development associated with the 2007 General Plan would also place noise-sensitive receptors in new locations where noise from the sources listed above would exceed County compatibility standards for noise. New development associated with the 2007 General Plan would also generate increased automobile and truck traffic that would result in substantial increases in noise at noise-sensitive locations.

Mobile Source Noise

Impact N-1: Future development activities associated with the 2007 General Plan would result in exposure of noise sensitive land uses (persons) to traffic noise in excess of County noise standards, or substantial increases in traffic noise. (Less-than-Significant Impact.)

2030 Planning Horizon

Impact of Development with Policies

Implementation of the 2007 General Plan to the 2030 planning horizon would result in new urban development in some undeveloped areas. The areas that would be affected include the Community Areas and Rural Centers due to the anticipated intensification of land uses in these areas. The increased traffic associated with this new development would increase traffic noise along roadways with adjacent noise-sensitive land uses.

Traffic noise has been evaluated using the FHWA Highway Traffic Noise Prediction Model, (Federal Highway Administration FHWA-RD-77-108, 1978) and traffic data provided by the project traffic consultant. The model

uses the number of daily vehicles, vehicle speed, the percentage of traffic that is medium truck and heavy, and the day, evening, night distribution for the calculation of predicted traffic noise levels. Highway 101 and SR1 were assumed to have 5% trucks. All other roadways were assumed to have 2.5% trucks.

Although the date of origin of the FHWA Highway Traffic Noise Prediction Model is 1978, the model is still valid. The more recent FHWA Traffic Noise Model (2002) is only mandated for use on federally funded highway projects. Many in the professional community, including ICF Jones & Stokes' acoustical engineer, consider the older model to be more appropriate for this type of analysis. In addition, the older model was used in the 2006 EIR upon which the existing contours are based.

Table 4.8-3 provides a summary of traffic noise modeling results for a representative set of roadway segments in the county under existing (2008) conditions and 2030 conditions with and without implementation of the 2007 General Plan. Table 4.8-3 compares 2030 no-project conditions and 2030 with-project to existing conditions. It also compares 2030 with-project conditions to 2030 no-project conditions. As can be seen in the comparison of 2030 no-project conditions to 2030 with-project conditions traffic noise is predicted to increase from up to 4 dB without implementation of the project. These increases are the result of background growth that is unrelated to implementation of the project. The comparison of 2030 with-project conditions to existing conditions is a measure of this background growth in combination with the proposed project. The comparison of 2030 with-project conditions to 2030 no-project is the true measure of how implementation of the proposed project will change noise conditions.

The comparison of 2030 with-project conditions to 2030 no-project conditions indicates that implementation of the 2007 General Plan would not increase traffic noise by more than 3 dB along any of the roadway segments evaluated. Accordingly, implementation of the 2007 General Plan is not predicted to result in the exposure of noise sensitive land uses(persons) to substantial increases in noise. Note that traffic noise analysis is different than the typical analysis applied to on-the-ground resources. The direct effect of the project can only be measured by comparing conditions in the same time frame. This is the same approach taken in the 2006 EIR. Existing conditions are illustrated in Exhibits 4.8.1, 4.8.2a and 4.8.2b, and Table 4.8-3 below, allowing the reader to make a comparison, but the significance conclusion is be based on a comparison of project vs. no-project in the same time frame.

The results in Table 4.8-3 also indicate that under the 2007 General Plan new noise-sensitive land uses (persons) would be exposed to traffic noise that exceeds the County's "normally acceptable" land use compatibility standards for noise specified in Table 4.8-2.

Table 4.8-3. Traffic Noise Modeling Results

Segment	Existing L_{dn}	2030 No Project L_{dn}	2030 Cumulative (with Project) L_{dn}	2030 No Project minus Existing	2030 Cumulative with Project minus Existing	2030 Cumulative with Project minus No Project	Buildout L_{dn}	Buildout minus Existing	Buildout Minus 2030 Cumulative with Project
Espinosa Rd to E Boronda Rd	74	75	76	1	2	1	76	2	0
Chualar Rd to Old Stage Rd	72	75	75	3	3	0	77	5	2
SR-183 to SR-156	69	69	71	0	2	2	71	2	0
Del Monte Blvd to Imjin Pkwy	75	75	75	0	0	0	77	2	2
17 Mile Dr to Skyline Forest Dr	67	67	67	0	0	0	68	1	1
Canyon del Rey Blvd to Bit Rd	63	64	64	1	1	0	65	2	1
Spreckels Blvd to E Blanco Rd	67	69	68	2	1	-1	71	4	3
County Road G-15 to Stonewall Canyon Rd	53	54	54	1	1	0	57	4	3
Castroville Blvd to US-101	70	70	70	0	0	0	71	1	1
Cooper Rd to S Davis Rd	67	70	70	3	3	0	71	4	1
US-101 to Cattlemen Rd	45	49	48	4	3	-1	50	5	2
Carlton Dr to SR-68	61	62	62	1	1	0	63	2	1
Salinas Rd to San Miguel Canyon Rd	54	58	58	4	4	0	59	5	1
Strawberry Rd to Castroville Blvd	63	65	67	2	4	2	67	4	0
US-101 to San Lucas Rd	52	55	55	3	3	0	57	5	2
Carmel Rancho Blvd to Rio Rd	64	65	65	1	1	0	66	2	1
Robinson Canyon Rd to Miramonte Rd	61	62	62	1	1	0	64	3	2
Las Palmas Rd to Las Palmas Pkwy	60	60	61	0	1	1	64	4	3
Drake Ave to Lighthouse Ave	62	65	65	3	3	0	67	5	2
Pacific Ave to Forest Ave	56	57	57	1	1	0	59	3	2
Forest Ave to David Ave	56	54	54	-2	-2	0	55	-1	1
Washington St to Camino Aguajito	66	67	67	1	1	0	69	3	2
Abrego St to Camino Aguajito	64	65	65	1	1	0	66	2	1
Soledad Dr to Via Zaragoza	64	64	65	0	1	1	67	3	2
Playa Ave to Fremont Blvd	61	63	62	2	1	-1	65	4	3

Segment	Existing L_{dn}	2030 No Project L_{dn}	2030 Cumulative (with Project) L_{dn}	2030 No Project minus Existing	2030 Cumulative with Project minus Existing	2030 Cumulative with Project minus No Project	Buildout L_{dn}	Buildout minus Existing	Buildout Minus 2030 Cumulative with Project
N Del Monte Blvd to SR-1	59	60	59	1	0	-1	62	3	3
Reindollar Ave to Reservation Rd	67	68	68	1	1	0	70	3	2
Casa Verde Wy to SR-218	65	66	66	1	1	0	69	4	3
US-101 to Abbott St	65	65	65	0	0	0	67	2	2
San Juan Grade Rd to W Laurel Dr	65	66	66	1	1	0	68	3	2
US-101 to N Main St	60	63	63	3	3	0	65	5	2
Romie Ln to E Blanco Rd	62	62	62	0	0	0	64	2	2
Abbott St to US-101	65	66	65	1	0	-1	67	2	2
Davis Rd to N Main St	62	62	62	0	0	0	64	2	2
W Laurel Dr to SR-183	62	62	62	0	0	0	63	1	1
W Alisal St to SR-68	57	57	57	0	0	0	60	3	3
SH 101 to Salinas City Line	67	68	68	1	1	0	70	3	2
SR-183 to Commercial Pkwy E	60	61	61	1	1	0	61	1	0
Reservation Rd to Cooper Rd	68	69	69	1	1	0	70	2	1
Carmel Rancho Ln to Rio Rd	53	54	53	1	0	-1	55	2	2
Serra Ave to SR-1	58	58	58	0	0	0	61	3	3
Blanco Rd to Reservation Rd	65	69	68	4	3	-1	68	3	0
Spreckels Blvd to Abbott St	61	63	63	2	2	0	65	4	2
Carmel City Line to SR-1	57	57	57	0	0	0	59	2	2
San Juan Rd to Santa Cruz County Line	65	67	67	2	2	0	68	3	1
Carmel City Line to SR-1	57	58	58	1	1	0	60	3	2
SR-1 to Fruitland Ave	60	62	63	2	3	1	64	4	1
Salinas City Line to Russell Rd	57	62	62	5	5	0	65	8	3
SR-68 to Harkins Rd	57	60	60	3	3	0	61	4	1

The 2007 General Plan, Area Plan, and Community Area policies summarized below set forth comprehensive measures to avoid and minimize adverse impacts from traffic noise.

2007 General Plan Policies

Safety Element

Safety Element Policy S-7.1 (new noise-sensitive land uses) limits new noise-sensitive land uses to areas where existing and projected noise levels are "acceptable" as defined by the County. A graphic interpretation of acceptable noise levels is presented in S-7.1, Table S-2 (labeled Figure 2). It also states that a Community Noise Ordinance will be established consistent with the associated table that addresses capacity related roadway improvement projects, construction-related noise impacts, site planning, and design elements to control traffic noise.

Policy S-7.2 that proposed development shall incorporate design elements necessary to minimize noise impacts on surrounding land uses and to reduce noise in indoor spaces to an acceptable level.

Safety Element Policy S-7.3 (noise reduction measures) states that development may occur in areas identified as "normally unacceptable" provided that effective measures are taken to reduce both indoor and outdoor noise levels to acceptable levels.

Safety Element Policy S-7.6 (acoustical analysis) states that an acoustical analysis shall be part of the environmental review process for projects when noise-sensitive receptors are proposed in areas exposed to existing or projected noise levels that are "normally unacceptable" as defined by the County.

Safety Element Policy S-7.7 (noise analysis) states that all proposed discretionary residential projects that are within roadway noise contours of 60 dB CNEL or greater will include a finding of consistency with the provisions of the Noise Hazards section of the Safety Element. If roadway noise exceeds the 60 dB CNEL within the project site, a project-specific noise impact analysis will be required and mitigation identified.

Implementation of the Safety Element policies summarized above would limit the exposure of noise-sensitive land uses to traffic noise associated with the implementation of the 2007 General Plan.

Area Plan Policies

There are no policies related to traffic noise in the area plans.

Community Area Policies

Fort Ord Master Plan

The Fort Ord Master Plan Noise Element contains objectives and policies for controlling noise in the Fort Ord Planning Area. Objective A of the Noise Element ensures that the application of land use compatibility criteria for noise, and enforcement of noise regulations are consistent throughout the Fort Ord Planning Area. Objective B of the Noise Element ensures that noise environments are appropriate for and compatible with existing and proposed land uses based on noise guidelines provided in the Noise Element.

Noise Program A-1.1 of Noise Policy A-1 (compatibility criteria) establishes land use compatibility criteria for exterior community noise. Program B-1.1 of Noise Policy B-1 (noise mitigation) states that the County will develop a program to identify developed areas that are adversely affected by noise impacts and implement measures to reduce these impacts by constructing noise barriers and limiting hours of operation of noise sources. Noise Policy B-3 (acoustic studies) requires that acoustical studies be conducted for all new development that could be exposed to noise above the normally acceptable range as defined by the County to ensure that existing and proposed land uses will not be adversely affected. Noise Policy B-4 (noise insulation) requires enforcement of state noise insulation standards and requires that interior sound levels of 45 dB Ldn be achieved for all new multi-family dwellings, condominiums, hotels, and motels. Noise Policy B-5 (noise barriers) states that noise barriers be provided for new development to ensure that noise guidelines are met and that interior noise levels be reduced to 45 dB Ldn if site planning or architectural layout of buildings is not feasible for compliance with noise guidelines. Noise Policies B-6 (ambient noise/single-family), B-7 (ambient noise/industrial), and B-8 (ambient noise/institutional) place limits on increases in noise allowed by new development.

Implementation of the policies summarized above would limit the exposure of noise-sensitive land uses to traffic noise associated with the 2007 General Plan.

Significance Determination

As indicated in Table 4.8-3 implementation of the 2007 General Plan through the 2030 planning horizon would result in exposure of persons to traffic noise in excess of County noise standards. However, the 2007 General Plan and the Fort Ord Master Plan policies, summarized above, set forth comprehensive measures to avoid and minimize these impacts. Therefore, traffic noise resulting from implementation of the 2007 General Plan through

the 2030 planning horizon would have a less-than-significant impact on existing and planned noise-sensitive land uses.

Mitigation Measures

No mitigation required

Significance Conclusion

Traffic noise resulting from implementation of the 2007 General Plan through the 2030 planning horizon would have a less-than-significant impact on existing and planned noise-sensitive land uses.

Buildout

Impact of Development with Policies

Buildout of the 2007 General Plan through 2092 would result in new urban development in undeveloped areas of the county beyond 2030 levels. Table 4.8-3 summarizes traffic noise modeling results for buildout conditions and compares buildout conditions to existing conditions and 2030 cumulative conditions. Overall traffic volumes across the county are forecast to be about 45% greater than volumes under 2030 conditions. This generally corresponds to a 1 to 2 dB increase in traffic noise. The areas that would be affected by new development include the Community Areas and Rural Centers due to the anticipated intensification of land uses in these areas. Therefore, new development would result in the exposure of noise-sensitive land uses (persons) to traffic noise exceeding County land use compatibility guidelines for noise.

The 2007 General Plan and Fort Ord Master Plan policies summarized above would limit the exposure of existing and planned noise-sensitive land uses to traffic noise and comply with County land use compatibility guidelines for traffic noise.

Significance Determination

Buildout of the 2007 General Plan through 2092 would potentially result in adverse impacts from traffic noise. However, the 2007 General Plan and Fort Ord Master Plan policies set forth comprehensive measures to avoid and minimize these impacts. Therefore, traffic noise resulting from buildout of the 2007 General Plan through the 2092 planning horizon would have a less-than-significant impact on existing and planned noise-sensitive land uses (persons).

Mitigation Measures

No mitigation is required.

Significance Conclusion

Traffic noise resulting from buildout of the 2007 General Plan through the 2092 would have less-than-significant impacts on existing and planned noise-sensitive land uses.

Ground-borne Vibration

Impact N-2: Development activities associated with implementation of the 2007 General Plan would result in exposure of persons to excessive ground-borne vibration. (Less-than-Significant Impact.)

2030 Planning Horizon

Impact of Development with Policies

Implementation of the 2007 General Plan to the 2030 planning horizon would result in new urban development in undeveloped areas of the county. New development would result in additional construction activities in some areas of the county. Operation of heavy equipment during construction would result in minor amounts of ground-borne vibration. Typical ground-borne vibration levels and their effects at 50 feet from the source are summarized in Exhibit 4.8.4.

Roadway operations, particularly for well-maintained roads, have minimal impact potential. Any possible vibration impacts would normally only occur during construction. Nonetheless, there is still the potential for ground-borne vibration levels to exceed typical levels as noted in Exhibit 4.8.4.

The 2007 General Plan, policies summarized below set forth comprehensive measures to avoid and minimize adverse ground-borne vibration impacts.

2007 General Plan Policies

Safety Element

Safety Element Policy S-7.8 (vibration studies) states that all discretionary projects proposing to use heavy construction equipment that has the potential to create vibrations that could cause structural damage to adjacent structures within 100 feet would be required to submit a pre-construction vibration study prior to the approval of a building permit. Specified measures and monitoring identified to reduce impacts would be incorporated into construction contracts. Implementation of this policy would limit ground-borne vibration to acceptable levels for all new discretionary projects.

Area Plan Policies

There are no policies related to ground-borne vibration in the area plans.

Community Area Policies

Fort Ord Master Plan

The Fort Ord Master Plan contains no policies related to ground-borne vibration.

Significance Determination

Implementation of the 2007 General Plan within the 2030 planning horizon would potentially result in adverse ground-borne vibration impacts associated with new construction and development. However, 2007 General Plan Safety Element Policy S-7.8 would avoid and minimize adverse ground-borne vibration impacts from proposed discretionary projects. Therefore, ground-borne vibration resulting from implementation of the 2007 General Plan through the 2030 planning horizon would have a less-than-significant impact on existing and planned vibration-sensitive land uses.

Mitigation Measures

No mitigation required.

Significance Conclusion

Ground-borne vibration resulting from implementation of the 2007 General Plan through the 2030 planning horizon would have a less-than-significant impact on existing and planned vibration-sensitive land uses.

Buildout

Impact of Development with Policies

Buildout of the 2007 General Plan through 2092 would result in new urban development in undeveloped areas beyond 2030 levels. New development would result in the exposure of vibration-sensitive land uses (persons)to excessive ground-borne vibration from construction activities.

2007 General Plan Policies

Safety Element Policy S-7.8, summarized above, would limit the exposure of existing and planned vibration-sensitive land uses to excessive ground-borne vibration.

Significance Determination

Buildout of the 2007 General Plan through 2092 would result in adverse ground-borne vibration impacts associated with new development and construction. However, Safety Element Policy S-7.8 would avoid and minimize adverse ground-borne vibration impacts from new development and construction to acceptable levels. Therefore, ground-borne vibration resulting from buildout of the 2007 General Plan through the 2092 planning horizon would have a less-than-significant impact on existing and planned vibration-sensitive land uses.

Mitigation Measures

No mitigation required.

Significance Conclusion

Ground-borne vibration resulting from buildout of the 2007 General Plan through 2092 would have a less-than-significant impact on existing and planned vibration-sensitive land uses.

Short-Term Construction Noise

Impact N-3: Implementation of the 2007 General Plan would create temporary, short-term noise impacts during associated construction activities. (Less-than-Significant Impact.)

2030 Planning Horizon

Impact of Development with Policies

Implementation of the 2007 General Plan to the 2030 planning horizon would result in new development and construction in undeveloped areas of the county. This construction wouldgenerate new sources of short-term construction noise.

Table 4.8-4 shows typically maximum noise levels for various types of construction equipment that are typically used during construction (FTA 2006). This table indicates that noise from construction equipment has the potential to exceed that County's noise standard of 85 dBA as measured at 50 feet. Construction noise typically attenuates at a rate of about 6 dB per doubling of distance. Given this, the table also indicates that construction noise could increase the existing noise by at least 10 dBA within several hundred feet of an active construction site. Accordingly, there is potential for construction noise to result in significant temporary noise impacts.

Table 4.8-4. Noise Emission Levels Typical for Construction Equipment

Equipment	Typical Noise Level (dBA) 50 Feet from Source
Backhoe	80
Bulldozer	85
Grader	85
Loader	85
Roller	74
Scraper	89
Truck	88

Source: Federal Transit Administration 2006.

2007 General Plan Policies

The 2007 General Plan policies summarized below establish comprehensive measures to avoid and minimize adverse impacts from construction noise.

Safety Element

Safety Element Policy S-7.9 (construction noise) limits construction noise levels and the hours that construction can occur within 500 feet of noise-sensitive land uses. It also identifies specific measures than can be used to reduce construction noise, such as constructing temporary noise barriers and using quieter construction equipment.

Safety Element Policy S-7.10 (noise protection measures) identifies standard noise protection measures that must be incorporated into all construction contracts. These measures include the following: 1) allowing construction only during times allowed by ordinance/code unless such limits are waived for public convenience 2) requiring all construction equipment to have mufflers and 3) requiring lay-down yards and semi-stationary equipment such as pumps or generators to be located as far from noise-sensitive land uses as practicable.

Implementation of these Safety Element policies would reduce temporary construction noise to a less-than-significant level.

Area Plan Policies

There are no policies related to construction noise in the area plans.

Community Area Policies

Fort Ord Master Plan

There are no policies related to construction noise in this plan.

Significance Determination

Implementation of the 2007 General Plan within the 2030 planning horizon would result in adverse impacts from construction noise. However, the 2007 General Plan Safety Element policies establish comprehensive measures to avoid and minimize adverse construction noise impacts. Therefore, construction noise resulting from implementation of the 2007 General Plan over the 2030 planning horizon would have a less-than-significant impact on existing and planned noise-sensitive receptors.

Mitigation Measures

No mitigation required.

Significance Conclusion

Therefore, construction noise resulting from implementation of the 2007 General Plan over the 2030 planning horizon would have a less-than-significant impact on existing and planned noise-sensitive receptors.

Buildout

Impact of Development with Policies

Buildout of the 2007 General Plan through 2092 would result in new urban development in undeveloped areas beyond 2030 levels. New development would result in the exposure of noise-sensitive receptors to construction noise.

The 2007 General Plan Safety Element policies, summarized above, identify measures that would limit the exposure of existing and planned noise-sensitive receptors to construction noise.

Significance Determination

Buildout of the 2007 General Plan through 2092 would result in adverse impacts from construction noise. However, 2007 General Plan Safety Element policies establish comprehensive measures to avoid and minimize adverse construction noise impacts. Therefore, construction noise resulting from buildout of the 2007 General Plan through the 2092 planning horizon would have a less-than-significant impact on existing and planned noise-sensitive land uses.

Mitigation Measures

No mitigation required.

Significance Conclusion

Construction noise resulting from buildout of the 2007 General Plan through the 2092 planning horizon would have a less-than-significant impact on existing and planned noise-sensitive land uses.

Aviation Noise

Impact N-4: Implementation of the 2007 General Plan would potentially expose people residing or working near an airport to excessive noise levels. (Less-than-Significant Impact.)

2030 Planning Horizon

Impact of Development with Policies

Implementation of the2007 General Plan would result in new urban development in some areas of the county, including new development in the vicinity of airports, private airstrips, and helipads. New development near aviation facilities would expose residents and workers to noise from aviation facilities that exceeds County noise standards. This is of most concern in the unincorporated areas near Monterey Peninsula Airport, Salinas Municipal Airport, Marina Airport, and Mesa del Rey (King City) Airport.

2007 General Plan Policies

The Safety Element policies of the 2007 General Plan summarized below establish comprehensive measures to avoid and minimize adverse aviation noise impacts.

Safety Element Policy S-7.1 (new noise-sensitive land uses) limits new noise-sensitive land uses to areas where existing and projected noise level are “acceptable” as defined by the County. It also states that a Community Noise Ordinance will be established consistent with the table that addresses new residential land uses exposed to aircraft operations at any airport or airbase.

Safety Element Policy S-7.3 (noise reduction measures) states that development may occur in areas identified as “normally unacceptable” provided that effective measures are taken to reduce both the indoor and outdoor noise levels to acceptable levels.

Policy S-7.6 (acoustical analysis) states that an acoustical analysis will be part of the environmental review process for projects when noise-

sensitive receptors are proposed in areas exposed to existing or projected noise levels that are "normally unacceptable" as defined by the County.

Implementation of these policies would limit the exposure of noise-sensitive land uses to aviation noise.

Area Plan Policies

The North County Area Plan

There are no policies related to aviation noise in this area plan.

Greater Salinas Area Plan

There are no policies related to aviation noise in this area plan.

Central Salinas Valley Area Plan

There are no policies related to aviation noise in this area plan.

Greater Monterey Peninsula Area Plan

Greater Monterey Peninsula Area Plan GMP-4.2 (Airports) states that development in the vicinity of the Monterey Peninsula Airport and the Marina Municipal Airport should be sited, designed, and/or constructed to minimize noise hazards from aircraft and other sources and that the County should adopt the Airport Noise Control and Land Use Compatibility (ANCLUC) standards for the areas in the vicinity of the Monterey Peninsula Airport. Implementation of these policies would limit the exposure of new noise-sensitive land uses to aircraft noise within the Greater Monterey Peninsula Area.

Carmel Valley Master Plan

There are no policies related to aviation noise in this area plan.

Toro Area Plan

There are no policies related to aviation noise in this area plan.

Cachagua Area Plan

There are no policies related to aviation noise in this area plan.

South County Area Plan

There are no policies related to aviation noise in this area plan.

Agricultural Winery Corridor Plan

There are no policies related to aviation noise in this area plan.

Community Area Policies

Fort Ord Master Plan

The Monterey County Fort Ord Master Plan Noise Element contains objectives and policies for controlling noise in the plan area.

Noise Program A-1.1 of Noise Policy A-1 (compatibility criteria) establishes land use compatibility criteria for exterior community noise. Program B-1.1 of Noise Policy B-1(noise mitigation) states that the County will develop a program to identify developed areas that experience adverse impacts from excessive noise levels and implement measures to reduce these impacts by constructing barriers and limiting hours of operation of noise sources. Noise Policy B-3 (acoustic studies) requires that acoustical studies be conducted for all new development that could be exposed to noise above the "normally acceptable" range as defined by the County to ensure that existing and proposed use will not be adversely affected. Noise Policy B-4 (noise insulation) requires enforcement of state noise insulation standards and requires that interior sound levels of 45 dB L_{dn} be achieved for new multi-family dwellings, condominium, hotel, and motel uses. Noise Policy B-5 (noise barriers) states that noise barriers will be provided for new development to ensure that noise guidelines are met and that interior noise levels will be reduced to 45 dB L_{dn} if site planning or architectural layout of buildings is not feasible for compliance with noise guidelines. Noise Policies B-6 (ambient noise/single-family), B-7 (ambient noise/industrial), and B-8 (ambient noise/institutional) place limits on increases in noise allowed by new development. Implementation of these policies will limit exposure of noise-sensitive land uses to noise.

Implementation of the Fort Ord Noise Element policies summarized above would limit the exposure of noise-sensitive land uses to traffic noise associated with the 2007 General Plan.

State and Federal Aviation Safety Regulations

State Airport Land Use Commission law and Federal Aviation Administration Part 77 regulations place additional restrictions on developments in the vicinity of airports that limit placement of noise-sensitive land uses in the vicinity of airports.

Significance Determination

Implementation of the 2007 General Plan through the 2030 planning horizon would result in adverse impacts from aviation noise. However, the 2007 General Plan, Area Plan, and Community Area policies, and state and federal aviation regulations, listed above, establish comprehensive measures to avoid and minimize adverse impacts from aviation noise. Therefore, aviation noise resulting from implementation of the 2007 General Plan through the 2030 planning horizon would have a less-than-significant impact on existing and planned noise-sensitive receptors.

Mitigation Measures

No mitigation required.

Significance Conclusion

Aviation noise resulting from implementation of the 2007 General Plan through the 2030 planning horizon would have a less-than-significant impact on existing and planned noise-sensitive receptors.

Buildout

Impact of Development with Policies

Buildout of the 2007 General Plan through 2092 would result in new urban development in undeveloped areas of the County beyond 2030 levels. New development would potentially be exposed to aviation noise exceeding County noise standards.

The 2007 General Plan, Area Plan, and Community Area policies, as well as and state and federal aviation regulations, summarized above, identify measures that limit the exposure of existing and planned noise-sensitive receptors to aviation noise.

Significance Determination

Buildout of the 2007 General Plan through the 2092 planning horizon would potentially result in adverse impacts from aviation noise, especially near existing municipal and general aviation airports. However, the 2007 General Plan, Area Plan, and Community Area policies establish comprehensive measures to avoid and minimize adverse impacts from aviation noise. Therefore, aviation noise resulting from buildout of the 2007 General Plan through 2092 would have a less-than-significant impact on existing and planned noise-sensitive receptors.

Mitigation Measures

No mitigation required.

Significance Conclusion

Aviation noise resulting from buildout of the 2007 General Plan through the 2092 planning horizon would have a less-than-significant impact on existing and planned noise-sensitive receptors.

Stationary Source Noise

Impact N-5: Implementation of the 2007 General Plan would expose people residing or working near industrial/agricultural land uses and recreational venues to excessive noise levels. (Less-than-Significant Impact)

2030 Planning Horizon

Impact of Development with Policies

Implementation of the 2007 General Plan would result in new urban development in the vicinity of industrial/agricultural land uses and recreation venues in the county.

Industrial and/or agricultural processing areas in the unincorporated county area include Castroville, Moss Landing, and Pajaro; incorporated cities with industrial areas include Marina, Salinas, Seaside, Soledad, and King City. These areas include a mix of industrial uses and agricultural processing plants. Isolated agricultural processing plants also exist in the Salinas Valley. The San Ardo oil field is also a source of noise. Other potential noise sources include the four landfills in the County, which are located near Marina, Prunedale, Soledad, and King City. Laguna Seca Raceway is located near Fort Ord on Highway 68. Racing events involve competition between high performance vehicles that emit substantial levels of noise.

New development near these facilities would expose residents and workers to noise levels that exceed County noise standards.

The 2007 General Plan, Area Plan, and Community Area policies summarized below establish comprehensive measures to avoid and minimize adverse noise impacts from industrial, agricultural, and recreational sources.

2007 General Plan Policies

Safety Element Policy S-7.1 (new noise-sensitive land uses) limits new noise-sensitive land uses to areas where existing and projected noise level are “acceptable” as defined by the County.

Safety Element Policy S-7.2 (new development) states that proposed development shall incorporate design elements necessary to minimize

noise impacts on surrounding land uses and reduce noise in indoor spaces to an acceptable level.

Safety Element Policy S-7.3 (noise reduction measures) states that development may occur in areas identified as "normally unacceptable" provided that effective measures to reduce both the indoor and outdoor noise levels to acceptable levels are taken.

Safety Element Policy S-7.4 (new noise generators) states that new noise generators may be allowed in areas where projected noise levels are "conditionally acceptable" only after a detailed analysis of the noise reduction requirements is made, and necessary noise mitigation features are included in project design.

Safety Element Policy S-7.5 (new noise generators, cntd.) states that new noise generators should generally be discouraged in areas identified as "normally acceptable." Where such new noise generators are permitted, mitigation to reduce both the indoor and outdoor noise levels would be required.

Policy S-7.6 (acoustical analysis) states that an acoustical analysis shall be part of the environmental review process for projects when noise-sensitive receptors are proposed in areas exposed to existing or projected noise levels that are "normally unacceptable" as defined by the County.

Implementation of these policies would limit the exposure of noise-sensitive land uses to noise from industrial, agricultural, and recreational sources.

Area Plan Policies

The North County Area Plan

North County Area Plan Policy NC-1.1 (noise minimization) states that proposed commercial development shall be designed to minimize noise impacts on the surrounding area to the greatest extent feasible. Policy NC-1.2 (industrial/commercial noise) states that potential noise impacts from industrial and commercial facilities shall be minimized to the maximum extent feasible and that installation of environmental control methods for noise impact brought by regulatory agencies will require review and approval by the Director of Planning and Building Inspection. Implementation of these policies would limit noise produced by new commercial and industrial noise sources. Implementation of these policies would also limit the exposure of noise-sensitive land uses to noise from industrial and commercial facilities within this planning area.

Greater Salinas Area Plan

There are no policies related to stationary noise sources in this area plan.

Central Salinas Valley Area Plan

There are no policies related to stationary noise sources in this area plan.

Greater Monterey Peninsula Area Plan

There are no policies related to stationary noise sources in this area plan.

Carmel Valley Master Plan

Carmel Valley Master Plan Policy CV-1.14 (service centers) limits service centers in Carmel Valley to urbanized areas such as the mouth of the Valley, Carmel Valley Village or mid-Valley area and states that these sites shall be designed to result in low noise impact on surrounding uses. Implementation of this policy would limit the exposure of noise-sensitive land uses to noise from these facilities within this planning area.

Toro Area Plan

There are no policies related to stationary source noise in this area plan.

Cachagua Area Plan

Cachagua Area Plan Policy CACH-1.1 (service centers) states that provision should be made for service centers in Cachagua to result in low noise impact on surrounding uses. Policy CACH-3.2 (ambient noise abatement) states that stronger ambient noise abatement requirements should be considered in this planning area. Policy CACH-3.5 (resource production operation) states that mining or commercial timber or other resource production operations that include methods to control noise impacts may be considered in the planning area. Implementation of these policies would limit exposure of noise-sensitive land use to noise from these facilities and operations within this planning area.

South County Area Plan

There are no policies related to stationary source noise in this area plan.

Agricultural Winery Corridor Plan

AWCP Development Standard 3.5F (noise standards) states that all winery structures and outdoor uses will comply with the County's adopted Noise Codes. Development Standard 3.6 E (development conditions) states that agencies are authorized to attach such conditions as deemed necessary to protect the health, safety, and general welfare of the community and the persons attending special winery related events. These conditions include specific limits on outdoor amplified music. Implementation of these development standards would limit the exposure of noise-sensitive land uses to noise from wineries within the AWCP corridor.

Community Area Policies

Fort Ord Master Plan

Noise Program A-1.1 of Noise Policy A-1 (compatibility criteria) establishes land use compatibility criteria for exterior community noise. Program A-1.2 of Policy A-1 states that the County will adopt a noise ordinance to control noise from non-transportation sources and construction. Program B-1.1 of Noise Policy B-1 (noise mitigation) states that the County will develop a program to identify developed areas that are adversely affected by excessive noise levels, and implement measures to reduce these impacts by constructing noise barriers and limiting hours of operation of noise sources. Noise Policy B-3 (acoustic studies) requires that acoustical studies be conducted for all new development that could be exposed to noise above the "normally acceptable" range as defined by the County to ensure that existing and proposed use will not be adversely affected. Noise Policy B-4 (noise insulation) requires enforcement of state noise insulation standards and requires that interior sound levels of 45 dB L_{dn} be achieved for new multi-family dwellings, condominium, hotel, and motel uses. Noise Policy B-5 (noise barriers) states that noise barriers be provided for new development to ensure that noise guidelines are met and that interior noise level be reduced to 45 dB L_{dn} if site planning or architectural layout of buildings is not feasible for compliance with noise guidelines. Noise Policies B-6 (ambient/single-family), B-7 (ambient noise/industrial), and B-8 (ambient noise/institutional) place limits on increases in noise allowed by new development. Implementation of these policies would limit exposure of noise-sensitive receptors within the Fort Ord Master Plan area.

Significance Determination

Implementation of the 2007 General Plan through the 2030 planning horizon would result in adverse noise impacts from stationary sources. However, the 2007 General Plan, Area Plan, and Community Area policies summarized

above establish comprehensive measures to avoid and minimize adverse noise impacts from stationary sources. Therefore, noise from stationary sources resulting from implementation of the 2007 General Plan through the 2030 planning horizon would have a less-than-significant impact on existing and planned noise-sensitive land uses.

Mitigation Measures

No mitigation is required.

Significance Conclusion

Noise from stationary sources resulting from implementation of the 2007 General Plan through the 2030 planning horizon would have a less-than-significant impact on existing and planned noise-sensitive land uses.

Buildout

Impact of Development with Policies

Buildout of the 2007 General Plan through 2092 would result in new urban development in undeveloped areas of the county beyond 2030 levels. New development would result in the exposure of noise-sensitive land uses to excessive noise levels from stationary sources.

The 2007 General Plan, Area Plan, and Community Area policies summarized above identify policies that limit the exposure of existing and planned noise-sensitive land uses to excessive noise levels from stationary sources.

Significance Determination

Buildout of the 2007 General Plan through the 2092 planning horizon would potentially result in adverse impacts from stationary noise sources. However, the 2007 General Plan, Area Plan, and Community Area policies summarized above establish comprehensive measures to avoid and minimize adverse noise impacts from stationary sources. Therefore, noise from stationary sources resulting from implementation of the 2007 General Plan through the 2030 planning horizon would have a less-than-significant impact on existing and planned noise-sensitive land uses.

Mitigation Measures

No mitigation required.

Significance Conclusion

Noise from stationary sources resulting from implementation of the 2007 General Plan through the 2030 planning horizon would have a less-than-significant impact on.

4.8.6 Level of Significance after Mitigation

Development of new noise-sensitive land uses and noise sources associated with implementation of the 2007 General Plan would result in significant noise impacts. However, all noise impacts would be less than significant with implementation of General Plan, Area Plan, and Community Area policies described herein and would not require mitigation.

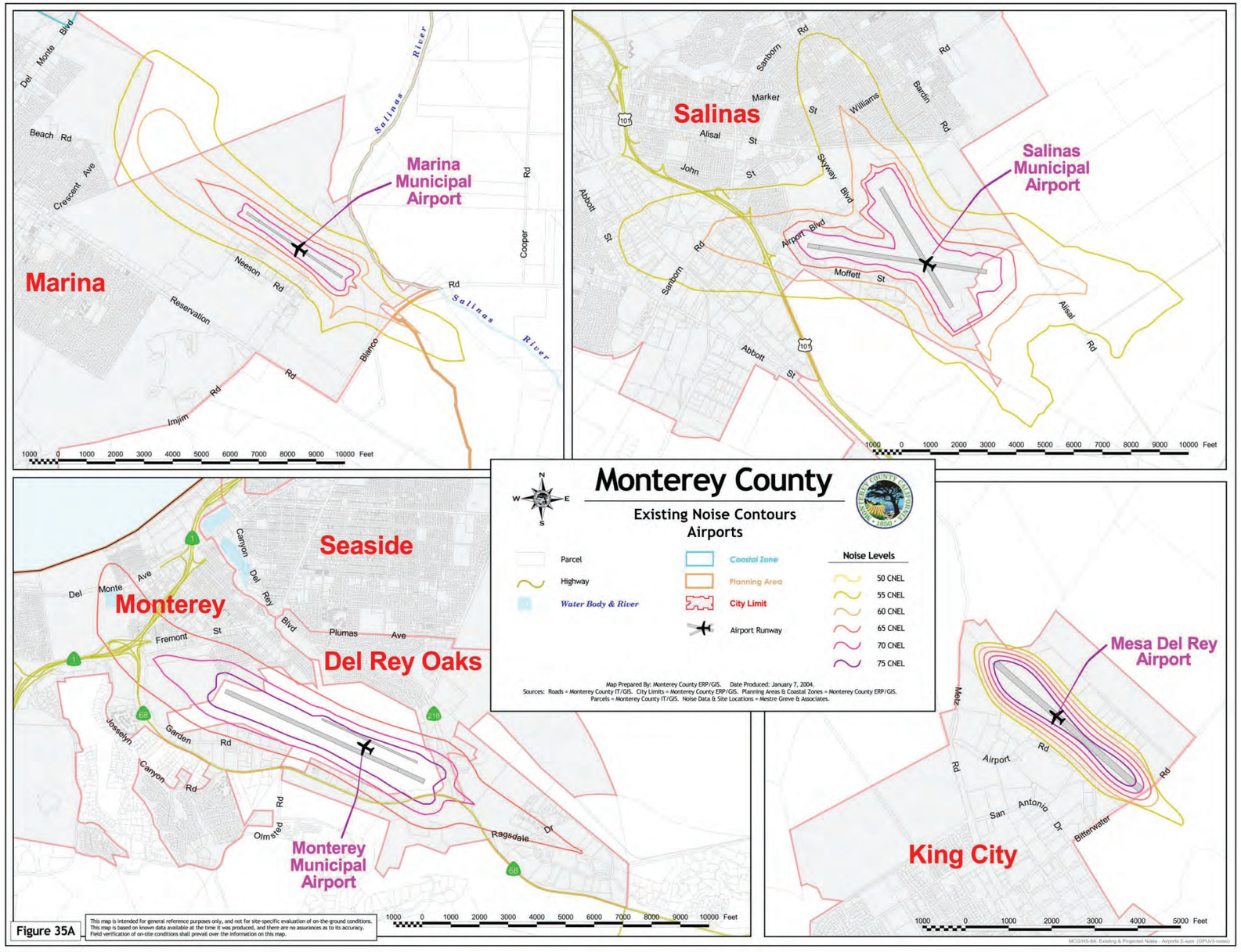

Figure 35A

Source: Monterey County 2006 General Plan Update.

Michael Brandman Associates

00982.07 (06-08)

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an ICF International Company

Exhibit 4.8.1
Existing Noise Contours, Airports

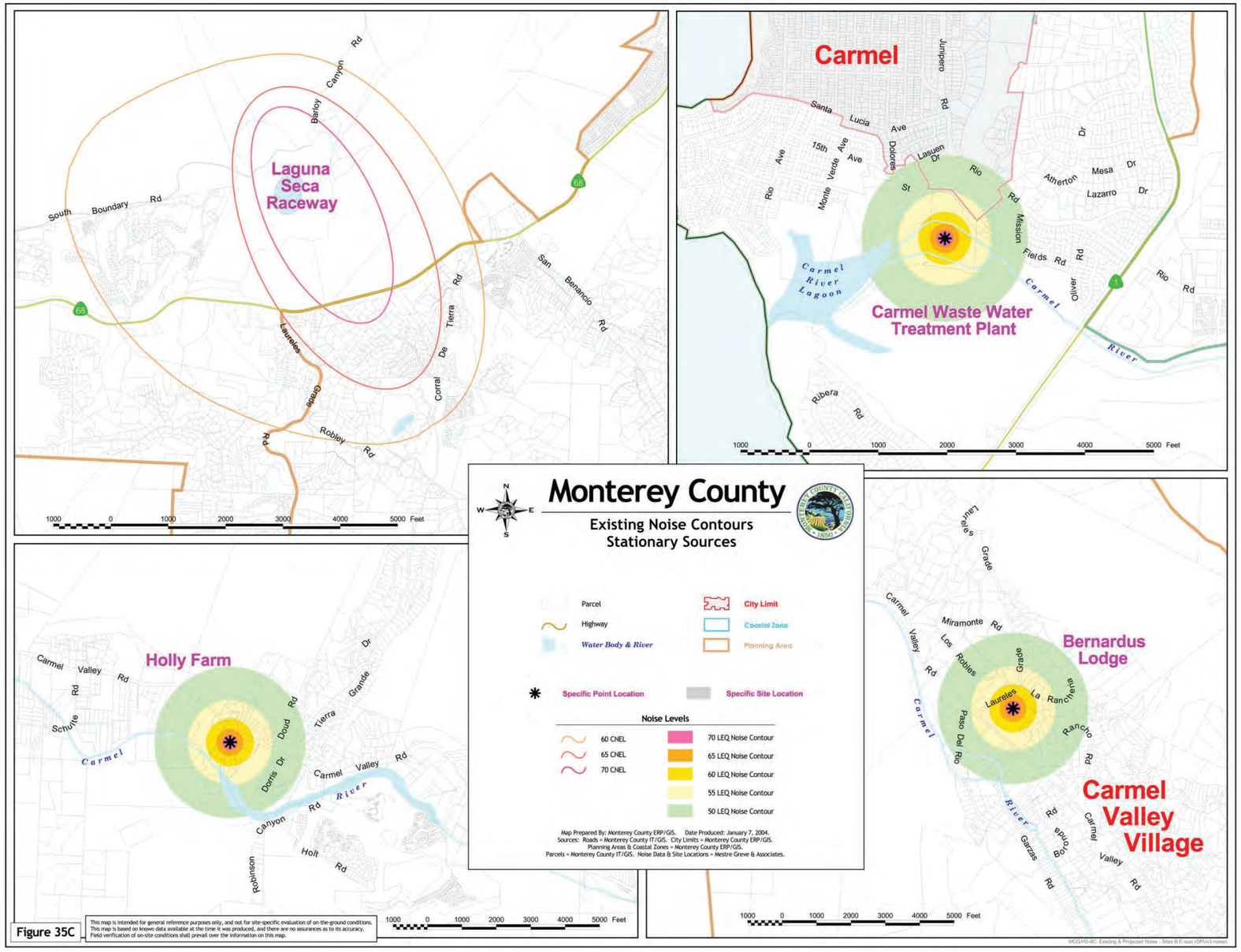

Figure 35C

Source: Monterey County 2006 General Plan Update.

Michael Brandman Associates

00982.07 (06-08)

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an ICF International Company

Exhibit 4.8.2a
Existing Noise Contours, Stationary Sources

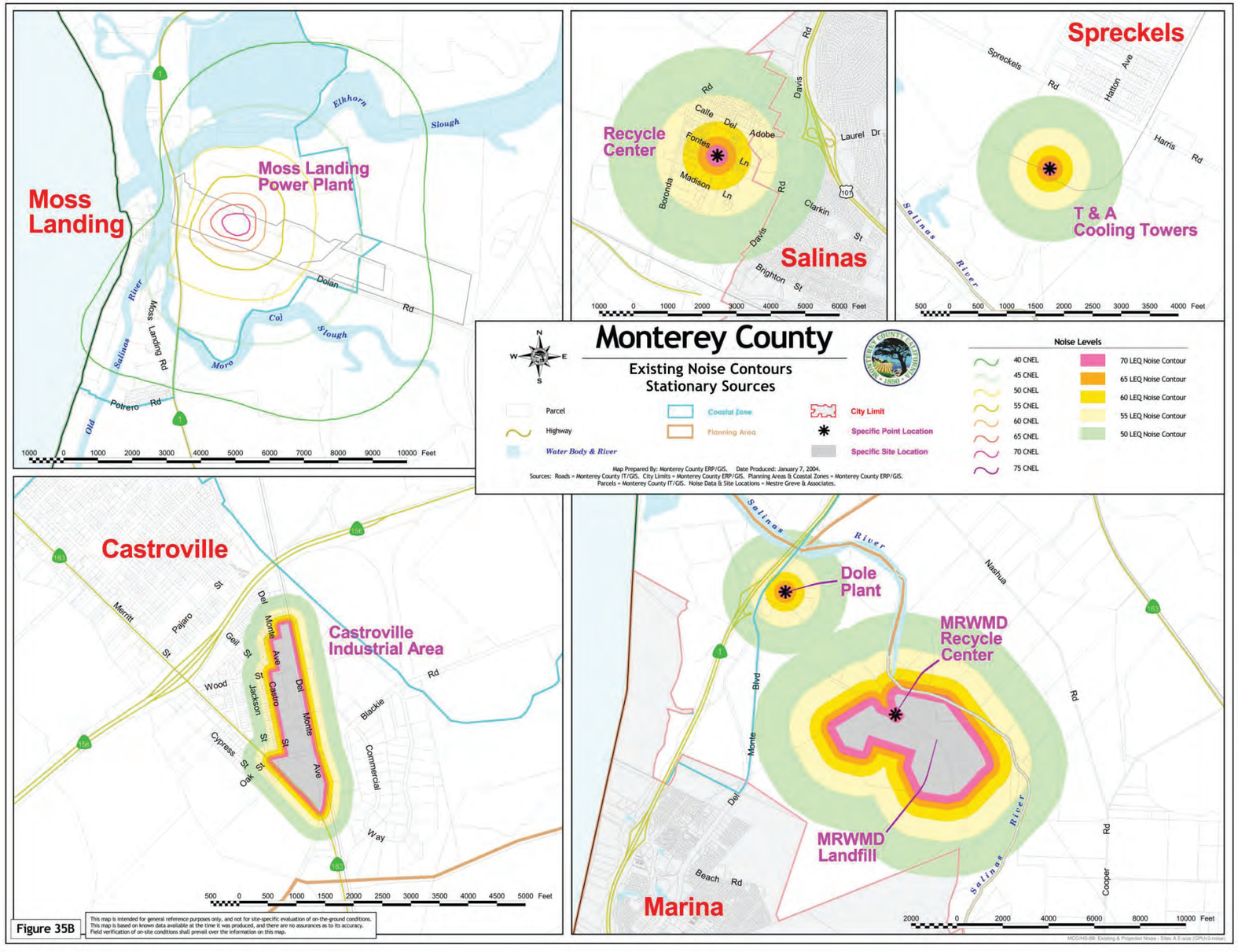

Figure 35B

This map is intended for general reference purposes only, and not for site-specific evaluation of on-the-ground conditions. This map is based on known data available at the time it was produced, and there are no assurances as to its accuracy. Field verification of on-site conditions shall prevail over the information on this map.

Source: Monterey County 2006 General Plan Update.

NORTH

Michael Brandman Associates

MONTEREY COUNTY GENERAL PLAN EIR

00982.07 (06-08)

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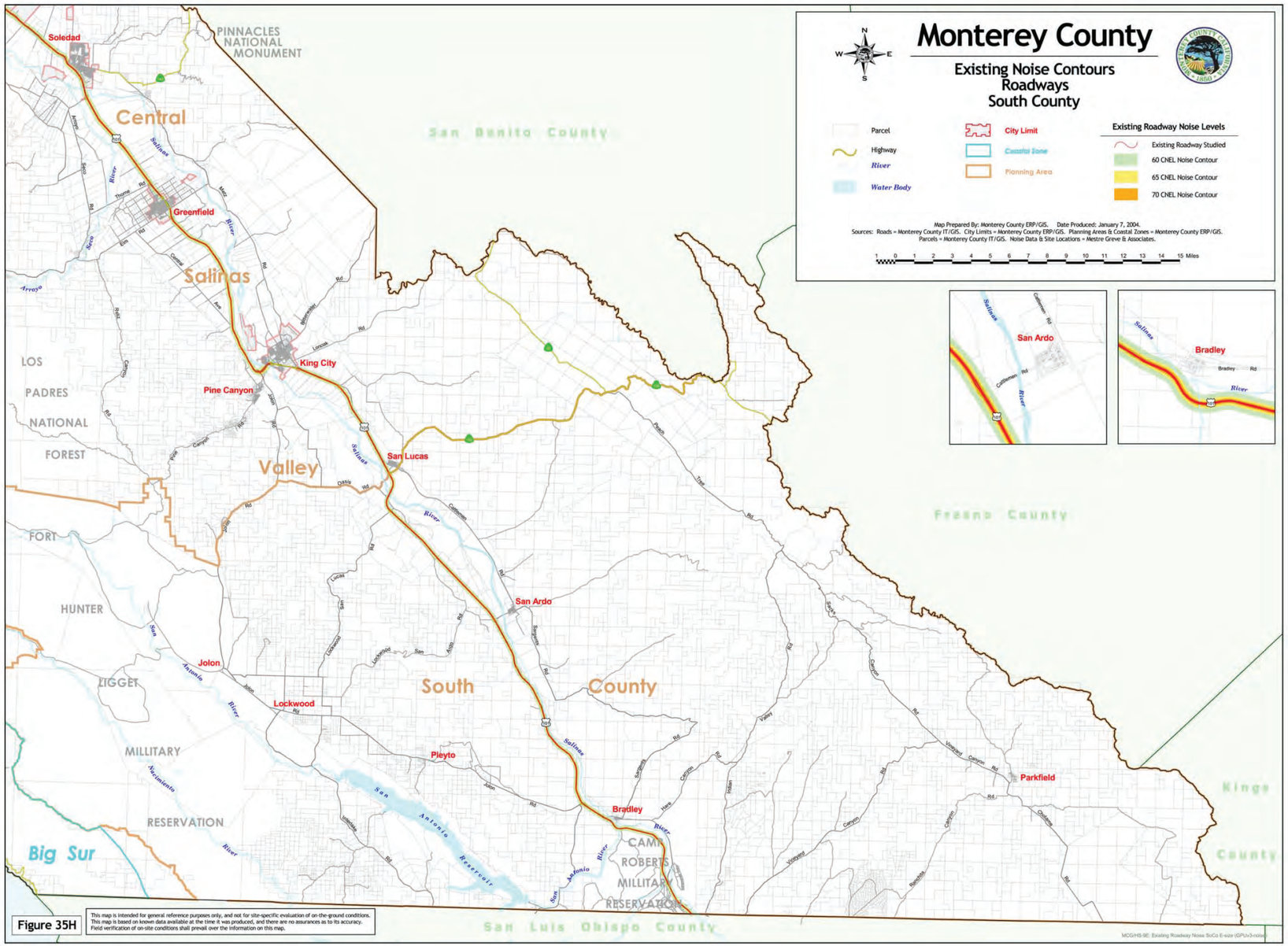
Exhibit 4.8.2b
Existing Noise Contours, Stationary Sources



Source: Monterey County 2006 General Plan Update.

NORTH

Michael Brandman Associates

00982.07 (05-08)

ICF Jones & Stokes
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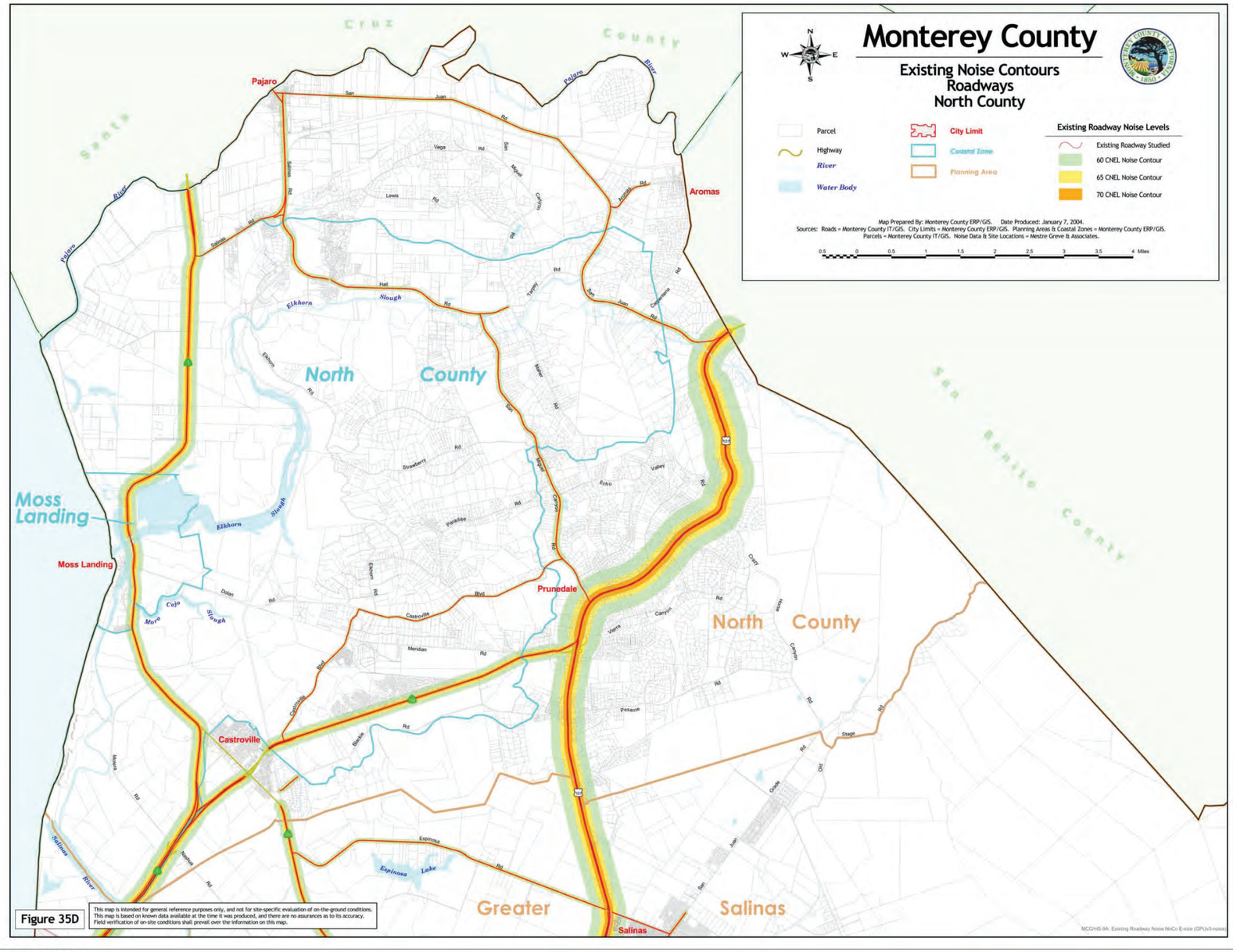
Exhibit 4.8.3a
Existing Noise Contours Roadways, South County



Source: Monterey County 2006 General Plan Update.

Michael Brandman Associates

MONTEREY COUNTY GENERAL PLAN EIR

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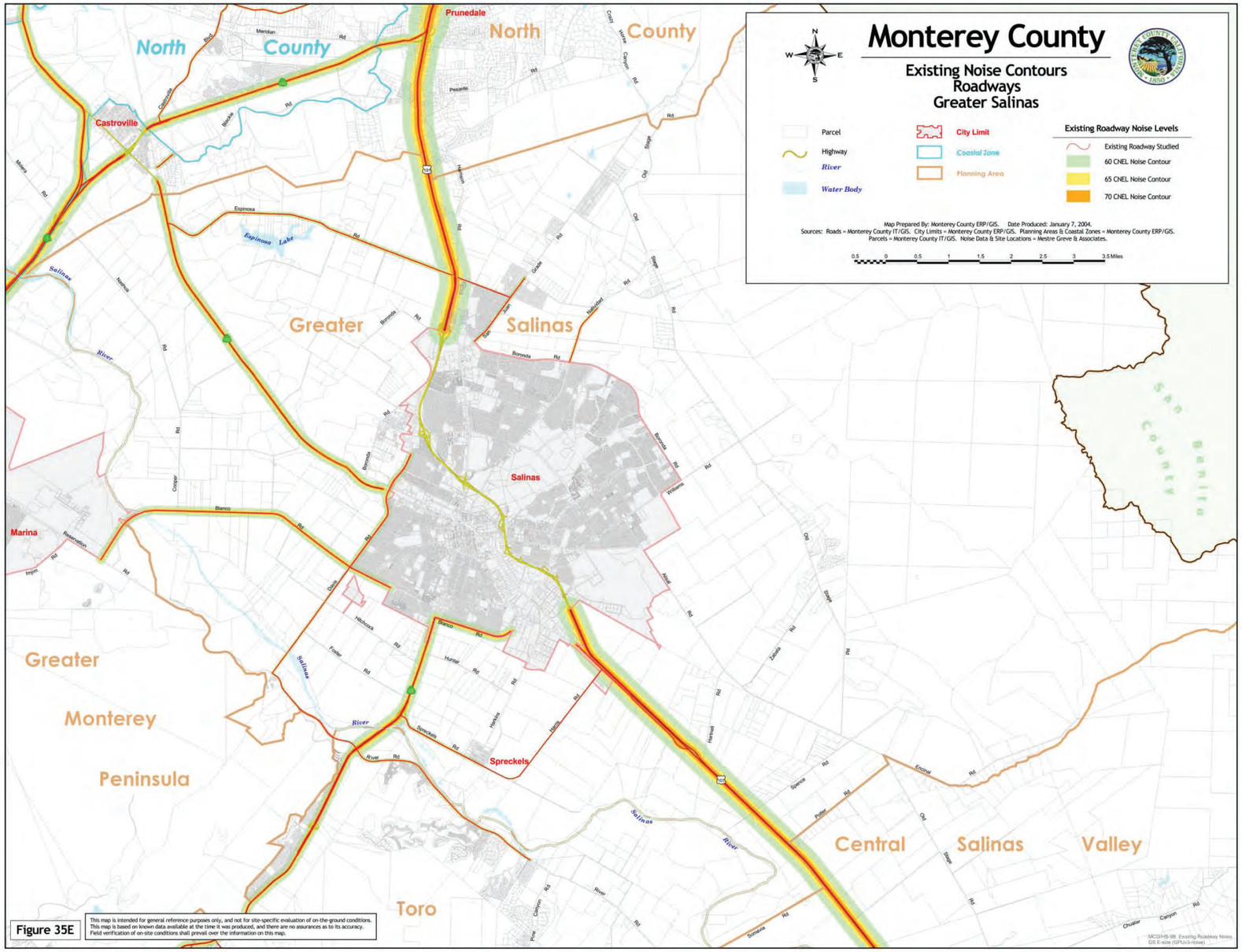
Exhibit 4.8.3b
Existing Noise Contours Roadways, North County



Source: Monterey County 2006 General Plan Update.

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MONTEREY COUNTY GENERAL PLAN EIR

00982.07 (06-08)

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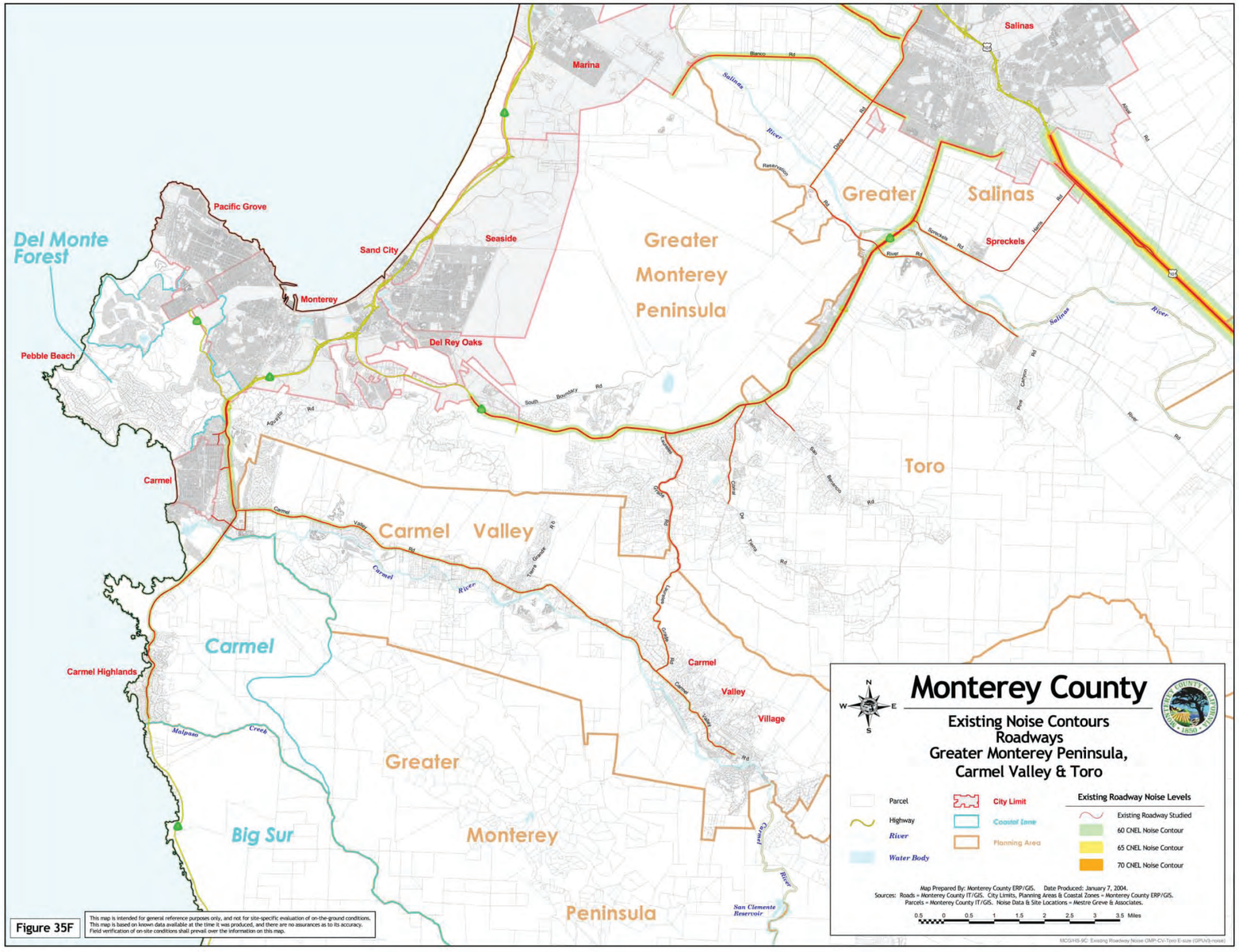
Exhibit 4.8.3c
Existing Noise Contours Roadways, Greater Salinas



Source: Monterey County 2006 General Plan Update.

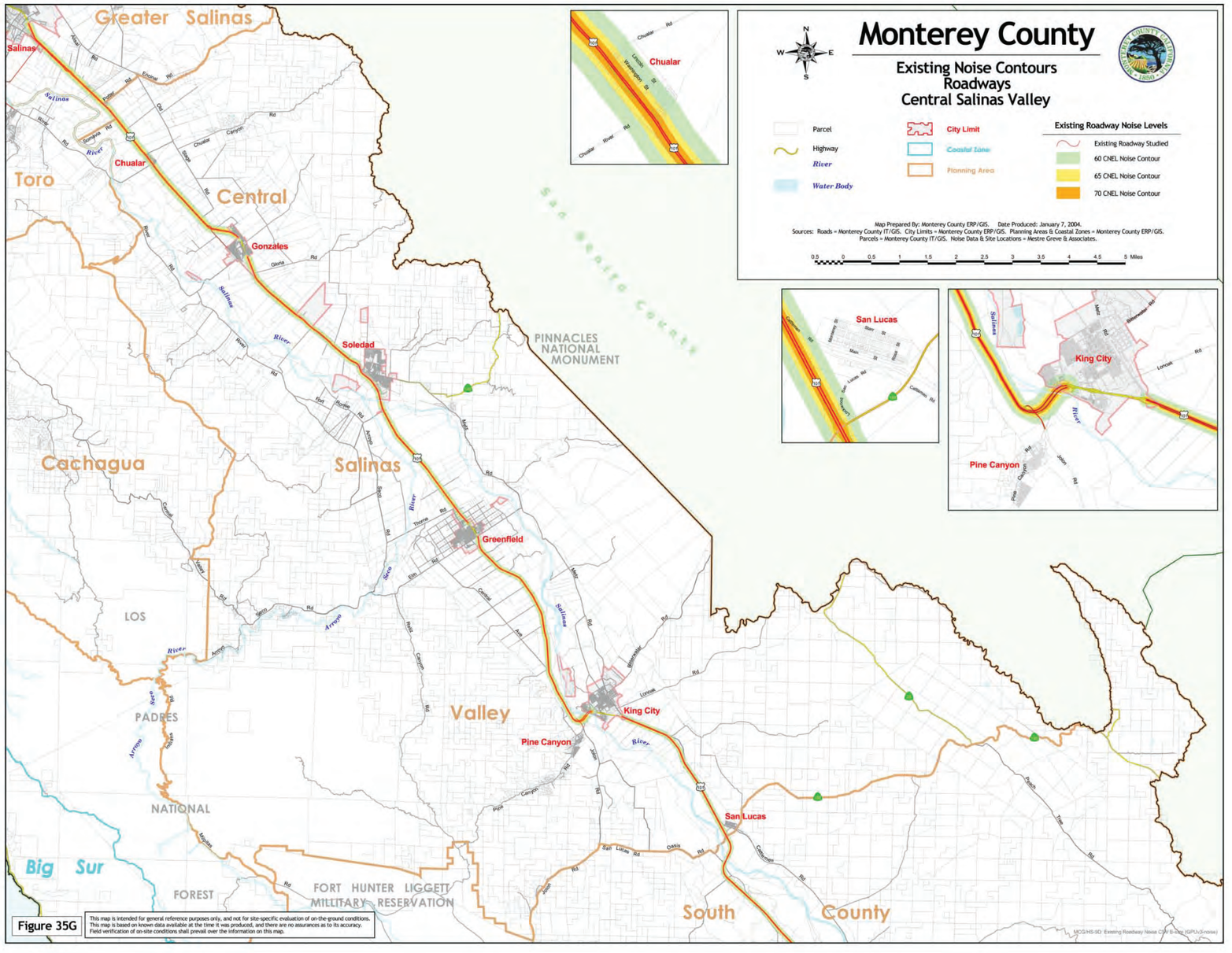
NORTH

Michael Brandman Associates

0098.2.07 (06-08)

ICF Jones & Stokes
an ICF International Company

Exhibit 4.8.3d
Existing Noise Contours Roadways, Greater Monterey Peninsula, Carmel Valley, and Toro



Source: Monterey County 2006 General Plan Update.

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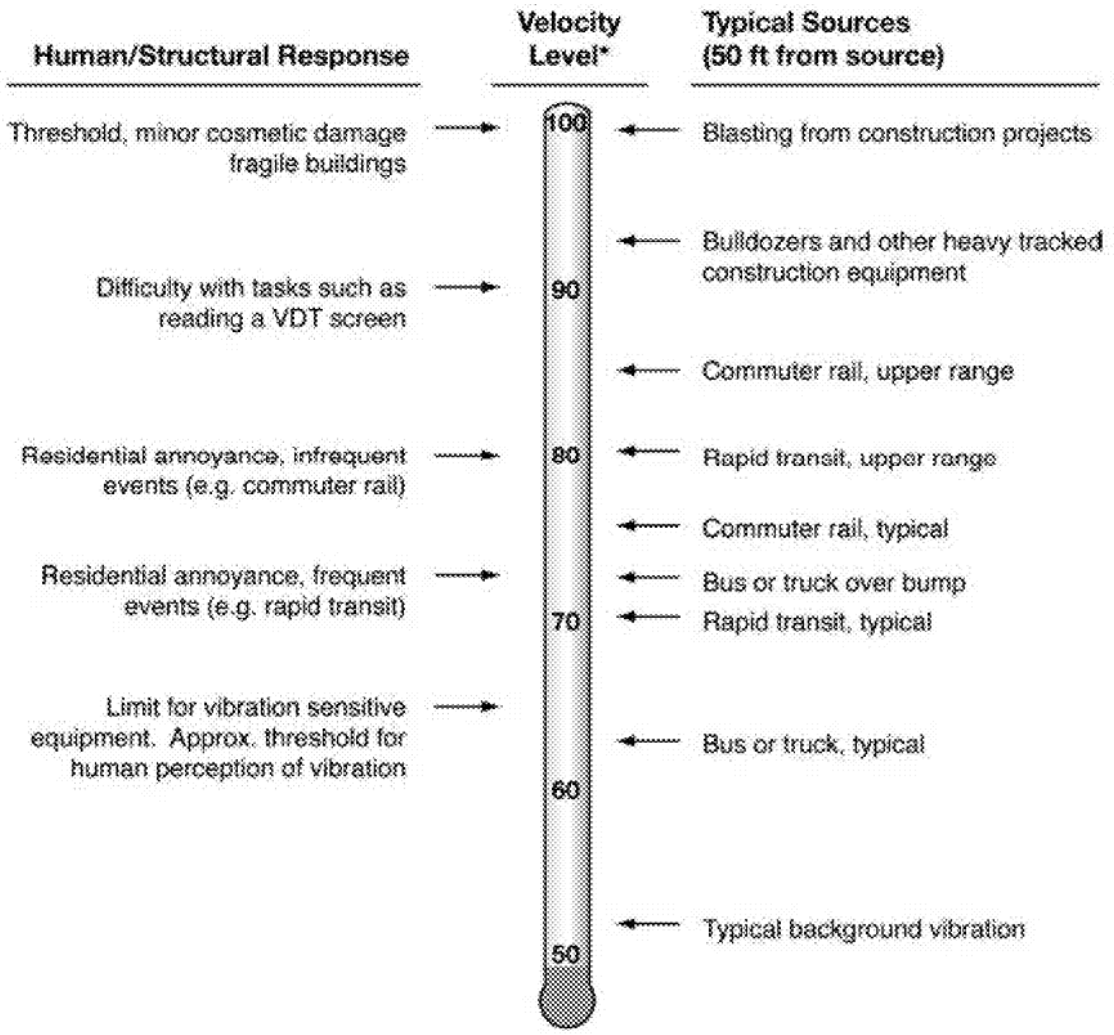
Exhibit 4.8.3e
Existing Noise Contours Roadways, Central Salinas Valley



* *RMS Vibration Velocity Level in VdB relative to 10^{-6} inches/second*

00982.07 (07-08)

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Exhibit 4.8.4
FTA Vibe

4.9 Biological Resources

4.9.1 Abstract

Monterey County contains a diverse array of natural communities, ranging from oak woodlands in the Salinas Valley, to beach dunes near Fort Ord, to Elkhorn Slough in North County. Natural vegetation throughout the County is typical of that occurring in the coastal ranges and interior valleys of central California. The two most common types of natural habitat are oak woodland on middle and upper elevations and grassland in lower elevations such as valleys. There are numerous federally listed endangered and threatened species and other CEQA-defined special-status species in the County. More than 70,000 acres in the County are designated as critical habitat by the U.S. Fish and Wildlife Service (USFWS).

Development and land use activities (including agriculture) allowed by the 2007 General Plan in designated growth areas (Community Areas, Rural Centers, and AHOs) as well as in other unincorporated areas would result in the following significant impacts on biological resources:

- **Special Status Species:** Future development anticipated by the 2007 General Plan would result in loss of CEQA-defined "special-status species" habitat and individuals.

  [Note: The 2007 General Plan Glossary defines "special-status species" as species that are listed and protected by the federal and California endangered species acts. This EIR defines "CEQA-defined special-status species" more broadly For this EIR, CEQA-defined special-status species are defined to include both listed and non-listed species that are candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS or that otherwise meet the definitions of rare or endangered under CEQA based on substantial evidence (State CEQA Guidelines Section 15380). Note that this definition is broader than that in the 2007 General Plan, which only includes listed special-status species. Unless otherwise specified, all references in this document are to the broad list of CEQA-defined special-status species, whether listed or not. All CEQA findings in this document refer to both listed and non-listed special status species].

  Mitigation is available that would reduce impacts to less than significant for the 2030 Planning Horizon and for buildout. However, there are uncertainties as to the threats that special-status species may face beyond 2030 and the means to address these new threats. Thus the 2007 General Plan is considered to result in a significant and unavoidable impact to CEQA-defined special-status species for buildout.

- **Sensitive Natural Communities, Riparian Habitat and Wetlands:** Future development anticipated by the 2007 General Plan would result in a net loss

of sensitive natural communities, riparian habitat, and wetlands. Mitigation is available that would, reduce impacts to less than significant for the 2030 Planning Horizon and for buildout. However, there are uncertainties as to the threats that sensitive natural communities, riparian habitat, and wetlands may face beyond 2030 and the means to address these new threats. Thus the 2007 General Plan is considered to result in a significant and unavoidable impact to sensitive natural communities, riparian habitat, and wetlands for buildout.

- **Wildlife Movement Corridors:** Future development anticipated by the 2007 General Plan could result in the creation of impediments to wildlife movement along key river and land wildlife corridors. Mitigation is available that would reduce impacts to less than significant for the 2030 Planning Horizon and for buildout.
- **Consistency with Biological Protection Policies and Adopted Conservation Plans:** Future development anticipated by the 2007 General Plan would be consistent with local tree ordinances. There are no adopted habitat conservation plans (HCPs) or natural communities conservation plans (NCCPs) within the areas covered by the 2007 General Plan. The county is a participant in the development of the HCP for the former Fort Ord and future development permitted by the County within the Fort Ord Master Plan area will be consistent with the HCP (when adopted). This impact is less than significant.

4.9.2 Introduction

In this chapter, the County's biological resources and potential impacts on them arising from development under the 2007 General Plan are described at a program level. The impact analysis is quantitative (where data is reasonably available) and qualitative (otherwise) and is not site-specific because of the wide geographical area covered. This impact analysis assumes that biological resources would be affected directly or indirectly by development under the 2007 General Plan. As part of subsequent, project-specific environmental analysis, the County shall analyze impacts to biological resources at an appropriate level of details, as required under Public Resources Code Section 2100 et seq.

4.9.3 Environmental Setting

Information is presented in this section about the existing biological setting of Monterey County in general.

The sensitive and common plant communities (habitats) present in Monterey are described below; a map of their general distribution is presented in Exhibit 4.9.1. The actual distribution of plant communities is much more detailed than presented in this exhibit. Project-specific environmental reviews that are tiered from this EIR would need to conduct site-specific evaluation to determine the

presence or absence of sensitive and common plant communities within a specific project area.

Exhibit 4.9.1 provides a basis for a general discussion of potential environmental impacts and the location of sensitive communities and CEQA-defined special-status species. Exhibits 4.9.2, 4.9.3, and 4.9.4 identify the common plant communities found within the 2007 General Plan focused developed areas (community areas, rural centers, affordable housing overlays, and the agricultural wine corridors). Table 4.9-2 shows the approximate acres of different vegetation types found within the County (including cities and the coastal area). Table 4.9-3 shows the approximate acres of different vegetation types found within the 2007 General Plan focused development areas.

Monterey County occurs within one of the richest biological regions in North America (Ricketts et al 1999; Abell et al 2000). Monterey County is especially rich in biological resources, primarily because of the diversity of unique physical characteristics: highly varied terrain, large elevation range, extensive coastline, broad range of microclimates, and diverse substrate materials. This variability is reflected in the large array of plant communities and resident plant and animal species. For example, there are almost 3,000 species of plants that occur in Monterey County according to Calflora (2008), a database of California plants. Of these, 101 plant species are considered to be rare or sensitive by the CNPS and are listed in the CNDDB (2007).

Table 4.9-1. Monterey County Vegetation Communities (Estimated for 2006) (Includes Cities and Coastal Areas)

Vegetation Community	Acres
Annual Grassland	726,632
Oak Woodland	426,334
Agriculture	**254,491**
Baccharis Scrub	205,060
Oak Savanna	201,662
Gabilan Scrub	115,146
Urban/Non-Veg	43,579
Sparse Vegetation/Bare Soil	34,098
Mixed Conifer	29,477
Riparian/Wetland	25,970
Redwood Forest	21,738
Maritime Chaparral	12,597
Coastal prairie	6,434
Blue Oak Woodland	5,606
Saltwater Marsh	2,883
Dune Scrub	2,235
Baccharis Chaparral	2,165
Monterey Pine Forest	1,260
Eucalyptus	1,224
Golf Course	584
Coastal Scrub	572
Valley Needlegrass Grassland	392
Dune	326
Freshwater Marsh	317
Coastal Terrace Prairie	212
Native Grassland	85
Total	**2,121,079**

Methodology: No existing mapping for current vegetation coverage for the County was identified. Vegetation community acreages for 2006 were identified by comparing a 1982 base vegetation map to the 2006 FMMP maps for County using GIS. The FMMP covereage was used to identify urban land and important farmland (prime, statewide importance, unique). Where the FMMP maps show grazing land, land is not presumed to be urban or to be intensive agriculture, but is presumed to be original 1982 land cover. A minimum mapping unit of 2.5 acres was used for conversions. See Figure 4.9-1 for 1982 land cover, and Figures 4.9-3 through 4.9-6 for habitat conversions between 1982 and 2006.

Table 4.9-2. Monterey County GP 2007 Natural Communities by New Plan Areas (Estimated Extant as of 2006)

	Annual Grassland	Baccharis and Other Scrub	Coastal Prairie	Baccharis and Maritime Chaparral	Mixed Conifer	Monterey Pine Forest/ Redwood Forest	Native Grassland	Oak Woodland and Savanna	Riparian/ Wetland	Total
Community Areas										
Chualar CA										0
Fort Ord CA	3,320	356		9,805	1		460	4,005	273	18,219
Boronda CA										0
Pajaro CA	0								1	1
Castroville CA	29									29
Community Areas Subtotal	3,349	356	0	9,805	1		460	4,005	273	18,249
Rural Centers										
Pine Canyon RC	427	110			2			28		567
San Lucas RC	15									15
Bradley RC	34								0	34
Lockwood RC	92	6								97
Pleyto RC	359	33								393
San Ardo RC										0
River Road RC	171	25			14			35	26	272
Rural Centers Subtotal	1,098	173	0	0	16		0	63	26	1,377
AHOs										
Carmel Mid-Valley AHO	1									1
Hwy 68/Airport AHO	1		58					12		71
Hwy 68/Reservation AHO	6			1						6
AHOs Subtotal	8	0	58	1	0		0	12	0	79
Total of Focused Growth Areas	4,455	529	58	9,806	18		460	4,080	299	19,706

	Annual Grassland	Baccharis and Other Scrub	Coastal Prairie	Baccharis and Maritime Chaparral	Mixed Conifer	Monterey Pine Forest/ Redwood Forest	Native Grassland	Oak Woodland and Savanna	Riparian/ Wetland	Total
Planning Areas outside the Focused Growth Areas Designated for Development										
Areas designated for Development in Rest of Unincorporated County	93,975	63,620	1,493	377	4,267	317	17	90,613	3,258	257,937
Agricultural Wine Corridors (Note: these areas overlap with some of the Development areas in the Planning Areas)										
Central/Arroyo Seco/River Road Segment	4,364	420			45			93	1,590	6,512
Jolon Road Segment	10,400	3,394			134			1,432	281	15,642
Metz Road Segment	1,877	5			8			11	206	2,106
Agricultural Wine Corridor Subtotal	16,641	3,819	0	0	187		0	1,536	2,077	24,260

Methodology: No existing mapping for current vegetation coverage for the County was identified. Vegetation community acreages for 2006 were identified by comparing a 1982 base vegetation map to the 2006 FMMP maps for County using GIS. The FMMP coverage was used to identify urban land and important farmland (prime, statewide importance, unique). Where the FMMP maps show grazing land, land is not presumed to be urban or to be intensive agriculture, but is presumed to be original 1982 land cover. A minimum mapping unit of 2.5 acres was used for conversions. See Figures 4.9-7 through 4.9-10 for habitats by plan area.

Table 4.9-3. Relationship of natural communities discussed in the 2008 Monterey County General Plan Update to sensitive communities designated by the California Department of Fish and Game's California Natural Diversity Database and CDFG's Vegetation Classification and Mapping Program (VCMP)

	CNDDB Plant Communities[a]		VCMP Vegetation Alliance[b]	
GPU SEIR Mapping Units	CNDDB Community Name	Rarity Rank (Globally and in California)[c]	CDFG Alliance Name	Rarity Rank (Globally and in California)[c]
Dune*	Central Foredunes	G1S1	*Abronia latifolia-Ambrosia chamissonis*	G3S3
	Active Coastal Dunes	G3S2	*Ambrosia chamissonis*	G4S3
Dune Scrub*	Central Dune Scrub	G2S2	*Lupinus chamissonis-Ericameria ericoides*	G3S3
Maritime Chaparral*	Central Maritime Chaparral	G2S2	*Arctostaphylos pajaroensis*	G1S1
			Arctostaphylos pumila	G1S1
Saltwater Marsh*	Northern Coastal Salt Marsh	G3S3	*Salicornia virginica*	G4S4
	Coastal Brackish Marsh	G2S2		
Freshwater Marsh*	Coastal and Valley Freshwater Marsh	G3S2	*Typha* (*angustifolia, domingensis*)	G4S3
			Schoenoplectus spp.–*Typha* spp.	G5S3?
			Schoenoplectus spp.	G4S3 to G5S4
Riparian/Wetland*	Sycamore Alluvial Woodland	G1S1	*Platanus racemosa*	G4S3
	Coastal and Valley Freshwater Marsh	G3S2	*Acer macrophyllum*	G4S3
Native Grassland*	Native Grassland	G3S3	*Nasella pulchra*	G4S3
Valley Needlegrass Grassland*	Valley Needlegrass Grassland	G1S3	*Nasella pulchra*	G4S3
Oak Savanna*	Valley Oak Woodland	G3S2	*Quercus lobata*	G3S3
Mixed Conifer*	Monterey Cypress Forest	G1S1	*Cupressus macrocarpa*	G1S1
	Monterey Pygmy Cypress Forest	G1S1	*Cupressus goviniana*	G1S1
	Northern Bishop Pine Forest	G2S2	*Pinus muricata*	G4S3
Monterey Pine Forest*	Monterey Pine Forest	G1S1	*Pinus radiata*	G3S2
Coastal Terrace Prairie*	Valley Needlegrass Grassland	G1S3	*Danthonia californica*	G4S3
			Festuca idahoensis	G4S3
Oak Woodland*	Blue Oak Woodland	G3S3	*Quercus douglasii*	G4S4
	Black Oak Woodland	G3S3	*Quercus kelloggii*	G4S4
	Valley Oak Woodland	G3S2	*Quercus lobata*	G3S3

	CNDDB Plant Communities[a]		VCMP Vegetation Alliance[b]	
GPU SEIR Mapping Units	CNDDB Community Name	Rarity Rank (Globally and in California)[c]	CDFG Alliance Name	Rarity Rank (Globally and in California)[c]
Blue Oak Woodland*	Blue Oak Woodland	G3S3	*Quercus douglasii*	G4S4
Redwood Forest*	Not listed	—	*Sequoia sempervirens*	G3S3
Agriculture	N/A—not considered a sensitive community			
Annual grassland	N/A—not considered a sensitive community			
Baccharis Chaparral	N/A—not considered a sensitive community			
Baccharis Scrub	N/A—not considered a sensitive community			
Gabilan Scrub	N/A—not considered a sensitive community			
Eucalyptus	N/A—not considered a sensitive community			
Golf Course	N/A—not considered a sensitive community			
Sparse Vegetation/Bare Soil	N/A—not considered a sensitive community			
Urban/Non-Veg	N/A—not considered a sensitive community			

Notes:

= sensitive communities in the 2008 Monterey General Plan Update EIR

[a] Based on California Department of Fish and Game, California Natural Diversity Database (CNDDB) (Version 3.1.0, accessed on January 22, 2008)

[b] Based on the most current California Department of Fish and Game classification approach: *Vegetation Classification and Mapping Program List of California Vegetation Alliances*, October 22, 2007. This classification is currently in development and is a long-term update and refinement of the classification used by the CNDDB. This will bring the California vegetation classification system in line with the National Vegetation Classification System. This system is based on the dominant species and is organized hierarchically; alliances are listed here, at a finer-scale is the association.

[c] Rarity ranking: Global (G) and State (S) rankings are analogous to those given to species in the CNDDB. The ranking is between 1 and 5 using NatureServe's standard heritage program conservation status methodology (http://www.natureserve.org/explorer/ranking.htm#interpret). The ranking presented in this table is for the alliance; it is possible that an association within any alliance may have a rarer ranking than the alliance; additionally, some communities in California are considered rare although the alliance is not. The rankings are interpreted as

1 = **critically imperiled**; at very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.

2 = **imperiled**; at high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors.

3 = **vulnerable to extirpation or extinction**; at moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors.

4 = **apparently secure**; uncommon but not rare; some cause for long-term concern due to declines or other factors

5 = **secure**; demonstrably widespread, abundant, and secure; common; widespread and abundant.

4.9.3.1 Sensitive Vegetation Communities

The vegetation types, or plant communities, described in this section are known to occur within Monterey County and are considered to be "sensitive natural communities" under CEQA. Sensitive plant communities are intrinsically rare (i.e., uncommon plant associations that are of limited distribution) and/or they are habitat for CEQA-defined special-status plant or wildlife species.

There are two state lists of sensitive plant communities; both of which are maintained by CDFG: the CNDDB and the Vegetation Classification and Mapping Program (VCMP). The two lists are closely related to each other; the differences between them are essentially a matter of classification and naming conventions. The VCMP is currently updating the entire vegetation classification system (including rare and common communities) in California to meet the standards set by the National Vegetation Classification (Grossman et al. 1998). The plant community names presented below and in the map in Exhibit 4.9.1 are based on previous draft General Plan Updates and associated environmental review documents, in order to facilitate comparison. However, to make a clear connection between these communities and those listed as sensitive or rare by the CNDDB and the VCMP, a crosswalk is provided in Table 4.9-3.

A general mapping of the distribution of sensitive plant communities within Monterey County is provided in Exhibit 4.9.1 and approximate acreages are presented in Table 4.9-1. Project-specific environmental reviews that are tiered from this EIR would need to conduct site-specific evaluation to determine the presence or absence of sensitive plant communities within a specific project area.

The following sensitive vegetation communities are found within the inland areas covered by the 2007 General Plan (many of these communities are also found within the coastal areas, which are not covered by the 2007 General Plan.

Freshwater Marsh

Freshwater marsh occurs in low-flow water bodies such as ponds, lakes, and estuaries with strong freshwater through-flow. Common dominant species include cattail (*Typha latifolia, T. angustifolia*), tall cyperus (*Cyperus eragrostis*), bulrush and tule species (Sc*hoenoplectus* spp.), rushes (*Juncus* spp.), sedges (*Carex* spp.) and spike rushes (*Eleocharis* spp.). Freshwater marshes support many of the same species as salt marsh, above. In addition, these freshwater wetlands support CEQA-defined special-status species such as the California tiger salamander (*Ambystoma californiense*), California red-legged frog (*Rana aurora draytonii*), and Santa Cruz long toed salamander (*Ambystoma macrodactylum croceum*) in Monterey County.

Riparian/Wetland

Riparian communities occur along rivers, streams and creeks, while wetlands generally refer to plant communities growing in standing water or in areas that are frequently inundated. The marsh communities described above are all types of wetlands. Other types of wetlands include seasonal wetlands in meadows, ditches and areas that retain water in the rainy winter months; and vernal pools which are seasonally wet depressions in meadows with clay soils.

Riparian communities generally grow alongside rivers and streams and are dominated by winter-deciduous trees and shrubs that are adapted to high amounts of water. Common riparian dominant species include willow species (*Salix* spp.), alder (*Alnus rhombifolia, A. rubra*), cottonwood (*Populus* spp.), box elder (*Acer negundo* var. *californicum*), big-leaf maple (*Acer macrophyllum*), and sycamore (*Platanus racemosa*). The understory often consists of dense thickets of poison oak or non-native invasive species such as Himalayan blackberry (*Rubus armeniacus*).

Because the vegetation is diverse and well developed, riparian forest provides high-value habitat for wildlife, including several CEQA-defined special-status species. Riparian forest habitat provides food, water, and migration and dispersal corridors, as well as escape, nesting and thermal cover for many wildlife species (Mayer and Laudenslayer 1988). Invertebrates, amphibians, and aquatic reptiles live in aquatic and adjacent upland habitats. Raptors, herons, egrets, and many songbirds nest in riparian forest habitat. These areas also important stopover sites during bird migration along the Pacific Flyway and generally serve as important routes for daily movements and dispersal of many species of mammals.

Seasonal wetlands occur in areas with some amount of inundation each year adequate to support plant species adapted to wet conditions. These plants are generally indicative of wetlands, and may include longer-lived perennial species such as cattail and tule, as well as annual species like those found in marshes (listed above). Other species common in seasonal wetlands include iris-leaved rush (*Juncus xiphioides*), toad rush (*Juncus bufonius*), curly dock (*Rumex crispus*), rabbit's foot grass (*Polypogon monspeliensis*), English plantain (*Plantago major*), and bristly ox-tongue (*Picris echioides*). Many of the common seasonal wetland species are non-native and, to some degree, considered invasive.

Vernal pools are seasonally flooded landscape depressions underlain by a subsurface which limits drainage. Vernal Pools are typically formed during winter rains. They result from an unusual combination of soil conditions, summer-dry Mediterreanean climate, topography, and hydrology. These pools dry from the perimeter inward as the summer heat approaches, and characteristic concentric rings of wildflowers and grasses form. Because vernal pools are quite rare, many of the associated plants are also rare. Vernal pool species include Vasey's coyote thistle (*Eryngium vaseyi*), water starwort (*Callitriche* spp.), downingia (*Downingia* spp.), meadowfoam (*Limnanthes* spp.), brass buttons

(*Cotula coronopifolia*), goldfields (*Lasthenia* spp.), water buttercup (*Ranunculus aquatilis* var. *capillaceus*), and flowering quillwort (*Lilaea scilloides*).

Riparian/wetlands are important breeding habitat for CEQA-defined special-status species such as the California tiger salamander, California red-legged frog, western spadefoot (*Scaphiopus hamondii*), and many common species of songbirds and waterbirds. Riparian/wetland areas serve as important stopover sites during long distance migrations for many bird species and provide foraging and roosting habitat for many bat species.

Native Grassland/Valley Needlegrass Grassland

The primary native grassland types that remain in Monterey County are coastal prairie (described below) and valley needlegrass grassland. Valley needlegrass grassland occurs primarily on fine-textured (usually clay) soils that are very moist, even waterlogged, in winter but extremely dry in the summer months. Valley needlegrass has not been comprehensively mapped although Fort Ord is known to contain area of this community. It is dominated by purple needlegrass (*Nasella pulchra*), which is a clump-forming, perennial species that grows to about two feet high. A large number of species may be associated with the purple needlegrass, a very few include nodding needlegrass (*Stipa cernua*), golden stars (B*loomeria crocea*), golden brodiaea (*Triteleia ixiodes*), and soap plant (*Chlorogalum pomeridianum* var. *pomeridianum*).

Perennial native grasslands are threatened throughout their range due to conversion to annual grasses and then loss to development and agricultural uses. Because grasslands in the United Sates have been so thoroughly and rapidly taken over by annual non-native grasses, the details of the original extent and species composition of native grasslands are not known.

Native grasslands are used by many wildlife species for foraging. Some of these species also breed in native grassland if special habitat features such as cliffs, caves, ponds, or woody plants are available for breeding, resting, or as escape cover. Many songbirds only nest in grasslands. Common reptiles that breed in grassland habitats include western fence lizards (*Sceloporus occidentalis*), common garter snake (*Thamnophis sirtalis*), and western rattlesnake (*Crotalus tigris*). Grasslands provide foraging habitat for wide-ranging species such as red-tailed hawk (*Buteo jamaicesis*), turkey vulture (*Cathartes aura*), American kestrel (*Falco sparverius*), and northern harrier (*Circus cyaneus*). Mammals typically found in this habitat include California vole (*Microtus californicus*), western harvest mouse (*Reithrodontomys megalotis*), California ground squirrel (*Spermophilus beecheyi*), coyote (*Canis latrans*), and American badger (*Taxidea taxus*) (Mayer and Laudenslayer 1988). Many species that nest or roost in adjacent habitats forage in grasslands, including western bluebird (*Sialia mexicana*), western kingbird (*Tyrannus verticalis*), and some species of bats.

After fire, cover, density, and seedling establishment of purple needlegrass often increase as a result of increased soil temperature, light intensity, and nutrient

release, and decreased standing litter. Even though fire during periods of rapid growth can be detrimental to purple needlegrass, it is generally more damaging to nonnative annuals. Some studies, however, have found fire and/or grazing effects on cover, density, or seedling establishment of purple needlegrass were highly variable or insignificant, suggesting a large influence of climate on purple needlegrass' response to fire (Dyer et al. 1996; Heady et al. 1977).

Coastal Prairie/Coastal Terrace Prairie

The coastal prairie community is dominated by annual and perennial grasses, and by a wide variety of herbaceous species. Dominant species include perennial grasses such as California oatgrass (*Danthonia californica*), Idaho fescue (*Festuca idahoensis*), creeping red fescue (*F. rubra*), purple needelgrass (*Nasella pulchra*), and meadow barley (*Hordeum brachyantherum*). Common herbaceous plant species include Douglas iris *(Iris douglasiana),* blue dicks *(Dichelostemma capitatum),* blue-eyed grass *(Sisyrinchium bellum),* checkerbloom (*Sidalcea malvaeflora*), and suncups (*Cammisonia ovata*).

CEQA-defined special-status species that have been documented in coastal prairie in Monterey County include the federally threatened and state endangered plant, Santa Cruz Tarweed *(Holocarpha macradenia)* and Santa Cruz clover (*Trifolium buckwestiorum*). Wildlife species that occur in Coastal Prairie/Coastal Terrace Prairie are the same as those discussed under *Native Grassland*. This vegetation type is important for CEQA-defined special-status wildlife such as the Smith's blue butterfly along the Big Sur Coast and north toward Fort Ord.

Maritime Chaparral

The vast majority of maritime chaparral within the inland portion of Monterey County covered by the 2007 General Plan is on Fort Ord.

Maritime chaparral occurs on stabilized, ancient sand dunes in coastally-influenced areas with summer fog and strong winds. While maritime chaparral is a drought-tolerant and fire-adapted plant community, it occurs in generally cooler, more humid regions than other forms of chaparral and is likely adapted to less frequent fire cycles and more moisture than other chaparral types. The soil conditions are harsh; sand has low nutrient levels and moisture-retention. Low soil moisture is apparently compensated for by higher humidity levels. Maritime chaparral is dominated by low-growing, evergreen shrubs, many of which are considered rare. These include Monterey manzanita (*Arctostaphylos montereyensis*), sandmat manzanita (*Arctostaphylos pumila*), Pajaro manzanita (*Arctostaphylos pajaroensis*), and Monterey ceanothus (*Ceanothus cuneatus* var. *ridgidus*). Other special-status herbaceous species found in maritime chaparral in Monterey County include Monterey spineflower (*Chorizanthe pungens* var. *pungens*), Yadon's rein-orchid (*Piperia yadonii*), sand gilia (*Gilia tenuiflora* ssp. *arenaria*) and Kellogg's horkelia (*Horkelia cuneata* ssp. *sericea*).

Many CEQA-defined special-status wildlife species occur in chaparral habitats including, California horned lizard (*Phrynosoma coronatum frontale*), silvery legless lizard (*Anniella pulchra pulchra*), and big-eared kangaroo rat (*Dipodomys elephantinus*).

Oak Woodland

The nature and composition of oak woodland varies throughout its range. The overstory generally includes deciduous and evergreen hardwoods with a large percentage of oak species, and occasionally some coniferous species. In mesic sites, trees tend to be closely spaced, creating a closed canopy, while in drier sites trees are often widely spaced and form an open woodland (also referred to as oak savannah). Composition of the understory also varies widely depending on the nature of the overstory (open or closed), soil characteristics, microclimate, and other ecological factors. Coast live oak (*Quercus agrifolia*) is often the dominate tree in oak woodlands within Monterey County; additional species vary depending on the specific site conditions. In mesic areas, other trees include California bay (*Umbellularia californica*), madrone (*Arbutus menziesii*), tanbark oak (*Lithocarpus densiflora*), black oak (*Quercus kelloggii*) and canyon live oak (*Quercus chrysolepis*) are common. On drier sites, valley oak (*Quercus lobata*), blue oak (*Quercus douglasii*), and foothill pine (*Pinus sabiniana*) are often associated with coast live oak. Oak woodland often intergrades with chaparral and coastal scrub in which case shrubs from these communities often occur in the understory. In mesic areas characterized by dense coast live oak forest, shade tolerant shrubs tend to dominate the understory while in drier open sites, grassland species and herbaceous species are more likely to occur.

Oak woodlands are important habitats because of their high value to wildlife in the form of nesting sites, cover, and food (Mayer and Laudenslayer 1988). Birds associated with oak woodlands include acorn woodpeckers (*Melanerpes formicivorus*), Nuttall's woodpeckers (*Picoides nuttallii)*, western scrub jay (*Aphelocoma californica)*, and many warblers and flycatchers. Cavities in oak trees are important nesting sites for American kestrel, tree swallow (*Tachycineta bicolor*), oak titmouse (*Baeolophus inornatus*), house wren (*Troglodytes aedon*), white-breasted nuthatch (*Sitta carolinensis*), and western bluebird. Oak woodlands provide nesting sites for raptors, such as red-tailed hawks, red-shouldered hawks (*Buteo lineatus*), and great-horned owls (*Bubo virginianus*) (Zeiner et al. 1990a.). Mammals associated with woodlands include western gray squirrel (*Sciurus griseus*), pallid bat (*Antrozous pallidus*), bobcat (*Lynx rufus*), blacktail deer (*Odocoileus hemionus*), and gray fox (*Urocyon cinereoargenteus*) (Zeiner et al. 1990b). Acorns are an important food source for species such as California quail (*Callipepla californica*), wild turkey (*Meleagris gallopavo*), western gray squirrel, and black-tailed deer (Mayer and Laudenslayer 1988).

Blue Oak Woodland

In Monterey County, blue oak woodland occurs in association with mixed chaparral, coastal scrub, annual grassland, and coastal oak woodland. It is often found on rocky, well-drained, infertile soils due to their high tolerance for drought. In this habitat type, blue oak (*Quercus douglasii*) is the dominant species and is typically characterized by an overstory of scattered trees and an understory of annual grassland on dry ridges and moderate slopes. This habitat type may have a minor shrub component, especially on rock outcrops. Blue oaks may also occur in denser stands on better quality habitat. Frequently associated arboreal species of this habitat type are coast live oak and valley oak. Some stands of blue oak and foothill pine occur on drier interior hills of California, particularly in the inner coast ranges in the eastern part of the County. Common shrub associates with blue oak woodland include poison-oak (*Toxicodendron diversilobum*), coffeeberry (*Rhamnus californica*), buckbrush (*Ceanothus* spp.), California buckeye (*Aesculus californica*), and manzanita (*Arctostaphylos* spp.).

Blue oak woodland supports the same wildlife species described above under *Oak Woodland*.

Oak Savannah

Valley oaks dominate oak savannah, which is a community of widely spaced trees spread across a grass-dominate landscape. They tend to occur on gently sloping hills and valley bottoms with deep, well developed soils. There are no understory shrubs in oak savannah, and the grassland understory includes a variety of herbaceous flowering species, the diversity of which depends on microsite factors such as the degree of non-native annual grass invasion, soils conditions and geographic location. In general, the valley oaks are not regenerating across California. This community is, therefore, of particularly high priority for preservation. Due to the unique combination of oak woodland and grassland community types found in oak savannah it supports a wide array of wildlife species. Oak savannah includes all of the species discussed above under *Native Grasslands* and *Oak Woodland*. Wildlife species most common in this habitat include, but are not limited to, common garter snake, western rattlesnake, California, western harvest mouse (*Reithrodontomys megalotis*), California ground squirrel, coyote, and American badger (Mayer and Laudenslayer 1988). Oak savannahs are particularly important to many species of songbirds and raptors since they provide both nesting and foraging habitat.

Mixed Conifer

Mixed conifer includes forests dominated by a combination of conifers and hardwood species, and generally occurs at higher elevations in the coast and inner coast ranges. This forest generally requires moist conditions and tends to occur on north facing slopes and steep valleys. It is a diverse forest with a range of species, age classes, and canopy gaps interspersed with closed canopy. The

gaps generally provide areas of ongoing regeneration as saplings can establish in these areas when they are formed by tree-falls and other events. The understory of this forest consists primarily of tree saplings; there is little shrub or herbaceous growth here. In Monterey County, mixed conifer dominant species include Douglas-fir (*Pseudotsuga menziesii*), madrone, coast live oak, big leaf maple (*Acer macrophyllum*), tanoak (*Lithocarpus densiflora*), and coast redwood (*Sequoiadendron sempervirens*). Additional species might include Bishop pine (*P. muricata*), knobcone pine (*P. attenuata*), Coulter pine (*Pinus coulteri*) and ponderosa pine (*Pinus ponderosa*).

Birds associated with conifer woodlands include acorn woodpeckers, Nuttall's woodpeckers, western scrub jay, and many warblers and flycatchers. Conifer woodlands provide nesting sites for raptors, such as red-tailed hawks, red-shouldered hawks, and great-horned owls (Zeiner et al. 1990a.). Mammals associated with woodlands include western gray squirrel (*Sciurus griseus*), bobcat, black-tailed deer, and many species bats (Zeiner et al. 1990b).

Monterey Pine Forest

The Monterey Peninsula is well known for its Monterey pine forest. Although widely planted, there are only three native stands of Monterey pine: at Point Ano Nuevo, Cambria, and on the Monterey Peninsula. These forests occur in rich loamy soils that support an understory of diverse plants. Ferns such as sword fern (*Polystichum munitum*), bracken fern (*Pteridium aquilinum* var. *pubescens*) and wood fern (*Dryopteris arguta*) proliferate and herbaceous flowering species include milkmaids (*Cardamine californica* var. *californica*), yarrow (*Achillea millefolium*), and Douglas iris (*Iris douglasiana*).

Monterey pines are closed cone pines: the cones remain closed protecting the seeds until fire or hot weather expands the cones and throws seeds out away from the parent tree. This is an adaptation to fire that occurs in a number of pine and cypress tree species that have evolved in fire-prone environments.

Monterey pine forest intergrades with Monterey cypress forest, Monterey pygmy forest and northern Bishop forest, all of which are sensitive communities in the CNDDB. Several rare plants occur in the Monterey pine forest, including Monterey manzanita, Yadon's rein orchid, Gowen cypress (*Cupressus goveniana* ssp. *goveniana)*, Monterey cypress (*Cupressus macrocarpa*) and Monterey Pine itself.

Wildlife that occurs in Monterey Pine forest is generally the same as oak woodland and mixed conifer, above.

Redwood Forest

Redwood forest occurs along the coast in Monterey County. Very little of this community is located in areas designated for development.

This community requires moist conditions where temperatures are relatively mild and stable, and require a strong influence of coastal fog and marine air flows. In Monterey County, redwood forest is often found in association with coastal oak woodland and it occurs at elevations as high as 3,000 feet. Redwood forest is dominated by coast redwood, and also can includes several coniferous species including Douglas-fir, tan oak, and madrone (*Arbutus menziesii*). Other species that may occur are Bishop pine (*Pinus muricata*), Monterey pine (*P. radiata*), California bay (*Umbellularia californica*), and big-leaf maple. In second growth redwood stands, there is generally little understory vegetation and an open park-like appearance. Old growth stands tend to have a much denser understory component (Mayer and Laudenslayer 1988).

Many species of amphibians, reptiles, birds, and mammals occupy redwood forests, which provide food, cover, and special habitat components such as tree cavities for nesting. Several CEQA-defined special-status wildlife species occupy redwood habitat such as California red-legged frog, osprey (*Pandion haliaetus*), marbled murrelet (*Brachyramphus marmoratus*), ringtail (*Bassariscus astutus*), and Pacific fisher (*Martes pennanti pacifica*) (Mayer and Laudenslayer 1988). Some wildlife species (e.g., marbled murrelet and spotted owl [*Strix occidentalis*]) are dependent on old growth redwood forests or show a strong preference for them as breeding habitat (Zeiner et al. 1990a).

Sensitive Vegetation Communities in Coastal Areas

Although the 2007 General Plan does not cover the coastal areas, the following vegetation types are discussed for cumulative impact context.

Dune and Dune Scrub

The sand dunes located at many beach areas of Monterey County include two distinct plant communities: **dune**, located on the beach and foredune areas, and **dune scrub**, which occurs on backdunes just beyond direct influence of the ocean.

Dune communities have limited values for wildlife due to the lack of cover. Dune habitat is important for CEQA-defined special-status species such as the Smith's blue butterfly (*Euphilote enoptes smithi*) and the globnosed dune beetle (*Coelus globosus*). The western snowy plover (*Charadrius alexandrinus nivosus*) nests in the foredune and forages, along with several other shorebird species along the wrack line in the adjacent tidal areas. Other common species that occur in dune habitats include the common raven (*Corvus corax*), raccoon (*Procyon lotor*), and red fox (*Vulpes vulpes*).

Dune scrub occurs landward of the dune community, on inland dunes beyond the reach of storm waves and direct impact of ocean forces. This community is dominated by shrubs interspersed with open sand and herbaceous species Dominant species in the dune scrub include mock heather (*Ericameria ericoides)*, dune lupine (*Lupinus chamissonis)* and lizard tail (*Eriophyllum*

staechadifolium). Dune scrub is included in the CNDDB (2007) as Central Dune Scrub, with four documented locations in the County

Saltwater Marsh and Tidal mudflats

Salt marshes are tidally influenced plant communities that occur along wave-sheltered margins of bays, lagoons and estuaries where they occupy the upper intertidal zone. Most salt marshes in Monterey County are in the sloughs adjacent to Monterey Bay (e.g., Elkhorn Slough, Bennet Slough, etc.). The dominant species in salt marshes is generally pickleweed (*Salicornia virginica*), and sub-dominants include salt grass (*Distichlis spicata*), jaumea (*Jaumea carnosa*) and alkali heath (*Frankenia salina*).

Another type of marsh found in Monterey County and considered rare by the CNDDB is brackish marsh. This marsh type is generally located in areas that have some infrequent tidal influence, enough to cause elevated salinity levels over freshwater marshes. One documented occurrence in Monterey County is near Castroville, in Moro Cojo slough. Brackish marshes are generally dominated by tule (*Scirpus acutus*) and alkali bulrush (*Scirpus robustus*). Both of these communities support CEQA-defined special-status species such as the California clapper rail (*Rallus longirostris obsoletus*), California black rail (*Laterallus jamaicensis*), and many other water and shorebirds that move through the Pacific flyway.

Tidal flat habitat includes mudflats, sandflats, and shell flats, and is usually comprised of less than 10% vascular vegetation. This habitat occurs from below Mean Lower Low Tide to Mean Tide Level. Tidal mudflats have a substrate consisting of fine-grained silts and clays that is exposed twice daily during low tide and extend to the extreme low water elevation. Narrow bands of mudflat are also found at the same elevations along the margins of subtidal channels in tidal marshes. In Monterey County, the only substantial areas of tidal mudflat are in Elkhorn Slough and its associated tidal channels.

Tidal mudflats are highly productive and support large populations of benthic organisms, including aquatic worms, crustaceans, and mollusks that are important elements of the estuarine food web. When exposed or covered by shallow water, mudflats provide important foraging areas for migrant and wintering shorebirds, wading birds, and gulls. Some shorebird species that utilize Bay tidal mudflats for feeding include semipalmated plover (*Charadrius semipalmatus)*, black-bellied plover (*Pluvialis squatarola*), American avocet (*Recurvirostra americana*), long-billed curlew (*Numenius americanus*), willet (*Catoptrophorus semipalmatus*), marbeled godwit (*Limosa fedoa*), western sandpiper (*Calidris mauri*), dunlin (*Calidris alpine*), whimbrel (*Numenius phaeopus*), sanderling (*Calidris alba*), greater yellowlegs (*Tringa melanoleuca*), and least sandpiper (*Calidris minutilla*).

4.9.3.2 Other Plant Communities (Habitats)

The following vegetation communities are found in inland areas covered by the 2007 General Plan (as well as in coastal areas not covered by the 2007 General Plan)

Coastal Scrub

The structure and species composition of coastal scrub communities vary along the California coast from north to south. In Monterey County, the primary form is called central coast scrub (also known as coastal sage scrub) and is dominated by drought-tolerant low shrubs, generally less than six feet tall. The understory herbaceous species can vary from slightly dense to non-existent, depending on site conditions. In general, coastal scrub occurs on steep, south-facing slopes with relatively dry, shallow soils where conditions are harsh for most plants. The dominant species in central coast scrub may include coastal sage scrub (*Artemesia californica*), coyote brush (*Baccharis pilularis*), bush monkey flower (*Mimulus aurantiacus*), black sage (*Salvia mellifera*), coffeeberry (*Rhamnus californica*, and coast buckwheat (*Eriogonum latifolium*). Other common species include poison oak (*Toxicodendron diversilobum*) and bush monkey flower (*Mimulus aurantiacus*).

Denser shrub habitats provide suitable breeding habitat and/or cover for several species of birds, including California thrasher (*Toxostoma redivivum*), spotted towhee (*Piplio maculatus*), wrentit (*Chamaea fasciata*), and golden-crowned sparrow (*Zonotrichia atricapilla*). Less dense shrub areas provide suitable breeding habitat and/or cover for northern mockingbird (*Mimus polyglottos*), Brewer's blackbird (*Euphagus cyanocephalus*), Anna's hummingbird (*Calypte anna*), and American robin (*Turdus migratorius*) (Zeiner et al. 1990a.). These more open areas are also suitable for western fence lizards and jackrabbits, which use the area beneath shrub vegetation for cover (Zeiner et al. 1988, 1990b).

Baccharis Chaparral/Baccharis Scrub/Gabilan Scrub/Mixed Chaparral (Interior Scrub and Chaparral)

Interior scrub and chaparral communities include baccharis chaparral, baccharis scrub and Gabilan scrub, as well as mixed chaparral. These communities generally occur east of the summit of the coastal Santa Lucia mountains and in the interior Gabilan Range and Cholame Hills. They are dominated by various combinations of drought- and fire-adapted shrub species with evergreen leaves, including coyote bush (*Baccharis pilularis*), chamise (*Adenostoma fasciculatum*), manzanita species (*Arctostaphylos* spp), and ceanothus species (*Ceanothus* spp.). Chaparral and interior scrub occupies challenging sites in generally steep terrain with low soil accumulation relative to grassland and woodlands. The plants in these communities are adapted to harsh conditions of low nutrient availability, low soil water and intense seasonal drought. Associated species may include

scrub oak (*Quercus berberidifolia*), toyon (*Heteromeles arbutifolia*), coffeeberry (*Rhamnus californica*), birchleaf mountain-mahogany (*Cercocarpus betuloides*), hollyleaf cherry (*Prunus ilicifolia*), and California yerba santa (*Eriodictyon californicum*), poison oak, and bush monkey flower.

Mixed chaparral provides habitat for a variety of birds and mammals. Numerous rodents, deer, and other herbivores are common in chaparral communities. Rabbits and hares will eat twigs, evergreen leaves, and bark from chaparral in fall and winter when there isn't an abundance of grasses. Shrubby vegetation provides mammals with cover and shade during hot weather and protection from wind in the winter. Chaparral provides seeds, fruits, insects, and protection from predators and the weather, in addition to singing, roosting, and nesting sites for many species of birds (Mayer and Laudenslayer 1988.) California quail, Bewick's wren (*Thryomanes bewickii*), wrentit, California thrasher, brush mouse (*Peromyscus boylii*), dusky-footed woodrat (*Neotoma fuscipes*), and deer are common in chaparral habitats (Zeiner et al. 1990a, 1990b).

Eucalyptus

Eucalyptus groves are generally single species stands of eucalyptus trees (*Eucalytpus globulus*). All species of eucalyptus are non-native in California. These stands are scattered throughout the County and often are expanding. Where they grow, other species are generally unable to co-exist because they eucalyptus leaves and branches contain a chemical that is toxic to most other species. Eucalyptus forests can be strongly invasive where they grow. Eucalyptus is often concentrated near highly populated areas and on agricultural lands where they were planted for windbreaks.

Eucalyptus groves typically support common wildlife species since the often occur in semi-natural or urbanized habitats. These groves can be important stopover sites for migratory songbirds and are the winter roost sites for thousands of Monarch butterflies (*Danaus plexippus*) along the Monterey coast.

Annual Grassland

Annual grassland is found throughout Monterey County; it intermingles with coastal oak woodland, coastal scrub, montane hardwood, and several other communities. Annual grassland is an herbaceous plant community dominated by annual grasses and herbs. Most annual grasses in California's grasslands are nonnative grasses from the Mediterranean basin. Perennial grasses such as purple needlegrass (*Nassella pulchra*) and Idaho fescue (*Festuca idahoensis*), are occasionally found in annual grassland.

Annual grasslands support the same suite of species discussed above under *Native Grassland*. Important species for this habitat include the San Joaquin kit fox (a listed species), California ground squirrel (important to create burrow

habitat for California tiger salamanders and western burrowing owl and other species), and many species of raptors that forage in grassland habitat.

Agriculture

Agriculture refers to areas where the native vegetation has been cleared for both irrigated and non-irrigated agricultural use. It is defined by areas having less than 2% total cover by non-wildland vegetation grown for food, fiber, or landscaping, and does not meet criteria for any wildland habitat (DFG *California Interagency Wildlife Task Group* 2005). This can include dryland grain crops, irrigated grain crops, irrigated hayfields, irrigated row and field crops, rice, orchards, and vineyards (Mayer and Laudenslayer 1988).

The quality of habitat for wildlife is diminished when the land is converted to agricultural uses and is intensively managed. Many species of rodents and birds have adapted to agricultural lands, but they are often affected by fencing, trapping, and poisoning to prevent excessive crop losses.

Certain agricultural lands have become important habitats for wintering waterfowl and breeding and wintering raptors. In the plan area, wildlife species associated with agricultural lands include mourning dove (*Zenaida macroura*), American crow (*Corvus brachyrhynchos*), Brewer's blackbird, sandhill crane (*Grus canadensis*), various raptor species, egrets, and many species of rodents (Mayer and Laudenslayer 1988). Agricultural areas are also important foraging sites for many species of raptors and several mammals, such as the California ground squirrel, San Joaquin kit fox, and coyote use the edges of agricultural fields for hunting and local migrations.

Golf Course

Golf courses are prevelant in certain areas of Monterey County. Golf courses have nesting habitat for several species on migratory songbirds and some waterfowl and typically support dense deer populations. Since golf courses are generally landscaped and heavily managed they are typically devoid of CEQA-defined special-status wildlife.

Sparse Vegetation/Bare Soil

Some areas are characterized by a lack of vegetation. This includes areas having less than 2 percent total coverage of herbaceous, desert, or non-wildland species, and less than 10 percent tree or shrub cover (Mayer and Laudenslayer 1988). Along rivers, this includes vertical riverbanks and canyon walls.

Because of the lack of vegetation, barren ground has a limited use by wildlife. However, some species, such as western burrowing owl (*Athene cunicularia*

hypugea) and California horned lark (*Eremophila alpestris actia*); prefer areas with limited or very low growing vegetation.

Urban/Non-Vegetated

Urban habitat is a developed habitat type; it includes all areas that are planted and maintained as landscaped areas. These habitats are often host to a wide array of invasive species.

Urban areas have marginal value for wildlife because of human disturbance and a lack of vegetation. Wildlife species that use these areas are typically adapted to human disturbance. Wildlife species associated with urban residential and suburban areas include western scrub jay, northern mockingbird, house finch (*Carpodacus mexicanus*), rock pigeon (*Columba livia*), raccoon, opossum (*Didelphis virginiana*), striped skunk (*Mephitis mephitis*), western fence lizard, and gopher snake (*Pituophis melanoleucus*) (Mayer and Laudenslayer 1988).

Water/Aquatic

Water/aquatic habitat is defined as areas with more than 98 percent total cover by open water and less than 2 percent total cover by vegetation in the continually exposed shore zone (DFG *California Interagency Wildlife Task Group* 2005). Open water habitat in the county is found in the rivers and creeks in the county (including the Carmel River, the Salinas River, Arroyo Seco, the Pajaro River and their tributaries) as well as in reservoirs in the County.

Wildlife use of this habitat type is dependent on the extent of emergent and submergent vegetation, and adjacent streamside (riparian) vegetation. Creek channels with well-vegetated areas provide food, water, and migration and dispersal corridors, as well as escape, nesting and thermal cover for many wildlife species (Mayer and Laudenslayer 1988). Wildlife species associated with stream and riparian habitats include western toad (*Bufo boreas*), California newt (*Taricha torosa*), black phoebe (*Sayornis nigricans*), Anna's hummingbird, great egret (*Ardea alba*), belted kingfisher (*Ceryle alcyon*), raccoon, and striped skunk. (Zeiner et al. 1988, 1990a, 1990b) as well as California red-legged frog and California tiger salamander. In less-vegetated areas, aquatic species (e.g., fish, invertebrates, and amphibians), are found in the creek channel, and the banks of the channel are often used by species that require less cover, such as California ground squirrel, western fence lizard, gopher snake, and their predators (e.g., coyotes, raptors).

4.9.3.3 CEQA-Defined Special-Status Species

For this EIR, CEQA-defined special-status species are defined to include both listed and non-listed species that are candidate, sensitive, or special-status species

in local or regional plans, policies, or regulations, or by the CDFG or USFWS or that otherwise meet the definitions of rare or endangered under CEQA based on substantial evidence (State CEQA Guidelines Section 15380). Note that this definition is broader than that in the 2007 General Plan, which only includes listed special-status species. Unless other specified all references in this document are to the broad list of CEQA-defined special-status species, whether listed or not.

Listed CEQA-defined special-status species are plants and animals that are legally protected under the California Endangered Species Act (CESA) and federal Endangered Species Act (FESA) and include the following:

- Species listed or proposed for listing as threatened or endangered under the FESA (50 CFR 17.12 [listed plants], 50 CFR 17.11 [listed animals], and various notices in the Federal Register [FR] [proposed species]).
- Species listed or proposed for listing by the State of California as threatened or endangered under CESA (14 California Code of Regulations 670.5).

CEQA-defined special-status species are plants and animals that are not listed under CESA or FESA but which meet the CEQA definition of a rare, threatened, or endangered species (State CEQA Guidelines Section 15380). Non-listed special-status plants and animals included as CEQA-defined special-status species include the following:

- Species that are candidates for possible future listing as threatened or endangered under the FESA (67 FR 40657, June 13, 2002).
- Plants listed as rare under the California Native Plant Protection Act (California Fish and Game Code Section 1900 et seq.).
- Plants considered by the CNPS to be "rare, threatened, or endangered in California" (Lists 1B and 2 in California Native Plant Society 2001).
- Plants listed by CNPS as plants about which more information is needed to determine their status and plants of limited distribution (Lists 3 and 4 in California Native Plant Society 2001), which may be included as special-status species on the basis of local significance or recent biological information.
- Animal species of special concern to DFG (California Department of Fish and Game 2006, Remsen 1978 [birds], Williams 1986 [mammals], and Jennings and Hayes 1994 [amphibians and reptiles]).
- Animals fully protected in California (California Fish and Game Code Sections 3511 [birds], 4700 [mammals], 5050 [amphibians and reptiles], and 5515 [fish]).
- Species that otherwise meet the definitions of rare or endangered under CEQA based on substantial evidence (State CEQA Guidelines Section 15380).

Other laws that protect wildlife species include the following.

- California Fish and Game Code Sections 3503 and 3503.5, which protect nesting raptors, their nests, and eggs.
- The federal Migratory Bird Treaty Act (MBTA), which protects migratory birds, their nests, and eggs.
- The Bald and Golden Eagle Protection Act, which prohibits, except under certain specified conditions, the taking, possession, transportation, export or import, barter, or offers to sell, a bald or golden eagle, alive or dead, or any part, nest, or eagle egg.
- Fish species that are considered commercially valuable under essential fish habitat protection established by the Sustainable Fisheries Act of 1996, which amended the Magnuson-Stevens Fishery Conservation and Management Act.

CEQA-Defined Special-Status Plant Species

There are 100 CEQA-defined special-status plant species known to occur in Monterey County. These are presented in Table 4.9-4 in a table which summarizes the legal status, period of identification, distribution, and habitat for each species. The table was compiled based on the following sources:

- A records search of the CNDDB for Monterey County (California Natural Diversity Database 2008),
- USFWS species list for Monterey County (USFWS 2008), and
- CNPS *Inventory of Rare and Endangered Plants of California* online edition (2008), records search for Monterey County.

The species listed in Table 4.9-4 have been selected based on a search for occurrences in Monterey County only.

CEQA-Defined Special-Status Fish and Wildlife Species

There are 47 CEQA-defined special-status fish and wildlife species known to occur in Monterey County. These are presented in Table 4.9-5 which summarizes the legal status, distribution, and habitat for each species. The table was compiled based on the following sources:

- A records search of the CNDDB for Monterey County (California Natural Diversity Database 2008),
- USFWS species list for Monterey County (USFWS 2008) and

The species listed in Table 4.9-5 have been selected based on a search for occurrences in Monterey County only.

Table 4.9-4. Special-Status Plants with Potential to Occur in Monterey County

Common and Scientific Name	Status[1] Federal/ State/CNPS	California Distribution	Habitats	Blooming Period
Abbott's bush mallow *Malacothamnus abbottii*	SC/–/1B.1	Monterey County	Riparian scrub	Jun–Oct
Adobe sanicle *Sanicula maritima*	–/R/1B.1	Coastal Monterey and San Luis Obispo Counties. Historically known from the San Francisco Bay area: Alameda* and San Francisco* Counties	Moist clay or ultramafic soils, in meadows and grassland	Feb–May
Alkali milk–vetch *Astragalus tener* var. *tener*	–/–/1B.2	Southern Sacramento Valley, northern San Joaquin Valley, east San Francisco Bay Area	Grassy flats and vernal pool margins, on alkali soils, below 200'	Mar–Jun
Arroyo de la Cruz manzanita *Arctostaphylos cruzensis*	SC/–/1B.2	Coastal Monterey and San Luis Obispo Counties	Sandy soils, in coastal scrub, chaparral and oak woodland, valley and foothill grassland, below 500'	Dec–Mar
Arroyo Seco bush mallow *Malacothamnus palmeri* var. *lucianus*	SC/–/1B.2	Monterey County	Chaparral, meadows	May–Aug
Beach layia *Layia carnosa*	E/E/1B.1	Scattered occurrences along coastal California from Humboldt County to Santa Barbara County	Coastal dunes, coastal scrub on sandy soil	Mar–Jul
Brewer's spineflower *Chorizanthe breweri*	–/–/1B.3	South Coast Ranges, San Luis Obispo County	Rocky or gravelly areas in Sargent cypress forest, chaparral, oak woodland, coastal scrub in open areas on serpentinite soil	May–Jun
Bristlecone fir *Abies bracteata*	–/–/1B.3	Endemic to the Santa Lucia Range: Monterey and San Luis Obispo Counties	Lower montane coniferous forest on steep, rocky, fire–resistant slopes at 700–5,250'	n/a
Butterworth's buckwheat *Eriogonum butterworthianum*	SC/R/1B.3	Monterey County	Chaparral on sandstone	Jun–Jul
California screw–moss *Tortula californica*	–/–/1B.2	Known from Kern and Riverside Counties	Chenopod scrub, valley and foothill grassland/ sandy soil, 10–100 meters	N/A

Common and Scientific Name	Status[1] Federal/ State/CNPS	California Distribution	Habitats	Blooming Period
Calycadenia micrantha *Small-flowered calycadenia*	–/–1B.2	Colusa, Lake, Monterey, Napa, and Trinity Counties	Chaparral, Meadows and seeps(volcanic), Valley and foothill grassland/ roadsides, rocky, talus, scree, sometimes serpentinite, sparsely vegetated areas	Jun-Sep
Caper–fruited Tropidocarpum *Tropidocarpum capparideum*	–/–/1B.1	Historically known from the northwest San Joaquin Valley and adjacent Coast Range foothills	Grasslands in alkaline hills below 1,500'	Mar–Apr
Carmel Valley bush mallow *Malacothamnus palmeri* var. *involucratus*	SC/–/1B.2	Monterey and San Luis Obispo Counties	Chaparral, oak woodland, talus hilltops and slopes, 1,200–2,200'	May–Aug
Carmel Valley cliff–aster *Malacothrix saxatilis* var. *arachnoidea*	SC/–/1B.2	Monterey and Santa Barbara Counties	Rocky areas in chaparral	Jun–Dec
Coast wallflower *Erysimum ammophilum*	–/–/1B.2	Coastal San Mateo, Santa Cruz, and Monterey Counties	Sandy soils and openings in maritime chaparral, coastal dunes, coastal scrub	Feb–Jun
Coastal dunes milk–vetch *Astragalus tener* var. *titi*	E/E/1B.1	Central coast, southern coast, including portions of Los Angeles*, Monterey, and San Diego Counties	Sandy soils of coastal bluff scrub, coastal dunes, coastal prairie on mesic or sandy depressions near the coast	Mar–May
Compact cobwebby thistle *Cirsium occidentale* var. *compactum*	–/–/1B.2	San Francisco and San Luis Obispo Counties	Chaparral, coastal dunes, coastal prairie, coastal scrub	Apr–Jun
Cone Peak bedstraw *Galium californicum* ssp. *luciense*	SC/–/1B.3	Monterey County	Broadleaved upland forest, cismontane woodland, lower montane coniferous forest	Mar–Jul
Congdon's tarplant *Centromadia parryi* ssp. *congdonii* (formerly *Hemizonia*)	–/–/1B.2	East San Francisco Bay Area, Salinas Valley, Los Osos Valley	Annual grassland, on lower slopes, flats, and swales, sometimes on alkaline or saline soils, below 700'	Jun–Nov

Common and Scientific Name	Status[1] Federal/ State/CNPS	California Distribution	Habitats	Blooming Period
Contra Costa goldfields *Lasthenia conjugens*	E/–/1B.1	Scattered occurrences in Coast Range valleys and southwest edge of Sacramento Valley, Alameda, Contra Costa, Mendocino, Monterey, Napa, Santa Barbara*, Santa Clara*, and Solano Counites.	Alkaline or saline vernal pools and swales, below 700'	Mar–Jun
Cook's Triteleia *Triteleia ixioides* ssp. *cookii*	–/–/1B.3	San Luis Obispo County	Closed–cone coniferous forest, cismontane woodland, on serpentinite seeps	May–Jun
Davidson's bush mallow *Malacothamnus davidsonii*	–/–/1B.2	Los Angeles, Monterey, and San Luis Obispo Counties	Coastal scrub, chaparral, and riparian woodland in sandy washes, 900–2,800'	Jun–Sep
Delicate bluecup *Githopsis tenella*	1B.1	Kern, Monterey, and Tulare Counties	Chaparral, Cismontane woodland/mesic	May-Jun
Dudley's lousewort *Pedicularis dudleyi*	–/R/1B.2	Monterey, Santa Cruz*, San Luis Obispo, and San Mateo Counties	Maritime chaparral, North Coast coniferous forest, valley and foothill grassland	Apr–Jun
Dwarf Calycadenia *Calycadenia villosa*	–/–/1B.1	Known from 20 occurrences in interior foothills of South Coast Ranges, in San Luis Obispo and Monterey Counties. Historically in Kern County	Rocky sites in chaparral, oak woodland, juniper woodland, grasslands, open dry flats and hillsides, and alluvial fans, below 4,200'	May–Oct
Eastwood's buckwheat *Eriogonum eastwoodianum*	–/–/1B.3	Fresno and Monterey Counties	Sandy or clay soils in cismontane woodland	Jun–Jul
Eastwood's goldenbush *Ericameria fasciculata*	SC/–/1B.1	Monterey County	Sandy soils and openings in closed–cone coniferous forest, maritime chaparral, coastal dunes, coastal scrub	Jul–Oct
Fragrant fritillary *Fritillaria liliacea*	–/–/1B.2	Coast Ranges from Marin County to San Benito County	Adobe soils of interior foothills, coastal prairie, coastal scrub, annual grassland, often on serpentinite, below 1,350'	Feb–Apr
Gabilan Mountains manzanita *Arctostaphylos gabilanensis*	—/—/1B.2	Monterey and San Benito Counties	Chaparral, Cismontane woodland/granitic	Jan

Common and Scientific Name	Status[1] Federal/ State/CNPS	California Distribution	Habitats	Blooming Period
Gowen cypress *Cupressus goveniana* ssp. *goveniana*	T/–/1B.2	Monterey County	Closed–cone coniferous forest, maritime chaparral	
Hall's tarplant *Deinandra halliana*	–/–/1B.1	Interior foothills of South Coast Ranges, in San Benito, Monterey, and San Luis Obispo counties	Oak woodland, grassland; in clay soil on flood plains	Apr–May
Hardham's bedstraw *Galium hardhamiae*	–/–/1B.3	Monterey and San Luis Obispo Counties	Closed–cone coniferous forest on serpentinite substrate	Apr–Oct
Hardham's evening–primrose *Camissonia hardhamiae*	SC/–/1B.2	South coast ranges, Monterey and San Luis Obispo Counties	Chaparral, oak woodland on decomposed carbonate substrate	May
Hickman's checkerbloom *Sidalcea hickmanii* ssp. *hickmanii*	–/–/1B.3	Monterey County	Chaparral	Jun–Jul
Hickman's cinquefoil *Potentilla hickmanii*	E/E/1B.1	Monterey, San Mateo, and Sonoma* Counties	Freshwater marshes, seeps, and small streams in open areas in coastal scrub or coniferous forest	Apr–Aug
Hickman's onion *Allium hickmanii*	SC/–/1B.2	Central coast: Monterey and San Luis Obispo Counties, especially Monterey Peninsula and Arroyo de la Cruz.	Closed–cone coniferous forest, maritime chaparral, coastal prairie, coastal scrub, valley and foothill grassland, generally +/– 150'	Apr–May
Hooked popcorn–flower *Plagiobothrys uncinatus*	–/–/1B.2	Monterey, San Benito, Santa Clara, and San Luis Obispo Counties	Chaparral, cismontane woodland, valley and foothill grassland, in sandy areas	Apr–May
Hooker's Manzanita *Arctostaphylos hookeri* ssp. *hookeri*	–/–/1B.2	Central coast, western San Francisco Bay region, Santa Cruz mountains and south to Carmel. Monterey and Santa Cruz Counties	Closed–cone coniferous forest, chaparral, cismontane woodland, coastal scrub on sandy substrate	Feb–Jun
Hutchinson's larkspur *Delphinium hutchinsoniae*	SC/–/1B.2	Monterey County	Broadleaved upland forest, chaparral, coastal prairie, coastal scrub	Mar–Jun
Indian Valley bush mallow *Malacothamnus aboriginum*	–/–/1B.2	Inner South Coast Ranges: San Benito, Fresno, and Monterey Counties	Rocky areas in chaparral and oak woodland, often in burned areas	Apr–Oct

Common and Scientific Name	Status[1] Federal/ State/CNPS	California Distribution	Habitats	Blooming Period
Indian Valley spineflower *Aristocapsa insignis*	–/–/4 B.2	Inner south Coast Range, Monterey and San Luis Obispo Counties	Cismontane woodland on sandy substrate	May–Sep
Jolon clarkia *Clarkia jolonensis*	–/–/1B.2	Northern outer south coast ranges, Monterey County	Cismontane woodland	Jun
Kellman's bristle-moss *Orthotrichum kellmanii*	–/–/1B.2	Monterey, Santa Cruz, and San Mateo Counties	Chaparral, Cismontane woodland/sandstone, carbonate	Jan-Feb
Kellogg's Horkelia *Horkelia cuneata* ssp. *sericea*	SC/–/1B.1	Coastal California from Marin to Santa Barbara Counties	Openings in closed–cone coniferous forest, coastal scrub, maritime chaparral, on sandy or gravelly soils	Apr–Sep
Late–flowered mariposa lily *Calochortus weedii* var. *vestus*	SC/–/1B.2	Outer south Coast Ranges, Western Transverse Range, Monterey, Santa Barbara, San Luis Obispo, and Ventura Counties	Chaparral, cismontane woodland, often on serpentinite	Jun–Aug
Lemmon's jewelflower *Caulanthus coulteri* var. *lemmonii*	–/–/1B.2	Southeast San Francisco Bay Area, south through the South Coast Ranges and adjacent San Joaquin Valley	Dry exposed slopes in grasslands and pinyon–juniper woodland, between 260–4,000 feet; blooms March–May	Mar–May
Little Sur Manzanita *Arctostaphylos edmundsii*	SC/–/1B.2	Central coast, Monterey County	Coastal bluff scrub, chaparral on sandy substrate	Nov–Apr
Maple–leaved checkerbloom *Sidalcea malachroides*	–/–/1B.3	North Coast and northern Central Coast: from Humboldt to Monterey County	Openings in coastal scrub, perennial grassland, Redwood forest, Douglas–fir forest, often in disturbed areas, 5–2,300'	May–Aug
Marsh microseris *Microseris paludosa*	–/–/1B.2	Coastal California from Mendocino County to San Luis Obispo County	Grassland, coastal scrub, closed–cone–coniferous forest, cismontane woodland	
Mason neststraw *Stylocline masonii*	–/–/1B.1	Scattered locations from Monterey County to Los Angeles County	Chenopod scrub, pinyon–juniper woodland, in sandy washes, 300–3,900'	Mar–Apr
Menzies's wallflower *Erysimum menziesii* ssp. *menziesii*	E/E/1B.1	North and Central coast: Fort Bragg, Monterey Bay, and Point Pinos areas in Mendocino and Monterey Counties	Localized on coastal dunes, on coastal strand areas in coastal scrub below 115'	Mar–Jun
Monterey clover *Trifolium trichocalyx*	E/E/1B.1	Monterey County	Closed–cone coniferous forest, openings, burned areas	Apr–Jun

Common and Scientific Name	Status[1] Federal/ State/CNPS	California Distribution	Habitats	Blooming Period
Monterey cypress *Cupressus macrocarpa*	SC/–/1B.2	Monterey County	Closed–cone coniferous forest	
Monterey Manzanita *Arctostaphylos montereyensis*	SC/–/1B.2	Central coast, Fort Ord, northern outer south Coast Range, Toro Mountain, northwestern Monterey County	Maritime chaparral, cismontane woodland, coastal scrub, sandy soils	Feb–Mar
Monterey pine *Pinus radiata*	SC/–/1B.1	Monterey, Santa Cruz, San Luis Obispo, and San Mateo Counties, Baja California, Guadalupe Island (Mexico)	Closed–cone coniferous forest, cismontane woodland	N/A
Monterey spineflower *Chorizanthe pungens*	T/–/1B.2	Monterey and Santa Cruz Counties	Coastal dunes	April–June
Moss (Norris' Beard–moss) *Didymodon norrisii*	–/–/2.2	Humboldt, Lake, Madera, and Tuolumne Counties	Cismontane woodland, lower montane coniferous forest/ intermittently mesic, rock, 600–1700 meters	N/A
Most beautiful jewel–flower *Streptanthus albidus* ssp. *peramoenus*	–/–/1B.2	Eastern San Francisco Bay area, Central south coastal outer ranges. Alameda, Contra Costa, Monterey, and Santa Clara Counties	Chaparral, annual grassland, on ridges and slopes on serpentinite outcrops, 450–3,200'	Apr–Jun
Muir's tarplant *Carlquistia muirii*	–/–/1B.3	Fresno, Kern, Monterey, and Tulare Counties	Chaparral (montane), lower montane coniferous forest, upper montane coniferous forest.	Jul-Aug
Napa false indigo *Amorpha californica* var. *napensis*	–/–/1B.2	Monterey, Marin, Napa, and Sonoma counties	Openings in broadleaved upland forest, cismontane woodland, chaparral, between 500–6.580 feet	April–July
Oval–leaved snapdragon *Antirrhinum ovatum*	–/–/4.2	Inner Coast Ranges from San Benito County to Kern and Ventura Counties	Clay or gypsum substrates (often alkaline) in chaparral, cismontane woodland, pinyon–juniper woodland, valley and foothill grassland, between 650–3,300'	May–Nov
Pacific Grove clover *Trifolium polyodon*	–/R/1B.1	Monterey County	Closed–cone coniferous forest, coastal prairie, meadows, valley and foothill grassland, in mesic areas	Apr–Jun

Common and Scientific Name	Status[1] Federal/ State/CNPS	California Distribution	Habitats	Blooming Period
Pajaro Manzanita *Arctostaphylos pajaroensis*	–/–/1B.1	Pajaro Hills, Monterey County	Chaparral, in sandy areas	Dec–Mar
Pale–yellow layia *Layia heterotricha*	SC/–/1B.1	Interior foothills of the South Coast Ranges, Transverse Ranges, and Tehachapi mountains: Fresno, Kings*, Kern*, Monterey*, Santa Barbara, San Luis Obispo*, Ventura, and possibly San Benito Counties	Cismontane woodland, pinyon– juniper woodland, grassland in open areas on alkaline or clay soils, below 5,250'	Mar–Jun
Palmer's Monardella *Monardella palmeri*	–/–/1B.2	Monterey and San Luis Obispo Counties	Chaparral, cismontane woodland on serpentinite	Jun–Aug
Pine rose *Rosa pinetorum*	–/–/1B.2	Monterey and San Mateo Counties	Closed–cone coniferous forest, up to 985'	May–July
Pinnacles buckwheat *Eriogonum nortonii*	–/–/1B.3	Monterey and San Benito Counties	Sandy soils in chaparral, valley and foothill grassland; often on recent burns	May–Jun
Prostrate navarettia *Navarretia prostrata*	–/–/1B.1	Western San Joaquin Valley, interior South Coast Ranges, central South Coast, Peninsular Ranges: Los Angeles, Merced, Monterey, Orange, Riverside, San Bernardino, and San Diego Counties	Vernal pools and mesic areas in coastal scrub and alkali grasslands	Apr–Jul
Purple amole *Chlorogalum purpureum* var. *purpureum*	T/–/1B.1	Northeastern outer south Coast Ranges, eastern Santa Lucia Mountains, Monterey County	Cismontane woodland, valley and foothill grassland	May–Jun
Rayless ragwort *Senecio aphanactis*	–/–/2.2	Scattered locations in central western and southwestern California, from Alameda County to San Diego County	Oak woodland, coastal scrub, open sandy or rocky areas, on alkaline soils; 15–800 meters	Jan–Apr
Recurved larkspur *Delphinium recurvatum*	–/–/1B.2	San Joaquin Valley and central valley of the South Coast Ranges, Contra Costa County to Kern County	Subalkaline soils in annual grassland, saltbush scrub, cismontane woodland, and vernal pools	Mar–May
Robust spineflower *Chorizanthe robusta* var. *robusta*	E/–/1B.1	Coastal central California, from San Mateo to Monterey County	Coastal bluff scrub, coastal dunes openings in cismontane woodland, on sandy soil	May–Sep

Common and Scientific Name	Status[1] Federal/ State/CNPS	California Distribution	Habitats	Blooming Period
Saline clover *Trifolium depauperatum* var. *hydrophilum*	–/–/1B.2	Sacramento Valley, central western California	Salt marsh, mesic alkaline areas in grasslands, vernal pools	Apr–Jun
San Antonio collinsia *Collinsia antonina*	–/–/1B.2	Monterey County	Chaparral, Cismontane woodland	Mar-May
San Benito fritillary *Fritillaria viridea*	–/–/1B.2	Central Coast Ranges in San Benito, Monterey, and San Luis Obispo counties	Serpentinite outcrops, on slopes, in chaparral, 650–5,000'	Mar–May
San Benito spineflower *Chorizanthe biloba* var. *immemora*	SC/–/1B.2	Eastern inner south coast ranges, Fresno, Monterey, and San Benito Counties	Chaparral, cismontane woodland	May–Sep
San Francisco collinsia *Collinsia multicolor*	–/–/1B.2	Coastal California from San Francisco to Monterey County	Closed–cone coniferous forest, coastal scrub	Mar–May
San Luis Obispo sedge *Carex obispoensis*	–/–/1B.2	Outer South Coast Ranges in San Luis Obispo County	Sargent cypress forest, chaparral, coastal prairie, coastal scrub, valley and foothill grassland; often on serpentinite seeps	Apr–Jun
San Simeon Baccharis *Baccharis plummerae* ssp. *glabrata*	–/–/1B.2	Central coast, San Luis Obispo County	Coastal scrub	Jun
Sand gilia *Gilia tenuiflora* ssp. *arenaria*	E/T/1B.2	Monterey County	Sandy soils in maritime chaparral, cismontane woodland, coastal dunes, coastal scrub	Apr–Jun
Sandmat manzanita *Arctostaphylos pumila*	SC/–/1B.2	Central coast, especially Monterey Bay, Monterey County	Openings in closed–cone coniferous forest, maritime chaparral, cismontane woodland, coastal dunes, and coastal scrub, in sandy areas	Feb–May
Santa Cruz clover *Trifolium buckwestiorum*	–/–/1B.1	San Francisco Bay area and central coastal California, Endemic to Santa Cruz County, also known from Monterey and Sonoma Counties	Moist grassy areas on margins of broadleaved upland forest, cismontane woodland, and coastal prairie, sometimes in disturbed areas, 200–1,800'	May–Oct
Santa Cruz Microseris *Stebbinsoseris decipiens*	–/–/1B.2	Coastal California: scattered occurrences from Marin County to Monterey County	Grasslands, coastal prairie, and open grassy areas in other habitat types	Apr–May

Common and Scientific Name	Status[1] Federal/ State/CNPS	California Distribution	Habitats	Blooming Period
Santa Cruz tarplant *Holocarpha macradenia*	T/E/1B.1	Coastal slope of the Santa Cruz Mountains, Monterey and Santa Cruz Counties	Coastal terrace grasslands on light sandy to sandy clay soils, below 300 feet	Jun–Oct
Santa Lucia bedstraw *Galium clementis*	–/–/1B.3	Monterey County	Lower and upper montane coniferous forest on granitic or serpentinite, rocky substrates	May–Jul
Santa Lucia bush mallow *Malacothamnus palmeri* var. *palmeri*	–/–/1B.2	San Luis Obispo and possibly Monterey Counties	Rocky places in chaparral	May–Jul
Santa Lucia mint *Pogogyne clareana*	–/E/1B.2	Monterey County	Riparian woodland	May–Jun
Seaside bird's–beak *Cordylanthus rigidus* ssp. *littoralis*	SC/E/1B.1	Central and southern central coast, Monterey and Santa Barbara Counties	Closed–cone coniferous forest, maritime chaparral, cismontane woodland, coastal dunes, coastal scrub; on sandy soils, often disturbed sites	May–Oct
Shining Navarretia *Navarretia nigelliformis* ssp. *radians*	–/–/1B.2	Interior foothills of South Coast Ranges from Merced County to San Luis Obispo County	Mesic areas with heavy clay soils, in swales and clay flats; in oak woodland, grassland	May–Jun
Showy madia *Madia radiata*	–/–/1B.1	Scattered populations in the interior foothills of the south Coast Ranges: Contra Costa, Fresno, Kings, Kern, Monterey, Santa Barbara, San Benito, San Joaquin, and San Luis Obispo Counties	Oak woodland, grassland, slopes below 3,000'	Mar–May
Slender Pentachaeta *Pentachaeta exilis* ssp. *aeolica*	SC/–/1B.2	Monterey and San Benito Counties	Cismontane woodland, valley and foothill grassland	Apr–May
Straight–awned spineflower *Chorizanthe rectispina*	–/–/1B.3	Outer south coast ranges: Monterey, Santa Barbara, and San Luis Obispo Counties	Chaparral, coastal scrub, oak woodland; often on granitic soils, between 1,165–3,400 feet	Jun–Jul
Talus fritillary *Fritillaria falcata*	–/–/1B.2	South inner coast ranges. Alameda, Monterey, San Benito, Santa Clara, and Stanislaus Counties	Chaparral, oak woodland, closed–cone coniferous forest, on serpentinite talus	Mar–May

Common and Scientific Name	Status[1] Federal/ State/CNPS	California Distribution	Habitats	Blooming Period
Tear Drop moss *Dacryophyllum falcifolium*	–/–/1B.3	Monterey, Santa Cruz	North Coast coniferous forest/carbonate	N/A
Temblor buckwheat *Eriogonum temblorense*	SC/–/1B.2	Kern, Monterey, and San Luis Obispo Counties	Valley and foothill grassland on clay or sandstone substrate	May–Sep
Tidestrom's lupine *Lupinus tidestromii*	E/E/1B.1	Coastal Monterey, Marin, and Sonoma Counties	Coastal dunes, coastal dune scrub	May–Jun
Umbrella larkspur *Delphinium umbraculorum*	–/–/1B.3	Monterey, Santa Barbara, San Luis Obispo, and Ventura Counties	Moist areas in cismontane woodland	April–Jun
Yadon's rein orchid *Piperia yadonii*	E/–/1B.1	Monterey County	Coastal bluff scrub, closed–cone coniferous forest, maritime chaparral, on sandy soils	May–Aug
Yadon's wallflower *Erysimum menziesii* ssp. *yadonii*	E/E/1B.1	Monterey County	Coastal dunes	Jun–Aug
Yellow–flowered Eriastrum *Eriastrum luteum*	–/–/1B.2	Monterey and San Luis Obispo Counties	Broadleaved upland forest, chaparral, cismontane woodland	May–Jun

Notes:
[1] Status explanations:

Federal
- E = listed as endangered under the federal Endangered Species Act.
- T = listed as threatened under the federal Endangered Species Act.
- SC = considered a species of concern by the Fish and Wildlife Service
- – = no listing.

State
- E = listed as endangered under the California Endangered Species Act.
- T = listed as threatened under the California Endangered Species Act.
- R = listed as rare under the California Endangered Species Act.
- – = no listing.

California Native Plant Society (CNPS)
- 1B = List 1B species: rare, threatened, or endangered in California and elsewhere.
- 2 = List 2 species: rare, threatened, or endangered in California but more common elsewhere.
- 3 = List 3 species: more information is needed for this plant.
- – = no listing.
- .1 = seriously endangered in California
- .2 = fairly endangered in California
- .3 = not very endangered in California

* Populations uncertain or extirpated in the county indicated

Table 4.9-5. Special-Status Wildlife Species with Potential to Occur in Monterey County

Common and Scientific Names	Status Fed/State	Geographic Distribution	Habitat Requirements
INVERTEBRATES			
Bay checkerspot butterfly *Euphydryas editha bayensis*	T/–	Vicinity of San Francisco Bay including San Francisco peninsula in San Mateo Co., and mountains near San Jose, Santa Clara County	Native grasslands on outcrops of serpentine soil; California plantain and owl's clover are host plants
Dolloff Cave spider *Meta dolloff*	–/–	Empire Cave and other caves in area, Santa Cruz County	Cave dwelling
Globose dune beetle *Coelus globosus*	–/–	Sporadically distributed from central and southern California and the Channel Islands; from Bodega Bay, Sonoma County, south to Ensenada, Baja California	Foredunes and sand hummocks, burrows beneath sand surface under shrubs or herbaceous plants
Pinnacles optioservus riffle beetle *Optioservus canus*	–/–	San Benito county	Aquatic, in gravel in warm to cool springs
Redwood shoulderband *Helminthoglypta sequoicola consors*	–/–	Southern slope of San Juan Grade, Monterey County	Under decaying logs and in bramble patches
Smith's blue *Euphilotes (=Shijimiaeoides) enoptes smithi*	E/–	Localized populations along the immediate coast and in coastal canyons of Monterey County; single populations reported in Santa Cruz and San Mateo Counties	Coastal dunes and hillsides that support seacliff buckwheat (Eriogonum parvifolium) or coast buck-wheat (Eriogonum latifolium); these plants used as a nectar source for adults and host plant for larvae
Vernal pool fairy shrimp *Branchinecta lynchi*	T/–	Central Valley, central and south Coast Ranges from Tehama County to Santa Barbara County. Isolated populations also in Riverside County	Common in vernal pools; also found in sandstone rock outcrop pools
AMPHIBIANS AND REPTILES			
Arroyo toad *Bufo californicus*	E/SSC	Along the coast and foothills from San Luis Obispo County to San Diego County and inland to San Bernardino County	Prefers sandy arroyos and river bottoms with open riparian vegetation in inland valleys and foothills
Black California legless lizard *Anniella pulchra nigra*	–/SSC	Monterey Bay region	Coastal dunes with native vegetation or chaparral, pine-oak woodland, or riparian areas with loose soil for burrowing

Common and Scientific Names	Status Fed/State	Geographic Distribution	Habitat Requirements
California horned lizard *Phrynosoma coronatum frontale*	–/SSC	Sacramento Valley, including foothills, south to southern California; Coast Ranges south of Sonoma County; below 4,000 feet in northern California	Grasslands, brushlands, woodlands, and open coniferous forest with sandy or loose soil; requires abundant ant colonies for foraging
California red-legged frog *Rana aurora draytonii*	T/SSC	Found along the coast and coastal mountain ranges of California from Marin County to San Diego County and in the Sierra Nevada from Tehama County to Fresno County	Permanent and semi-permanent aquatic habitats, such as creeks and cold-water ponds, with emergent and submergent vegetation. May aestivate in rodent burrows or cracks during dry periods.
California tiger salamander *Ambystoma californiense (=A. tigrinum c.)*	T/SSC	Central Valley, including Sierra Nevada foothills, up to approximately 1,000 feet, and coastal region from Butte County south to northeastern San Luis Obispo County.	Small ponds, lakes, or vernal pools in grass-lands and oak woodlands for larvae; rodent burrows, rock crevices, or fallen logs for cover for adults and for summer dormancy
Coast Range newt *Taricha torosa torosa*	–/SSC	Coastal drainages from Mendocino county south to Boulder creek, San Diego county. Populations highly fragmented. Elevation range near sea level to 1830 meters	Frequent terrestrial habitats, but breed in ponds, reservoirs, and slow moving streams
Foothill yellow-legged frog *Rana boylii*	–/SSC	Occurs in the Klamath, Cascade, north Coast, south Coast, Transverse, and Sierra Nevada Ranges up to approximately 6,000 feet	Creeks or rivers in woodland, forest, mixed chaparral, and wet meadow habitats with rock and gravel substrate and low overhanging vegetation along the edge. Usually found near riffles with rocks and sunny banks nearby.
San Joaquin whipsnake *Masticophis flagellum ruddocki*	–/SSC	From Colusa county in the Sacramento Valley southward to the grapevine in the San Joaquin Valley and westward into the inner coast ranges. An isolated population occurs at Sutter Buttes. Known elevation range from 20 to 900 meters	Occurs in open, dry, vegetative associations with little or no tree cover. It occurs in valley grassland and saltbush scrub associations. Often occurs in association with mammal burrows
Santa Cruz long-toed salamander *Ambystoma macrodactylum croceum*	E/E	Three metapopulations and breeding sites in coastal areas of southern Santa Cruz County and northern Monterey County	Lifetime spent mostly underground in willow groves, coastal scrub, coast live oak, or riparian habitats; migrates to breeding ponds in early to late winter, and juveniles disperse from the pond in September

Common and Scientific Names	Status Fed/State	Geographic Distribution	Habitat Requirements
Southwestern pond turtle *Clemmys marmorata pallida*	–/SSC	Occurs along the central coast of California east to the Sierra Nevada and along the southern California coast inland to the Mojave and Sonora Deserts; range overlaps with that of the northwestern pond turtle throughout the Delta and in the Central Valley	Woodlands, grasslands, and open forests; aquatic habitats, such as ponds, marshes, or streams, with rocky or muddy bottoms and vegetation for cover and food
Silvery legless lizard *Anniella pulchra pulchra*	–/SSC	Along the Coast, Transverse, and Peninsular Ranges from Contra Costa County to San Diego County with spotty occurrences in the San Joaquin Valley	Habitats with loose soil for burrowing or thick duff or leaf litter; often forages in leaf litter at plant bases; may be found on beaches, sandy washes, and in woodland, chaparral, and riparian areas
Two-striped garter snake *Thamnophis hammondii*	–/SSC	Known range extends through the south coast and peninsular ranges west of the San Joaquin valley from the Salinas Valley and the southeastern slopes of the Diablo range, south to the Mexican border	Perennial and intermittent streams having rocky beds bordered by willow thickets or other dense vegetation. Also inhabits large sandy riverbeds, such as the Santa Clara river, if a strip of riparian vegetation is present, and stock ponds if riparian vegetation and fish and amphibian prey are present
Western spadefoot Scaphiopus hammondii	–/SSC, P	Sierra Nevada foothills, Central Valley, Coast Ranges, coastal counties in southern California	Shallow streams with riffles and seasonal wetlands, such as vernal pools in annual grasslands and oak woodlands.
FISHES			
South central California coast steelhead *Oncorhynchus mykiss*	T/SSC	Includes populations from the Pajaro River south to, but not including, the Santa Maria River.	Cold, clear water with clean gravel of appropriate size for spawning. Most spawning occurs in headwater streams. Steelhead migrate to the ocean to feed and grow until sexually mature.
Tidewater goby *Eucyclogobius newberryi*	E/SSC	Occur in lagoons of coastal streams from the Smith River (Del Norte County), to the south in Agua Hedionda Lagoon (San Diego County). Extirpated from San Francisco Bay (Moyle 2002).	Coastal lagoons along California. Prefer water with high dissolved oxygen levels and salinities less than 10 parts per thousand (ppt) (Moyle 2002).

Common and Scientific Names	Status Fed/State	Geographic Distribution	Habitat Requirements
BIRDS			
Bald eagle *Haliaeetus leucocephalus*	D, PR/E, FP	Nests in Siskiyou, Modoc, Trinity, Shasta, Lassen, Plumas, Butte, Tehama, Lake, and Mendocino Counties and in the Lake Tahoe Basin. Winter range includes the rest of California, except the southeastern deserts, very high altitudes in the Sierra Nevada, and east of the Sierra Nevada south of Mono County	In western North America, nests and roosts in coniferous forests within 1 mile of a lake, reservoir, stream, or the ocean
Bank swallow *Riparia riparia*	–/T	Occurs along the Sacramento River from Tehama County to Sacramento County, along the Feather and lower American Rivers, in the Owens Valley; and in the plains east of the Cascade Range in Modoc, Lassen, and northern Siskiyou Counties. Small populations near the coast from San Francisco County to Monterey County	Nests in bluffs or banks, usually adjacent to water, where the soil consists of sand or sandy loam
Black swift *Cypseloides niger (nesting)*	–/SSC	Breeds very locally in the Sierra Nevada and Cascade Range, the San Gabriel, San Bernardino, and San Jacinto mountains, and in coastal bluffs from San Mateo county south to near San Luis Obispo county	Nests in moist crevice or cave on sea cliffs above the surf, or on cliffs behind, or adjacent to, waterfalls in deep canyons
California brown pelican *Pelecanus occidentalis californicus*	E/E	Present along the entire coastline, but does not breed north of Monterey County	Typically in littoral ocean zones, just outside the surf line; nests on offshore islands
California clapper rail *Rallus longirostris obsoletus*	E/E	Marshes around the San Francisco Bay and east through the Delta to Suisun Marsh	Restricted to salt marshes and tidal sloughs; usually associated with heavy growth of pickle-weed; feeds on mollusks removed from the mud in sloughs
California horned lark *Eremophila alpestris actia*	–/SSC	Found throughout much of the state, less common in mountainous areas of the north coast and in coniferous or chaparral habitats	Common to abundant resident in a variety of open habitats, usually where large trees and shrubs are absent. Grasslands and deserts to dwarf shrub habitats above tree line
Cooper's hawk *Accipiter cooperii*	–/SSC	Throughout California except high altitudes in the Sierra Nevada. Winters in the Central Valley, southeastern desert regions, and plains east of the Cascade Range	Nests in a wide variety of habitat types, from riparian woodlands and digger pine-oak woodlands through mixed conifer forests

Common and Scientific Names	Status Fed/State	Geographic Distribution	Habitat Requirements
Double-crested cormorant *Phalacrocorax auritus (rookery site)*	–/SSC	Winters along the entire California coast and inland over the Coast Ranges into the Central Valley from Tehama County to Fresno County; a permanent resident along the coast from Monterey County to San Diego County, along the Colorado River, Imperial, Riverside, Kern and King Co.s, and the islands off San Francisco	Rocky coastlines, beaches, inland ponds, and lakes; needs open water for foraging, and nests in riparian forests or on protected islands, usually in snags
Ferruginous hawk *Buteo regalis*	–/SSC	Does not nest in California; winter visitor along the coast from Sonoma County to San Diego County, east-ward to the Sierra Nevada foothills and south-eastern deserts, the Inyo-White Mountains, the plains east of the Cascade Range, and Siskiyou County	Open terrain in plains and foothills where ground squirrels and other prey are available
Golden eagle *Aquila chrysaetos*	PR/SSC, FP	Foothills and mountains throughout California. Uncommon nonbreeding visitor to lowlands such as the Central Valley	Nest on cliffs and escarpments or in tall trees overlooking open country. Forages in annual grasslands, chaparral, and oak woodlands with plentiful medium and large-sized mammals
Least Bell's vireo *Vireo bellii pusillus*	E/E	Small populations remain in southern Inyo, southern San Bernardino, Riverside, San Diego, Orange, Los Angeles, Ventura, and Santa Barbara Counties	Riparian thickets either near water or in dry portions of river bottoms; nests along margins of bushes and forages low to the ground; may also be found using mesquite and arrow weed in desert canyons
Northern harrier *Circus cyaneus*	–/SSC	Occurs throughout lowland California. Has been recorded in fall at high elevations	Grasslands, meadows, marshes, and seasonal and agricultural wetlands
Prairie falcon *Falco mexicanus*	–/SSC	Permanent resident in the south Coast, Transverse, Peninsular, and northern Cascade Ranges, the southeastern deserts, Inyo-White Mountains, foothills surrounding the Central Valley, and in the Sierra Nevada in Modoc, Lassen, and Plumas Counties. Winters in the Central Valley, along the coast from Santa Barbara County to San Diego County, and in Marin, Sonoma, Humboldt, Del Norte, and Inyo Counties	Nests on cliffs or escarpments, usually overlooking dry, open terrain or uplands

Common and Scientific Names	Status Fed/State	Geographic Distribution	Habitat Requirements
Short-eared owl *Asio flammeus*	–/SSC	Permanent resident along the coast from Del Norte County to Monterey County although very rare in summer north of San Francisco Bay, in the Sierra Nevada north of Nevada County, in the plains east of the Cascades, and in Mono County; small, isolated populations	Freshwater and salt marshes, lowland meadows, and irrigated alfalfa fields; needs dense tules or tall grass for nesting and daytime roosts
Tricolored blackbird *Agelaius tricolor*	–/SSC	Permanent resident in the Central Valley from Butte County to Kern County. Breeds at scattered coastal locations from Marin County south to San Diego County; and at scattered locations in Lake, Sonoma, and Solano Counties. Rare nester in Siskiyou, Modoc, and Lassen Counties	Nests in dense colonies in emergent marsh vegetation, such as tules and cattails, or upland sites with blackberries, nettles, thistles, and grainfields. Habitat must be large enough to support 50 pairs. Probably requires water at or near the nesting colony
Tufted puffin *Fratercula cirrhata (nesting colony)*	–/SSC	Occurs sparsely along the California coast from Prince Island in Del Norte County to the northern end of Big Sur. The majority of the colonies in California breed mainly on Castle Rock and a few other islands off Del Norte and Humboldt Counties and on the Farallon Islands. No longer nests in southern California, and the northern California population has declined substantially since 1900	Nests on islands and, less commonly, on coastal cliffs. Requires islands free from human disturbance, with soil suitable for digging burrows, or with natural rock cavities. Perches on rocky outcroppings on islands, not necessarily near the nest. Requires large schools of pelagic fish, such as smelt or herring for food
Western burrowing owl *Athene cunicularia hypugea*	–/SSC	Lowlands throughout California, including the Central Valley, northeastern plateau, southeastern deserts, and coastal areas. Rare along south coast	Level, open, dry, heavily grazed or low stature grassland or desert vegetation with available burrows
Western snowy plover (coastal populations) *Charadrius alexandrinus nivosus*	T/SSC	Population defined as those birds that nest adjacent to or near tidal waters, including all nests along the mainland coast, peninsulas, offshore islands, and adjacent bays and estuaries. Twenty breeding sites are known in California from Del Norte to Diego County	Coastal beaches above the normal high tide limit in flat, open areas with sandy or saline substrates; vegetation and driftwood are usually sparse or absent
White-tailed kite *Elanus leucurus*	–/FP	Lowland areas west of Sierra Nevada from the head of the Sacramento Valley south, including coastal valleys and foothills to western San Diego County at the Mexico border	Low foothills or valley areas with valley or live oaks, riparian areas, and marshes near open grasslands for foraging
Yellow warbler *Dendroica petechia*	–/SSC	Nests in all of California except the Central Valley, the Mojave Desert region, and high altitudes in the Sierra Nevada.	Nests in riparian areas dominated by willows, cottonwoods, sycamores, or alders or in mature chaparral; may also use oaks, conifers, and urban areas near stream courses

Common and Scientific Names	Status Fed/State	Geographic Distribution	Habitat Requirements
MAMMALS			
Big-eared kangaroo rat *Dipodomys elephantinus*	–/SSC	Restricted to the southern Gabilan Range near the Pinnacles National Monument, San Benito and Monterey Counties	Grassland and sparse chaparral habitats where it forages in open areas and nests in underground burrows
Monterey dusky-footed woodrat *Neotoma fuscipes luciana*	–/SSC	Occurs throughout Monterey and northern San Luis Obispo Counties where appropriate habitat is available	Coast live oak woodland and chaparral habitats with moderate canopy cover and moderate to dense understory and abundant deadwood for nest construction
Pallid bat *Antrozous pallidus*	–/SSC	Occurs throughout California except the high Sierra from Shasta to Kern County and the northwest coast, primarily at lower and mid elevations	Occurs in a variety of habitats from desert to coniferous forest. Most closely associated with oak, yellow pine, redwood, and giant sequoia habitats in northern California and oak woodland, grassland, and desert scrub in southern California. Relies heavily on trees for roosts
Salinas pocket mouse *Perognathus inornatus psammophilus*	–/SSC	The known range extends from near Soledad to Hog Canyon in the Salinas Valley, Monterey County	Dry, open grasslands with sandy soils
San Joaquin kit fox *Vulpes macrotis mutica*	E/T	Principally occurs in the San Joaquin Valley and adjacent open foothills to the west; recent records from 17 counties extending from Kern County north to Contra Costa County	Saltbush scrub, grassland, oak, savanna, and freshwater scrub

Notes:

Status explanations:

Federal

E = listed as endangered under the federal Endangered Species Act.
T = listed as threatened under the federal Endangered Species Act.
PR = protected by the Bald and Golden Eagle Protection Act.
D = species that has been delisted under the Endangered Species Act.
— = no listing.

State

E = listed as endangered under the California Endangered Species Act.
T = listed as threatened under the California Endangered Species Act.
FP = fully protected under the California Fish and Game Code.
SSC = species of special concern in California.
— = no listing.

Critical Habitat

Critical habitat is defined in the Federal Endangered Species Act (ESA) as specific areas in which physical or biological features essential to the conservation of a protected species are present. The ESA requires that Federal agencies ensure that actions they fund, authorize, or carry out do not destroy, or adversely modify critical habitat. Individuals, organizations, states, local governments, and other non-Federal entities are affected by the designation of critical habitat only if their actions occur on Federal lands, require a Federal permit, license or other authorization, or involve Federal funding. If these conditions apply, the applicant must consult with the USFWS or NOAA Fisheries about any action that is likely to jeopardize the continued existence of a protected species or result in destruction or adverse modification of proposed critical habitat. As a condition of approval, the applicant may be required to implement USFWS or NOAA Fisheries recommendations regarding conservation of critical habitat.

The USFWS has designated critical habitat for the western snowy plover, California red-legged frog, California tiger salamander, Monterey spineflower, Santa Cruz tarplant, and purple amole in Monterey County. NOAA Fisheries has designated several rivers and stream in Monterey County as critical habitat (FR 70: 52488) for the South-Central California Coast Distinct Population Segment (DPS) of steelhead (*Oncorhynchus mykiss*). These streams and rivers include those found in the Carmel River and Salinas River watersheds, along with several coastal rivers, such as the Big Sur and Little Sur Rivers (Exhibit 4.9.5).

Habitat Conservation Plans

There are no adopted project-level Habitat Conservation Plans (HCPs) that intersect with the inland areas covered by the 2007 General Plan. However, the Fort Ord Multispecies Habitat Conservation Plan is currently being developed and will likely be adopted in the next few years and thus be operational during the life of the 2007 General Plan.

Adopted Habitat Conservation Plans

Permits have been issued for HCPs for the Post-Ranch Inn (Big Sur), Sarment (Carmel Highlands), and Wildcat Line LP (Carmel Highlands). All three of these areas are within coastal areas not covered by the 2007 General Plan.

Installation-Wide Multispecies Habitat Conservation Plan at Former Fort Ord (in development).

The former Fort Ord military base occupies approximately 27,686 acres (approximately 45 square miles) along the Pacific Ocean in northern Monterey County. About 3,968 acres of the former base were originally developed for military facilities with approximately 23,718 acres left as relatively natural habitat used for military training and other purposes. An installation-wide

multispecies HCP is currently being developed to provide the framework for ensuring conservation, enhancement and recovery of 19 CEQA-defined special-status plant and wildlife species and the natural communities that support them on former Fort Ord.

All base reuse (i.e., post-transfer) activities that are conducted within the plan area pursuant to the HCP are considered "covered activities." To accommodate growth and development, about 5,956 acres of existing habitat within the plan area will be removed for a total of approximately 9,924 acres in development on the former base at full build out. Impacts to HCP species and natural communities resulting from base redevelopment will be minimized and fully mitigated through the preservation and management of habitat on approximately 17,762 acres (over 64%) of the former base.

Participating in the HCP are 12 Permittees and the Bureau of Land Management.

Habitat Connectivity/Wildlife Movement

In 1991, Hay defined a corridor as "a landscape linkage designed to connect open spaces to form protected [areas] that follow natural and man-made features and embrace ecological, cultural and recreational amenities where applicable" (Hay 1991). The term corridor is used to refer to contiguous areas of habitat that connect larger areas of habitat and facilitate genetic exchange within a population or between subpopulations by allowing for movement within or between habitat patches. Because reduction and fragmentation of habitat are among the principal causes of species decline, identifying and preserving key corridors is important to retaining native populations in the county.

Habitat connectivity can be assessed at many levels. On a landscape or regional scale connectivity typically refers to how mobile mammals (e.g., deer) are able to move between prominent landscape features such as mountain ranges. The type of natural habitats between those features combined with the distance would be used to determine the connectedness or permeability of the landscape. At a smaller scale habitat connectivity is often important for seasonal migrations (e.g., steelhead) or local (daily) movements by some wildlife species between nesting and foraging habitat (e.g., golden eagles). The built environment further alters the connectivity of a landscape by removing natural habitat and restricting the opportunities for species movement. In the present day, built environment habitat corridors are recognized as a means to retain some connectivity across a landscape.

A preliminary assessment (the Missing Linkages assessment by California Wilderness Coalition, 2001) identified connectivity between habitats in four key areas within the county. These habitat linkages are considered to be critical to retaining the viability of local wildlife populations.

- **Santa Cruz Mountains to Gabilan Range—**Due to development and agriculture along the edge of Monterey Bay, wildlife movement between the

Gabilan Range to the Santa Cruz Mountains facilitates interaction between populations in these ranges. Key areas of concern relative to maintaining connectedness is development along Highway 101 and Highway 101 itself.

- **Santa Lucia Mountains to Fort Ord—**A north-south corridor exists between the Santa Lucia Mountains and Fort Ord crossing Carmel Valley, the Toro Plan Area and Highway 68. Retaining the connectedness in this area is contingent on managing development along Highway 68 and in Carmel Valley, the Toro Area, and Cachagua as well as managing connections across Highway 68.
- **Salinas Valley (east–west)—**A general east-west corridor exists across Salinas Valley that connects the Gabilan Range to the east with the Santa Lucia Range to the west in the north part of the valley and connects the Fort Hunter Liggett and Camp Roberts Areas to the Diablo Range and Cholame Hills to the east. Without retaining some connectedness across the valley, the habitat blocks between the valley and the coast are subject to isolation from the mountains and prairies of eastern Monterey County.
- **Salinas River (north-south) —**The Salinas River provides a migration corridor from Monterey Bay upstream for steelhead into the Arroyo Seco River (where spawning occurs) as well as a general north-south movement corridor along the river corridor. Wildlife movement also occurs through upland and agricultural areas west and east of the river.

In addition to the four linkages identified by the California Wilderness Coalition, Two other wildlife corridors are also identified for the purposes of this analysis, particularly as they relate to steelhead migration:

- **Carmel River—**The Carmel River provides a wildlife movement corridor for steelhead, California red-legged frogs, and a variety of other wildlife species in a generally east-west direction in Carmel River. Conditions along the river corridor vary from undeveloped to developed depending on location.
- **Pajaro River—**The Pajaro River is a steelhead migration corridor from Monterey Bay to spawning and nursery habitat in the upper watershed reaches in Santa Clara County and back. Other wildlife moves along the river as well.

Protected Marine Environments

The 2007 General Plan only covers inland portions of Monterey County. However, development in the inland areas would indirectly affect marine resources due to impacts on water quality downstream.

Monterey Bay National Marine Sanctuary

The Monterey Bay National Marine Sanctuary (MBNMS), designated in 1992, is a federally protected marine area offshore of California's central coast. Stretching from Marin County to San Luis Obispo County, the MBNMS

encompasses a shoreline length of 276 miles, including the entire length of Monterey County, and 5,322 square miles of ocean, extending an average distance of 30 miles from shore It is home to one of the most diverse marine ecosystems in the world.

Essential Fish Habitat

Monterey Bay is also designated as Essential Fish Habitat (EFH) for the Pacific Coast Salmon, the Pacific Groundfish, and the Coastal Pelagic species, pursuant to the Magnuson-Stevens Fishery Conservation and Management Act. Activities that have the potential to adversely affect EFH include dredging, filling, excavation, mining, discharge, water diversions, thermal additions, non-point source pollution, sedimentation, introduction of exotic species, and the conversion of aquatic habitats that may diminish or disrupt the functions of EFH.

4.9.3.4 Noxious Weeds

A noxious weed is defined as a plant that could displace native plants and natural habitats, affect the quality of forage on rangelands, or affect cropland productivity. One organization and one agency track, list and rate the noxious weeds of California: The California Invasive Plant Council (Cal-IPC) and the California Department of Food and Agriculture (CDFA).

The CDFA lists weeds and assigns ratings (A–C) to each species on the list. The ratings reflect this organization's assessment of the statewide economic importance of the pest, the likelihood that eradication or control efforts would be successful, and the present distribution of the pest in the state. These ratings are guidelines that indicate the most appropriate action to take against a pest under general circumstances.

Noxious weeds in Monterey County were not inventoried for this analysis because target weeds will differ widely from project to project, depending on the sensitivity of the site to infestation, the nature of the proposed project, and the type of weeds in the immediate area.

4.9.3.5 Historical Conversion of Habitat 1982 to 2006

In order to better comprehend the pattern and extent of natural habitat conversion that might occur with implementation of the 2007 General Plan, GIS mapping was used to roughly estimate the historical conversion of habitat that has occurred to date under the 1982 General Plan due to urban development and due to agricultural conversion of previously uncultivated areas.

No current map of vegetation cover in Monterey County was located with sufficient accuracy to support this analysis. Thus, an alternative methodology was developed using a 1982 map of vegetation cover and the Farmland Monitoring and Mapping Program (FMMP) mapping from 1982 to 2006

(Department of Conservation 1982 to 2006). The FMMP maps identify urban land, important farmland (defined as prime, unique, and of state importance), grazing land and other land. The 2006 FMMP mapping was overlayed on the 1982 vegetation map to identify conversion areas as follows:

- Where the FMMP 2006 data identified important farmland cover and the 1982 vegetation cover was agriculture, no conversion was presumed. Where the FMMP 2006 data identified important farmland cover and the 1982 vegetation cover was not agriculture or urban, these areas were identified as a habitat to farmland conversion.
- Where the FMMP 2006 data identified urban cover and the 1982 vegetation cover was agriculture, a farmland to urban conversion was identified.
- Where the FMMP 2006 data identified urban cover and the 1982 vegetation cover was not agriculture or urban, these areas were identified as a habitat to urban conversion.

A similar process was used using the 1996 FMMP data to identify conversions between 1982 and 1996 and between 1996 and 2006. A 2.5-acre minimum mapping unit was utilized for this analysis (i.e., changes in land cover less than 2.5-acres were not included in the analysis) to avoid topology (i.e., alignment) errors in identifying areas of conversion.

Exhibits 4.9.6, 4.9.7, 4.9.8, and 4.9.9 show the results of this analysis and identify areas of land cover change between 1982 and 2006 in different parts of Monterey County. Table 4.9-6 summarizes the acreages of change of different land covers in the County.

It should be noted that the 1982 vegetation map and the FMMP maps used in this analysis have different mapping conventions and methodologies. In addition, the FMMP maps over time have changed in terms of the aerial imagery used, and the soil conventions used to identify important farmland, and thus comparison of farmland maps over different years separated by decades reduces the accuracy of any results. Thus, the results should be considered only as grossly representative both geographically and in terms of the acreages in Table 4.9-6. Nevertheless, the results are considered roughly representative for the programmatic analysis in this document.

Wine industry data (Monterey County Agricultural Commission 2008) was also reviewed to identify historic trends in vineyard acreage. In 1982 there were about 33,771 acres of vineyards and overall acreage had not changed by 1996 when 33,319 acres were in vineyard. Acreage rose to 45,043 acres in 2001 and then declined to 37, 116 acres by 2003 with a slight increase to 41,309 acres by 2006. The overall 25-year trend is an average increase of about 300 acres per year, but between 1996 and 2006, there was an annual average increase of about 800 acres per year in vineyard acreage.

The analysis above of habitat conversion is used as the basis for impact analysis below of potential future agricultural conversions of habitat. Specifically, the 25-year trend of habitat conversion from 1982 to 2006 (approximately 450 acres per

year on average) is used to estimate potential future habitat conversion in the impact analysis as more representative of long-term conditions than the last 10 years.

Table 4.9-6. Monterey County Habitat Conversions, 1982 to 2006 (Includes Cities and Coastal Areas)

Conversion Type	Acres Converted 1982–2006	Acres Converted 1982–1996	Acres Converted 1996–2006
Habitat to Urban	**14,692**	**9,830**	**4,862**
Annual Grassland	5,370	3,179	2,191
Oak Woodland	4,896	3,538	1,358
Mixed Conifer	1,453	1,096	357
Monterey Pine Forest	566	515	51
Maritime Chaparral	474	379	95
Coastal Prairie	460	342	118
Baccharis Scrub	415	201	214
Riparian/Wetland	315	203	112
Dune	178	44	134
Oak Savanna	151	67	84
Baccharis Chaparral	111	77	34
Dune Scrub	97	60	37
Coastal Terrace Prairie	85	56	29
Coastal Scrub	60	33	27
Saltwater Marsh	33	32	1
Freshwater Marsh	16	8	8
Gabilan Scrub	4	0	4
Native Grassland	4	0	4
Redwood Forest	4	0	4
Habitat to Farmland	**11,185**	**2,976**	**8,209**
Annual Grassland	8,564	1,484	7,080
Oak Woodland	653	473	180
Riparian/Wetland	641	251	390
Coastal Prairie	428	219	209
Mixed Conifer	388	349	39
Baccharis Scrub	269	93	176
Gabilan Scrub	93	22	71
Oak Savanna	49	49	0
Saltwater Marsh	38	0	38
Baccharis Chaparral	33	15	18
Freshwater Marsh	21	21	0
Maritime Chaparral	8	0	8

Conversion Type	Acres Converted 1982–2006	Acres Converted 1982–1996	Acres Converted 1996–2006
Methodology: Conversion acreages were identified by comparing 1982 base vegetation map to 1996 and 2006 FMMP maps for County using GIS. Where the FMMP maps show urban land, conversion is presumed from 1982 land type. Where the FMMP maps show important farmland (prime, statewide importance, Unique), then conversion is presumed if 1982 land cover was not agricultural. Where the FMMP maps show grazing land, land is not presumed to be urban or to be intensive agriculture, but is presumed to be original 1982 land cover. A minimum mapping unit of 2.5 acres. FMMP and vegetation maps used different methods and conventions and FMMP mapping methodologies and conventions have changed over time and this may diminish the accuracy of the mapping and estimation of acreages noted above. See Figures 4.9-6 through 9 for areas of conversion. Forecast for 2030 and buildout based on 1982 to 2006 averages.			

4.9.4 Regulatory Framework

This section describes the federal, state, and local plans, policies, and regulations that are relevant to biological resources within the county.

4.9.4.1 Federal Regulations

This discussion focuses on the federal requirements associated with subsequent CEQA compliance for the proposed plan. Additional federal requirements would apply to project-specific components of the 2007 General Plan that receive federal funding or otherwise affect federal lands and decision-making. The additional federal requirements do not apply to projects under the 2007 General Plan or this program EIR, but they would need to be addressed if federal funding or another federal action (e.g., if federal lands were crossed or a federal permit were required) were triggered at the time of consideration and approval of a specific project.

Endangered Species Act

The ESA protects fish and wildlife species, and their habitats that have been identified by USFWS or National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS) as threatened or endangered. *Endangered* refers to species, subspecies, or distinct population segments that are in danger of extinction through all or a significant portion of their range; *threatened* refers to species, subspecies, or distinct population segments that are likely to become endangered in the near future.

The ESA is administered by USFWS and NMFS. In general, NMFS is responsible for protection of ESA-listed marine species and anadromous fishes, whereas listed, proposed, and candidate wildlife and plant species and commercial fish species are under USFWS jurisdiction. *Take* of listed species can be authorized through either the Section 7 consultation process for actions by

federal agencies or the Section 10 permit process for actions by nonfederal agencies. Federal agency actions include activities that are:

- on federal land,
- conducted by a federal agency,
- funded by a federal agency, or
- authorized by a federal agency (including issuance of federal permits and licenses).

Under Section 7, the federal agency conducting, funding, or permitting an action (the federal lead agency) must consult USFWS or NMFS, as appropriate, to ensure that the proposed action will not jeopardize endangered or threatened species or destroy or adversely modify designated critical habitat. If a proposed project "may affect" a listed species or designated critical habitat, the lead agency is required to prepare a biological assessment (BA) evaluating the nature and severity of the expected effect. In response, USFWS issues a biological opinion with a determination that the proposed action either:

- May jeopardize the continued existence of one or more listed species (jeopardy finding) or result in the destruction or adverse modification of critical habitat (adverse modification finding), or
- Will not jeopardize the continued existence of any listed species (no jeopardy finding) or result in adverse modification of critical habitat (no adverse modification finding).

The BO issued by USFWS may stipulate discretionary "reasonable and prudent" conservation measures. If the project would not jeopardize a listed species, USFWS issues an incidental take statement to authorize the proposed activity.

In cases where a nonfederal entity is undertaking an action that does not require federal authorization, the take of listed species must be permitted by USFWS through the Section 10 process. If the proposed project would result in the incidental take of a listed species, the applicant must first obtain a Section 10(a)(1)(B) incidental take permit (ITP). Incidental take under Section 10 is defined as take of federally listed fish and wildlife species "that is incidental to, but not the purposes of, otherwise lawful activities". To receive an ITP, the nonfederal entity is required to prepare a Habitat Conservation Plan (HCP). The HCP must include conservation measures that avoid, minimize, and mitigate the project's impact on listed species and their habitat.

Migratory Bird Treaty Act

The MBTA (16 USC 703) enacts the provisions of treaties between the United States, Great Britain, Mexico, Japan, and the Soviet Union and authorizes the U.S. Secretary of the Interior to protect and regulate the taking of migratory birds. It establishes seasons and bag limits for hunted species and protects migratory birds, their occupied nests, and their eggs (16 USC 703; 50 CFR 10,

21). Most actions that result in taking or in permanent or temporary possession of a protected species constitute violations of the MBTA. Examples of permitted actions that do not violate the MBTA are the possession of a hunting license to pursue specific game birds, legitimate research activities, display in zoological gardens, bird-banding, and other similar activities. USFWS is responsible for overseeing compliance with the MBTA, and the U.S. Department of Agriculture's (USDA's) Animal Damage Control Officer makes recommendations on related animal protection issues.

Clean Water Act

The CWA was enacted as an amendment to the federal Water Pollution Control Act of 1972, which outlined the basic structure for regulating discharges of pollutants to waters of the United States. The CWA serves as the primary federal law protecting the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. The following discussion gives background information as relevant to biological resources; additional discussion of the CWA is provided in Section 3.2, *Hydrology and Water Quality*.

Waters of the United States are areas subject to federal jurisdiction pursuant to Section 404 of the CWA. *Waters of the United States* are typically divided into two types: *wetlands* and *other waters of the United States*.

Wetlands

Wetlands are "areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR § 328.3[b], 40 CFR § 230.3). To be considered subject to federal jurisdiction, a wetland must normally support hydrophytic vegetation, hydric soils, and wetland hydrology (Environmental Laboratory 1987).

Other Waters of the United States

Other waters of the United States are seasonal or perennial water bodies, including lakes, stream channels, drainages, ponds, and other surface water features, that exhibit an ordinary high water mark but lack positive indicators for the three wetland parameters (33 CFR 328.4).

Permits for Fill Placement in Waters and Wetlands (Section 404)

CWA Section 404 regulates the discharge of dredged and fill materials into waters of the United States.

Applicants must obtain a permit from the Corps for all discharges of dredged or fill material into waters of the United States, including wetlands, before proceeding with a proposed activity. The Corps may issue either an individual permit evaluated on a case-by-case basis or a general permit evaluated at a program level for a series of related activities. General permits are preauthorized and are issued to cover multiple instances of similar activities expected to cause

only minimal adverse environmental effects. Nationwide permits (NWPs) are a type of general permit issued to cover particular fill activities. Each NWP specifies particular conditions that must be met for the NWP to apply to a particular project. Waters of the United States in the county are under the jurisdiction of the San Francisco District of the Corps.

Compliance with CWA Section 404 requires compliance with several other environmental laws and regulations. The Corps cannot issue an individual permit or verify the use of a general permit until the requirements of NEPA, ESA, and the National Historic Preservation Act (NHPA) have been met. In addition, the Corps cannot issue or verify any permit until a water quality certification or a waiver of certification has been issued pursuant to CWA Section 401.

Water Quality Certification (Section 401)

Under CWA Section 401, applicants for a federal license or permit to conduct activities that may result in the discharge of a pollutant into waters of the United States must obtain certification from the state in which the discharge would originate or, if appropriate, from the interstate water pollution control agency with jurisdiction over affected waters at the point where the discharge would originate. Therefore, all projects that have a federal component and may affect state water quality (including projects that require federal agency approval, such as issuance of a Section 404 permit) must also comply with CWA Section 401.

Executive Order 13112 (Prevention and Control of Invasive Species)

Executive Order 13112 (February 3, 1999) directs all federal agencies to prevent and control the introduction of invasive species in a cost-effective and environmentally sound manner. It established a national Invasive Species Council comprising federal agencies and departments and a supporting Invasive Species Advisory Committee comprising state, local, and private entities. The Invasive Species Council and Invasive Species Advisory Committee have prepared a National Invasive Species Management Plan (2001) that recommends objectives and measures to implement the Executive Order and prevent the introduction and spread of invasive species. The Executive Order and directives from FHWA require consideration of invasive species in NEPA analyses, including identification and distribution, potential impacts, and prevention or eradication measures.

4.9.4.2 State Regulations

California Endangered Species Act

California implemented CESA in 1984. It prohibits the take of endangered and threatened species; however, habitat destruction is not included in the state's definition of take. CESA Section 2090 requires state agencies to comply with

endangered species protection and recovery, and to promote conservation of these species. DFG administers CESA and authorizes take through Section 2081 agreements (except for species designated as fully protected).

For rare plant species, CESA defers to the California Native Plant Protection Act of 1977, which prohibits importing, taking, or selling rare and endangered plants. State-listed plants are protected mainly in cases in which state agencies are involved in projects under CEQA. In such cases, plants that are listed as rare under the California Native Plant Protection Act are not protected under CESA but can be protected under CEQA.

California Fish and Game Code

Fully Protected Species

The California Fish and Game Code provides protection from take for a variety of species, referred to as *fully protected species*. Section 5050 lists protected amphibians and reptiles. Section 3515 prohibits take of fully protected fish species. Eggs and nests of all birds are protected under Section 3503, nesting birds (including raptors and passerines) under Sections 3503.5 and 3513, birds of prey under Section 3503.5, and fully protected birds under Section 3511. Migratory non-game birds are protected under Section 3800. Mammals are protected under Section 4700. The California Fish and Game Code defines *take* as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." Except for take related to scientific research, all take of fully protected species is prohibited. There are two fully protected species, white-tailed kite and bald eagle, which have the potential to occur in the county.

Streambed Alteration Agreements (Section 1602 et seq.)

DFG has jurisdictional authority over wetland resources associated with rivers, streams, and lakes under California Fish and Game Code Sections 1602. DFG has the authority to regulate all work under the jurisdiction of California that would substantially divert, obstruct, or change the natural flow of a river, stream, or lake; substantially change the bed, channel, or bank of a river, stream, or lake; or use material from a streambed.

In practice, DFG marks its jurisdictional limit at the top of the stream or lake bank or the outer edge of the riparian vegetation, where present, and sometimes extends its jurisdiction to the edge of the 100-year floodplain. Because riparian habitats do not always support wetland hydrology or hydric soils, wetland boundaries, as defined by CWA Section 404, sometimes include only portions of the riparian habitat adjacent to a river, stream, or lake. Therefore, jurisdictional boundaries under Section 1600 may encompass a greater area than those regulated under CWA Section 404.

DFG enters into a Streambed Alteration Agreement (SAA) with an applicant and can request conditions to ensure that no net loss of wetland values or acreage will be incurred. The streambed or lakebed alteration agreement is not a permit but, rather, a mutual agreement between DFG and the applicant.

Sections 3503 and 3503.5

Section 3503 of the California Fish and Game Code prohibits the killing of birds or the destruction of bird nests. Section 3503.5 prohibits the killing of raptor species and the destruction of raptor nests.

Regional Water Quality Control Board

Porter Cologne Water Quality Act

Water Code Section 13260 requires "any person discharging waste, or proposing to discharge waste, within any region that could affect the *waters of the state* to file a report of discharge (an application for waste discharge requirements)." Under the Porter-Cologne Act definition, the term *waters of the state* is defined as "any surface water or groundwater, including saline waters, within the boundaries of the state." While all waters of the United States that are within the borders of California are also waters of the state, the converse is not true—in other words, waters of the United States is a subset of waters of the state. Thus, California retains authority to regulate discharges of waste into any waters of the state, regardless of whether Corps has concurrent jurisdiction under Section 404 of the CWA. This authority is regulated and implemented by the Regional Water Quality Control Board (RWQCB).

Region 3 Conditional Agriculture Waiver Program

On July 9, 2004, the Central Coast Regional Water Quality Control Board adopted Order No. R3-2004-0117, Conditional Waivers of Waste Discharge Requirements for Discharges from Irrigated Lands. All commercial, irrigated farming operations were required to comply beginning in January 1, 2005. Lands that are being prepared for planting also need to enroll. Farmers are expected to complete 15 hours of farm water quality education within three years of adoption of the waiver, develop farm water quality management plans that address, at a minimum, irrigation management, nutrient management, pesticide management, and erosion control, and implementing management practices identified in their plans. Growers have the option of performing individual monitoring or participating in cooperative monitoring program.

4.9.4.3 Local Policies and Regulations

This section summarizes local policies and regulations that pertain to biological resources that would affect or be affected by the 2007 General Plan.

Tree Protection

The County has an ordinance for the protection of trees within its jurisdiction. Tree protection within the County varies in accordance with different areas and master plans, which provide specific policies relative to the protection of specific

types of trees. Each of the following tree removal scenarios require a tree removal permit (16.60.030):

- North County Area Plan or Toro Area Plan areas: oak or madrone tree six inches or more in diameter two feet above ground level.
- Carmel Valley Master Plan area: oak, madrone or redwood tree six inches or more in diameter two feet above ground level.
- Cachagua Area Plan area: native tree six inches or more in diameter two feet above ground level. "Native trees," for the purpose of this section, are Santa Lucia fir; black cottonwood; Fremont cottonwood; box elder; willows; California laurel; sycamores; oaks; and madrones.
- Any oak tree in any other area of the County of Monterey designated in the applicable area plan as Resource Conservation, Residential, Commercial or Industrial (except Industrial, Mineral Extraction).
- Any landmark oak tree removed in any area except as may be approved by the Director of Planning and Building Inspection pursuant to Section 16.60,040 Landmark oak trees are those trees which are twenty-four (24) inches or more in diameter when measured two feet above the ground, or trees which are visually significant, historically significant, or exemplary of their species.
- Any oak trees in any other area of the County of Monterey designated in the applicable area plan as Agricultural or Industrial, Mineral Extraction, except for a small number of uses specified in Section 16.60.050.
- Any oak trees removed in any area of the County of Monterey for commercial harvesting purposes.

As a condition of permit approval, any applicant seeking to remove a protected tree from a property within County jurisdiction is required to relocate or replace each removed protected tree at a one-to-one ratio. Removal of more than three protected trees from a single lot over a one-year period requires submission of a Forest Management Plan and approval of a Use Permit by the Monterey County Planning Commission. The Forest Management Plan is to be prepared at the applicant's expense by a qualified professional forester (16.60.040).

Several tree removal activities are exempted from the provisions of the County tree ordinance. These include timber harvesting operations in accordance with a timber harvesting plan submitted pursuant to the provisions of the Forest Practices Act (Pub. Resources Code Section 45110 et seq); any governmental or utilities-related tree removal that occurs within public rights-of-way; and any construction-related tree removal that is included in an approved subdivision, Use Permit, or similar discretionary permit (16.60.060).

4.9.4.4 Other Local Programs

Elkhorn Slough Partners in Restoration Program

The Elkhorn Slough Partners in Restoration (PIR) permit coordination program is a permit coordination program to support local farmers, ranchers, and landowners who want to improve water quality and wildlife habitat on and near their lands. Elkhorn Slough PIR incorporates erosion control and riparian enhancement practices making it easier for the agricultural community to participate in implementing voluntary conservation projects. The project partners have crafted this program to enhance the Elkhorn Slough watershed's natural habitat and reduce erosion and sedimentation in both the upland areas and the coastal environment downstream.

The core of Elkhorn Slough PIR is the watershed—based agreements entered into by local, state and federal regulatory agencies and the National Resource Conservation Service (NRCS) and the Resource Conservation District (RCD) of Monterey County. These agreements create "one-stop permit shopping" for farmers, ranchers, and landowners working with the NRCS and RCD of Monterey County on conservation projects. The watershed—based agreements covered ten different conservation practices and management measures in the Elkhorn Slough watershed. Under Elkhorn Slough PIR, a cooperator receiving technical and/or cost share assistance from the NRCS or the RCD of Monterey County is allowed to implement the associated conservation practices without seeking individual permits—provided they partner with the NRCS and RCD of Monterey County and carefully follow the terms of the program's agreements. The NRCS and RCD of Monterey County assist in project design and monitor implementation and maintenance of the conservation practices to ensure the projects comply with the program.

Salinas Valley Watershed Permit Coordination Program

The NRCS, the RCD of Monterey County, Sustainable Conservation, and the Monterey Bay National Marine Sanctuary's Water Quality Protection Program have worked with eight federal, state, and county regulatory agencies (Monterey county, Coastal Commission, CDFG, RWQCB, U.S. Army Corps of Engineers, USEPA, USFWS, and NMFS) to pre-approve permits for sixteen commonly used conservation practices when doing watershed improvement practices and projects through the NRCS/RCD. This program allows farmers to be able to efficiently complete site improvements that are of benefit to water quality, reduce erosion, and in some cases enhance wildlife habitat.

4.9.5 Impacts and Mitigation Measures

This section discusses impacts and mitigation measures for development associated with the 2007 General Plan. Impact analyses are presented for two

scenarios under the 2007 General Plan: development anticipated up to the year 2030 (2030 planning horizon) and full buildout.

4.9.5.1 Methodology

The significance criteria below and the special-status definition noted above were used in combination with the profile of existing biological resources described above to identify the potential impact of development. The effect of the proposed General Plan and Area Plan policies is taken into account before determining significance. Where significant impacts are identified, mitigation is recommended. A significance conclusion is made for residual impacts after the application of recommended mitigation.

While indirect effects to biological resources from alterations in water quality due to development is considered in the analysis below, the reader is directed to Section 4.3, Hydrology and Water Quality, for the detailed analysis of water quality and identification of relevant General Plan/Area Plan policies, and recommended mitigation.

4.9.5.2 Criteria for Determining Significance

Development under the 2007 General Plan would have a significant impact on biological resources if it would:

- Have a substantial adverse effect, either directly or through habitat modifications on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS (these impacts are discussed below under Impact BIO-1);
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFG or USFWS (these impacts are discussed below under Impacts BIO-2);
- Have a substantial adverse effect on federally protected waters and wetlands as defined by Section 404 of the Clean Water Act and state waters protected by the Porter-Cologne Water Quality Act (including, but not limited to, rivers, creeks, marshes, vernal pools, etc.) through direct removal, filling, hydrological interruption, or other means (these impacts are discussed below under Impact BIO-2);
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites (these impacts are discussed below under Impact BIO-4);
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (these impacts are discussed below under Impact BIO-5); or

- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan (these impacts are discussed below under Impact BIO-6).

4.9.5.3 Impact Overview by Development Area

To provide the reader a general characterization of the types of biological resource impacts in different potential development areas, this section gives a broad impact overview of each development area. This analysis is general in nature, providing insight into potential impacts for each are based on assessment of current resources and assuming that development associated with the 2007 General Plan would potentially impact all resources.

Impact analysis taking into account General Plan and Area Plan policies, significance determination, and mitigation determinations follows this section.

Estimated impacts on natural communities from development other than agriculture are shown in Table 4.9-7.

Table 4.9-7. Monterey County GP 2007 Estimated Impacts on Natural Vegetation Communities due to Development

Natural Community	Area of Potential Effect in Planning Areas outside Fort Ord	Estimated Area of Effect in Planning Areas outside Fort Ord	Fort Ord Potential Effects (b)	Total Effects
Annual Grassland	94,004	7,709	1,513	9,222
Baccharis and Gabilan Scrub	63,614	1,268		1,268
Baccharis Chaparral	367	32		32
Coastal Scrub	6	2		2
Coastal Prairie	1,493	38		38
Mixed Conifer	4,267	292		292
Maritime Chaparal	10	0	2,796	2,796
Monterey Pine Forest	246	36		36
Native Grassland	17	15		15
Oak Savannah and Woodland	90,613	2,607	1,505	4,112
Redwood Forest	71	1		1
Riparian and Wetland Areas	3,258	180	0	180
Total	257,967	12,177	5,814	17,991

Notes:

(a) Vegetation mapping described in Table 4.9-2 was overlayed with land use designations in the 2007 General Plan for all locations outside Fort Ord. Where the land use designation allows development (residential, commercial, industrial, public/quasi-public, etc.), the area was identified as a potential effect. Assumptions were made about percentage of conversion for each land use designation. Conversions for certain categories (medium density residential, industrial, mineral extraction) were assumed to be total (100%), whereas other categories were assumed to result in partial conversion (such as commercial assumed to convert 50% of the designated land) or very limited conversion (such as public-quasi public and rural density residential - both assumed to convert only 1% of designated land due to the large acreage in these designations). Assumptions are rough estimates only and may overstate or understate actual impacts as the exact amount of conversion on any specific parcel cannot be estimated accurately on a landscape level. Castroville acres were not in the GIS land use layer and were added manually from the vegetation map GIS.

(b) Fort Ord impacts were identified based on unpublished data from the Fort Ord HCP. The total for Maritime Chaparral for Fort Ord includes coastal scrub as the HCP data did not disaggregate the totals.

Community Areas

Pajaro

The proposed Pajaro Community Area is located in the northern part of the County adjacent to the Pajaro River, which creates the Santa Cruz/Monterey county line. There are no known CEQA-defined special-status species occurrences on record within the Pajaro Community Area, though without a site

specific habitat assessment the presence of CEQA-defined special-status species or other sensitive resources (i.e., wetlands, native grasslands) cannot be ruled out. The Community Area includes riparian habitat along the Pajaro River. It does not appear that the Community Area will encroach on the riparian corridor though a closer study during implementation of the plan or specific projects will be necessary for confirmation. The Pajaro River has only minimal riparian vegetation associated with it along this reach. Many common wildlife species likely use the river for daily movement through the area. The Pajaro River itself is an important migration corridor for steelhead during annual spawning runs.

Boronda

The Boronda Community Area is located on the western edge of the City of Salinas. The Boronda Community Area is already more than half developed on the northeast end and the southwestern portion, between Boronda Road, Davis Road, and SR 183 is primarily agricultural lands.

The only significant biological resource in the Boronda Community Area is Markley Swamp, a freshwater wetland. Markley Swamp supports a diverse array of wildlife, including migratory waterfowl, raptors, amphibians, aquatic reptiles, and small mammals. There are no known occurrences of CEQA-defined special-status species in the Boronda Community Area, but there is the potential for the western pond turtle, California red-legged frog, and Californian tiger salamander to occur in Markley Swamp.

Castroville

The Castroville Community Area is located eight miles northwest of the City of Salinas and five miles west of Prunedale at the crossroads of Highways 1, 156 and 183. The Castroville Community Area Plan has already been adopted by Monterey County. The following discussion is based on the Draft EIR for the Castroville Community Area (PMC 2006)

There are drainages and small pockets of ruderal vegetation that contain habitat for CEQA-defined special-status species. A portion of Tembladero Slough contains riparian habitat and other wetlands.

CEQA-defined special-status plant species in the area include the San Joaquin spearscale, Congdon's tarplant, saline clover, and the federally threatened and state endangered Santa Cruz tarplant and there is potential for Hickman's cinquefoil. CEQA-defined special-status wildlife species that have been documented in the Castroville vicinity include steelhead, California red-legged frog, and California tiger salamander. Other CEQA-defined special-status species have the potential to occur in the area include Least's Bell vireo and burrowing owl. Modifications to local hydrology to provide flood protection to the community will affect wetland habitats of the Tembladero Slough. Similar modifications are likely to alter Castroville Slough on the northeast side of the community.

Mitigation was adopted for the Community Plan that reduced the impacts of the Community Plan to less than significant (Monterey County Housing and Redevelopment Office 2007).

Fort Ord Master Plan

The entire proposed Fort Ord Community Area is addressed in the Fort Ord Reuse Plan. Potential impacts of development at Fort Ord were addressed programmatically in the Fort Ord Reuse Plan and its EIR (FORA 1997). The FORA Reuse Plan Final Environmental Impact Report (FORA FEIR) identified on a program level a potentially significant environmental impact for biological resources as related to loss of sensitive species addressed in the Installation-Wide Multispecies Habitat Management Plan for Former Fort Ord (HMP). An HCP is under development that would address impacts to federal and state listed species. The HMP is designed to managed open space habitat as well as CEQA-defined special-status species throughout the base.

The HMP establishes a habitat conservation area, a corridor system, and parcel-specific land use categories, in addition to outlining management requirements for all lands on the former Fort Ord (FFO). The HMP identifies four general categories of parcel-specific land uses: habitat reserve, habitat corridor, development with reserve areas or restrictions, and development with no restrictions.

The Fort Ord Reuse Authority (FORA) and the County of Monterey submitted modifications to the original HMP to the Army and USFWS for approval for the East Garrison Specific Plan. The Army and USFWS approved the boundary changes and other HMP modifications. The approved modifications allow residential and commercial development at East Garrison on an additional 210 acres of oak woodland, maritime chaparral, and grassland communities that would have been preserved under the original HMP. In exchange, the amendments to the habitat reserve set aside over 450 acres of land to support biotic communities at Parker Flats, which was previously designated for development. Thus, some 240 acres of habitat are preserved under the amended HMP (with the East Garrison Specific Plan than under the original.

The Fort Ord Community Areas contains extensive areas of sensitive and other natural communities including: maritime chaparral, oak savannah, oak woodland native grassland, dune scrub, riparian forest, vernal pools, and freshwater marsh. Some of these areas may be affected by potential future development. Impacts on the East Garrison Specific Area Plan were addressed in the EIR prepared for that project and mitigation was identified to reduce impacts (Michael Brandman Associates 2004).

Chualar

The boundary of the Chualar Community Area has not yet been established, however most of the undeveloped area surrounding Chualar is irrigated farmland with limited value for biological resources.

There are drainages and small pockets of ruderal vegetation that could contain habitat for CEQA-defined special-status species. A portion of Chualar River is adjacent to the west side of the Community Area. This river contains limited riparian habitat but does have potential to support CEQA-defined special-status wildlife species such as the California tiger salamander and California red-legged frog.

Rural Centers

There are seven designated Rural Centers in the 2007 General Plan. Development within the Rural Centers has the potential to impact biological resources in some sites. Each Rural Center also has the potential for impacts to wildlife corridors and movement of wildlife species across the landscape, and for introduction of exotic species, particularly noxious weeds.

Bradley, Lockwood, San Ardo, San Lucas

These four Rural Centers are located in agricultural areas south of King City along the Highway 101 corridor and west of Highway 101 along Jolon Road. The land in these centers is flat and in varying degrees of development already. For the most part, vegetation in these areas is limited to agricultural and annual grassland. All of the annual grassland and agricultural areas along the Highway 101 corridor have the potential to support San Joaquin kit fox and in many places along the Salinas River there are known occurrences of bald eagle. There are many documented occurrences of both of these species around Bradley. Development of the Bradley rural center, in particular, will likely result in the removal of San Joaquin kit fox habitat.

Pleyto

Pleyto is located southeast of Lockwood in an agricultural valley along Jolon Road. A small amount of the Pleyto Rural Center is currently developed and vegetation includes annual grassland and baccharis scrub.

Pine Canyon

Pine Canyon is located west of King City where Pine Canyon opens out of the Santa Lucia Mountains into the southern Salinas Valley. This Rural Center includes upland hills and the valley floor. Natural areas in Pine Canyon Rural Center include oak woodland, oak savanna, scrub, mixed conifer, and riparian/wetland. Development of Pine Canyon may have significant impacts on sensitive communities including mixed conifer, oak savannah, oak woodland and riparian/wetland areas. Additionally, the upland portion of Pine Canyon Rural Center has been identified as potential denning and foraging habitat for the San Joaquin kit fox, based on habitat conditions and historical observation of kit foxes in the region (Bryan Mori Biological Consulting Services 2000). Although kit foxes are not documented on the upland portion, development of this portion of the Rural Center could result in loss of kit fox habitat and incidental mortalities. Since kit fox is a federal endangered and state threatened species, these impacts would be significant.

River Road

River Road is located southwest of Salinas and includes the following habitats: mixed conifer forest, oak savannah, oak woodland and riparian/wetland. The current parcel lines indicate that most of the remaining natural habitat is contained within a small number of large parcels. However, if these parcels are developed, the potential impacts would be significant and require mitigation.

Affordable Housing Overlay Districts

Development of AHOs could impact CEQA-defined special-status species, sensitive natural communities, wildlife corridors and wildlife movement, and protected trees.

Using the landcover mapping described above and shown in Table 4.9-2 and aerial photographs, these AHO areas contain the following potential biological resources (this is only a general overview and is not based on any site-specific inventory):

- The Mid-Valley AHO is approximately 13 acres in size excluding portions of properties located within the floodplain. It is mostly developed land (residential and commercial development) with some areas of agriculture, a limited (~1 acre) area of annual grassland. The primary biological resource of concern would be the Carmel River which located adjacent to, but not on the AHO district, and a possible drainage on the east side of the district.
- The Highway 68 AHO near the Monterey Airport is mostly undeveloped and includes 58 acres of coastal prairie, 12 acres of oak woodland, and small areas of annual grassland and previously disturbed areas. The oak woodland areas may also contain areas of native Monterey pine forest.
- Highway 68/Reservation Road AHO is mostly agricultural with about 6 acres of annual grassland and one acre of maritime chaparral. An apparent tributary to the Salinas River is located adjacent to the AHO district.

Unincorporated Areas outside Focused Development Areas

Undeveloped lots exist throughout the county in rural and agricultural lands. The Land Use Element allows development of lots of record, but requires establishment of a Subdivision Evaluation System that includes criteria for resource management.

These undeveloped lots may support native and often sensitive natural communities such as wetlands, oak woodland types, native grasslands, or redwood forests. Because of the abundance of native plant communities in rural Monterey County, there is potential to cause significant impacts, specifically due to:

- loss or degradation of sensitive special-status communities; and
- loss of CEQA-defined special-status species that depend on and inhabit these communities;

- effects of habitat fragmentation; and
- introduction of non-native pest plants and/or animals.

Agricultural Winery Corridors

The proposed Agricultural Winery Corridor Plan (ACWP) is designed to facilitate the establishment of up to 40 new artisan and 10 new full-scale wineries along three corridors in the central and southern Salinas Valley and the San Antonio Valley. These corridors overlap with three of the 2007 General Plan three Planning Areas (Toro, Central Salinas Valley, and South County).

The ACWP shall be developed to encourage development of the wine industry within the designated corridors. Approximately 60 percent of the winery corridors are currently already in agricultural development.

Natural communities in the corridors include annual grassland, Baccharis scrub, Gabilan scrub, mixed conifer, oak woodland, oak savanna, grassland, and riparian/wetland areas. Wine industry development may intersect sensitive biological resources. In addition, there are known rare plant occurrences documented in the CNDDB for the area around Jolon Road and there may be undocumented CEQA-defined special-status plant species in other locations. There are also several documented occurrences of CEQA-defined special-status wildlife, including San Joaquin kit fox and California tiger salamander and extensive potential habitat for these and other CEQA-defined special-status species.

Implementation of the ACWP will affect wildlife corridors to some extent under the presumption that a large scale winery would include result in expansion of viticulture in the adjacent area to supply the facility. Vineyards often are surrounded by fencing that is impermeable to wildlife, even for species that are willing to cross through vineyards - which many species are not. In addition, the increase in population and visitor numbers may impact the ability of wildlife to inhabit or move through these areas. However, the ACWP envisions that development of wineries will be geographically distributed throughout corridors, rather than concentrated in limited zones.

Increased vineyards could also involve the use of pesticides and increased soil erosion, depending on agricultural practices. Runoff containing pesticide residues or sediment could affect aquatic CEQA-defined special-status species in downstream areas. Water quality impacts of the 2007 General Plan are discussed in greater detail in Section 4.3, Water Resources.

Open Space

Increase in population growth in the County is likely to increase recreational demands on areas of recreational open space such as the County's Regional Parks, State Beaches and Parks, and lands held by the Monterey Peninsula Regional Parks District lands and private trusts and conservancies. Such increased demand on use of open space areas is distinct from the recreational demands that are met by urban or community parks. The increased use of open

space areas may result in impacts to biological resources in these areas. The open space lands contain sensitive and non-sensitive natural communities and are known or potential habitat for CEQA-defined special-status plant and animal species. The open space also often has valuable function as habitat corridors for wildlife species. Potential impacts of open space recreation use could include loss or degradation of sensitive communities (including wetlands), loss or degradation of CEQA-defined special-status species' habitat or populations, interference with wildlife movement, introduction of exotic invasive plant species, and/or interference with the use of native wildlife nursery sites.

Agriculture

Based on trends in agricultural employment (AMBAG 2004; AMBAG 2008), no net expansion in overall agricultural acreage is projected for 2030 as virtually no increase in agricultural employment is forecast by AMBAG to 2030 for the Monterey County in the most recent (2008) and the immediately prior (2004) economic forecasts.

Although no net expansion of agricultural acreage is forecast, there will still be expansion of agriculture onto natural lands due to the loss or agricultural lands to urban use and likely also due to expansion of wine growing on slopes of the Salinas Valley and other locations in the County.

The dominant vegetation community converted in the last decade has been annual grassland (over 80%) with far smaller conversions of oak woodland, riparian/wetland/marsh areas, coastal prairie, bacharis and gabiland scrub, mixed conifer and other community types.

Analysis of GIS data for current vineyard acreages provided by the Monterey County Vintner's Association (Monterey County Vintner's Association 2008) applied as an overlay to the habitat overlays created to analyze conversions indicates that nearly one third (~4,000 acres) of the total 1982 to 2006 habitat to agricultural conversions (~12,000 acres) was due to vineyard expansion. Of this 4,000 acres, approximately 700 acres were converted to vineyard between 1982 and 1996 and the remainder of 3,300 acres were converted between 1996 and 2006, which represents approximately 40 percent of overall conversion acreage (8,200 acres). Spatial analysis of the vineyard development indicated that most of the recent vineyard expansion is at the valley edges and upslope.

As shown in Exhibits 4.9.6, 4.9.7, and 4.9.8, while there are scattered conversions of habitat to agriculture east and west of Prunedale and along the Salinas River north of Fort Ord, the dominant locales of recent conversions are along the eastern and western slope of the Salinas Valley. It is expected that these slopes of the Salinas Valley along with the slopes of tributary valleys to the Salinas Valley will be the likely focus of future conversions of habitat to agriculture.

Using historic trends as a proxy for future conversions, Table 4.9-8 estimates the amount of habitat that might be converted by 2030 and at buildout.

As noted above for vineyards, expansion of agriculture into new areas could also involve the use of pesticides and increased soil erosion, depending on agricultural practices which could affect aquatic CEQA-defined special-status species in downstream areas. Water quality impacts of the 2007 General Plan are discussed in greater detail in Section 4.3, Water Resources.

Table 4.9-8. Monterey County Agricultural Habitat Conversions, 2030 and Buildout (Includes Cities and Coastal Areas)

Conversion Type	Acres Converted 1982–2006	Average Annual 1982–2006	Estimated Acres converted by 2030	Estimated Acres converted by Buildout
Habitat to Farmland	**11,185**	**447**	**9,843**	**37,582**
Annual Grassland	8,564	343	7,536	28,775
Oak Woodland	653	26	575	2,194
Riparian/Wetland	641	26	564	2,154
Coastal Prairie	428	17	377	1,438
Mixed Conifer	388	16	341	1,304
Baccharis Scrub	269	11	237	904
Gabilan Scrub	93	4	82	312
Oak Savanna	49	2	43	165
Saltwater Marsh	38	2	33	128
Baccharis Chaparral	33	1	29	111
Freshwater Marsh	21	1	18	71
Maritime Chaparral	8	0	7	27

Methodology: See Table 4.9-6. Forecast for 2030 and buildout based on 1982 to 2006 averages.

4.9.5.4 Impact Analysis

Impacts on CEQA-defined Special-Status species

Impact BIO-1: Potential Adverse Impact on CEQA-defined special-status species (Less than Significant with Mitigation through 2030 Planning Horizon and Significant and Unavoidable with Mitigation at Buildout)

2030 Planning Horizon

Impact of Development with Policies

Land use and development consistent with the 2007 General Plan would result in adverse impacts on CEQA-defined special-status species in Monterey County, particularly those in or near areas that are contemplated for future urban uses. Impacts on CEQA-defined special-status species would include direct loss of individuals or localized populations, elimination or degradation of habitat, and isolation of subpopulations due to habitat fragmentation. Conversion of existing natural habitat to urban development, roadways, and other infrastructure improvements could result in the elimination of populations of CEQA-defined special-status species where present within the limits of proposed grading and development.

Routine and ongoing agricultural activity conducted within its current footprint would not result in new conversions of natural habitat. Agricultural activity is required to comply with the Agricultural Waiver Program of the RWQCB which addresses runoff and downstream water quality that could otherwise have an indirect effect on aquatic resources.

The installation of new vineyards, row crops, and other actively managed agricultural uses (including routine and ongoing agriculture), mining extraction, and other activities could also result in the elimination of essential habitat for CEQA-defined special-status species. Even if the sensitive habitat is deliberately avoided at the project level, new development and intensively managed land practices would result in fragmentation of the existing habitat and leave the CEQA-defined special-status species population at risk of extirpation (local extinction). The exact amount of habitat conversion due to agricultural expansion onto uncultivated lands is not known. Based on recent trends from 1982 to 2006 when approximately 450 acres of habitat were converted each year on average, if this trend continued to 2030, then approximately 9,850 acres of habitat would be converted across the County.

Indirect impacts would include disruption of critical functions affecting reproductive success; degradation of habitat quality to such an extent that occupied habitat is no longer suitable for individual survival, and other influences. Indirect impacts to CEQA-defined special-status species could also occur due to increases in stormwater runoff, erosion and downstream sedimentation, and use of pesticides for agriculture and landscaping.

CEQA-Defined Special-Status Plant Species

Development associated with the 2007 General Plan would result in the direct loss or indirect disturbance of CEQA-defined special-status plant species that are known to grow or that could grow in impacted areas. Impacts on CEQA-defined special-status plant species would result in a substantial reduction in local population size, lowered reproductive success, or habitat fragmentation.

CEQA-Defined Special-Status Wildlife Species

Development under the 2007 General Plan will result in the direct loss or indirect disturbance of CEQA-defined special-status wildlife species or their habitats that are known to occur, or have potential to occur, in the plan area. Impacts on CEQA-defined special-status wildlife species or their habitat would result in a substantial reduction in local population size, lowered reproductive success, or habitat fragmentation. Significant impacts on CEQA-defined special-status wildlife species associated with general plan implementation include, but are not limited to the following: mortality from movement of construction equipment and vehicles; loss of breeding, foraging and refuge habitat from removal of woodland/forest habitat, filling of aquatic habitats and removal of riparian vegetation; and loss of migration corridors from construction of buildings and roadways.

CEQA-Defined Special-Status Fish Species

In some cases development under the general plan would adversely affect CEQA-defined special-status fish species. Impacts on aquatic systems would result from an increase in sediment and/or contaminant input, diversion of water flow, and removal of riparian vegetation. Construction and grading including urban development and conversion of previously uncultivated slopes adjacent to waterways would disturb soils and cause sediment to be transported into and through the channel, which would result in temporary increases in turbidity and sedimentation downstream of construction sites. This would affect food supply and feeding opportunities.

Fuel and concrete could spill into the waterway when construction occurs adjacent to riverine habitat. Various contaminants, such as fuel oils, grease, and other petroleum products used in construction activities, could be introduced into the system either directly or through surface runoff. Contaminants may be lethal or sublethally toxic to fish and other aquatic organisms.

Removal of riparian vegetation would weaken the streambank by loosening the soil, thus increasing the bank's susceptibility to erosion. Alteration of fish habitat would occur if the channel bed and banks were disturbed (e.g., if riprap were placed there) or if sites that have been disturbed mechanically were further disturbed by high-flow events before they are stabilized. Riparian vegetation provides cover for juvenile rearing, shade to reduce temperatures, and food input (i.e., terrestrial invertebrates), and is considered a very valuable component of fish habitat.

2007 General Plan Policies

Land Use Element

The 2007 General Plan Land Use Element emphasizes compact city-centered growth and discourages the encroachment of urban uses into undeveloped areas.

Land Use Element Policies LU-1.1 through LU-1.9 promote appropriate and orderly growth and development while protecting desirable existing land uses. Policy LU-1.1 requires that the type, location, timing, and intensity of growth in the unincorporated area be managed. Policy LU-1.2 discourages premature and scattered development. Policy LU-1.3 stipulates that balanced development of the County be assured through designating adequate land for a range of future land uses. Policy LU-1.4 limits growth to areas where an adequate level of services and facilities exists or can be assured concurrent with growth and development. Policy LU-1.5 requires that land uses be designated to achieve compatibility with adjacent uses. Policy LU-1.6 calls for the establishment of standards and procedures to assure proper levels of review of development siting, design, and landscaping. Policy LU-1.7 allows for clustering of residential development to those portions of the property most suitable for development. Policy LU-1.8 encourages voluntary reduction or limitation of development potential in the rural and agricultural areas through dedication of scenic or conservation easements, transfer of development rights and other appropriate techniques. Policy LU-1.9 prioritizes infill of vacant non-agricultural lands in existing developed areas and new development within designated urban service areas are a priority.

Open Space and Conservation Element

Policy OS-3.5 establishes permit requirements for development relative to steep slopes. The policy prohibits development on slopes greater than 30% with certain exceptions, provides for a discretionary development permit on slopes greater than 25%, or greater than 15% in highly erodible soils and establishes an agricultural permit process for conversion of previously uncultivated lands greater than 25%. These permit processes will be designed to require that an erosion control plan be developed and implemented that addresses slope stabilization, and drainage and flood hazards. There are specialized criteria for projects that are subject to a State Agricultural Waiver Program that includes biological resource and water quality.

Open Space and Conservation Element Policies OS-4.1 through OS-4.3 establish measures to protect coastal, marine, and river resources. Policy OS-4.1 stipulates that lFederal and state designated native

marine fresh water plant and animal species be protected. Policy OS-4.2 requires that direct and indirect discharges of harmful substances into rivers or streams not exceed state or federal standards. Policy OS-4.3 stipulates that fresh water marshes, wetlands, sloughs, river and stream mouth areas, as well as all waterways that drain and have impact on state designated Areas of Special Biological Significance be protected, maintained and preserved in accordance with state and federal water quality regulations.

Open Space and Conservation Element Policies OS-5.1 through OS-5.18 establish measures to protect biological resources and natural habitats.

Policy OS-5.1 and 5.2 establishes that the extent and acreages of critical habitat and suitable habitat for listed species shall be inventoried and their conservation promoted. Policy OS-5.3 stipulates that development be carefully planned to provide for the conservation and maintenance of plant and animal communities or species listed by state or federal agencies for protection. Policy OS-5.4 encourages the avoidance of impacts to state and federally protected plant and wildlife species through the use of clustering lots to avoid critical areas, dedications of permanent conservation easements, and other appropriate means. Policy OS-5.5 encourages landowners and developers to preserve the integrity of existing terrain and native vegetation in visually sensitive areas such as hillsides, ridges, and watershed but exempts Routine and Ongoing Agricultural from this policy.

Policy OS-5.6 stipulates that native and native compatible species, especially drought resistant species, be utilized in fulfilling landscaping requirements. Policy OS-5.7 requires that proposals for harvesting commercially valuable timber (as defined by the California Department of Forestry) must include a Timber Harvest Plan, consider opportunities for concurrent public recreation, be approved by the California Department of Forestry, complete environmental review, and comply with the resource protection goals and policies the General Plan. Policy OS-5.8 allows small-scale milling operations, subject to compatibility with resource protection policies and the peace of adjacent residences. Policy OS-5.9 establishes that each Area Plan set forth tree removal permit requirements. Policy OS-5.10 sets forth criteria for the County tree removal ordinance.

Policy OS-5.11 promotes conservation of large, continuous expanses of native trees and vegetation as the most suitable habitat for maintaining abundant and diverse wildlife. Policy OS-5.12 requires consultation with the CDFG to protect Areas of Special Biological Significance for state and federally listed species. Policy OS-5.13

encourages efforts to obtain and preserve natural areas of particular biologic, scientific, or educational interest and restrict incompatible uses from encroaching upon them. Policy OS-5.14 requires that policies and procedures that encourage exclusion and control or eradication of invasive exotic plants and animals be established. Policy OS-5.15 sets forth a fee waiver program for environmental restoration projects.

Policy OS-5.16 requires biological surveys and implementation of mitigation measures for development that would potentially disturbed listed species or its critical habitat. Policy OS-5.17 requires the County to develop a program to mitigate the loss of critical habitat. Policy OS-5.18 requires all applicable federal state permitting requirements to be met before disturbing any federal or state jurisdictional areas.

Public Services Element

Public Service Element Policies PS-11.11 and 11.12 establish measures to minimize impacts to biological resources within recreational areas and open space areas. These policies require emphasis on protection and best management practices of environmental resources in County parks and open space facilities. Open spaces that are rich in biological resources are to be managed for passive enjoyment of these resources.

Area Plan Policies

Cachagua Area Plan

Policy CACH-1.4 stipulates that new development adjacent to the Ventana Wilderness does not impact the purpose of the wilderness areas. Policy CACH-3.3 requires that the alteration of hillsides and natural landforms be minimized through sensitive siting and design of all improvements and maximum feasible restoration including botanically appropriate landscaping. Policy CACH-3.5 stipulates mitigation for mining, commercial timber, or resource production impacts on flora and fauna. Policy CACH-3.6 promotes cooperation with the United States Forest Service and private property owners to ensure that Santa Lucia fir are protected. Policy CACH-3.7 protects riparian vegetation and threatened fish species and along the Carmel and Arroyo Seco Rivers. It also reduces encroachment from new development on the main channels of the Carmel and Arroyo Seco Rivers.

Carmel Valley Master Plan

Policy CV-3.4 requires that the alteration of hillsides and natural landforms be minimized through sensitive siting and design Policy

CV-3.7 stipulates that specific areas of biological significance be identified and preserved as open space. Policy CV-3.8 requires that development be sited to protect riparian vegetation, minimize erosion, and preserve the visual aspects of the Carmel River. It also requires that riparian vegetation be re-established in areas where it no longer exists. Policy CV-3.9 stipulates that willow-cover along the banks and bed of the Carmel River be maintained in a natural state for erosion control. Policy CV-3.10 requires that predominant landscaping and erosion control material consist of plants native to the valley and requires landscape and erosion plans to incorporate an approach to controlling invasive non-native plant species. Policy CV-3.11 discourages removal of healthy, native oak and madrone trees and requires a permit for the removal of any of these trees with a trunk diameter in excess of six inches at breast height with replacement at 1:1 ratio. Policy CV-3.12 encourages the designation of open space in areas of diverse habitats and ecologically important zones. Policy CV-4.1 stipulates that reduce potential erosion, the amount of land cleared at any one time be limited to the area that can be developed during one construction season, motor vehicles be prohibited on the banks or in the bed of the Carmel River, and native vegetation must be maintained in areas with certain slopes or erodible soils. Policy CV-5.3 requires that new development incorporate water reclamation, conservation features to maintain the ecological environment. Policy CV-6.2 discourages gardens, orchards, row crops, grazing animals, farm equipment, and buildings on slopes of 25 percent or greater or where it would require the conversion or extensive removal of existing native vegetation.

Central Salinas Valley Area Plan

Policy CVS-5.1 prohibits new development from encroaching on the main channels of the Arroyo Seco River and the Salinas River in order to preserve riparian habitats. Policy CVS-5.2 stipulates that new recreational uses avoid encroaching on the main channels of the Arroyo Seco River and the Salinas River in order to preserve riparian habitats.

Fort Ord Master Plan

Recreation Policy C-2 requires review of all proposed recreational use for compatibility with an adopted Habitat Conservation Plan to insure long-term protection of sensitive resources.

Biological Resource Policies A-1 through A-9 promote the preservation and protection of the sensitive species and habitats addressed in the installation-wide Habitat Management Plan (HMP) for Fort Ord in conformance with its resource conservation and habitat management requirements and with the guidance provided in the HMP Implementing/Management Agreement.

Biological Resource Policies B-1 through B-3 require the County to preserve and protect sensitive species and habitats not addressed in the HMP. Policy B-1 requires the County to strive to avoid or minimize loss of sensitive species listed in Fort Ord Reuse Plan Table 4.4-2 that are known or expected to occur in the areas planned for development. Policy B-2 requires County coordination with the Cities of Seaside and Marina, California State University, FORA and other interested entities in the designation of an oak woodland conservation area connecting the open space lands of the habitat management areas. Policy B-3 requires the County to preserve, enhance, restore and protect vernal ponds, riparian corridors and other wetland areas.

Biological Resource Policies C-1 through C-3 require the County to avoid or minimize disturbance to natural land features and habitats through sensitive planning, sitting and design as new developed is proposed in undeveloped lands.

Biological Resource Policies D-1 through D-2 encourage construction worker biological resource training and environmental education and outreach. Biological Resource Policies E-1 and E-2 require the County to address the interim management of natural land areas for which the County is designated as the responsible party and monitor activities that affect all undeveloped natural lands.

Greater Monterey Peninsula Area Plan

Policy GMP-3.4 stipulates that plant materials be used to integrate human-made and natural environments. Policy GMP-3.5 promotes the preservation of redwood forest habitat and wetlands as open space through the use of conservation easements or fee acquisition. Policy GMP-3.6 requires that a 100-foot setback from all wetlands. . Policy GMP-3.7 promotes cooperative efforts between County and cities to conserve wetlands. Policy GMP-3.8 encourages the designation of open space in areas of diverse habitats and ecologically important zones. Policy GMP-3.9 promotes the preservation of critical habitat areas as open space. Policy GMP-3.10 encourages the County to work with state and federal agencies to ensure that oil transport activities near the Monterey County coast include adequate procedures to protect marine bird and mammal (particularly sea otter) populations and to clean up oil spills. Policy GMP-4.1 promotes the preservation of redwood forest and chaparral habitat on land exceeding 25 percent slope.

Greater Salinas Area Plan

Policy 1.1 requires that new development in the Butterfly Village Special Treatment Area preserve certain specified sensitive habitat areas. Policy GS-1.5 requires that development of commercial land

uses designated near Highway 68 and the Salinas River be allowed only if it protects and, where feasible, enhances the riparian habitat along the river. Policy GS-1.8 allows that the land near the town of Spreckels designated as industrial if it is designed to protect, and where feasible, enhance the riparian corridor along the Salinas River. Policy GS-3.1 requires that all vegetation on land exceeding 25 percent slope, particularly chaparral and broad leaf evergreen, remain undisturbed. Policy GS-3.2 encourages the use of native plant materials to integrate the human-made environment with the natural environment. Policy GS-5.1 requires that Gabilan Creek be maintained in a natural riparian state.

North County Plan

Policy NC-3.3 prioritizes conservation of North County's native vegetation in order to retain the viability of threatened or limited vegetative communities and animal habitats and preserve rare, endangered, and endemic plants for scientific study. Policy NC-3.4 discourages removal of healthy, native oak and madrone trees and requires a permit for the removal of any of these trees with a trunk diameter in excess of six inches at breast height. Trees removed must be replaced at a 1:1 ratio using nursery-grown trees of the same species that are a minimum of one gallon in size. Policy NC-3.5 promotes the preservation of critical habitat areas as open space.

South County Area Plan

Policy SC-1.2 encourages cluster development in all areas where development is permitted in order to preserve open space. Policy SC-5.2 encourages cooperative soil conservation, water quality protection, and resource restoration programs within watershed basins shared with neighboring counties. Policy SC-5.3 prohibits new development from encroaching on the main channels and associated floodways of the Nacimiento, San Antonio, and Salinas Rivers.

Toro Area Plan

Policy T-3.7 discourages the removal of healthy trees with diameters in excess of eight inches. Policy T-4.1 prohibits land uses and practices that contribute to significant increases of siltation and flooding of Toro Creek.

AWCP

Section 3 of the Wine Corridor Plan provides limits on the number of wineries in each segment. Section 3.4 (Permitted Uses) and 3.5 (Development Standards) is intended to reduce the footprint of a winery complex.

Section 4 of the Agricultural Element includes policies that support the development of a fully integrated wine industry and encourage development along the designated corridor. Policy AG-4.2 designates segments of the corridor to achieve a balance between wine grape production and wine processing capacity.

Significance Determination

The definition of "special status species" in the 2007 General Plan (Glossary, p. 13) is limited to those listed under the ESA and the CESA and "critical habitat" is defined as areas designated under the ESA. 2007 General Plan Policies OS-5.1,-5.2,-5.3, -5.4, -5.12, -5.16,-5.17, and -5.18 require avoidance, minimization, and compensation of impacts to listed "special-status species". However, there is a landscape-level concern related to new discretionary development in the Salinas Valley that may occur in potential kit fox habitat that is not fully addressed by currently proposed General Plan policies. There is no specific mechanism for mitigating potential impacts to this species from conversion of its habitat due to discretionary development.

Given the General Plan definition of "special-status policies", the aforementioned policies in the 2007 General Plan for biological resources in the Open Space and Public Services Elements concerning "special status species" do not provide for the assessment or mitigation of impacts to species that are not listed under the FESA or CESA. While there are a number of Area Plan policies that provide for protection or mitigation of impacts to certain CEQA-defined special-status species, and the policies for the protection for habitats of listed species will produce co-benefits for non-listed (but rare) other species, the 2007 General Plan does not provide a systematic approach to address impacts of development to CEQA-defined special-status species as described above in this document.

This impact is considered potentially significant because development under the 2007 General Plan would result in reduced numbers, range, and habitat quantity and quality for plant, wildlife, and fish species that are considered "rare, threatened, or endangered" as defined by CEQA guidelines Section 15380 but which are not protected by the federal or state endangered species acts. The following mitigation measures are recommended for implementation by the County.

Mitigation Measures

CEQA-Defined Special-Status Species—Program Level

Mitigation Measure BIO-1.1: Baseline Inventory of Landcover, CEQA-Defined Special Status Species Habitat, Sensitive Natural Communities, Riparian Habitat, and Wetlands in Monterey County

The County shall expand the inventory of listed species suitable and critical habitat required by Policy OS 5.1 and OS-5.2 to include an

updated vegetation land cover map, identification of suitable habitat for CEQA-defined special status species (as defined in this document), sensitive natural communities, and riparian habitat in Monterey County. The inventory shall include wetlands inventory as feasible based on existing data sources and aerial interpretation. This inventory should be updated at a minimum of ten-year intervals. The inventory can exclude areas that are not under the control of Monterey County (e.g., cities, state and federal lands).

Mitigation Measure BIO-1.2: Salinas Valley Conservation Plan to preserve habitat for the San Joaquin kit fox in the Salinas Valley

The County shall, in concert with the USFWS, CDFG, cities in the Salinas Valley, and stakeholders develop a conservation plan for the Salinas Valley to provide for the preservation of adequate habitat to sustain the San Joaquin kit fox population. The general focus area of the plan shall be the Salinas Valley south of the community of Chualar. The Conservation Plan, at a minimum, shall be adopted by Monterey County and shall be applied to all discretionary approvals (and their associated CEQA documents) with potential to affect the San Joaquin kit fox within the conservation plan area. The County shall complete the conservation plan within 4 years of General Plan adoption. The conservation plan funding program shall be developed and shall include a mitigation fee program for which development projects will be assessed a fee based on a proportional basis of impact to the San Joaquin kit fox. The compensation plan shall be developed and implemented in coordination with the appropriate state or federal agency and may provide mechanisms to mitigate impacts of an individual project through one or more of the following means: identifying an agency-approved mitigation bank or other compensation site (on- or off-site); and/or preserving habitat; monitoring the compensation site; and funding the management of the compensation site.

<u>CEQA-Defined Special Status Species—Project Level</u>

Mitigation Measure BIO-1.3: Project Level Biological Survey and Avoidance, Minimization, and Compensation for Impacts to CEQA-defined Special-Status Species and Sensitive Natural communities.

The County shall require that any development project that could potentially impact a CEQA-defined special status species or sensitive natural community shall be required to conduct a biological survey of the site. If CEQA-defined special-status species or sensitive natural communities are found on the site, the project biologist shall recommend measures necessary to avoid, minimize, and/or compensate for identified impacts to CEQA-defined special-status species and sensitive natural communities. An ordinance establishing minimum standards for a biological report shall be enacted. This policy shall only apply to the following:

- Development in Focused Growth Areas (Community Areas, Rural Centers and Housing Overlays
- Development requiring a discretionary permit
- Large scale wineries in the AWCP.

Significance Conclusion

Over 80% of the development in Monterey County within the 2030 Planning Horizon will occur in areas designated for focused growth. Discretionary permits will be required for this development as well as for any large scale residential and commercial development that might occur outside of these areas (and is subject to the Subdivision Evaluation System). The subdivision Evaluation System examines subdivisions of 5 or more lots or projects of equivalent intensity. For discretionary development, implementation of the General Plan policies alone would have resulted in significant impacts to the San Joaquin kit fox and to CEQA-defined special status species. Mitigation Measure BIO-1.1 creates a biological resources inventory (including CEQA-defined special status species) that will be periodically updated. Mitigation Measure BIO-1.2 would address impacts to kit fox habitat that might occur from development. Mitigation Measure BIO-1.3 requires preparation of a biological report that includes measures to avoid impacts or minimize impacts to CEQA-defined special-status species for focused growth allowed under the General Plan, other large scale projects and projects requiring discretionary permits in the County.

These mitigation measures would address impacts from discretionary large-scale residential, commercial, public infrastructure and agricultural development. In combination with the application of Area Plan policies targeting specific CEQA-defined special-status species, impacts to special-status species (both listed and CEQA-defined) from discretionary development would be considered less than significant.

While "routine and ongoing" agricultural activities would affect CEQA-defined special-status species, these activities occur on agricultural properties that were previously converted from natural land and are already committed to crops. Thus, new habitat loss would not occur and the remaining concern is about impacts on adjacent habitat areas. Participation in the Salinas Valley Watershed Permit Coordination Program, which promotes voluntary conservation practices that protect water quality, is extensive. There were approximately 250,000 irrigated acres in Monterey County enrolled in the program as of September 2007. In addition, agriculture is subject to the RWQCB's Agricultural Waiver Program, which also concerns water quality protection. Participation in the Permit Coordination Program and compliance with the requirements of the Agricultural Waiver program would minimize indirect off-site effects of agriculture on downstream aquatic habitat that support CEQA-defined special-status species. For these reasons, the impact of "routine and ongoing agriculture", where it does not result in conversion of natural lands, is considered to be less than significant.

Legal lot development without subdivision would result in conversion of habitat, but would have highly dispersed effects on CEQA-defined special-status species and their habitat that on a landscape level is also considered less than significant.

The remaining development consists of conversion of previously uncultivated agricultural lands to new farmland. Previously uncultivated lands are those areas that have not been cultivated during the past 20 years. As shown in the pattern of historic conversion (see Exhibits 4.9.6, 4.9.7, 4.9.8, and 4.9.9), conversion of natural communities would be widely dispersed geographically throughout the ranges of CEQA-defined special-status species addressed in this document. Thus future habitat conversions are expected to dispersed and not concentrated in a way that they would substantially change overall populations of CEQA-defined special-status species. New agricultural development would be subject to the Agricultural Waiver Program concerning water quality protection, which will protect downstream aquatic species habitat that contain CEQA-defined special-status species from indirect water quality effects. For agricultural conversions on slopes greater than 25%, Policy OS-3.5 includes requirements to address water quality, erosion and biological resources, which would reduce potential impacts to CEQA-defined special-status species and their habitat. Based on the assumption that conversion of previously uncultivated lands is not anticipated to exceed the previous 25 year trend (1982 – 2006) in the County (approximately 450 acres per year), the sporadic and discontinuous pattern of crop expansion, the extensive geographic distribution of agricultural operations especially within the Salinas Valley, and the application of current regulatory requirements to address off-site water quality impacts, agricultural conversion is not considered to result in a significant impact to CEQA-defined special-status species or their habitat.

Buildout

Impact of Development with Policies

While there are profound uncertainties in predicting the impacts of buildout on CEQA-defined special-status species nearly 84 years in the future, nevertheless there will likely be further adverse effects of buildout beyond the 2030 horizon. Given the amount of potential buildout, these effects would exceed those for impacts before 2030.

Up to 2030, based on housing units, the County would have less than one-third (~28%) of the overall buildout allowed by the 2007 General Plan. It is expected that most of the growth by 2030 (perhaps 80% or more) will be within the focused development areas (Community Areas, Rural Centers, and AHOs). What this means for development between 2030 and 2092 is that the bulk of development will be in areas outside the focused development areas and will thus be far less compact, and is likely to result in more fragmentation of habitat compared to the development prior to 2030.

Furthermore, up to 2030, there will be 22 years of agricultural conversion, compared to 2092, which will have an additional 62 years of agricultural conversion of potential CEQA-defined special-status species habitat. While it is reasonable to assume that some agricultural conversion will continue in the immediate future based on current trends, and that only a portion of the lands that would be converted would include CEQA-defined special-status species habitat or impact wildlife corridors, it is highly speculative to presume that recent trends of agricultural conversion of habitat and expansion will continue as at present for 84 years in the future. Thus, the amount of agricultural conversion of CEQA-defined special-status species habitat at buildout is not estimated, but is assumed to be some level beyond 2030.

2007 General Plan and Area Plan Policies

The 2007 General Plan and Area Plan policies summarized above would apply to buildout after 2030.

Significance Determination

This impact is considered potentially significant because buildout under the 2007 General Plan would result in reduced numbers, range, and habitat quantity and quality for plant, wildlife, and fish species that are considered "rare" under CEQA as evidence by meeting the special-status species definition noted above but which are not protected by the federal or state endangered species acts. A further concern is that new threats to CEQA-defined special-status species may arise in the more distant future beyond 2030 that are not currently anticipated.

The following mitigation measures are recommended for implementation by the County.

Mitigation Measures

Mitigation Measures BIO- 1.1 through BIO-1.3 as described above.

Mitigation Measure BIO-1.4: By 2030, prepare an Update to the General Plan to identify expansion of existing focused growth areas and/or to identify new focused growth areas to reduce loss of natural habitat in Monterey County

The County shall update the County General Plan by no later than January 1, 2030 and shall consider the potential to expand focused growth areas established by the 2007 General Plan and/or the designation of new focused growth areas. The purpose of such expanded/new focused growth areas would be to reduce the loss of CEQA-defined special status species and their habitat due to continued urban growth after 2030. The new/expanded growth areas shall be designed to accommodate at least 80% of the projected residential and commercial

growth in the unincorporated County from 2030 to buildout. This update will also address expansion of agricultural operations and potential impacts to CEQA-defined special-status species.

Mitigation Measure BIO-1.5: By 2030, prepare a Comprehensive County Natural Communities Conservation Plan

The County shall complete the preparation of a NCCP for all incorporated areas in Monterey County by no later than January 1, 2030 to address all state and federal listed species and all CEQA-defined special-status species with potential to be listed up to buildout of the County. The County shall invite the participation of the incorporated cities, the federal land agencies, Caltrans and other stakeholders. The NCCP shall also cover preservation of sensitive natural communities, riparian habitat, and wetlands, and wildlife movement corridors and include mechanisms including on and off-site mitigation ratios and fee programs for mitigating impacts.

Significance Conclusion

Implementation of General Plan policies and Mitigation Measures BIO-1.1 through BIO-1.5 would reduce impacts of buildout on CEQA-defined special-status species and their habitat to a less than significant level.

However, it is impossible to know what threats CEQA-defined special-status species will face over the next 84 years. Species that are currently common today may be subject to new threats (such as invasive species or climate change) that may make them far more rare than at present and it is unknown whether there will be feasible means to address these new threats. Species that are currently rare could be subject to new threats as well, which could undermine current conservation practices and require additional measures that are not anticipated at present. Further, actions in other parts of California could affect populations of CEQA-defined special-status species that also occur in Monterey County, that could in turn affect the priority for conservation in Monterey County and require additional protection measures and conservation areas.

Given this uncertainty, it is not possible definitively conclude that impacts can be fully mitigated and thus this impact is considered significant and unavoidable.

Impacts to Natural Communities (including Riparian Habitat and Wetlands)

Impact BIO-2: Potential Adverse Effects on Sensitive Riparian Habitat, Other Sensitive Natural Communities and on Federal and State Jurisdictional Waters and Wetlands (Less Than Significant with Mitigation for 2030 Planning Horizon and Significant and Unavoidable with Mitigation for Buildout)

2030 Planning Horizon

Impact of Development with Policies

Common Natural Communities

There are several common vegetation types (habitats) within the county that may be lost as a result of development associated with the 2007 General Plan. Examples of common habitats are agricultural land, annual grassland, barren land, common chaparral and scrub communities, and eucalyptus forests. The loss of these common habitats is considered less than significant because this habitat type is not a sensitive natural community, and because similar habitat of equivalent or greater value is abundant in the region. Furthermore, loss of these common habitats alone is not expected to contribute to the destruction or deterioration of an individual, population of, or habitat for CEQA-defined special-status species. Impacts are considered less than significant. No mitigation is required.

Sensitive Natural Communities (other than Riparian Habitat)

There are several sensitive natural community types within the county that may be lost as a result of development associated with the 2007 General Plan. These are described in detail in the Environmental Setting section of this chapter and include dune scrub, marshes, native grasslands, maritime chaparral, oak woodland types, Monterey pine forests and conifer/redwood forests. The loss of these habitats is considered potentially significant because it would result in permanent loss of communities considered sensitive by DFG.

Riparian Habitat

Development associated with the 2007 General Plan would result in the removal of riparian habitat in specific locations. Additionally, development could result in long-term degradation of riparian sensitive plant communities, fragmentation or isolation of an important wildlife habitat, or disruption of natural wildlife movement corridors or important rearing habitat for juvenile steelhead. The loss or disruption of riparian habitats is a significant impact due to the value of such habitat for a wide

variety of common and CEQA-defined special-status species and for providing a wildlife movement corridor along creeks in the County.

Waters and Wetlands

Development activities associated with the 2007 General Plan would result in the loss of wetlands and waters of the United States and/or the State, including named or unnamed streams, vernal pools, salt marshes, freshwater marshes, and other types of seasonal and perennial wetland communities. Wetlands and other waters would be affected through direct removal, filling, hydrological interruption (including dewatering), alteration of bed and bank, and other construction-related activities. This impact is considered potentially significant because it would result in permanent loss of wetlands or waters of the United States and/or the State, or loss of functions or habitats associated with these wetlands or waters.

Noxious Weeds

Development associated with the 2007 General Plan could introduce noxious weeds or result in their spread into currently uninfested areas, possibly resulting in the degradation or loss of sensitive natural communities including wetlands and riparian habitats. Noxious weed plants or seeds may be dispersed via construction equipment if appropriate measures are not implemented. New development at the urban-wildland interface would also increase the potential for wildland fire. While fire is an essential part of maintaining many native vegetation communities, fires can also spread weed seed that can outcompete native vegetation during the recolonization period following fire, which can reduce the range and vigor of native vegetation communities. This impact is considered potentially significant because the introduction or spread of noxious weeds would result in a substantial reduction or elimination of species diversity or abundance.

2007 General Plan Policies

The 2007 General Plan emphasizes compact city-centered growth in and near existing urbanized areas. This land use concept is designed to preserve significant natural areas and minimize adverse biological impacts, including adverse effects on sensitive natural communities, riparian habitat and wetland areas. The 2007 General Plan also contains goals and policies that address potential adverse impacts on riparian and wetland areas from development.

Land Use Element

Land Use Element Policies LU-1.1 through LU 1.9 establish general land use concepts that emphasize city-centered growth, compatibility between adjacent land uses, and the conservation of natural areas.

These policies are summarized in detail under Impact BIO-1. Collectively, these policies promote compact urban growth in existing developed areas and discourage growth in sensitive natural communities, riparian and wetland areas where development would have the most deleterious impacts on these habitats.

Open Space and Conservation

Policies OS-3.1 -3.9 address mechanisms to reduce soil erosion, and water quality impacts through the use of BMPs, project design and permitting requirements on slopes. OS-3.7 encourages preparation and implementation of a coordinated resources management plan in watersheds of State designated impaired waterways. OS-3.9 requires the development of a Program to address potential cumulative hydrologic impacts of the conversion of hillside rangeland areas to cultivated croplands, including effects from soil erosion, increased runoff related stream stability impact and potential violation of water quality standards.

Policy OS-4.2 requires that direct and indirect discharges of harmful substances into rivers or streams not exceed state or federal standards. Policy OS-4.3 stipulates that fresh water marshes, wetlands, sloughs, river and stream mouth areas, as well as all waterways that drain and have impact on state designated Areas of Special Biological Significance be protected, maintained and preserved in accordance with state and federal water quality regulations.

Policy OS-5.5 provides encouragement to preserve the integrity of existing terrain and native vegetation in visually sensitive areas such as hillsides, ridges, and watersheds. Policy OS-5.6 requires the use of native and native compatible species, especially drought resistant species, shall be utilized in fulfilling landscaping requirements. Policy OS-5.11 promotes conservation of large, continuous expanses of native trees and vegetation as the most suitable habitat for maintaining abundant and diverse wildlife. Policy OS-5.12 requires consultation with the CDFG to protect Areas of Special Biological Significance for state and federally listed species. Policy OS-5.13 encourages efforts to obtain and preserve natural areas of particular biologic, scientific, or educational interest. Policy OS-5.14 requires establishment of policies and procedures that encourage exclusion and control or eradication of invasive exotic plants and pests. Policy OS-5.15 requires establishment of a fee waiver program for environmental restoration projects.

Public Services Element

PS-2.8 requires that all projects be designed to minimize runoff, recharge groundwater and protect water quality. Public Service

Element Policies PS-11.11 and 11.12 establish measures to minimize impacts to biological resources within recreational areas and open space areas. These policies require emphasis on protection and best management practices of environmental resources in County parks and open space facilities. Open spaces that are rich in biological resources are to be managed for passive enjoyment of these resources.

Agricultural Element

Policy AG-5.1 of the Agricultural Element supports programs that reduce soil erosion. Policy AG-5.2 promotes policies and programs to protect and enhance surface water and groundwater resources.

Area Plan Policies

Cachagua Area Plan

Policy CACH-3.3 requires that the alteration of hillsides and natural landforms be minimized through sensitive siting and design of all improvements and maximum feasible restoration including botanically appropriate landscaping. Policy CACH-3.6 promotes cooperation with the United States Forest Service and private property owners to ensure that Santa Lucia fir are protected. Policy CACH-3.7 protects riparian vegetation and threatened fish species along the Carmel and Arroyo Seco Rivers. It also reduces encroachment from new development on the main channels of the Carmel and Arroyo Seco Rivers.

Carmel Valley Master Plan

Policy CV-3.4 requires that the alteration of hillsides and natural landforms be minimized through sensitive siting and design of all improvements and maximum feasible restoration including botanically appropriate landscaping. Policy CV-3.7 stipulates that areas of biological significance, including the redwood community of Robinson Canyon, the riparian community and redwood community of Garzas Creek, wetlands, marshes, seeps, springs, native bunchgrass stands, natural meadows, cliffs, rock outcrops, unusual geologic substrates, ridgelines, and wildlife migration routes be identified and preserved as open space. Policy CV-3.8 requires that development be sited to protect riparian vegetation, minimize erosion, and preserve the visual aspects of the Carmel River. Policy CV-3.9 stipulates that willow-cover along the banks and bed of the Carmel River be maintained in a natural state for erosion control and any alteration to the river be only allowed by permit from the Monterey Peninsula Water Management District or Monterey County. Policy CV-3.10 requires that predominant landscaping and erosion control material consist of plants native to the valley. Policy

CV-3.12 encourages the designation of open space in areas of diverse habitats and ecologically important zones. Policy CV-4.1 stipulates that reduce potential erosion, the amount of land cleared at any one time be limited to the area that can be developed during one construction season, motor vehicles be prohibited on the banks or in the bed of the Carmel River, and native vegetation must be maintained in areas with certain slopes or erodible soils. Policy CV-5.3 requires that new development incorporate water reclamation, conservation features to maintain the ecological environment. Policy CV-6.2 discourages gardens, orchards, row crops, grazing animals, farm equipment, and buildings on slopes of 25 percent or greater or where it would require the conversion or extensive removal of existing native vegetation.

Central Salinas Valley Area Plan

Policy CVS-5.1 prohibits new development from encroaching on the main channels of the Arroyo Seco River and the Salinas River in order to preserve riparian habitats, flood flow capacity, and groundwater recharge. Policy CVS-5.2 stipulates that new recreational uses avoid encroaching on the main channels and floodways of the Arroyo Seco River and the Salinas River in order to preserve riparian habitats. The policy also prohibits development that would create level of runoff that would cause erosion or adversely affect surface water resources.

Fort Ord Master Plan

Recreation Policy C-1 requires the County to establish an oak tree protection program to ensure conservation of existing coastal live oak woodlands in large corridors within a comprehensive open space system. Recreation Policy C-2 requires review of all proposed recreational use for compatibility with an adopted Habitat Conservation Plan to insure long-term protection of sensitive resources.

Biological Resource Policies A-1 through A-9 promote the preservation and protection of the sensitive species and habitats addressed in the installation-wide Habitat Management Plan (HMP). Biological Resource Policies B-1 through B-3 require the County to preserve and protect sensitive species and habitats not addressed in the HMP. Biological Resource Policies C-1 through C-3 require the County to avoid or minimize disturbance to natural land features and habitats through sensitive planning, sitting and design as new developed is proposed in undeveloped lands. Biological Resource Policies D-1 through D-2 encourage construction worker biological resource training and environmental education and outreach. Biological Resource Policies E-1 and E-2 require the County to address the interim management of natural land areas for which the

County is designated as the responsible party and monitor activities that affect all undeveloped natural lands.

Greater Monterey Peninsula Area Plan

Policy GMP-3.4 stipulates that plant materials be used to integrate human-made and natural environments. Policy GMP-3.5 promotes the preservation of redwood forest habitat and wetlands as open space through the use of conservation easements or fee acquisition. Policy GMP-3.6 requires that a 100-foot setback from all wetlands, as identified by a County-approved biologist, be provided and maintained in open space use. Policy GMP-3.7 promotes cooperative efforts between County and cities to conserve wetlands. Policy GMP-3.8 encourages the designation of open space in areas of diverse habitats and ecologically important zones. Policy GMP-4.1 promotes the preservation of redwood forest and chaparral habitat on land exceeding 25 percent slope.

Greater Salinas Area Plan

Policy 1.1 requires that new development in the Butterfly Village Special Treatment Area preserve certain specified sensitive habitat areas. Policy GS-1.5 requires that development of commercial land uses designated near Highway 68 and the Salinas River be allowed only if it protects and, where feasible, enhances the riparian habitat along the river. Policy GS-1.8 allows that the land near the town of Spreckels designated as industrial if it is designed to protect, and where feasible, enhance the riparian corridor along the Salinas River. Policy GS-3.1 requires that all vegetation on land exceeding 25 percent slope, particularly chaparral and broad leaf evergreen, remain undisturbed. Policy GS-3.2 encourages the use of native plant materials to integrate the human-made environment with the natural environment. Policy GS-5.1 requires that Gabilan Creek be maintained in a natural riparian state.

North County Area Plan

Policy NC-3.3 prioritizes conservation of North County's native vegetation in order to retain the viability of threatened or limited vegetative communities and animal habitats and preserve rare, endangered, and endemic plants for scientific study.

South County Area Plan

Policy SC-1.2 encourages cluster development in all areas where development is permitted in order to preserve open space. Policy SC-5.3 prohibits new development from encroaching on the main channels and associated floodways of the Nacimiento, San Antonio, and Salinas Rivers.

Toro Area Plan

Policy T-4.1 prohibits land uses and practices that contribute to significant increases of siltation and flooding of Toro Creek.

Significance Determination

The policies in the 2007 General Plan Open Space Element concerning sensitive natural communities do not always provide for the assessment or mitigation of impacts to all sensitive natural communities. However, there are there a numerous Area Plan policies provide for protection or mitigation of impacts to a number of important sensitive natural communities that are unique to these geographic areas. In addition, policies for the protection for habitats of listed species will produce co-benefits for some natural communities. The 2007 General Plan does not provide a systematic approach to address impacts of development to all sensitive natural communities as defined above in this document. This impact is considered potentially significant because development under the 2007 General Plan would result in reduced range, quality and extent of sensitive natural communities. Further, the 2007 General Plan policies do not sufficiently guide the implementation of future development so as to ensure avoidance, minimization, and/or compensation for impacts to sensitive natural communities. Thus impacts to sensitive natural communities are considered significant.

The 2007 General Plan and some of the Area Plans contain policies concerning the protection of riparian habitat and wetlands. For example, Policies OS-4.2 and OS-4.3 address marine and wetland resources. The Cachagua Area Plan, the Carmel Valley Master Plan, the Greater Monterey Peninsula Area Plan and the South County Area Plan contain specific protections for riparian habitat (or for riparian habitat along key rivers) and the Carmel Valley Master Plan and the Greater Monterey Peninsula Area Plan contain specific protections for wetlands. However, there is no specific protection framework for riparian habitat and in the General Plan. Thus, impacts to riparian habitat are considered significant. Additionally, development on slopes adjacent to riparian habitats is not specifically protected. Nor are there criteria for development adjacent to streams and riparian areas.

Impacts to wetlands as designated under the Clean Water Act Section 404, and the state Porter-Cologne Water Quality Control Act and State designated Areas of Special Biological Significance are protected by proposed 2007 General Plan policies in Section OS-4 and Area Plans.

Impacts that could occur as a result of displacement impacts from the spread of noxious weeds are addressed by the 2007 General Plan Policy OS 5-14 and is less than significant. No new General Plan policies are required related to this impact.

The following mitigation measures are recommended for implementation by the County.

Mitigation Measures

Program Level Mitigation Measures

Mitigation Measure BIO-1.1 as described above under Impacts to CEQA-defined special-status species.

Mitigation Measure BIO-2.1: Stream Setback Ordinance

The county shall develop and adopt a county-wide Stream Setback Ordinance to establish minimum standards for the avoidance and setbacks for new development relative to streams. The ordinance shall identify standardized inventory methodologies and mapping requirements. A stream classification system shall be identified to distinguish between different stream types (based on hydrology, vegetation, and slope, etc.) and thus allow application of standard setbacks to different stream types. The ordinance shall identify specific setbacks relative to the following rivers and creeks so they can be implemented in the Area Plans: Salinas, Carmel River, Arroyo Seco, Pajaro River, Nacimiento, San Antonio, Gabilan Creek, and Toro Creek. The ordinance may identify specific setbacks for other creeks or may apply generic setbacks based on the stream classification developed for the ordinance. The purpose of the ordinance will be to preserve riparian habitat and reduce sediment and other water quality impacts of new development.

The Stream Setback Ordinance shall apply to all discretionary development within the County and to conversion of previously uncultivated agricultural land (as defined in the General Policy Glossary) on normal soil slopes over 15% or on highly erodible soils on slopes over 10%.

Mitigation Measure BIO-2.2: Oak Woodlands Mitigation Program.

The County shall prepare, adopt and implement a program that allows project to mitigate the loss of oak woodlands. The program would include ratios for replacement, payment of fees to mitigate the loss or direct replacement for the loss of oak woodlands and monitoring for compliance. The program would identify criteria for suitable donor sites. Mitigation for the loss of oak tree woodlands may be either on-site or off-site. The program would allow payment to either a local fund established by the County. Until such time as the County program is implemented, payment of a fee may be made to the State Oak Woodlands Conservation Program. Replacement of oak woodlands shall be on a minimum 1:1 ratio.

Mitigation Measure BIO-2.3: Add Considerations Regarding Riparian Habitat and Stream Flows to Criteria for Long-Term Water Supply and Well Assessment.

Public Services Policies PS-3.3 and PS-3.4 establish the criteria for proof of a long-term water supply and for evaluation and approval of new wells. The following criteria shall be added to these policies:

- Policy PS-3.3.i—Effects on instream flows necessary to support riparian vegetation, wetlands, fish, and other aquatic life including migration potential for steelhead.
- Policy PS-3.4.g—Effects on instream flows necessary to support riparian vegetation, wetlands, fish, and other aquatic life including migration potential for steelhead.

Project Level Mitigation Measure

Mitigation Measure BIO-1.3 as described above under Impacts to CEQA-defined special-status species.

Significance Conclusion

Up to 2030, based on housing units, the County would have less than one-third (~28%) of the overall buildout allowed by the 2007 General Plan. It is expected that most of the growth by 2030 (perhaps 80% or more) will be within the focused development areas (Community Areas, Rural Centers, and AHOs).

A Stream Setback Ordinance as identified above would reduce impacts to streams from new development and from conversion of previously uncultivated agricultural land on steeper slopes and on highly erodible soils in steep slope areas and would further protect these habitats and species by minimizing direct impacts to habitat and reducing water quality impacts in streams. Other mitigation would require a baseline inventory of sensitive natural communities, establish an oak woodlands mitigation program, require consideration of riparian habitat and stream flows during water supply assessments, and project-level inventory, avoidance, minimization, and compensation for impacts to sensitive natural communities.

Accordingly, application of the General Plan policies combined with the above mitigation would mitigate project-level impacts to sensitive natural communities, riparian habitat, and wetlands/waters to a less than significant level.

Buildout

Impact of Development with Policies

As noted above, there are uncertainties in predicting the impacts of buildout on sensitive natural communities, riparian habitat, and wetlands nearly 84 years in the future, nevertheless there will likely be further adverse effects of buildout beyond the 2030 horizon. It is anticipated that lots of record would be the primary location for residential development unless there are changes to the density of Community Areas and Rural Centers or new growth areas identified. Given the amount of potential buildout, these effects would exceed those for impacts before 2030. There are also uncertainties with respect to trends in agriculture that cannot be predicted at this time. This would result in the potential conversion of sensitive natural communities, riparian habitat, and wetlands. The amount of conversion at buildout is not estimated, but is assumed to be some level beyond 2030.

2007 General Plan and Area Plan Policies

The 2007 General Plan and Area Plan policies summarized above for this impact would apply to buildout after 2030.

Significance Determination

This impact is considered potentially significant because buildout under the 2007 General Plan would result in reduced quality, extent, and range of sensitive natural communities, riparian habitat and wetlands. Furthermore, the geographic extent of those impacts is difficult to predict.

The following mitigation measures are recommended for implementation by the County.

Mitigation Measures

Mitigation Measure BIO-1.1, 1.2, 1.3, 1.4, and 1.5 as described above under Impacts to CEQA-defined special-status species.

Mitigation Measures BIO-2.1, 2.2 and 2.3 as described above.

Significance Conclusion

Implementation of General Plan policies, Mitigation Measures BIO-1.1 through BIO-1.5, and Mitigation Measures BIO-2.1 through 2.3 would reduce impacts of buildout on sensitive natural communities, riparian habitat, and wetlands to a less than significant level.

However, it is impossible to know what threats sensitive natural communities will face over the next 84 years. Natural communities may be subject to new threats (such as invasive species, new diseases, new pests, or climate change)

that may make them far more rare than at present and it is unknown whether there will be feasible means to address these new threats. New threats could undermine current conservation practices and require additional measures that are not anticipated at present. Further, actions in other parts of California could affect sensitive natural communities that also occur in Monterey County, that could in turn affect the priority for conservation in Monterey County and require additional protection measures and conservation areas.

Given this uncertainty, it is hard to definitively conclude that impacts can be fully mitigated and thus this impact is considered significant and unavoidable.

Impact on Wildlife Movement and Wildlife Nursery Sites

Impact BIO-3.1: Potential Disturbance and Loss of Native Fish and Wildlife Species Movement Corridors (Less than Significant with Mitigation for 2030 Planning Horizon and for Buildout)

2030 Planning Horizon

Impact of Development with Policies

Development under the 2007 General Plan could restrict local or long-distance movement of native species by further fragmenting intact habitat blocks. Development in natural landscapes serves to disconnect or fragment habitat areas, which in turn reduces the size of CEQA-defined special-status species populations that those habitat areas can support. This reduces the ability of the population to grow and increases the probability the population will be impacted by other environmental factors (e.g., disease, catastrophic weather, predation). However, in some cases these impacts may be unavoidable due to the density of development plans, the specific migration needs of individual species, or the extent of wildlife corridor alternation.

Potential corridors that would be impacted are as follows:

- **Santa Cruz Mountains to Gabilan Range**—The 2007 General Plan does not focus growth in the northeast part of the county around Prunedale. However ongoing expansion of Highway 101 and development on existing lots along Highway 101 will continue to affect this linkage.
- **Santa Lucia Mountains to Fort Ord**—Expansion of Highway 68, development in the Toro Plan Area and in Carmel Valley could affect this corridor.
- **Salinas Valley (east–west)**—Development in Community Centers and Rural Centers and other areas adjacent to the river, along the valley floor, and along the slopes of the Valley (including agricultural conversions

and winery expansion) could affect east-wide migration cross the valley. Expansion and increased traffic along Highway 101 and River Road could also affect east-west migration potential.

- **Salinas River (north-south)**—Development adjacent to the river, along the valley floor, and along the margins of the Valley (including agricultural conversions and winery expansion) could affect north-south migration along the valley.
- **Carmel River**—Limited subdivision (266 lots), development on existing lots, development of the STA at Rancho Canada Village, and the Mid-Valley AHO could affect areas adjacent to the Carmel River.
- **Pajaro River**—Development in the Pajaro Rural Center and on existing lots in North County could affect the river. Nearly all of the land adjacent to the river within Monterey County has already been converted to agriculture.

2007 General Plan Policies

Land Use Element

The 2007 General Plan Land Use Element emphasizes compact city-centered growth and discourages the encroachment of urban uses into undeveloped areas and clustering of residential development to areas most suitable to support the development. Collectively, these policies promote compact urban growth in existing developed areas and discourage growth on significant natural areas that serve as wildlife movement corridors where development would have the most deleterious impacts on wildlife movement. Land Use Element Policies LU-1.1 through LU-1.9 were summarized under Impact BIO-1.

Land Use in Area Plans

Development on properties with residential land use designations location within the Toro Area Plan along the Highway 68 corridor, Greater Salinas Area Plan north of the City of Salinas between Williams Road and Highway 101, and the North County Area Plan are limited to the first single family home on a legal lot of record. Creation of new lots in the Carmel Valley Area is capped at 266 new lots.

Open Space and Conservation Element

Policies OS 1.3-1.8 address ridgeline development, transfer of development rights and clustering. OS-1.7 establishes a transfer development program to direct development away from areas with unique visual or natural features, critical habitat, or prime agricultural soils. OS-1.8 encouraging clustering of development in

rural and agricultural areas to protect prime agricultural land and critical habitat areas.

Policy OS-4.3 stipulates that fresh water marshes, wetlands, sloughs, river and stream mouth areas, as well as all waterways that drain and have impact on state designated Areas of Special Biological Significance be protected, maintained and preserved in accordance with state and federal water quality regulations.

Policy OS-5.11 promotes conservation of large, continuous expanses of native trees and vegetation as the most suitable habitat for maintaining abundant and diverse wildlife. Policy OS-5.13 encourages efforts to obtain and preserve natural areas of particular biologic, scientific, or educational interest and restrict incompatible uses from encroaching upon them. Policy OS-17 requires the County to develop a program to mitigate the loss of critical habitat.

Safety Element

Goal S-2 and Policies S-2.1 through 2.8 address reducing development in the floodplain and reducing impacts that would occur within the floodplain.

Agricultural Wine Corridor

AG-4.3 addresses the development of a Winery Corridor Plan to encourage development of the wine industry within the designated corridor. The Corridor Plan establishes limits on the facilities that could be permitted under the Plan along with development criteria.

Area Plan Policies

Cachagua Area Plan

Policy CACH-1.4 stipulates that new development adjacent to the Ventana Wilderness not impact the purpose of the wilderness areas. Policy CACH-3.7 protects riparian vegetation and threatened fish species along the Carmel and Arroyo Seco Rivers. It also reduces encroachment from new development on the main channels of the Carmel and Arroyo Seco Rivers.

Carmel Valley Master Plan

Policy CV-3.7 stipulates that areas of biological significance, including the redwood community of Robinson Canyon, the riparian community and redwood community of Garzas Creek, wetlands, marshes, seeps, springs, native bunchgrass stands, natural meadows, cliffs, rock outcrops, unusual geologic substrates, ridgelines, and wildlife migration routes be identified and preserved as open space.

Policy CV-3.8 requires that development be sited to protect riparian vegetation, minimize erosion, and preserve the visual aspects of the Carmel River. It also requires that riparian vegetation be re-established in areas where it no longer exists. Policy CV-3.9 stipulates that willow-cover along the banks and bed of the Carmel River be maintained in a natural state for erosion control. Policy CV-3.12 encourages the designation of open space in areas of diverse habitats and ecologically important zones. CV-4.1 limits the amount of land that can be cleared during one construction season, provhits motorized vehicles in the Carmel River bed, and requires maintenance of native vegetative cover in areas with erosive soils and steep slopes.

Central Salinas Valley Area Plan

Policy CVS-5.1 prohibits new development from encroaching on the main channels of the Arroyo Seco River and the Salinas River in order to preserve riparian habitats. Policy CVS-5.2 stipulates that new recreational uses avoid encroaching on the main channels of the Arroyo Seco River and the Salinas River in order to preserve riparian habitats.

Fort Ord Master Plan

Biological Resources Policy A-3 requires the County to maintain the habitat values and integrity of the habitat corridor through the western portion of the Recreational Vehicle Park/Youth Camp. Policy A-4 requires the County to protect the habitat corridor in the RV park/youth camp parcel from degradation due to the development in, or use of, adjacent parcels. Policy A-7 requires the County to coordinate with California State University and UCNRS to minimize the potential for HMP species in the habitat conservation and corridor areas adjacent to CSUMB land to be adversely affected by human activity associated with access.

Policy B-2 requires County coordination with the Cities of Seaside and Marina, California State University, FORA and other interested entities in the designation of an oak woodland conservation area connecting the open space lands of the habitat management areas. Policy B-3 requires the County to preserve, enhance, restore and protect vernal ponds, riparian corridors and other wetland areas.

Biological Resources Policy E-2 requires the County to monitor activities that affect all undeveloped natural lands, including, but not limited to conservation areas and habitat corridors as specified and assigned in the HMP.

Greater Monterey Peninsula Area Plan

Policy GMP-3.6 requires that a 100-foot setback from all wetlands, as identified by a County-approved biologist, be provided and maintained in open space use. Policy GMP-3.8 encourages the designation of open space in areas of diverse habitats and ecologically important zones.

Greater Salinas Area Plan

Policy GS-1.5 requires that development of commercial land uses designated near Highway 68 and the Salinas River be allowed only if it protects and, where feasible, enhances the riparian habitat along the river. Policy GS-1.8 allows that the land near the town of Spreckels designated as industrial if it is designed to protect, and where feasible, enhance the riparian corridor along the Salinas River. Policy GS-5.1 requires that Gabilan Creek be maintained in a natural riparian state.

South County Area Plan

Policy SC-1.2 encourages cluster development in all areas where development is permitted in order to preserve open space. Policy SC-5.3 prohibits new development from encroaching on the main channels and associated floodways of the Nacimiento, San Antonio, and Salinas Rivers.

Significance Determination

Development under the general plan could restrict local or long-distance movement of native species by further fragmenting intact habitat blocks. Development in natural landscapes serves to disconnect or fragment habitat areas, which in turn reduces the size of CEQA-defined special-status species populations that those habitat areas can support. This reduces the ability of the population to grow and increases the probability the population will be impacted by other environmental factors (e.g., disease, catastrophic weather, predation, etc.). In many cases these impacts are avoidable by using permeable landscape designs (e.g., roadway underpasses, reduced fencing).

The policies in the 2007 General Plan for Biological Resources do not specifically address wildlife corridors with the exception of the Fort Ord Master Plan. However, the Land Use Element focuses development within designated areas which helps to reduce habitat and corridor fragmentation below the level it would otherwise be. Certain Area Plan policies provide protection of riparian corridors along the Salinas River, Carmel River, Arroyo Seco, Gabilan Creek, and Garzas Creek. The Open Space Element addresses ridgeline development and the Safety Element addresses floodplain development.

In the past decade, there has been a concerted effort by land conservation groups, the regional park district, state and federal agencies and County government to conserve large expanses of open space and wildlife corridor in key corridor linkages. These efforts have contributed to the cumulative reduction in potential impacts to the corridors described above, including coastal and inland linkages. There have also been a number of recent donations and sales of key conservation areas to public and private entities that will have significant long term benefits to securing important wildlife corridors. The Big Sur Land Trust has over 25,000 acres in its holdings and recently acquired, along with the Nature Conservancy, an additional 4,000 acre holding west of Gonzales that straddles the Sierra de Salinas ridgeline with lands in both Carmel River and Salinas watersheds. The Marks Ranch, an 812 acre holding which includes a major wildlife corridor in the Highway 68 corridor, has been deeded for future annexation to the County's Toro Park. A 2,137 acre parcel along the Arroyo Seco River (Central Salinas Area) has been designated as a permanent conservation area as mitigation for a major pipeline project recently approved by the County.

Despite the beneficial effects of these conservation efforts, the 2007 General Plan does not provide a systematic approach to address impacts of development to key wildlife movement linkage as defined above in this document. This impact is considered significant because development under the 2007 General Plan could result in a reduction in linkage between wildlife species populations and reduction in migration of fish and other species along river corridors.

The following mitigation measures are recommended for implementation by the County.

Mitigation Measures

Mitigation Measure BIO-1.2 as discussed above under Impacts to CEQA-Defined Special-Status Species.

Mitigation Measure BIO-2.1 as discussed above under Impacts to Sensitive Natural Communities.

Mitigation Measure BIO-3.1: Project-Level Wildlife Movement Considerations.

The County shall require discretionary projects to retain movement corridors of adequate size and habitat quality to allow for continued wildlife use based on the needs of the species occupying the habitat. The County shall consider the need for wildlife movement in designing and expanding major roadways and public infrastructure projects to provide movement opportunities for terrestrial wildlife and to ensure that existing stream channels and riparian corridors continue to provide for wildlife movement and access.

Significance Conclusion

Over 80% of the development in Monterey County within the 2030 Horizon will occur in areas designated for focused growth. Discretionary permits will be required for this development as well as for any large scale residential and commercial development that might occur outside of these areas (subject to the Subdivision Evaluation System). For discretionary development, implementation of the General Plan policies alone would have potentially resulted in significant impacts to wildlife movement corridors. Mitigation Measure BIO-3.1 requires consideration of wildlife movement for all discretionary projects. Mitigation Measure BIO-1.2 would address impacts to kit fox habitat that might occur from development and will have co-benefits for the protection of wildlife movement for other species. Mitigation Measure BIO-1.3 requires preparation of a biological report that includes measures to avoid impacts or minimize impacts to CEQA-defined special-status species, which may also have some co-benefits for wildlife movement corridors. Mitigation Measure BIO-2.1 would further protection riparian corridors for wildlife movement.

These mitigation measures would address potential impacts from discretionary large-scale residential, commercial, public infrastructure and agricultural development. In combination with the application of Area Plan policies, impacts to wildlife movement from discretionary development would be considered less than significant.

"Routine and ongoing" agricultural activities that occur on existing cropland are part of the baseline and thus would not result in new impacts on wildlife movement corridors.

Legal lot development without subdivision would have highly dispersed effects on wildlife movement that on a landscape level is also considered less than significant.

The remaining development consists of conversion of previously uncultivated agricultural lands to new farmland. As shown in the pattern of historic conversion (see Exhibits 4.9.6, 4.9.7, 4.9.8, and 4.9.8), conversion of natural communities would be widely dispersed geographically throughout the County. Based on the assumption that conversion of previously uncultivated lands is not anticipated to exceed the previous 25 year trend (1982 – 2006) in the County (approximately 450 acres per year), the sporadic and discontinuous pattern of crop expansion, and the geographic distribution of agricultural operations (especially within the Salinas Valley), agricultural conversion is not considered to result in a significant impact to wildlife movement corridors.

Buildout

Impact of Development with Policies

As noted above, there are uncertainties in predicting the impacts of buildout on wildlife movement corridors nearly 84 years in the future; nevertheless there will likely be further adverse effects of buildout beyond the 2030 horizon. Given the amount of potential buildout, these effects would exceed those for impacts before 2030. As one example, the amount of traffic generated by buildout is larger than that for 2030, which would require substantial new transportation facilities to accommodate transportation needs. Whether that would be new roadways, new rail-lines, or other means of transportation cannot be known at this time. Further, trends in agriculture both respect to types of crops and technology are uncertain. The additional 62 years of potential for agricultural conversion of natural habitat is not estimated, but is assumed to be some level beyond 2030

2007 General Plan and Area Plan Policies

The 2007 General Plan and Area Plan policies summarized above for this impact would apply to buildout after 2030.

Significance Determination

This impact is considered potentially significant because buildout under the 2007 General Plan would result in further degradation and impediments to wildlife movement corridors. Furthermore, the geographic extent of those impacts is difficult to predict.

The following mitigation measures are recommended for implementation by the County.

Mitigation Measures

Mitigation Measure BIO-1.2 as discussed above under Impacts to CEQA-Defined Special-Status Species.

Mitigation Measure BIO-1.3 as discussed above under Impacts to CEQA-Defined Special-Status Species.

Mitigation Measure BIO-1.4 as discussed above under Impacts to CEQA-Defined Special-Status Species.

Mitigation Measure BIO-1.5 as discussed above under Impacts to CEQA-Defined Special-Status Species.

Mitigation Measure BIO-2.1 as discussed above under Impacts to Sensitive Natural Communities.

Mitigation Measure BIO-3.1 as discussed above.

Significance Conclusion

Implementation of General Plan policies would focus growth to 2030 and Mitigation Measure BIO-1.4 would focus growth for the period after 2030. Implementation of a NCCP for the County would provide for long-term conservation needs, which to be effective, must include effective preservation of wildlife movement corridors. Mitigation Measures BIO-1.2 would address conservation needs for the San Joaquin kit fox which will produce co-benefits for wildlife movement corridors. The new Stream Setback Ordinance would further protection of riparian corridors beyond the level provided in the General Plan. Mitigation Measure BIO-1.3 would require consideration of preservation of wildlife movement areas during project- review. The combined effect of these measures is to identify and plan for the long-term vitality of wildlife movement corridors in the Count and thus this impact is less than significant.

Impact BIO-3.2: Potential Loss or Disturbance of Nesting Migratory Birds and Raptors (Less than Significant with Mitigation)

2030 Planning Horizon

Impact of Development with Policies

Woodland, forest, scrub, grassland, aquatic and riparian habitats in throughout Monterey County provide suitable nesting habitat for hundreds of migratory birds including CEQA-defined special-status species such as the white-tailed kite, bald eagle, sharp-shinned hawk, Cooper's hawk, marbled murrelet, western burrowing owl, black swift, purple martin, yellow warbler, and tricolored blackbird. The loss or disturbance of these habitats is considered potentially significant to nesting migratory birds and raptors.

2007 General Plan Policies

While there are General Plan policies concerning the preservation of listed species habitat, specified sensitive natural communities, riparian vegetation and wetlands (these are summarized above under Impacts BIO-1 and BIO-2) and for protected trees (summarized below under Impact BIO-4) which will reduce the potential loss of nesting habitat and direct and indirect disturbance of nesting birds, there are no specific policies concerning nesting and migratory birds (unless they are state or federally-listed species).

Area Plan Policies

While there are Area Plan policies concerning the preservation of listed species habitat and listed species, specified sensitive natural communities, riparian vegetation and wetlands (these are summarized

above under Impacts BIO-1 and BIO-2) and protected trees (see Impact BIO-4 which will reduce the potential loss of nesting habitat and the direct and indirect of nesting birds, there are no specific policies concerning nesting and migratory birds (except for those included in the Fort Ord HMP).

Significance Determination

If development under the 2007 General Plan occurs during the breeding season (generally between February 1 and September 15), construction activities (e.g., vegetation removal, grading, noise, etc.) would result in nest abandonment and subsequent loss of eggs or developing young at active nests. This impact is considered potentially significant if the subsequent population declines affected the viability of the local population. Disturbance that results in nest abandonment and death of young or loss of reproductive potential at active nests would also violate California Fish and Game Code Sections 3503 (active bird nests) and the MBTA.

Mitigation Measures

Mitigation Measure BIO-3.2: Remove Vegetation during the Nonbreeding Season and Avoid Disturbance of Nesting Migratory Birds, Including Raptors, as Appropriate (generally September 16 to January 31).

Vegetation removed in the course of development will be removed only during the nonbreeding season (generally September 16 to January 31). Occupied nests of migratory birds, including raptors, will be avoided during this period. The county shall consult, or require the developer to consult, with a qualified biologist prior to any site preparation or construction work in order to (1) determine whether work is proposed during nesting season for migratory birds, (2) determine whether site vegetation is suitable to nesting migratory birds, (3) identify any regulatory requirements for setbacks or other avoidance measures for migratory birds which could nest on the site, and (4) establish project-specific requirements for setbacks, lock-out periods, or other methods of avoidance of nesting birds. The county shall require the development to follow the recommendations of the biologist.

Significance Conclusion

Implementation of the mitigation measure above, in combination with the General Plan Policies and mitigation measures identified for CEQA-defined special-status species, sensitive natural communities, riparian habitat, and wetlands would reduce impacts related to nesting birds (including raptors) to a less-than-significant level and avoid violating the MBTA and California Fish and Game Code.

Buildout

Impact of Development with Policies

Development after 2030 will continue to have the potential to disturb nesting birds during construction.

2007 General Plan and Area Plan Policies

The 2007 General Plan and Area Plan policies summarized above for this impact would also apply to buildout after 2030.

Significance Determination

This impact is considered potentially significant if the subsequent population declines affected the viability of the local population. Disturbance that results in nest abandonment and death of young or loss of reproductive potential at active nests would also violate California Fish and Game Code Sections 3503 (active bird nests) and the MBTA.

Mitigation Measures

Mitigation Measure BIO-3.2: Remove Vegetation During the Nonbreeding Season and Avoid Disturbance of Nesting Migratory Birds, Including Raptors, as Appropriate.

Significance Conclusion

Implementation of the mitigation measure above, in combination with the General Plan Policies and mitigation measures identified for CEQA-defined special-status species, sensitive natural communities, riparian habitat, and wetlands would reduce buildout impacts related to nesting birds (including raptors) to a less-than-significant level and avoid violating the MBTA and California Fish and Game Code.

Impacts Related to Local Policies or Ordinances for the Protection of Biological Resources

Impact BIO-4: Potential Loss of Protected Trees (Less than Significant)

2030 Planning Horizon

Impact of Development with Policies

New development contemplated by the 2007 General Plan would potentially result in the removal of trees that are protected under the County's existing

tree preservation ordinance (Monterey County Code, Chapter 16.60). This ordinance applies to various species of trees including oak, madrone, redwood, fir, elder, laurel, cottonwood, and sycamore trees, and requires that permits be obtained to remove to species of the aforementioned trees. This would be a potentially significant impact.

2007 General Plan Policies

The 2007 General Plan emphasizes compact city-centered growth in and near existing urbanized areas. This land use concept is designed to preserve significant natural areas and minimize adverse biological impacts, including conflicts with tree preservation policies.

Land Use Element

The 2007 General Plan Land Use Element emphasizes compact city-centered growth and discourages the encroachment of urban uses into undeveloped areas which will reduce the numbers of protected trees ultimately removed for development.

Open Space and Conservation

Policy OS-5.9 establishes that each Area Plan set forth tree removal permit requirements.

Policy OS-5.10 requires the establishment of regulations for tree removal, including Timberland Conversion, to be maintained by ordinance implementing Area Plan policies that address the following:

a. Criteria when a permit is required including:
    1. number of trees,
    2. minimum size of tree,
    3. Post Timberland conversion land-use
b. How size is measured for each protected species of tree, and what constitutes a landmark tree depending on the rate of growth for that species.
c. Hazardous trees
d. Pest and disease abatement
e. Replacement criteria.
f. Ensure minimal removal

Policy OS-5.11 promotes conservation of large, continuous expanses of native trees and vegetation as the most suitable habitat for maintaining abundant and diverse wildlife.

Area Plan Policies

Cachagua Area Plan

CACH-3.4 discourages the removal of native trees and specified the conditions under which they are allowed to be removed. Policy CACH-3.6 promotes cooperation with the United States Forest Service and private property owners to ensure that Santa Lucia fir are protected.

Carmel Valley Master Plan

Policy CV-3.11 discourages removal of healthy, native oak and madrone trees and requires a permit for the removal of any of these trees with a trunk diameter in excess of six inches at breast height. Trees removed must be replaced at a 1:1 ratio using nursery-grown trees of the same species that are a minimum of one gallon in size. The policy includes penalties for tree removal that occurs without a permit.

Fort Ord Master Plan

Policy C-2 requires the County to encourage the preservation and enhancement of native oak woodland elements in the natural and built environments.

Greater Monterey Peninsula Area Plan

GMP-3.5 requires development to be designed to prevent, to the maximum extent feasible, the destruction of native oak, pine, and redwood forest habitat.

North County Plan

Policy NC-3.4 discourages removal of healthy, native oak and madrone trees and requires a permit for the removal of any of these trees with a trunk diameter in excess of six inches at breast height. Trees removed must be replaced at a 1:1 ratio using nursery-grown trees of the same species that are a minimum of one gallon in size.

Toro Area Plan

Policy T-3.7 discourages the removal of healthy trees with diameters in excess of eight inches.

Significance Determination

The 2007 General Plan and Area Plans contain policies that establish tree preservation regulations for each planning area. The County's existing tree

preservation ordinance also sets forth criteria for removal of certain types of significant trees. In addition, the 2007 General Plan land use concept emphasizes city-centered growth and discourages urban development in greenfields and significant natural areas where large native trees are most likely to be found. Therefore, the 2007 General Plan is internally consistent with the County's existing and proposed tree preservation requirements and would not create potential conflicts with the aforementioned requirements. Impacts in this regard would be less than significant.

Mitigation Measures

None required.

Significance Conclusion

With the proposed General Plan policies as noted above, impacts to protected trees would be less than significant.

Buildout

Impact of Development with Policies

Development after 2030 would result in the loss of protected trees.

2007 General Plan and Area Plan Policies

The 2007 General Plan and Area Plan policies summarized above apply to buildout as well.

Significance Determination

The 2007 General Plan and Area Plans contain policies that establish tree preservation regulations for each planning area. The County's existing tree preservation ordinance also sets forth criteria for removal of certain types of significant trees. In addition, the 2007 General Plan land use concept emphasizes city-centered growth and discourages urban development in greenfields and significant natural areas where large native trees are most likely to be found. Therefore, the 2007 General Plan is internally consistent with the County's existing and proposed tree preservation requirements would not create potential conflicts with the aforementioned requirements. Impacts in this regard would be less than significant.

Mitigation Measures

None required.

Significance Conclusion

As noted above, impacts to protected trees would be less than significant.

Consistency with Adopted Conservation Plans

Impact BIO-5.1: Potential Inconsistency with Adopted Conservation Plan (Less than Significant)

2030 Planning Horizon

Impact of Development with Policies

There are no adopted regional habitat conservation plans or Natural Community Conservation Plans currently permitted in the county inland areas covered by the 2007 General Plan.

2007 General Plan Policies

There are no General Policies related to habitat conservation plans.

Area Plan Policies

Fort Ord Master Plan

There is an adopted Habitat Management Plan for Fort Ord that was adopted as part of the reuse planning. The Ford Ord Master Plan policies require consistency with the adopted HMP.

Significance Determination

The Fort Ord HCP will be in force in the future. The County is a participant in the development of this HCP and will implement the HCP on discretionary development under its jurisdiction. This impact is thus less than significant. No mitigation is required for this impact.

Significance Conclusion

The County's policies for the Fort Ord Master Plan require the County to only approve development consistent with the existing HMP. The County is a participant in the development of the current HCP for Fort Ord and will implement the HCP on discretionary development under its jurisdiction.

If the County adopts a Salinas Valley Conservation Plan (pursuant to Mitigation Measure BIO-1.2), it will implement the required measures for development subject to the plan within its jurisdiction. Thus, this impact is less than significant.

Buildout

Impact of Development with Policies

There are no adopted regional habitat conservation plans or Natural Community Conservation Plans currently permitted in the county inland areas covered by the 2007 General Plan. Thus, at present development allowed by the 2007 General Plan has no impact relative to adopted plans.

The HCP for the former Fort Ord will in all likelihood be completed in the near future. There may be other HCPs/NCCPs developed in the future.

2007 General Plan and Area Plan Policies

Policies related to this impact are summarized above.

Significance Determination

The Fort Ord HCP will be in force in the future. The County is a participant in the development of this HCP and will implement the HCP on discretionary development under its jurisdiction. Thus this impact is less than significant.

Mitigation Measures

The following measures are noted for information purposes only.

Mitigation Measure BIO-1.2: Salinas Valley Conservation Plan to preserve habitat for the San Joaquin kit fox in the Salinas Valley

Mitigation Measure BIO-1.5: By 2030, prepare a Comprehensive County Natural Communities Conservation Plan

Significance Conclusion

The County is a participant in the development of the current HCP for Fort Ord and will implement the HCP on discretionary development under its jurisdiction.

If the County adopts a Salinas Valley Conservation Plan (pursuant to Mitigation Measure BIO-1.2), it will implement the required measures for development subject to the plan within its jurisdiction.

If the County adopts a comprehensive NCCP for the entire County at some point in the future pursuant to Mitigation Measure BIO-1.5), the County will implement the required measures for development subject to the plan within its jurisdiction. The overall impact is less than significant.

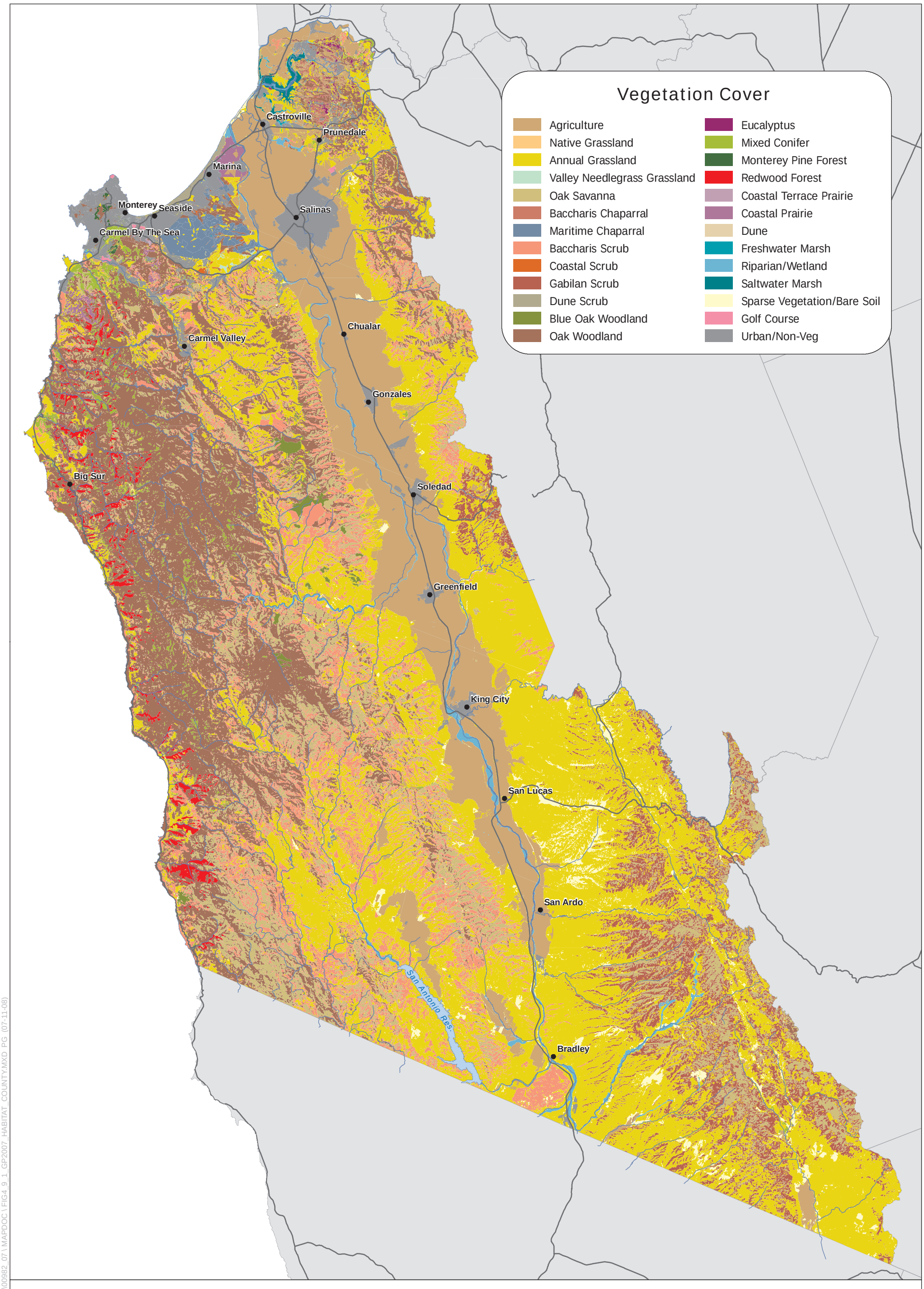

Exhibit 4.9-1
Vegetation Cover
Monterey County

ICF Jones & Stokes
an ICF International Company

Sources:
California Department of Conservation, Farmland Mapping and Monitoring Program, 1984, 1996, and 2006. County of Monterey, 1982 vegetation mapping. California Spatial Information Library.

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Exhibit 4.9-2

General Plan 2007
Plan Areas and Habitats
North County

Comm Area: Pajaro

Comm Area: Castroville

Comm Area: Boronda

Comm Area: Fort Ord/East Garrison

AHO: Hwy. 68 and Reservation Road

AHO: Monterey Airport and Highway 68

Rural Center: River Road

Wine Corridor: Central/Arroyo Seco/ River Road Segment

AHO: Mid-Valley

Prunedale

Marina

Salinas

Seaside

Monterey

Carmel

Carmel Valley Village

152 129 101 156 183 68 218 1

N

0 1 2 4 Miles

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Habitat Types

- Annual Grassland
- Native Grassland
- Valley Needlegrass Grassland
- Oak Woodland
- Blue Oak Woodland
- Oak Savanna
- Coastal Terrace Prairie
- Coastal Prairie
- Maritime Chaparral
- Baccharis Scrub
- Coastal Scrub
- Gabilan Scrub
- Mixed Conifer
- Freshwater Marsh
- Riparian/Wetland
- Sparse Vegetation/Bare Soil
- Urban/Non-Veg
- Agriculture

Sources:
California Department of Conservation, Farmland Mapping and Monitoring Program, 1984, 1996, and 2006. County of Monterey, 1982 vegetation mapping. California Spatial Information Library.

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Exhibit 4.9-3

General Plan 2007
Plan Areas and Habitats
Salinas Valley North

Chualar

Gonzalez

101

Soledad

146

Greenfield

Wine Corridor: Central/Arroyo Seco/ River Road Segment

Wine Corridor: Metz Road Segment

0 1 2 4 Miles

ICF Jones & Stokes
an ICF International Company

Habitat Types

- Annual Grassland
- Native Grassland
- Valley Needlegrass Grassland
- Oak Woodland
- Blue Oak Woodland
- Oak Savanna
- Coastal Terrace Prairie
- Coastal Prairie
- Maritime Chaparral
- Baccharis Scrub
- Coastal Scrub
- Gabilan Scrub
- Mixed Conifer
- Freshwater Marsh
- Riparian/Wetland
- Sparse Vegetation/Bare Soil
- Urban/Non-Veg
- Agriculture

Sources:
California Department of Conservation, Farmland Mapping and Monitoring Program, 1984, 1996, and 2006. County of Monterey, 1982 vegetation mapping. California Spatial Information Library.

S:\GIS\PROJECTS\COUNTY_OF_MONTEREY\00982_07\MAPDOC\FIG4_9_3_GP2007_HABITAT_SALINASVLYNORTH.MXD PG (07-11-08)

Rural Center: Pine Canyon (King City)

Rural Center: San Lucas

Wine Corridor: Jolon Road Segment

Rural Center: Lockwood

Rural Center: San Ardo

Rural Center: Pleyto

Rural Center: Bradley

San Lucas

San Ardo

Bradley

198

101

Exhibit 4.9-4

General Plan 2007
Plan Areas and Habitats
Salinas Valley South

0 1 2 4 Miles

ICF Jones & Stokes
an ICF International Company

Habitat Types

- Annual Grassland
- Native Grassland
- Valley Needlegrass Grassland
- Oak Woodland
- Blue Oak Woodland
- Oak Savanna
- Coastal Terrace Prairie
- Coastal Prairie
- Maritime Chaparral
- Baccharis Scrub
- Coastal Scrub
- Gabilan Scrub
- Mixed Conifer
- Freshwater Marsh
- Riparian/Wetland
- Sparse Vegetation/Bare Soil
- Urban/Non-Veg
- Agriculture

Sources:
California Department of Conservation, Farmland Mapping and Monitoring Program, 1984, 1996, and 2006. County of Monterey, 1982 vegetation mapping. California Spatial Information Library.

S:\ GIS \ PROJECTS \ COUNTY OF MONTEREY \00982_07 \ MAPDOC \ FIG4_9_4 GP2007_HABITAT_SALINASVLYSOUTH.MXD PG (07-11-08)

Castroville
Prunedale
Marina
Monterey
Seaside
Salinas
Carmel By The Sea
Chualar
Carmel Valley
Gonzales
Big Sur
Soledad
Greenfield
King City
San Lucas
San Ardo
San Antonio Res.
Bradley

Critical Habitat

- Santa Cruz tarplant
- purple amole
- Monterey spineflower
- western snowy plover
- California tiger salamander
- California red-legged frog
- South Central California Coast Steelhead

N

0 2.5 5 10
Miles

Highways
Streams

Exhibit 4.9-5
Critical Habitat
Monterey County

ICF Jones & Stokes
an ICF International Company

Sources:
U.S. Dept. of Fish & Game. California Spatial Information Library.

S:\ GIS \ PROJECTS \ COUNTY_OF_MONTEREY \ 00982_07 \ MAPDOC \ FIG4_9_5_CRITICALHABITAT_COUNTY.MXD PG (07-11-08)

Exhibit 4.9-6

Land Use Conversion, 1982 - 2006 Monterey County

Prunedale
Marina
Seaside
Monterey
Salinas
Carmel
Carmel Valley Village
Chualar
Gonzalez
Soledad
Greenfield
King City
San Lucas
San Ardo
Bradley

N

0 2.5 5 10 Miles

Habitat to Agriculture Conversion
- 1982 - 1996
- 1996 - 2006

Habitat to Urban Conversion
- 1982 - 1996
- 1996 - 2006

Agriculture to Urban Conversion
- 1982 - 1996
- 1996 - 2006

Highways
Streams

Note: Minimum size of mapped land use unit is 2.5 acres.

ICF Jones & Stokes
an ICF International Company

Sources:
California Department of Conservation, Farmland Mapping and Monitoring Program, 1984, 1996, and 2006. County of Monterey, 1982 vegetation mapping. California Spatial Information Library.

S:\ GIS \ PROJECTS \ COUNTY OF MONTEREY \ 00982 07 \ MAPDOC \ FIG4_9_6 CONVERSION_COUNTY.MXD PG (07-11-08)

Exhibit 4.9-7

Land Use Conversion, 1982 - 2006 North County

Note: Minimum size of mapped land use unit is 2.5 acres.

ICF Jones & Stokes
an ICF International Company

Sources:
California Department of Conservation, Farmland Mapping and Monitoring Program, 1984, 1996, and 2006. County of Monterey, 1982 vegetation mapping. California Spatial Information Library.

S:\ GIS \ PROJECTS \ COUNTY OF MONTEREY \ 00982 07 \ MAPDOC \ FIG4 9 7 CONVERSION NORTHCO.MXD PG (07-11-08)

Exhibit 4.9-8

Land Use Conversion, 1982 - 2006 Salinas Valley North

Chualar
Gonzalez
Soledad
Greenfield
King City
146
101

0 1 2 4 Miles

Habitat to Agriculture Conversion
- 1982 - 1996
- 1996 - 2006

Habitat to Urban Conversion
- 1982 - 1996
- 1996 - 2006

Agriculture to Urban Conversion
- 1982 - 1996
- 1996 - 2006

Highways
Streams

Note: Minimum size of mapped land use unit is 2.5 acres.

ICF Jones & Stokes
an ICF International Company

Sources:
California Department of Conservation, Farmland Mapping and Monitoring Program, 1984, 1996, and 2006. County of Monterey, 1982 vegetation mapping. California Spatial Information Library.

S:\ GIS \ PROJECTS \ COUNTY_OF_MONTEREY \ 00982_07 \ MAPDOC \ FIG4_9_8_CONVERSION_SALINASVLYNORTH.MXD PG (07-11-08)

Exhibit 4.9-9

Land Use Conversion, 1982 - 2006 Salinas Valley South

San Lucas

198

San Ardo

101

San Antonio Reservoir

SAN LUIS OBISPO CO.

Bradley

N

0 1 2 4 Miles

Habitat to Agriculture Conversion
- 1982 - 1996
- 1996 - 2006

Habitat to Urban Conversion
- 1982 - 1996
- 1996 - 2006

Agriculture to Urban Conversion
- 1982 - 1996
- 1996 - 2006

Highways

Streams

Note: Minimum size of mapped land use unit is 2.5 acres.

ICF Jones & Stokes
an ICF International Company

Sources:
California Department of Conservation, Farmland Mapping and Monitoring Program, 1984, 1996, and 2006. County of Monterey, 1982 vegetation mapping. California Spatial Information Library.

S:\ GIS \ PROJECTS \ COUNTY OF MONTEREY \ 00982 07 \ MAPDOC \ FIG4_9_9 CONVERSION_SALINASVLYSOUTH.MXD PG (07-11-08)

4.10 Cultural Resources

4.10.1 Abstract

Monterey County was first inhabited by the Costanoan then Esselen people. Spanish explorers first landed in Monterey Bay in the early 1600s; however, Franciscan missionaries did not establish missions in the county until the late 1700s. Americans began settling in the county in the 1800s during the Mexican period and especially after the Gold Rush of 1849. The unincorporated area of Monterey County contains a number of historic resources, including Mission Nuestra Señora de la Soledad and the Old Mission School near Soledad, the Site of the Battle of Natividad near Salinas, and the Glass House in Pajaro. Archaeological and paleontological resources have also been found at numerous sites in the county.

All potential cultural resources impacts from development and land use activities contemplated by the 2007 General Plan would be less than significant and would not require mitigation.

All potential cultural resources impacts from implementation of the proposed *Agricultural Winery Corridor Plan* (AWCP) would be less than significant and would not require mitigation.

4.10.2 Environmental Setting

Cultural resources encompass paleontological, archaeological, and historic resources. Below is a brief summary of each component.

- **Paleontological Resources:** Paleontology is the study of plant and animal fossils. Generally, paleontological resources are more than 10,000 years old.
- **Archaeological Resources:** Archaeology is the study of prehistoric human activities and cultures. Archaeological resources are generally associated with indigenous cultures and are less than 10,000 years old.
- **Historic Resources:** Historic resources are associated with the more recent past. In California, historic resources are typically associated with the Spanish, Mexican, and American periods in the state's history and are usually less than 200 years old.

4.10.2.1 Monterey County History

Pre-Historic Period

The earliest human presence in what is now Monterey County probably dates back as far as 10,000 to 12,000 years ago. The first inhabitants were nomadic hunters, banding together in small groups, following game herds for their subsistence. The earliest settlements began to appear around 7,500 to 8,000 B.C. These occupation sites, which comprised small villages, indicate a cultural shift to a different form of subsistence based on exploitation of a broader range of local resources, including marine and freshwater food sources (fish and shellfish), game (rabbits, deer, elk), acorns, and wild roots, and nuts and berries. By 6,000 B.C., at least four such village sites from this period are known to have existed in the area around Moss Landing and Elkhorn Slough, undoubtedly because of the abundance of resources in this area.

A little later, a second shift occurred, again reflecting a change in subsistence strategy that is evident in changes in prehistoric settlement patterns. This change is thought to have occurred because of in-migration of a different people from the north, who were part of a larger movement emanating from farther east. During the middle period (2,500 to 1,600 years ago), villages became larger but fewer in number. They were augmented by a large number of small, widely distributed sites for the collection, processing, and distribution of resources. This new settlement pattern reflects a fundamental shift in strategy from smaller sites dependent on close proximity to resources, to villages supported by outlying sites specializing in collecting and processing resources. Rather than being constrained to living near the food source, the people developed a specialized system to collect and transport resources to population centers.

This new strategy of collection rather than foraging allowed an even broader use of resources and over time resulted in a larger population. The ocean and nearby salt and freshwater marshes were used in conjunction with the oak woodland, savanna, and grassland habitats that provided game, acorns, and other resources. The larger collection strategy enabled early inhabitants to expand in number. The specialization of roles allowed the culture to develop. Instead of generalized foraging, individualized skills developed, such as production of arrowheads, musical instruments, shell beads, and tools. During this middle period of prehistory the local indigenous culture reached its peak in terms of cultural expressions of concentrated wealth.

During the period between A.D. 900 and 1,100, a severe climatic shift began. There was a warming period in which the ocean temperature rose, perhaps not unlike a prolonged El Niño event. The marine and coastal environment became less productive and less reliable as a food source. These conditions necessitated another adaptation in subsistence strategy, stimulating further movement inland and greater dependence on acorns as a staple food. Acorns were particularly useful because they could be stored for as long as a year, providing a secure supply of winter food. The climate change led to a redistribution of occupation sites into many different environments. Villages became further disseminated

and very seasonal. The overall effect was decentralization with many new sites farther inland. Settlement sites became specialized according to seasonal use, differentiating into winter and summer sites. In wintertime, occupants would move inland, seeking the shelter and resources in inland canyons and habitats. At this time Rancho San Carlos was first occupied intensively, as a winter village site. The resource-rich regions of what is now Fort Hunter Liggett, along the Nacimiento River, were also intensively occupied at the same time.

At roughly A.D. 1500, the climate shifted again, entering what is known as the Little Ice Age, a colder period which lasted until at least A.D. 1800. Collection behavior became very specialized and migratory. The indigenous people were still in this middle period of subsistence behavior when Spanish explorers saw them for the first time.

Historical Period

Monterey County has been called the "cradle of California history," owing to its central position relative to historical activities. Monterey Bay became the focus of several Spanish exploratory expeditions after it was first noticed by Juan Cabrillo in 1542. Sebastian Vizcaino, who sailed into it in 1602, named the bay after Conde de Monterrey, Viceroy of Spain. The Franciscans founded three missions (San Carlos Borroméo, San Antonio de Padua, and Nuestra Soñora de Soledad) in what is now Monterey County, and these, along with the Presidio established in the late 1700s and eight large ranchos that formed from land concessions to Spanish army veterans, became focal points of activity.

When the Mexican Republic formed in 1822, the missions were secularized and new ranchos developed on 68 Mexican land grants. A robust economy emerged, based on cattle ranching on these large ranchos, some of which exceeded 10,000 acres. This economy received a great boost when the Mexican regime opened Monterey harbor to foreign trade. The Custom House in Monterey became the site for collection of duties, providing the main source of income for Alta California's government. The harbor enabled rancheros to trade their hides and tallow for products from around the world. This commercial vitality led to Monterey's role as the Mexican capital of California.

In May 1846, the United States declared war against Mexico, commencing the Mexican-American War. Commodore John Drake Sloat sailed into Monterey Bay 2 months later and demanded surrender of the port. On orders to secure men and horses for the war in southern California, Lt. Colonel John C. Fremont arrived in Monterey as well. In November, as Fremont and his men were driving horses from San Juan Bautista to Monterey, Californios led by Manuel Castro attacked them. The Battle of Natividad was the only military engagement fought in northern California during the Mexican-American War. Organized resistance to the American occupation ended in 1847. On February 2, 1848, the Treaty of Guadalupe Hidalgo was signed, giving the United States possession of Alta California.

Monterey continued to play a key role for some time after the Mexican-American War. At the beginning of the American period, the convention to draft and sign California's new constitution convened at Colton Hall in Monterey, considered California's finest building at the time. This period coincided with the California Gold Rush, and the market for tallow and hides shifted to a demand for beef to feed the population of gold prospectors. By the 1870s, dairy farming was introduced in the area around Gonzales and Soledad. This enterprise required irrigation to support alfalfa production, a practice based on rudimentary canal systems used earlier by friars at the missions.

In 1863 and 1864, a disastrous drought wiped out the cattle industry. Grain production quickly became Monterey County's principal activity. Between 1857 and 1865, the county's grain acreage increased from 2,450 to 27,358 acres. The resulting grain surplus was an incentive to build the harbor at Moss Landing from which farmers could ship their grain products worldwide. Bixby's Landing played a similar role for the export of tanbark and lumber from the Big Sur coast. Transportation soon became a major factor in supporting the county's growing economy. In 1872, Southern Pacific Railroad extended its rail line to Salinas from Pajaro. As the railroad pushed farther south, it opened new markets and stimulated settlement of new towns. From Salinas, it extended southward to Chualar, followed by Gonzales and Soledad, as landowners donated rights-of-way across their ranches. With this new transport capability, grain could be loaded at Soledad, expanding the acreage available for cultivation. By 1875, nearly 100,000 acres of grain were harvested in the county, making it one of California's principal grain-producing regions.

In the 1880s, a transformation began in the lower Salinas Valley, initiated by systematic draining and reclamation of the extensive marshland and several dozen lakes in the northern end of the valley. By the 1880s, Chinese laborers had cleared 1,000 acres of land, increasing its value from $28 to $100 an acre. As land prices rose, dry farmers and cattle and sheep ranchers sold out or shifted to row crops.

Widespread sugar beet cultivation in the Salinas area prompted Claus Spreckels to open what was then the largest sugar beet refinery in the world in 1899, south of Salinas. Capacity of the plant reached 3,000 tons of beets per day—more than all of the other refineries in California combined. Spreckels also built the town that still bears his name around the facility. The community of Spreckels was one of California's few company towns and was home to a variety of businesses, a school, a church, and cottages for company employees.

The extension of the railroad, improved irrigation systems, refrigerated freight cars, and other innovations in technology transformed the agricultural economy of the Salinas Valley, further opening up cultivated lands to row crops in place of dry farming dominated by grain crops. This development established the basis for the Salinas Valley's modern economy.

In the late nineteenth century, Monterey County became a destination for tourism and resort activities. Three resorts with hotels developed at Paraiso, Tassajara,

and Slates Hot Springs. Pacific Grove was founded as a religious and cultural retreat, growing from a tent city to a town of small Victorian cottages. In the early 1900s, Pebble Beach was subdivided and became a fashionable summer resort. In Carmel, the Arts and Crafts movement took hold in local architecture, as the town became a colony for artists and writers.

On the coast, at Moss Landing and in Monterey, sardine fisheries flourished for a little less than two decades between 1931 and the late 1940s. The cannery buildings at both of these locations are historical remnants of that brief period before the sardines and then the canning industry disappeared.

4.10.2.2 Ethnography

Costanoan/Ohlone

The Costanoan were speakers of languages in the Penutian language family. The Costanoan, now commonly referred to as Ohlone, consisted of over 50 tribal groups, speaking eight different but related languages that included Karkin (northern and southern portions of the Carquinez Strait); Chochenyo (east shore of San Francisco between Richmond and Mission San Jose and probably Livermore Valley); Tamien (southern San Francisco Bay and lower Santa Clara Valley); Ramaytush (San Mateo and San Francisco Counties); Awaswas (Santa Cruz Costanoan between Davenport and Aptos); Mutsun (Pajaro River drainage); Achastan/Rumsen (lower Carmel, Sur, and lower Salinas Rivers); and Chalon (Salinas River). This territory encompasses a lengthy coastline as well as several inland valleys.

The Ohlone relied on gathering, hunting, and fishing to procure a wide variety of flora and fauna for subsistence and material needs. The Ohlone had both permanent village locations and seasonal camps to take advantage of the diverse terrain along the central coast. The first Spanish encounters with the Ohlone occurred as early as 1602 with the Sebastian Vizcaino navigational expedition, followed by the inland exploratory expedition of Gaspar de Portola in 1769. Seven missions were established in Ohlone territory between 1770 and 1797. Ohlone were both forcibly and voluntarily brought to the missions along with other tribes, including Yokuts, Miwoks, Esselen, and Patwin. Once part of the mission system, the Ohlone were discouraged or forced from practicing their traditional rituals and social activities. Contact with Euroamericans resulted in a drastic reduction of population due to disease, violence, and a declining birth rate. The Ohlone population fell from an estimated 10,000 in 1770 to fewer than 2,000 by 1832. Following secularization of the missions in 1834, most of the remaining Ohlone moved into growing towns and surrounding ranchos to work as laborers or domestic servants. By the mid-twentieth century, the Ohlone population was reduced to 130 in the San Francisco Bay area, although some research suggests that in the early 1970s there may have been approximately 200 surviving Ohlone.

In the 1960s, the Ohlone Indian Tribe was incorporated as a formal organization, now holding title to the Ohlone Indian cemetery in Fremont, California. In the 1970s, the Pajaro Valley Ohlone Indian Council was created and was actively preserving sites of traditional importance. Four Ohlone groups had sought recognition: the Amah-Mutsun Tribal Band, the Carmel Mission Band, the Indian Canyon Band, and the Muwekma/Ohlone Tribe. Similarly situated as previously Federally Recognized Tribal groups, were the Ohlone Costanoan Esselen Nation of the Monterey Bay region, historically identified by the Bureau of Indian Affairs (BIA) under the jurisdiction of the Reno and Sacramento Agencies as the Mission San Carlos Indian Band (Helen Hunt Jackson 1883) and Monterey Band of Monterey County (Special Indian Agent C. E. Kelsey 1906–1913; Superintendent James Jenkins, Reno Agency 1923), and the Amah-Mutsun Tribal Band identified by the BIA as the San Juan Bautista Band (C. E. Kelsey 1906–1913; Jenkins 1923; and L. A. Dorrington, Superintendent of Sacramento Agency 1927). The Muwekma Ohlone Tribe has historically used the term "Ohlone" throughout the twentieth century. On their 1928–1932 and 1968–1972 BIA enrollment applications, the families used either Ohlone or Mission San Jose Tribe. The Amah Mutsun community used only Mission San Juan Bautista Tribe, and the Monterey community used either Esselen or Mission Carmel Tribe.

There have been continued efforts to document genealogies by using mission records to piece together family and tribal history. The groups mentioned above, as well as other individuals, have been actively involved in the management and preservation of their heritage and are frequently involved in the management of cultural resources. Ohlone descendants continue to conduct ceremonies and traditional practices such as the gathering of plant materials for basket making. Some of these activities are known to take place on Fort Ord Public Lands in the Central Coast Management Area.

Esselen

Peoples of the Esselen language group inhabited the area south of Monterey, including the upper drainage of the Carmel River south to the vicinity of Junipero Serra Peak and west to the Sierra de Salinas. The area encompassed a 25-mile stretch along the Pacific Coast. Research in the early 1970s recognized six Esselen tribelets: Excelen, (Carmel Valley), Echilatg (Santa Lucia Mountains), El Pino (lower Arroyo Seco), Cuchunu (Arroyo Seco), Eslenajan (near Soledad Mission), and Tucutnut (Carmel River) (Hester 1978:497). Very little is known about the lifeways of the Esselen prior to Euroamerican contact. Documentation of Esselen lifeways has been minimal, and much of what is known about the group is gleaned from archaeological research and mission records. The population of the Esselen in the eighteenth century is estimated at 500 to 1,285 persons. With the founding of Mission San Carlos Borroméo de Monterey at Carmel in 1770, many Esselen were moved to the mission. It has been suggested that by the mid-1800s they were totally absorbed into the mission population, where many also perished. Families have taken steps to preserve their history and identities as Esselen by founding the Ohlone Costanoan Esselen

Nation, currently located in and around Carmel Valley. The Ohlone Costanoan Esselen Nation consists of 500 members and has been petitioning the federal government to regain recognition as a formal Federally Recognized Tribe.

4.10.2.3 Documented Cultural Resources

Paleontological Resources

Significant paleontological resources are fossils or assemblages of fossils that are unique, unusual, rare, uncommon, and diagnostically or stratigraphically important—and those that add to an existing body of knowledge in specific areas, stratigraphically, taxonomically, or regionally. They include fossil remains of large to very small aquatic and terrestrial vertebrates, remains of plants and animals previously not represented in certain portions of the stratigraphy, and assemblages of fossils that might aid stratigraphic correlations—particularly those offering data for the interpretation of tectonic events, geomorphologic evolution, paleoclimatology, and the relationships of aquatic and terrestrial species.

Most of the fossils found in Monterey County are of marine life forms and form a record of the region's geologic history of advancing and retreating sea levels. Because of the marine origin of these deposits, the area lacks the large, terrestrial fossils found in other regions such as the dinosaur fossils of the southwestern United States. Most of Monterey County's fossils are micro-organisms such as foraminifera or diatoms, or assemblages of mollusks and barnacles most commonly found in sedimentary rocks ranging from Cretaceous age (138 to 96 million years old) to Pleistocene age (1.6 million to 11 thousand years old).

Fossils are found throughout the county because of the widespread distribution of marine deposits. A review of nearly 700 known fossil localities was conducted by paleontologists in 2001, and 12 fossil sites were identified as having outstanding scientific value. To avoid potential degradation of the sites, the precise locations have been omitted from this document. However, the general location of the sites is shown in Exhibit 4.10.1. For the most part, the fossils at these 12 sites reflect the type of assemblages found throughout the county (microorganisms or invertebrates); however, each has special characteristics that make it unique or rare, or in some way provide important stratigraphic or historic information.

Archaeological Resources

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association. In the protection and management of the cultural environment, CEQA Guidelines provide definitions and standards for cultural

resource management. The term "unique archaeological resource" has the following meaning according to CEQA:

> An archaeological artifact, object, or site about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:
>
> - Contains information needed to answer important scientific research questions, and there is a demonstrable public interest in that information.
> - Has a special and particular quality, such as the oldest of its type or the best available example of its type.
> - Is directly associated with a scientifically recognized important prehistoric or historic event or person (Public Resources Code Section 21083.2[g]).

The likelihood for occurrence of archaeological resources is shown on Exhibit 4.10.2. The sensitivity map identifies three levels of archaeological sensitivity: high, moderate, and low. The mapping of these areas is based on three different considerations. One of these is the distribution of known archaeological resources (previously discovered and recorded sites). This distribution is reflected in the areas of high sensitivity concentrated in the lower Salinas Valley north of Salinas and extending to Castroville, Moss Landing, and coastal north county. It also accounts for the high-sensitivity zone extending from Monterey Peninsula southward along the full length of the coast, including the upper Carmel Valley; Fort Hunter Liggett; Cone Peak; and the Arroyo Seco, Big Sur, and Big Creek watersheds.

A second consideration used in the mapping is uncertainty in the number of resources in some areas. This is evident in the high-sensitivity rating given to Peachtree Valley and the Parkfield area, where little or no archaeological surveying has been conducted. In the interest of erring on the conservative side rather than putting unknown resources at risk, these areas are rated as high-sensitivity on the map.

A final consideration in defining sensitivity zones is the well-founded observation on the part of archaeologists that river courses and major drainages are common locations of human occupation or use. This consideration is reflected in the high-sensitivity designations given to Salinas River tributaries such as Pancho Rico and Sargent Creeks in the south county, and Chualar and Gabilan Creeks in the northern portion of the valley. The importance of streams and rivers in human occupation is evident in the several burial sites that have been uncovered on the terraces of the Salinas River.

Historical Resources

Exhibit 4.10.3 depicts the location of federally, state-, and county-listed historic resources. More than 200 sites in Monterey County are included in a federal, state, or county listing of designated or eligible historic resources. Notable historic resources in the unincorporated county include Mission Nuestra Señora

de la Soledad and the Old Mission School near Soledad, Richardson Adobe near Soledad, the Site of the Battle of Natividad near Salinas, the José Eusebio Boronda Adobe Casa in Boronda, the Glass House in Pajaro, and Mission San Antonio de Padua near Jolon.

4.10.3 Regulatory Framework

4.10.3.1 State Historic Preservation Programs

The State Office of Historic Preservation oversees four historic preservation programs:

- National Register of Historic Places
- California Register of Historic Places
- California Historical Landmarks
- California Points of Historic Interest

Each program has its own specific eligibility criteria, although historic resources often overlap on multiple lists.

Resources listed in the National Register, California Historical Landmarks 770 and above are automatically listed in the California Register. Points of Historical Interest designated after December 1997 and recommended by the State Historical Resources Commission are also listed in the California Register.

4.10.3.2 California Environmental Quality Act

CEQA requires that discretionary land use approvals be reviewed for potential environmental impacts, including impacts on cultural resources, and that potentially significant cultural resource impacts be disclosed, and if possible, mitigated to a level of less than significant (CEQA Guidelines Section 15064.5[3]).

4.10.3.3 Senate Bill 18—Tribal Consultation Guidelines

Senate Bill 18 (SB18) requires that local governments consult with tribal representatives about the implications of proposed general plans or amendments on protected cultural places and sacred sites. SB18 introduces a separate process that expands the focus to include traditional tribal cultural places on both public and private lands for Federally and non-Federally Recognized Tribes. A cultural place is a landscape feature, site, or cultural resource that has some relationship to particular tribal religious heritage or is an historical or archaeological site of

significance or potential significance. The cultural place may be outside the reservation boundary. Many tribes have "Traditional Use Areas" that extend miles beyond reservation boundaries, reflecting their historical mobile patterns. SB18 consultation is designed to be concurrent with the general plan process.

4.10.3.4 Monterey County Local Official Register of Historic Resources

The local Official Register of Historic Resources is the County of Monterey's listing of locally designated historic resources.

4.10.3.5 Monterey County Historic District Design Guidelines

Monterey County has specific design guidelines for the East Garrison and Spreckels Historic Districts. These guidelines are intended to preserve and protect historic structures and ensure that surrounding land uses are compatible with historic districts.

Project Impacts

This section describes the CEQA impact analysis relating to cultural resources for the project and alternatives. It describes the methods used to determine the Project's impacts and lists the thresholds used to conclude whether an impact would be significant. Measures to mitigate (avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany each impact discussion.

4.10.3.6 Thresholds of Significance

Implementation of the 2007 General Plan would result in a significant impact on cultural resources if it would:

- Cause a substantial adverse change in the significance of a historic resource;
- Cause a substantial adverse change in the significance of an archaeological resource;
- Directly or indirectly destroy a unique paleontological resource; or
- Disturb any human remains, including those interred outside of formal cemeteries.

4.10.3.7 Impact Analysis

Buildout of the 2007 General Plan to the 2030 and 2092 planning horizons could result in impacts on historical, archaeological, and paleontological resources and burial sites, in Monterey County.

New development in the 2007 General Plan could potentially damage, degrade, or destroy the historic integrity of historical resources resulting in significant adverse affects on such resources. Grading, trenching, and other subsurface construction activities associated with buildout of the 2007 General Plan have the potential to encounter undiscovered archaeological resources. Undiscovered archaeological resources could potentially be damaged or destroyed. Development activities associated with the 2007 General Plan (i.e., subsurface earthmoving) may have the potential to damage or destroy paleontological resources. The same development activities also have the potential to disturb or destroy burial sites, particularly those interred outside of formal cemeteries.

Historical Resources

Impact CUL-1: Development under the 2007 General Plan could potentially damage or destroy historic resources. (Less Than Significant Impact with Mitigation.)

2030 Planning Horizon

Impact of Development with Policies

Buildout of the 2007 General Plan to the 2030 planning horizon would result in new development that could damage, degrade, or destroy the historic integrity of various sites that are listed, or eligible for listing, in the National Register, State Register, or County Inventory of historic places. Ground-disturbing activity associated with new development could potentially damage, degrade, or destroy the historic integrity of these sites.

Special Treatment Area (STA) Paraiso Hot Springs contains sensitive historic and prehistoric archaeological resources (cultural resources). Specific archeological information is not currently available regarding these resources, but this site and its history imply that the resources may be significant. Applying an STA designation to the site would allow further study of the area for recreational and visitor-serving commercial development and, potentially, approval of discretionary permits that allow future development. The future discretionary project review will be subject to CEQA.

2007 General Plan Policies

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

Public Service Element

The 2007 General Plan contains policies that are designed to promote historical preservation. Public Services Element Policies PS-12.2 through PS-12.4 (identification and designation of historic resources) encourage the listing of eligible historical sites by means of regularly updating cultural resources inventories, encouraging private property owners to submit applications for appropriate properties to qualify on the National Register of Historic Places and/or the California Register of Historical Resources, and by designating such properties with a Historic resource (HR) overlay on the zoning map. This will ensure awareness of existing historic resources and their locations.

Policies PS-12.1, PS-12.9, PS-12.10, and PS-12.12 through PS-12.15 (plans and regulations for protection of historical resources) promote the continued use of land use planning tools such as zoning to protect the integrity of historical sites. This will ensure consistency with guidelines and requirements of state and federal historic preservation laws, that new development will be compatible with existing historical resources in order to maintain the special values and unique character of the historic properties, that repair or rehabilitation would not preclude the structures continued designation as a historic structure, and that the special character of designated historic districts and neighborhoods shall be retained.

Policy PS-12.6 (support incentives to help preserve historic and cultural resources) promotes tax incentives such as the Mills Act and covenants that encourage historical preservation. This would encourage landowners to help preserve structures or building on their property that may be deemed historically significant.

Policies PS-12.5, PS-12.7, PS-12.8, PS-12.11, PS-12.16, and PS-12.17 (enhancement of the county's historical programs and documentation) encourage enhancement of programs that promote historical preservation and documentation by seeking out sources of funding for such programs, continuing support for the efforts of Monterey County's historical organizations to preserve the county's historical resources, development of public information programs regarding opportunities and programs to preserve historic and cultural resources, and promotion of heritage tourism to highlight Monterey County's diverse cultural back ground.

Agricultural Winery Corridor Plan

The AWCP is included in the 2007 General Plan. It is designed to promote the development of an integrated wine industry in Monterey County. The plan designates three winery corridors in the Salinas Valley and establishes land use policies to guide the development of no more than 60 wine-related facilities on the three corridors (refer to Section 3.0, Project Description, for the type and number of allowed facilities on each corridor).

The 2007 General Plan Agriculture Element Policies AG-4.1 through AG-4.4 establish land use policies to guide the development of the AWCP. These land use policies include standards that regulate the size and location of wineries and allow for the development of wine-related facilities that are consistent with the existing agricultural land uses. Under the ultimate buildout scenario of the AWCP, 40 artisan wineries, 10 full-scale wineries, and 10 tasting rooms would be developed. A specified number of each wine-related facility is identified on each of the three corridors; however, specific locations are not.

Historical resources within the AWCP boundaries include Mission Nuestra Señora de la Soledad, the Old Mission School, and the Richardson Adobe on the River Road/Arroyo Seco Road/Central Avenue Corridor and Mission San Antonio de Padua on the Jolon Road Corridor. As shown on Exhibit 4.10.2, most of the Jolon Road Corridor is designated as having high sensitivity for archaeological resources while most of the River Road/Arroyo Seco Road/Central Avenue and Metz Road corridors are designated as having low sensitivity. As shown on Exhibit 4.10.1, taken from the 2007 General Plan, no recorded paleontological sites are within any of the three AWCP corridors.

Implementation of the AWCP would allow for the development of wineries and tasting rooms along three corridors in the Salinas Valley. The development of these facilities could result in the alteration or demolition of existing structures that meet historic eligibility criteria. Construction activities associated with the development of new or expanded winery or tasting room facilities could also damage or destroy historical resources.

The AWCP is a component of the 2007 General Plan and is consistent with the policies that pertain to historical resources. Furthermore, any wineries or tasting rooms that would adversely affect historical resources would be required to comply with all federal and state laws governing historical preservation.

Area Plan Policies

Three Area Plans also have supplemental policies in the 2007 General Plan to preserve and protect historical resources.

North County Area Plan

Policy NC-2.2 (protection of Old Stage Road) calls for the preservation of the historical value of Old Stage Road, which will ensure that the road maintains its historic integrity in spite of new development. Policy NC-3.6 (North County Historic Sites) lists sites to be considered for inclusion in a historical resources zoning district, which will encourage protection of such sites from destruction caused by future development.

Greater Salinas Area Plan

Policy 1.4 (restricted development of town of Spreckles) stipulates that future development projects in Spreckels be harmonious with the surrounding historic character and be reviewed by the Historic Resource Review Board. Policy GS-3.3 (historic walnut tree maintenance and preservation) promotes preservation of the walnut trees along Spreckels Boulevard and encourages the use of private fund-raising efforts for tree maintenance. Implementation of these policies will help protect the town of Spreckels from possible destruction caused by future development. Policy GS-3.4 (support efforts to preserve historic resources) identifies the Boronda Adobe and Darrington Adobe as significant historical resources and promotes efforts of the Monterey County Historic Resources Review Board (HRRB) to maintain and preserve these sites. This will contribute to the protection and preservation of Monterey County's historic resources.

Carmel Valley Master Plan

Policy CV-3.13 (designation and protection of historic resources) stipulates that future development in Carmel Valley preserve the integrity of historical sites. Implementation of this policy will aid in preventing the damage or destruction of historic resources potentially caused by future development.

Federal and State Historic Preservation Requirements

All future development activities contemplated by the 2007 General Plan would be required to comply with all applicable federal and state statutes that concern the preservation of historical resources (e.g., the National Historic Preservation Act).

CEQA Review

In addition, future discretionary development activities contemplated by the 2007 General Plan would be required to undergo environmental review pursuant to CEQA. This review would include assessment of potential impacts on historical resources.

Significance Determination

Buildout of the 2007 General Plan within the 2030 planning horizon could potentially result in adverse impacts on historical resources. New development could potentially damage, degrade, or destroy the historic integrity of these resources.

However, the 2007 General Plan and Area Plan policies set forth comprehensive measures to avoid and minimize adverse impacts on historical resources to the maximum extent practicable. The 2007 General Plan contains policies that are designed to promote historical preservation, such as setting forth measures to encourage the listing of eligible historical sites, the use of land use planning tools such as zoning to protect the integrity of historical sites, promotion of tax incentives and covenants that encourage historical preservation, and enhance the county's historical programs and documentation. Therefore, historic resources, including STA Paraiso Hot Springs, would not be significantly impacted by the buildout of the 2007 General Plan. Impacts in this regard would be less than significant.

Precise locations of future AWCP facilities are unknown at the time of this writing; therefore, it is speculative to engage in further analysis of impacts on historical resources. Further analysis of potential historical resource impacts will take place at the project level.

Mitigation Measures

Mitigation Measure CUL-1:
Policy CSV-1.1 of the Central Salinas Valley Area Plan will be revised to read:

CSV-1.1 Special Treatment Area: Paraiso Hot Springs - The Paraiso Hot Springs properties shall be designated a Special Treatment Area. Recreation and visitor serving land uses for the Paraiso Hot Springs Special Treatment Area may be permitted in accordance with a general development plan and other discretionary approvals such as subdivision maps, use permits, and design approvals. The Special Treatment Area may include such uses as a lodge, individual cottages, a visitor center, recreational vehicle accommodations, restaurant, shops, stables, tennis courts, aquaculture, mineral water bottling, hiking trails, vineyards, and orchards. The plan shall address cultural resources protection, fire safety, access, sewage treatment, water quality, water quantity,

drainage, and soil stability issues (APN: 418-361-004, 418-361-009, 418-361-021, 418-361-022).

Significance Conclusion

In summary, buildout of the 2007 General Plan within the 2030 planning horizon could potentially result in adverse impacts on historic resources. However, the 2007 General Plan and Area Plan policies set forth comprehensive measures to avoid and minimize adverse impacts on historic resources to the maximum extent practicable. Therefore, historic resources would not be significantly impacted by buildout of the 2007 General Plan. Impacts 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 damage, degrade, or destroy the historic integrity of various sites that are listed, or eligible for listing, in the National Register, State Register, or County Inventory of historic places. New development could potentially damage, degrade, or destroy the historic integrity of these sites resulting in significant adverse affects on historic resources.

2007 General Plan Policies

The 2007 General Plan and Area Plan policies summarized above set forth comprehensive measures to avoid and minimize adverse impacts on historic resources to the maximum extent practicable.

Significance Determination

Buildout by 2092 could potentially result in adverse impacts on historical resources. However, the 2007 General Plan and Area Plan policies set forth comprehensive measures to avoid and minimize adverse impacts on historic resources to the maximum extent practicable. The 2007 General Plan contains policies that are designed to promote historic preservation. Assuming these or similar policies and requirements remain in place, historic resources would not be significantly impacted by 2092 buildout of the 2007 General Plan. Impacts would be less than significant.

Mitigation Measures

No mitigation beyond the 2007 General Plan policies, as modified by Mitigation Measure CUL-1, is necessary.

Significance Conclusion

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

Archaeological Resources

Impact CUL-2: Development under the 2007 General Plan could potentially damage or destroy archaeological resources. (Less-Than-Significant Impact with Mitigation.)

2030 Planning Horizon

Impact of Development with Policies

Grading, trenching, and other subsurface construction activities associated with buildout of the 2007 General Plan have the potential to encounter undiscovered archaeological resources. Undiscovered archaeological resources could potentially be damaged or destroyed.

As mentioned previously in the historic impacts section, STA Paraiso Hot Springs contains sensitive historic and prehistoric archaeological resources (cultural resources). Future development would be subject to discretionary project review pursuant to CEQA. Policy CSV-1.1 of the Central Salinas Valley Area Plan, as modified by Mitigation Measure CUL-1 would avoid a significant impact on this resource.

2007 General Plan Policies

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

Open Space and Conservation Element

The 2007 General Plan contains policies that address potential impacts on archaeological resources. Policies OS-6.1, OS-6.2, and OS-6.6 (identification and protection of archaeological resources) establish procedures to identify archaeologically sensitive areas using the statewide inventory developed by the Native American Heritage Commission (NAHC) and the State Historic Preservation Office (SHPO), to educate the public on such matters archeological resources, and to stipulate that the County shall adopt a uniform set

of guidelines for data recovery programs as well as for consultation with Native American descendents. By creating public awareness, these policies protect archaeological resources from the potential damages of future development. Policy OS-6.5 (avoidance of development in culturally sensitive areas) stipulates policies and procedures must be established to encourage the avoidance or clustering of new development away from sensitive areas. Policies OS-6.3 and OS-6.4 (field surveys in sensitive areas) require field surveys for projects in sensitive areas, and use of the SHPO Clearinghouse and the NAHC's list of sacred sites. These policies will ensure that archaeological resources are not destroyed during new development.

Native American Consultation

In accordance with SB18 and above policies OS-6.2, OS-6.3, and OS-6.6, the County of Monterey initiated consultation over the 2007 General Plan with local Native American representatives in spring 2006. Consultation efforts included contacting six tribal groups (list provided by the Native American Heritage Commission and included Indian Canyon Mutsun Band of Costanoan, Xolon Salinan Tribe, Amah/Mutsun Tribal Band, Ohlone Costanoan Esselen, Nation, Salinan Tribe of Monterey, San Luis Obispo and San Benito Counties, Ohlone-Jakki Kehl). The County met with representatives of the Ohlone Coastanoan Esselan Nation (OCEN) tribe on about six occasions to review General Plan language relative to archaeology, burial sites, and paleontology. Several language changes were suggested by OCEN representatives and incorporated in the current draft. An OCEN representative was present at the Planning Commission hearings and agreed to the current language. None of the other tribes responded to the request for consultation.

Agricultural Winery Corridor Plan

As noted above, the AWCP would allow for the development of wineries and tasting rooms along three corridors in the Salinas Valley. Development of these facilities could result in damage or destruction of archaeological resources. The AWCP is a component of the 2007 General Plan and is consistent with the policies that pertain to archaeological resources.

Furthermore, any wineries or tasting rooms that would adversely affect archaeological resources would be required to comply with all state laws governing preservation of archaeological resources. Included are requirements that cultural resource surveys be conducted prior to development.

Area Plan Policies

One Area Plan contains a supplemental policy concerning archaeological resources.

Carmel Valley Master Plan

Policy CV-3.13 (designation and protection of archeological resources) stipulates that future development in Carmel Valley preserve the integrity of archaeological sites. Implementation of this policy will aid in preventing the damage or destruction of archaeological resources potentially caused by future development.

2007 General Plan Land Use Concepts

The 2007 General Plan emphasizes compact city-centered growth in and near existing urbanized areas. This land use concept is designed to preserve significant natural areas and minimize adverse cultural resource impacts, including adverse effects on archaeological resources. By emphasizing growth in areas where land use disturbances have already occurred, any potential adverse impacts on archaeological resources would be minimized. Significant natural areas that may contain unique and important archaeological sites would be preserved through this proposed land use concept.

CEQA Requirements

Future discretionary development activities contemplated by the 2007 General Plan would also be required to undergo environmental review pursuant to CEQA. This review would include assessment of potential impacts on archaeological resources.

Significance Determination

Buildout of the 2007 General Plan within the 2030 planning horizon could potentially result in adverse impacts on archaeological resources. However, the 2007 General Plan and Area Plan policies set forth comprehensive measures to avoid and minimize adverse impacts on archaeological resources to the maximum extent practicable. The 2007 General Plan and Area Plan policies summarized above contain policies that address potential impacts on archaeological resources. Implementation of these proposed policies would ensure that archaeological resources are protected from adverse impacts. The proposed policies reduce impacts on archaeological resources by requiring compliance with applicable laws and by implementing a land use concept that will direct new development in areas that have already experienced ground-disturbing activities

Monterey County also consulted with tribal representatives in accordance with SB18 about the implications of the 2007 General Plan on cultural places

and sacred sites. This process has provided the County with additional information about areas where potential archeological sites may occur and will enable the County to consider the potential occurrence of these sites when regulating future land use activities. Therefore, archeological resources, including STA Paraiso Hot Springs, would not be significantly impacted by the buildout of the 2007 General Plan. Impacts would be less than significant.

Mitigation Measures

Mitigation Measure CUL-1, described above, will avoid a significant effect.

Significance Conclusion

In summary, buildout of the 2007 General Plan within the planning horizon could potentially result in adverse impacts on archeological resources. However, the 2007 General Plan and Area Plan policies set forth comprehensive measures to avoid and minimize adverse impacts on archaeological resources to the maximum extent practicable. Therefore, archaeological resources would not be significantly impacted by buildout of the 2007 General Plan. Impacts 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 create ground-disturbing activity resulting in significant adverse affects on archeological resources.

2007 General Plan Policies

The 2007 General Plan and Area Plan policies summarized above set forth comprehensive measures to avoid and minimize adverse impacts on archaeological resources to the maximum extent practicable.

Significance Determination

Buildout by 2092 could potentially result in adverse impacts on archaeological resources. However, the 2007 General Plan and Area Plan policies set forth comprehensive measures to avoid and minimize adverse impacts on archaeological resources to the maximum extent practicable. The 2007 General Plan employs land use concepts such as city-centered growth and preservation of natural areas to direct future growth away from archaeological resources that would be most deleteriously impacted by urban development. Assuming these or more stringent requirements remain in place, archaeological resources therefore would not be significantly impacted

by buildout of the 2007 General Plan. Impacts would be less than significant.

Mitigation Measures

No mitigation beyond the 2007 General Plan policies, as modified by Mitigation Measure CUL-1, is necessary.

Significance Conclusion

Buildout by 2092 could potentially result in adverse impacts on archaeological resources. However, the 2007 General Plan and Area Plan policies set forth comprehensive measures to avoid and minimize adverse impacts on archaeological resources to the maximum extent practicable. Therefore, archaeological resources would not be significantly impacted by buildout of the 2007 General Plan. Impacts would be less than significant.

Paleontological Resources

Impact CUL-3: Development under the 2007 General Plan could result in damage or destruction of paleontological resources. (Less-Than-Significant Impact.)

2030 Planning Horizon

Impact of Development with Policies

Buildout of the 2007 General Plan would allow for the development of new urban uses in undeveloped areas and existing urbanized areas. Development activities (i.e., subsurface earthmoving) may have the potential to damage or destroy paleontological resources.

2007 General Plan Policies

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

Open Space and Conservation Element

The 2007 General Plan contains policies to specifically address potential impacts on paleontological resources. Policies OS-7 and OS-7.2 (identification and protection of paleontological resources) establish procedures to identify and map paleontological resources, by requiring complete paleontological reviews and consultation with academic professionals. Implementation of these policies will ensure that potentially significant paleontological resources are not destroyed as a result of activities related to new development.

Policies OS-7.3 and OS-7.4 (survey sensitive areas) require field surveys for paleontological resources in sensitive areas prior to approval of development. This requirement will ensure that unknown paleontological resources are protected from destruction due to future development activities. Policy OS-7.5 (development away from paleontological resources) stipulates that policies and procedures encourage avoidance or clustering of new development away from these resources, thus avoiding impacts on sensitive paleontological resources.

Agricultural Winery Corridor Plan

As noted above, the AWCP would allow for the development of wineries and tasting rooms along three corridors in the Salinas Valley. Development of these facilities could result in damage or destruction of paleontological resources.

The AWCP is a component of the 2007 General Plan and is consistent with the policies that pertain to paleontological resources, as summarized under Impact CUL-3. Furthermore, any wineries or tasting rooms that would adversely affect paleontological resources would be required to comply with all state laws governing preservation of paleontological resources. This includes requirements that cultural resource surveys be conducted prior to development.

2007 General Plan Land Use Concepts

The 2007 General Plan emphasizes compact city-centered growth in and near existing urbanized areas. This land use concept is designed to preserve significant natural areas and minimize adverse cultural resource impacts, including adverse effects on paleontological resources. Emphasizing growth in areas where land use disturbances have already occurred will minimize potential adverse impacts on paleontological resources. Significant natural areas that may contain unique and important paleontological sites would be preserved through this proposed land use concept.

CEQA Review

In addition, future discretionary development activities contemplated by the 2007 General Plan would be required to undergo environmental review pursuant to CEQA. This review would include assessment of potential impacts on paleontological resources.

Significance Determination

Development under the 2007 General Plan within the 2030 planning horizon could potentially result in adverse impacts on paleontological resources.

However, the 2007 General Plan and Area Plan policies set forth comprehensive measures to avoid and minimize adverse impacts on paleontological resources to the maximum extent practicable. The 2007 General Plan contains policies to specifically address potential impacts on paleontological resources. Implementation of these proposed policies would ensure that paleontological resources are protected from adverse impacts. The proposed policies reduce impacts on paleontological resources by requiring compliance with applicable laws and by implementing a land use concept that will direct new development in areas that have already experienced ground-disturbing activities. Consequently, impacts on paleontological resources associated with implementation of the 2007 General Plan 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 within the planning horizon could potentially result in adverse impacts on paleontological resources. However, the 2007 General Plan and Area Plan policies set forth comprehensive measures to avoid and minimize adverse impacts on paleontological resources to the maximum extent practicable. Therefore, paleontological resources would not be significantly impacted by buildout of the 2007 General Plan. Impacts 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. Development activities (i.e., subsurface earthmoving) may have the potential to damage or destroy paleontological resources.

2007 General Plan Policies

The 2007 General Plan and Area Plan policies summarized above set forth comprehensive measures to avoid and minimize adverse impacts on paleontological resources to the maximum extent practicable.

Significance Determination

Buildout by 2092 could potentially result in adverse impacts on paleontological resources. However, the 2007 General Plan and Area Plan policies set forth comprehensive measures to avoid and minimize adverse impacts on paleontological resources to the maximum extent practicable. The 2007 General Plan employs land use concepts such as city-centered growth and preservation of natural areas that would direct future growth

away from paleontological resources that would be most deleteriously impacted by urban development. Assuming that these or more stringent requirements remain in place, paleontological resources therefore would not be significantly impacted by buildout of the 2007 General Plan. Impacts would be less than significant.

Mitigation Measures

No mitigation beyond the 2007 General Plan policies is necessary.

Significance Conclusion

Buildout by 2092 could potentially result in adverse impacts on historical resources. However, the 2007 General Plan and Area Plan policies set forth comprehensive measures to avoid and minimize adverse impacts on historical resources to the maximum extent practicable. Therefore, paleontological resources would not be significantly impacted by buildout of the 2007 General Plan. Impacts would be less than significant.

Burial Sites

Impact CUL-4: Buildout of the 2007 General Plan could damage or destroy burial sites. (Less-Than-Significant Impact.)

2030 Planning Horizon

Impact of Development with Policies

Buildout of the 2007 General Plan would allow for the development of new urban uses in undeveloped areas and in existing urbanized areas. Development activities (i.e., subsurface earthmoving) have the potential to disturb or destroy burial sites, particularly those interred outside of formal cemeteries.

2007 General Plan Policies

Open Space and Conservation Element

The 2007 General Plan contains policies to specifically address potential impacts on burial sites. Policies OS-8.1 and OS-8.2 (identification and protection of burial sites) establish procedures to identify and protect burial sites with assistance from the local Native American representatives and the NAHC, and stipulate that information on location and significance of burial sites be included in the environmental review process. Policy OS-8.3 (development at known burial sites) states that proposed development at sites where known burials or human cemeteries are located is prohibited until compliance with appropriate regulations and agencies have been completed. Policy OS-8.4 (development away from burial sites)

stipulates that policies and procedures encourage avoidance or clustering of new development away from burial sites, thus avoiding impacts on sensitive burial sites. Policy OS-8.5 (improve public recognition of the county's cultural heritage) states that a Native Californian Advisory Panel shall be established to aid public recognition of the county's cultural heritage, thus ensuring the protection of burial sites during future development efforts. Policies OS-8.6 and OS-8.7 (Native American consultation) require consultation with tribal representatives to identify potential burial sites and other significant tribal resources for all future General Plan Amendments, Master Plans, and Specific Plans. Implementation of the above policies prevents damage or destruction of burial sites potentially caused by future development.

Area Plan Policies

Native American Consultation

As discussed above, in accordance with SB18 and above policies OS-8.1, OS-8.6, and OS-8.7 the County of Monterey initiated consultation with local Native American representatives in spring 2007. Consultation efforts included contacting six tribal groups. The County met with representatives of the OCEN tribe [none of the others responded to the request for consultation] on about six occasions to review general plan language relative to archaeology, burial sites, and paleontology. Several language changes were suggested by OCEN representatives and incorporated in the current draft. An OCEN representative was present at the PC hearings and agreed to the current language.

Agricultural Winery Corridor Plan

As noted above, the AWCP would allow for the development of wineries and tasting rooms along three corridors in the Salinas Valley. Development of these facilities could result in damage or destruction of burial sites. The AWCP is a component of the 2007 General Plan and is consistent with the policies that pertain to burial sites.

Furthermore, any wineries or tasting rooms that would adversely affect burial sites would be required to comply with all state laws governing preservation of burial sites. Included are requirements that cultural resource surveys be conducted prior to development.

2007 General Plan Land Use Concepts

The 2007 General Plan emphasizes compact city-centered growth in and near existing urbanized areas. This land use concept is designed to preserve significant natural areas and minimize adverse cultural resource

impacts, including adverse effects on burial sites. Emphasizing growth in areas where land use disturbances have already occurred minimizes potential adverse impacts on burial sites. Significant natural areas that may contain unique and important burial sites would be preserved through this proposed land use concept.

CEQA Review

Future discretionary development activities contemplated by the 2007 General Plan would be required to undergo environmental review pursuant to CEQA. This review would include assessment of potential impacts on burial sites.

Significance Determination

Buildout of the 2007 General Plan within the planning horizon could potentially result in adverse impacts on burial sites. However, the 2007 General Plan and Area Plan policies set forth comprehensive measures to avoid and minimize adverse impacts on burial sites to the maximum extent practicable. The 2007 General Plan and Area Plan policies summarized above contain policies that address potential impacts on burial sites. Implementation of these proposed policies would ensure that burial sites are protected from adverse impacts. The proposed policies reduce impacts on burial sites by requiring compliance with applicable laws and by implementing a land use concept that will direct new development in areas that have already experienced ground-disturbing activities. In addition, Monterey County consulted with tribal representatives in accordance with SB18 about the implications of the 2007 General Plan on cultural places and sacred sites. This process has provided the County with additional information about areas where potential burial sites may occur and will enable the County to consider the potential occurrence of these sites when regulating future land use activities. Therefore, burial sites would not be significantly impacted by the buildout of the 2007 General Plan. Impacts would be less than significant.

Mitigation Measures

No mitigation beyond the 2007 General Plan policies is necessary.

Significance Conclusion

In summary, development under the 2007 General Plan within the 2030 planning horizon could potentially result in adverse impacts on burial sites. However, the 2007 General Plan and Area Plan policies set forth comprehensive measures to avoid and minimize adverse impacts on burial sites to the maximum extent practicable. Therefore, burial sites would not be significantly impacted by buildout of the 2007 General Plan. Impacts 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. Development activities (i.e., subsurface earthmoving) have the potential to disturb or destroy burial sites, particularly where interment has occurred outside of formal cemeteries.

2007 General Plan Policies

The 2007 General Plan and Area Plan policies summarized above set forth comprehensive measures to avoid and minimize adverse impacts on burial sites to the maximum extent practicable.

Significance Determination

Buildout by 2092 could potentially result in adverse impacts on burial sites. However, the 2007 General Plan and Area Plan policies set forth comprehensive measures to avoid and minimize adverse impacts on burial sites to the maximum extent practicable. The 2007 General Plan employs land use concepts such as city-centered growth and preservation of natural areas that would direct future growth away from burial sites that would be most deleteriously impacted by urban development. Therefore, burial sites would not be significantly impacted by buildout of the 2007 General Plan. Impacts in this regard would be less than significant.

Mitigation Measures

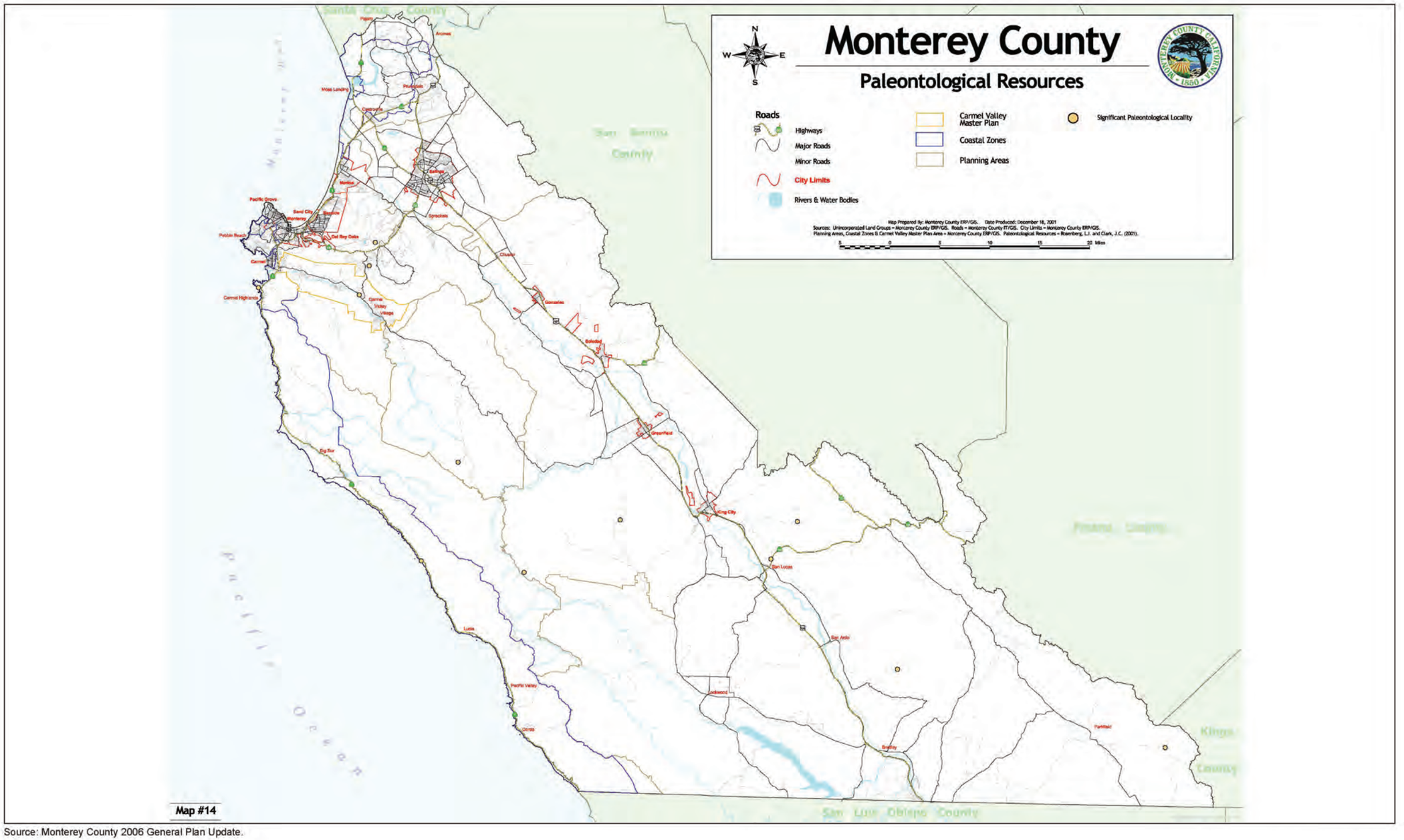
No mitigation beyond the 2007 General Plan policies is necessary.

Significance Conclusion

In summary, buildout to the 2092 planning horizon could potentially result in adverse impacts on burial sites. However, the 2007 General Plan and Area Plan policies set forth comprehensive measures to avoid and minimize adverse impacts on burial sites to the maximum extent practicable. Assuming that these or more protective requirements remain in place, burial sites would not be significantly impacted by buildout of the 2007 General Plan. Impacts would be less than significant.

4.10.4 Level of Significance after Mitigation

All impacts on cultural resources would be less than significant with implementation of the measures in the 2007 General Plan, and no additional mitigation would be required.



Source: Monterey County 2006 General Plan Update.

Michael Brandman Associates

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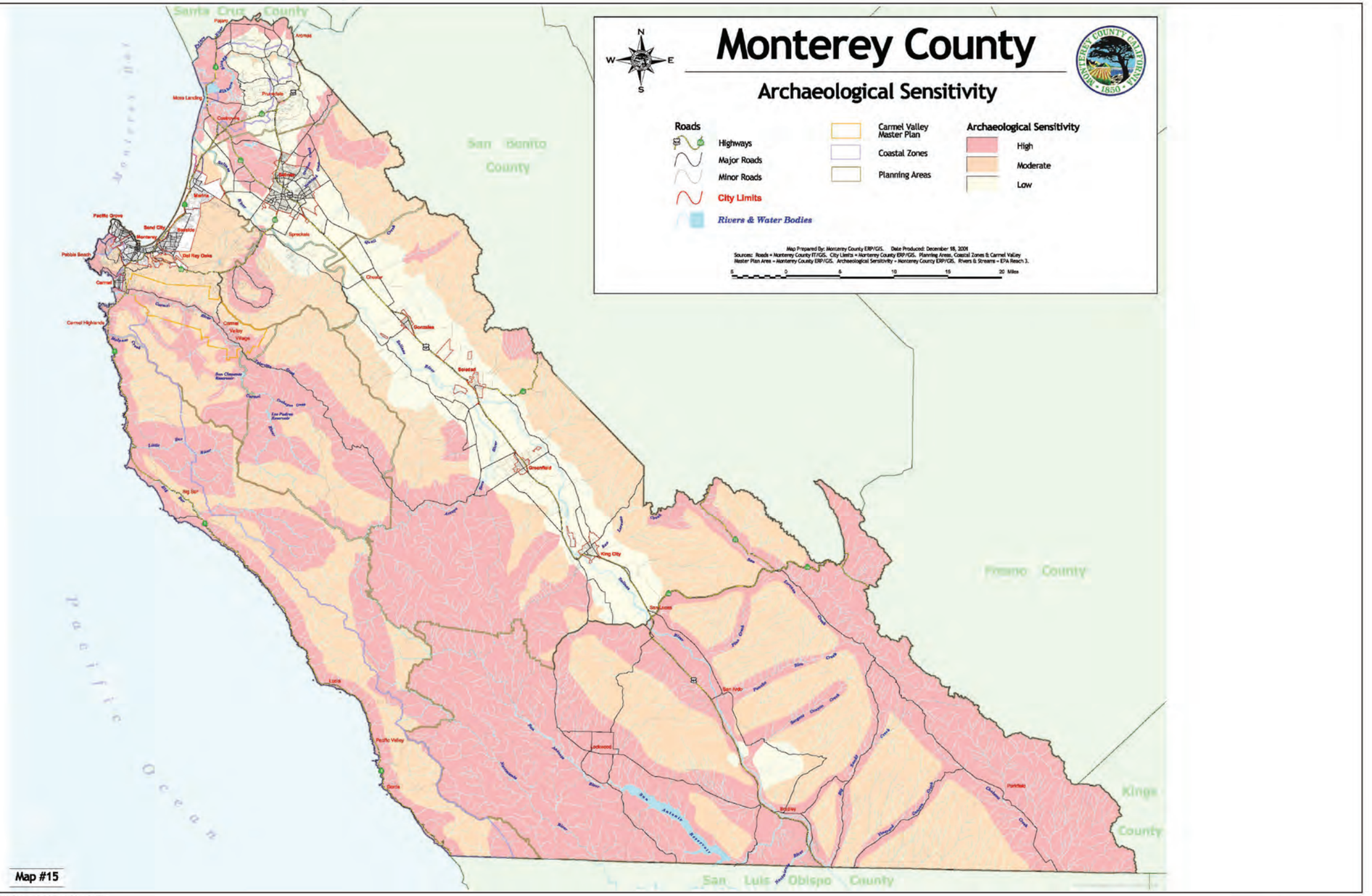
Exhibit 4.10.1
Palentological Resources



Source: Monterey County 2006 General Plan Update.

NORTH

Michael Brandman Associates

MONTEREY COUNTY GENERAL PLAN EIR

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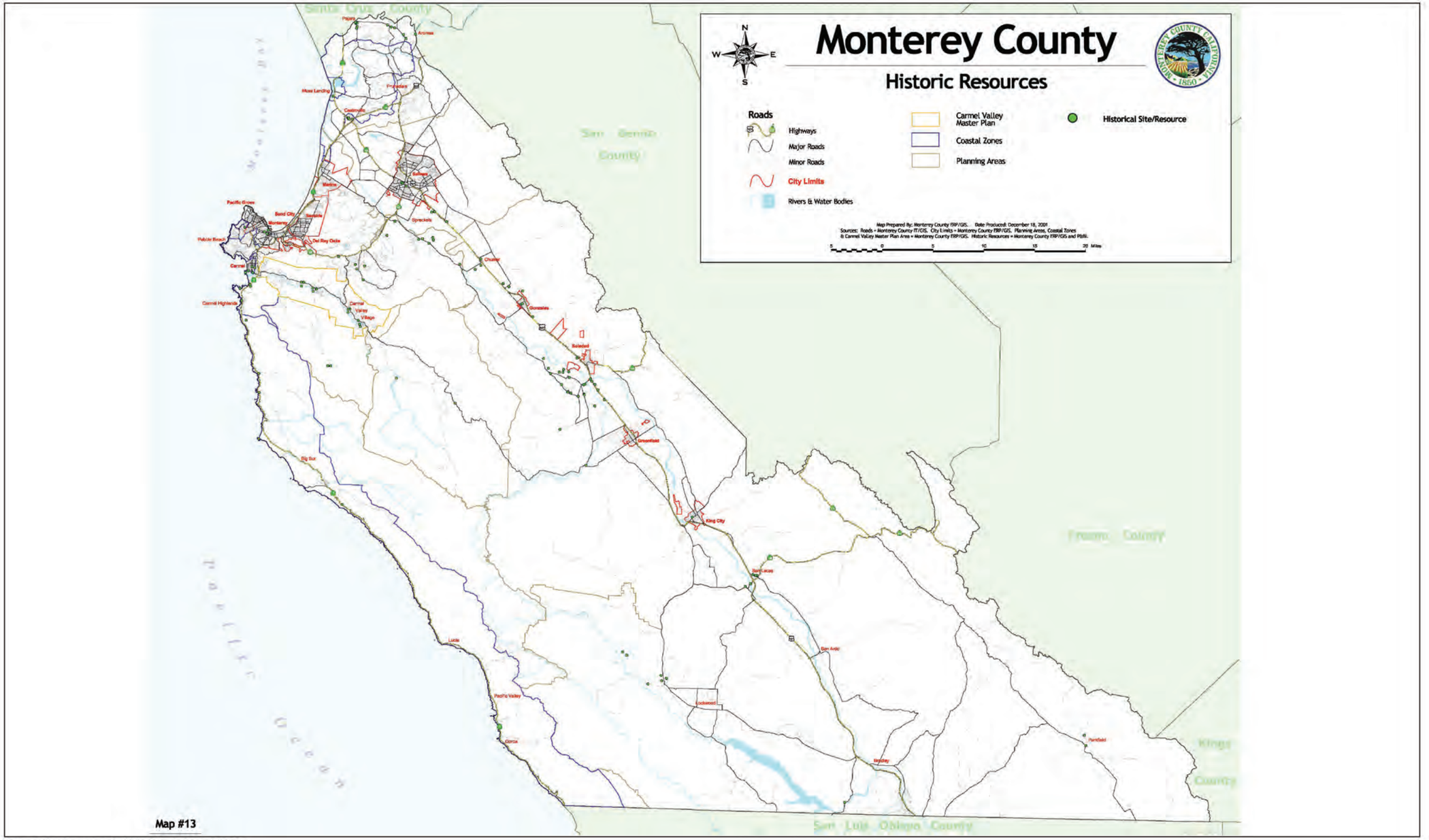
Exhibit 4.10.2
Archaeological Sensitivity



Source: Monterey County 2006 General Plan Update.

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Exhibit 4.10.3
Historic Resources

4.11 Public Services and Utilities

4.11.1 Abstract

A number of public service agencies and utility providers serve the unincorporated areas of Monterey County. These agencies and providers include nearly 20 fire protection agencies, the Monterey County Sheriff's Office, three dozen school districts, various County departments, and multiple water and wastewater districts.

All impacts related to public services and utilities would be less than significant and would not require mitigation beyond implementation of the proposed 2007 General Plan policies and programs. Impacts to water supply and infrastructure are discussed in Section 4.3.

4.11.2 Existing Setting

4.11.2.1 Fire Protection

Fire protection services in the county are currently provided by several different organizations, including fire protection districts, volunteer fire departments, fire brigades, the California Department of Forestry and Fire Protection (CDFFP), the U.S. Forest Service, the National Parks Service, and the U.S. military. Over 20 different fire protection entities serve the County (Exhibit 4.11.1).

Fire protection districts are the primary fire service providers. These independent special districts serve both incorporated and unincorporated areas. The cities of Carmel-by-the-Sea, Gonzales, King City, Marina, Monterey, Pacific Grove, Salinas, Seaside, and Soledad all have their own fire departments. Districts can establish and operate fire departments (though some do not have fire stations) and develop water storage facilities for fire protection. They can also operate ambulance services and provide rescue and first-aid services. Many of the districts have mutual aid agreements with one another, and several districts contract for services with the CDFFP. In most cases, the districts, volunteer fire departments, and brigades emphasize structural fire protection, while the CDFFP addresses wildland fires.

The CDFFP also provides protection to most of the southeast county, areas south of San Antonio Reservoir, the upper elevations and benchlands of the central Salinas Valley, and the upper elevations south of lower Carmel Valley. Fort Hunter Liggett and Camp Roberts are served by the military. The Big Sur Coast is protected by the Big Sur Volunteer Fire Brigade (a brigade does not have the same funding structure as the fire protection districts). The U.S. Forest Service provides wildland fire suppression in Los Padres National Forest.

4.11.2.2 Sheriff's Protection

The Monterey County Sheriff's Office provides police services to the unincorporated portions of the county. These services include patrol, crime prevention, and crime investigation provided out of stations in Monterey, Salinas, and King City. The Sheriff's Patrol Division provides a full range of law enforcement and related emergency response services to a resident population of approximately 110,000 (unincorporated areas) over an area of 3,325 square miles. Table 4.11-1 summarizes each station's service area. In addition, the Sheriff's Office operates the County Detention Facility in Salinas.

Table 4.11-1. Sheriff's Station Summary

Regional Station	Address	Service Area
Central	1414 Natividad Road in Salinas	Castroville, Aromas, Toro Park , Spreckels, Prunedale, Chualar, Fort Ord (portions)
Coastal	1200 Aguajito Road in Monterey	Monterey Peninsula, Carmel Valley, Big Sur Coast
South County	250 Franciscan Way in King City	Central Salinas Valley, San Lucas, San Ardo, Bradley, Bryson-Hesperia, Parkfield, Fort Hunter Ligget, Camp Roberts, Lake San Antonio

Source: Monterey County Sheriff's Office 2008.

The Sheriff's Office contains an Administrative Bureau, an Enforcement Operations Bureau, and a Custody Operations Bureau. The Enforcement Operations Bureau includes the Patrol Division, Narcotics Division, Investigations Division, Homeland Security Division, Crime Prevention Unit, Special Operations Division, and various other teams (such as Hostage/Crisis Negotiation, Search and Rescue, S.W.A.T., and K-9).

As of June 2006, the Sheriff's Office had 462.5 full-time equivalent staff positions. This includes 338 sworn safety officer positions and 124.5 non-sworn positions. As of June 2006, the Sheriff's Office 48 positions were vacant, 30 of them for sworn personnel and 18 for non-sworn personnel.

4.11.2.3 Schools

A total of 36 public school districts and charter school programs serve Monterey County. This total includes seven school districts whose boundaries overlap into other counties (Exhibit 4.11.2). The 29 school districts and charter school programs wholly contained in Monterey County are summarized in Table 4.11-2. In 2006, more than 53,000 students were enrolled in these districts.

School districts based in San Benito, Fresno, Santa Cruz, and San Luis Obispo Counties also serve portions of Monterey County. These seven districts are summarized in Table 4.11-3.

4.11.2.4 Library Services

The County provides library services to residents of the unincorporated county and eight cities through the Monterey County Free Libraries system. Branch libraries are located in the following communities: Aromas, Big Sur, Bradley, Buena Vista (Las Palmas area), Carmel Valley, Castroville, Gonzales, Greenfield, King City, Marina, Pajaro, Parkfield, Prunedale, San Ardo, San Lucas, Seaside, and Soledad. The Library also maintains deposit collections in some local schools. The Library's service area does not include the city limits of the cities of Carmel-by-the-Sea, Monterey, Pacific Grove, and Salinas, which operate their own public libraries.

Monterey County Free Libraries offer library materials in a variety of formats (i.e., books, talking books [books on tape], magazines and newspapers, pamphlets, large print, electronic resources, and videos) and in a variety of languages, such as English, Spanish, Korean, and Vietnamese. The library also operates two bookmobiles: one based in Prunedale and the other based in King City. The two bookmobiles visit more than 30 communities on a regular basis.

Table 4.11-2. Summary of Monterey County School Districts

District	District Type	Number of Schools	Enrollment (2006–2007)
Alisal Union School District	K-8	13	7,416
Bradley Union School District	K-8	1	28
Carmel Unified School District	K-12	6	2,132
Chualar Union Elementary School District	K-8	1	310
Cypress Grove Charter High School Arts & Science	9-12	1	166
Gonzales Unified School District	K-12	4	2,272
Graves Elementary District	K-8	1	40
Greenfield Union Elementary School District	K-8	4	2,468
International School	K-7	1	336
King City Joint Union High School District	9-12	4	2,142
King City Union Elementary School District	K-8	4	2,434
Lagunita School District	K-8	1	60
Learning for Life Charter School District	7-12	1	107
Mission Union Elementary School District	K-8	1	97
Monterey County Office of Education District	K-12	5	1,628
Monterey Peninsula Unified School District	K-12	22	11,607
North Monterey County Unified School District	K-12	8	4,707

District	District Type	Number of Schools	Enrollment (2006–2007)
Oasis Charter District	K-6	1	118
Pacific Grove Unified School District	K-12	5	1,725
Pacific Unified School District	K-12	1	21
Salinas City Elementary School District	K-6	12	7,788
Salinas Union High School District	7-12	10	13,548
San Antonio Union School District	K-8	1	193
San Ardo Union School District	K-8	1	120
San Lucas Union School District	K-8	1	78
Santa Rita Union School District	K-8	5	2,924
Soledad Unified School District	K-12	8	4,255
Spreckels Union School District	K-8	2	870
Washington Union School District	K-8	3	969
Total		**128**	**70,559**

Source: Ed-Data, Education Data Partnership 2008.

Table 4.11-3. Summary of School Districts Based In Other Counties

District	Home County	District Type	Total Number of Schools	Schools in Monterey County	Total District Enrollment (2006–2007)
Aromas-San Juan Unified School District	San Benito	K-12	3	1	1,330
Coalinga-Huron Joint Unified School District	Fresno	K-12	11	—	4,348
Pajaro Valley Unified School District	Santa Cruz	K-12	33	3	19,162
Paso Robles Joint Union School District	San Luis Obispo	K-12	12	—	5,030
Pleasant Valley Joint Union Elementary School District	San Luis Obispo	K-8	1	—	137
San Miguel Joint Union Elementary School District	San Luis Obispo	K-8	2	—	454
Shandon Joint Unified District	San Luis Obispo	K-12	4	1	384
Total			**61**	**5**	**30,845**

Source: Ed-Data, Education Data Partnership 2008.

4.11.2.5 Public Health

The Monterey County Health Department provides public health services to Monterey County. The Health Department provides a variety of services, including adult behavioral services alcohol and drug treatment, communicable diseases treatment, HIV/AIDS prevention, immunization, lifestyle risk, maternity, pediatric, and reproductive health services.

The Health Department operates clinics in Marina, Salinas, and Seaside. Natividad Hospital in Salinas, which is currently operated by the County, is the main provider of care for indigent and underinsured residents of the County and provides both primary and in-patient care.

4.11.2.6 Wastewater

Wastewater disposal in the urban areas of the county is mostly provided through sewage treatment plants. The Central Coast RWQCB has not identified any significant issues with any of the present plant operations.

Wastewater Treatment Facilities

There are two regional treatment facilities in Monterey County. The Monterey Regional Water Pollution Control Agency (MRWPCA) provides wastewater transmission, treatment, and disposal. The Agency's wastewater treatment plant is located north of the City of Marina, immediately south of the Salinas River. The membership and areas served by the MRWPCA include Del Rey Oaks, Seaside, Monterey, Pacific Grove, Salinas, Sand City, and MCWD. The Agency also serves the unincorporated areas of Moss Landing, Boronda, Castroville, and the former Fort Ord area. The wastewater treatment plant capacity is 29.6 MGD (about 89 acre-feet per day) and current demand is 21.0 MGD (about 64.5 acre-feet per day).

The Carmel Area Water District (CAWD) is the other regional district providing wastewater services in the county. The CAWD operates and maintains sewage collection, treatment, and disposal facilities. The District's facilities are located at the mouth of the Carmel River and serve the City of Carmel-by-the-Sea, Del Monte Forest/Pebble Beach, and portions of the Carmel Valley. The wastewater treatment plant capacity is 4.0 MGD (about 1.2 acre-feet per day) and current demand is 1.7 MGD (about 5.2 acre-feet per day).

In addition, the incorporated cities in the central Salinas Valley operate their own wastewater treatment facilities. A summary of the regional and city wastewater treatment facilities is provided in Table 4.11-4.

Table 4.11-4. Municipal Wastewater Disposal in Monterey County

Wastewater Treatment System	Service Area	Treatment Level	Capacity	Current Use	Remaining Capacity
Monterey Regional Water Pollution Control Agency	Del Rey Oaks, Marina, Monterey, Pacific Grove, Salinas, Sand City, Seaside	Tertiary	29.6 MGD (27.0 MGD permitted)	21 MGD	8.6 MGD
Carmel Area Wastewater District	Carmel-by-the-Sea, Pebble Beach, portions of Carmel Valley	Tertiary	4.0 MGD (3.0 MGD permitted)	1.7 MGD	2.7 MGD
Gonzales	Gonzales	Primary	0.706 MGD	0.35 MGD	0.356 MGD
Greenfield	Greenfield	Primary	1.0 MGD	0.8 MGD	0.2 MGD
King City	King City	Secondary	1.2 MGD	0.731 MGD	0.469 MGD
Soledad	Soledad	Secondary	5.6 MGD (3.1 MGD permitted)	2.5 MGD	3.1 MGD

MGD = Million gallons per day.

Source: Association of Monterey Bay Area Governments 1999.

Monterey County also has several County Service Areas (CSAs) providing wastewater services. CSAs provide various services to the unincorporated areas of the county. Wastewater collection, treatment, and disposal as well as septic tank maintenance are among the permitted services.

Rural Treatment Systems

On-site wastewater systems provide treatment and disposal of domestic wastes on individual sites. There are three basic types of treatment systems: septic tanks, biological treatment units, and chemical treatment units. A treatment system is usually used in combination with a soil absorption field: drain fields, seepage pits, leaching chambers, absorption mounds, and evapotranspiration beds. The predominant type of wastewater system used in the rural communities of Monterey County is the septic tank and dual drain field.

Many of the homes in Monterey County are currently using septic systems. Most of these systems pre-date 1969 County regulations governing the approval of individual disposal systems and have undersized septic tanks; inadequate area for expansion; and undersized, crowded drain fields. In some cases, when conventional septic systems fail, an alternative system may be allowed by the County Environmental Health Department. Alternative systems may employ aerobic processes to breakdown organic material or may use an engineered mound where percolation is inhibited. These alternative systems require intensive monitoring and are expensive to maintain.

4.11.2.7 Solid Waste

Two agencies oversee solid waste disposal in Monterey County. The Monterey Regional Waste Management District (MRWMD) serves the western coastal areas of Monterey County. MRWMD's service area includes the cities of Carmel-by-the-Sea, Del Rey Oaks, Marina, Monterey, Pacific Grove, Sand City, and Seaside; and the unincorporated areas of Big Sur, Carmel Highlands, Carmel Valley, Castroville, Corral De Tierra, Laguna Seca, Moss Landing, Pebble Beach, San Benancio, and Toro Park. The District covers a total of 853 square miles.

The Salinas Valley Solid Waste Authority (SVSWA) serves the eastern inland portions of Monterey County. SVSWA's service area includes the cities of Gonzales, Greenfield, King City, Salinas, and Soledad; and the unincorporated communities of Bradley, Chualar, Jolon, Lockwood, Pine Canyon (King City), Pleyto, Prunedale, San Ardo, San Lucas, and Spreckels.

Collection Service

Waste Management, Inc. provides contract solid waste and recycling collection services to unincorporated areas of Monterey County. Waste Management hauls solid waste and recyclables to each respective agency's facilities.

Landfills

Three active landfills currently operate in Monterey County. They are summarized in Table 4.11-5.

Table 4.11-5. Monterey County Landfill Summary

Landfill	Location	Operator	Permitted Capacity	Remaining Capacity	Closure Date
Crazy Horse Sanitary Landfill	Salinas	SVSWA	2.7 million cubic yards	1.0 million cubic yards	2009
Johnson Canyon Sanitary Landfill	Gonzales	SVSWA	13.8 million cubic yards	6.9 million cubic yards	2040
Marina Landfill	Marina	MRWMD	49.7 million cubic yards	48.6 million cubic yards	2107

Source: California Integrated Waste Management Board 2008a.

SVSWA currently has future plans to expand both of its landfills, as well as site a new landfill. This would increase capacity beyond that shown in Table 4.11-5. MRWMD has enough capacity at its existing landfill and has no immediate plans to expand or site a new landfill.

Waste Diversion Rates

Waste diversion is a measurement of how much solid waste is diverted from landfills by waste prevention or recycling activities. Table 4.11-6 summarizes the waste diversion rates for unincorporated Monterey County from 1996 through 2006. Although diversion rates improved substantially to over 50 percent in 2001, diversion rates have fluctuated and have begun to drop in recent years. Outreach efforts associated with recycling and waste diversion programs are being implemented to motivate the public to recycle.

Table 4.11-6. Waste Diversion Rates (1996–2006)

Year	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Diversion rate (%)	23	25	25	30	31	57	53	54	58	49	50

Source: California Integrated Waste Management Board 2008b.

The State requires that each jurisdiction achieve a diversion rate of at least 50 percent. Monterey County is currently in compliance with this requirement.

4.11.3 Regulatory Framework

4.11.3.1 Federal and State

Federal Regulations

The federal government sets minimum standards for the protection of water quality, including for drinking water and environmental protection, and has jurisdiction over flow in some waters where rivers or streams cross state boundaries. The federal government also has a voice in water management through its jurisdiction over energy regulation (for hydroelectric projects) and where endangered fish and aquatic species occur within a water body.

The federal CWA (including WDRs, the NPDES program, and Section 303(d) impaired water bodies and TMDLs) is described in detail in Section 4.3, Water Resources. The CWA is largely administered by the State Water Board and the Central Coast RWQCB.

State Regulations

Wastewater Disposal

CCRWQCB has adopted water quality standards to be met by treatment. These are imposed, for treatment facilities, through the waste discharge requirement (WDR) permitting process administered by the CCRWQCB. Wastewater

treatment plants, both public and private, are required to meet the standards under individual WDRs issued and enforced by the CCRWQCB. The CCRWQCB has adopted a WDR waiver for onsite domestic wastewater treatment for individual residences. A WDR "waiver" does not waive permitting, but rather establishes standard requirements for permitting qualifying projects.

Municipal Services Review

LAFCO is the agency empowered to incorporate, annex to, or dissolve cities and special districts. The objectives of LAFCO law (Government Code Section 56000 et seq.) require LAFCO to discourage urban sprawl, encourage the orderly formation and development of local government agencies, ensure the provision of adequate urban services, and preserve agricultural land resources on a countywide basis. Each county's LAFCO is comprised of representatives of the county, cities, special districts, and the public.

To assist with these functions, California Government Code Section 56430 requires LAFCOs to conduct Municipal Services Reviews (MSRs) that describe the municipal services provided by the agencies that are subject to LAFCO authority. MSRs are comprehensive studies designed to collect and analyze information about the governance structures and efficiencies of service providers, to estimate their ability to meet current and future service needs, and to identify opportunities for greater coordination and cooperation between providers. LAFCO may include one or more services in the review, and the study area may be the whole county or any subarea as determined by LAFCO.

The goals of the MSR are to determine infrastructure needs or deficiencies, growth and population projections for the affected area, financing constraints and opportunities, opportunities for shared facilities, and government structure options. MSRs can therefore provide useful information in evaluating water supply issues.

Wastewater Management

Wastewater disposal is regulated by the County Health Department, the CCRWQCB, and the SWRCB. Please see the Regulatory Framework for Potable Water above and in Section 4.3, Water Resources.

Solid Waste—California Integrated Waste Management Act of 1989

Decreasing landfill disposal capacity and the increasing difficulty to site or expand waste disposal facilities, whether as a result of public opposition or the enactment of more stringent environmental regulations, led to the passage of the California Integrated Waste Management Act of 1989 (AB 939) (Chapter 1095, Statutes of 1989, et seq.). AB 939 was adopted in an effort to improve planning for solid waste facilities and reduce the volume and toxicity of solid waste that is disposed. With its passage, solid waste management practices were redefined by (1) requiring each of the cities and unincorporated portions of counties throughout the State of California to divert 25 percent by 1995 and, as of the year 2000, 50 percent of the solid waste that is disposed; and (2) requiring local governments to prepare and implement plans that would improve waste resource management by integrating solid waste management principles that place

importance on first reducing solid waste through source reduction, reuse, recycling, and composting before disposing of it through environmentally safe landfill disposal or transformation (e.g., regulated incineration of solid waste materials).

Fire Protection—Uniform Fire Code and California Building Standards Code

The Uniform Fire Code published by the International Fire Code Institute and the Uniform Building Code (adopted in California as the California Building Standards Code) published by the International Conference of Building Officials both prescribe performance characteristics and materials to be used to achieve acceptable levels of fire protection.

Amendments to the California Building Standards effective in 2008 increased the requirements for defensible space and require more fire-resistant building materials and design than prior codes. These codes are in effect in areas identified as having severe fire hazards.

Public Education—Leroy F. Greene School Facilities Act of 1998 (SB 50)

In 1998, the California State Legislature enacted SB 50, which made significant amendments to existing State law governing school fees. SB 50 prohibited state or local agencies from imposing school impact mitigation fees, dedications, or other requirements in excess of those provided in the statute. Government Code Section 65995(e) provides that where payment has been made to a school district in accordance with the school fee program that is considered full mitigation of any school impacts. The legislation also prohibits local agencies from denying or conditioning any project (including a general plan) based on the inadequacy of school facilities.

Water Quality

A number of federal, state, and local governments protect beneficial uses and water quality objectives for surface water and groundwater resources. Government Code Section 65302 (Land Use), requires city and county general plans to address water supply as a topical issue, using an Urban Water Management Plan as a primary source document. Programs and regulations related to drinking water quality, water supply, and wastewater treatment and disposal are described below.

4.11.4 Project Impacts

Impacts to public service utilities from the 2007 General Plan policies on the 2030 planning horizon and 2092 buildout are discussed. The significance of the impact is based on the thresholds of significance, which are described below. If the impact would be significant, a mitigation measure to minimize the impact and the resultant level of significance of the impact are stated. Then, the impacts of the 2007 General Plan policies on the projected 2092 buildout, along with proposed mitigation are discussed.

4.11.4.1 Methodology

The impacts on public service utilities were based on using thresholds of significance to determine impact significance, described below, and an analysis of the remaining service capacity and expected future growth within the Community Areas. In addition, compliance with federal, state and local ordinances and regulation regarding public service utilities were also considered.

4.11.4.2 Thresholds of Significance

Implementation of the 2007 General Plan would result in a significant impact on public services and utilities if it would:

- Require new or expanded fire protection facilities;
- Require new or expanded Sheriff's facilities;
- Require new or expanded school facilities;
- Require new or expanded library facilities;
- Require new or expanded public health facilities;
- Require new or expanded wastewater treatment facilities;
- Require new or expanded storm water drainage facilities; or
- Require new or expanded solid waste disposal facilities or result in non-compliance with federal, state, or local statutes related to solid waste.

4.11.4.3 Impact Analysis

Buildout of the 2007 General Plan would impact the sheriff, fire protection, wastewater treatment, landfill, libraries, public school, and storm water drainage facilities if, new or expansions of the existing facilities are required. The following section provides an analysis of the potential impacts the 2007 General Plan policies would have on the 2030 planning horizon. Furthermore, mitigation measures and the minimization of the mitigation measures are also discussed.

Fire Protection

Impact PSU-1: Development and land use activities contemplated in the 2007 General Plan may result in the need for new or expanded fire facilities. (Less than Significant Impact.)

2030 Planning Horizon

Impact of Development with Policies

Implementation of the 2007 General Plan would increase urban development in the unincorporated areas of the county, resulting in a greater need for fire protection in order to avoid adverse effects on the public health and safety. The policies of the 2007 General Plan would avoid significant effects. New or expanded fire protection facilities would be required, particularly near the proposed Pajaro, Boronda, Castroville, Chualar, and Fort Ord Community Areas, which would result in significant effects.

2007 General Plan Policies

The 2007 General Plan proposes a number of policies to ensure that new or expanded fire facilities would be provided concurrently with anticipated growth.

Public Service Element

Public Service Element Polices PS-1.1 through PS-1.6 establish general standards for the provision of public facilities concurrently with future growth. Furthermore, these policies direct growth where adequate facilities currently exist, seek to achieve acceptable level of service standards through improvements funded by fair share impact fees and planned capital improvements. These policies would decrease the impact of future growth by requiring that fire stations be developed concurrently with future developments and that fire stations provide an Adequate Public Facility and Services (APFS) that meets or exceeds the required amount by the development.

Safety Element

Safety Element Policies S-4.1 through S-4.33 address potential impacts from fire hazards. The policies include educational awareness and participation about fire hazards, establish a minimum roadway access for fire vehicles, and require new developments to provide fire suppression systems, such as fire breaks, fire-retardant building materials, and automatic fire sprinkler systems. Furthermore, these policies would create a design review process by county planning and fire officials to address project design, landscaping, and building standards. The policies described above would decrease accidental fires through educational awareness of the

public. The above described policies would also prevent small fires from enlarging by establishing roadway access for fire vehicles and requiring new developments to provide fire suppressant systems. In addition, the design review process would further decrease fires from occurring by ensuring the project design, landscaping and building standards and other fire-protection related issues are addressed.

Safety Element Policies S-6.1 through S-6.8 set forth emergency preparedness policies to ensure that fire protection agencies would have adequate resources to meet the demands of the buildout population. These resources includes, adequate emergency centers and brochures that specify the levels of emergency levels available throughout the county be developed. Policy S-6.6 prohibits development in areas that cannot be reached by emergency vehicles within the county standards.

Area Plan Policies

Most of the fire policies are contained in the 2007 General Plan for the entire county. Two Area Plans provide area specific fire protection policies.

Greater Salinas Area Plan

Policy GS-1.1 requires that future development within the Butterfly Village portion of the Rancho San Juan Special Treatment Area provide adequate public services, including fire protection.

Cachagua Area Plan

Policy CACH-4.3 encourages the formation of a fire district in this area to assist and ensure that a minimum level of fire protection is available to residents within the area plan boundaries.

Development Impact Fees

New development projects also would be assessed impact fees to finance capital improvements for fire protection facilities. Because payment of these fees would be limited to the project's fair share, additional funding sources would be required to ensure that adequate facilities are provided concurrently with growth. Capital Improvement and Financing Plans that identify what is required to meet APFS needs are required under Public Services Element Policy PS-1.1.

Significance Determination

The 2007 General Plan and Area Plan goals and policies are designed to accommodate growth in Community Areas while ensuring that new development provides adequate fire protection facilities and services to

future residents. These comprehensive policies will ensure that facilities are built and operated to provide an acceptable level of fire protection.

Physical construction, resource demands, and employee requirements associated with future fire protection facilities and services would be addressed in future separate environmental reviews. However, typical impacts of fire protection facilities include noise and intermittent traffic disruption, depending on the location and design of the facility. Noise impacts are generally unavoidable due to the use of loud sirens when equipment is leaving the station on emergency calls; however, it is highly unlikely that noise impacts would occur frequently. Thus, noise impacts from sirens would be less than significant due to their low frequent occurrence and because it not expected to impact the overall noise level of a given area. Future facilities would include mitigation as necessary to reduce the magnitude of potential site-specific effects. Traffic disruption is typically short in nature; only long enough for equipment to leave the station and therefore has no impact on traffic congestion.

There are no plans at the current time that describe the size, location, or operational characteristics of these future facilities. Therefore, their environmental impacts cannot be determined with any certainty and are examined at only a general level of detail. New facilities and services would serve the Community Areas and Rural Centers (where demand is expected to be greatest) and likely would be located in those areas. When specific facilities are proposed, they would be subject to CEQA review; mitigation of any significant impacts that may be identified would be required where feasible.

Mitigation Measures

Because new or expanded fire protection facilities associated with implementation of the 2007 General Plan policies would require project-specific environmental review and potentially significant adverse effects would be mitigated as feasible, no mitigation is necessary.

Significance Conclusion

Adequate facilities will be provided in a timely manner such that impacts on the public health, safety and welfare are less than significant. Future fire station operations will have a less than significant noise impact on nearby residences and other sensitive uses because noise impacts are not likely to occur on a frequent basis.

Buildout

Impact of Development with Policies

Buildout in 2092 will result in increased development which, in turn, will require the construction or expansion of facilities beyond 2030 levels. Future policies and service standards are unknown; however, we may assume that

they will maintain or increase current standards. Historically, society has increased standards of safety; thus, it can be assumed that by buildout county standards of public safety and services will have been increased. The 2007 General Plan and Area Plan goals and policies will be implemented, including adoption of a County noise ordinance that will establish enforceable noise limits.

2007 General Plan Policies

The 2007 General Plan and Area Plan policies summarized above identify the public service, safety, and noise policies that will be in place to provide adequate fire protection services to future county residents.

Significance Determination

Future fire stations are assumed to require sirens to be sounded as vehicles leave on emergency calls. This would presumably result in temporary noise levels that exceed acceptable standards at nearby sensitive uses. As today, future facilities will be subject to environmental analysis and the mitigation of noise impacts, to the extent feasible. Nonetheless, occasional noise impacts may not be avoidable; however, noise impacts are not expected to occur frequently. The construction and operation of future fire stations would be less than significant.

Mitigation Measures

Because new or expanded fire protection facilities associated with implementation of the 2007 General Plan policies would require project-specific environmental review and potentially significant adverse effects would be mitigated as feasible, no additional mitigation is necessary beyond 2007 General Plan policies and adoption of the County noise ordinance.

Significance Conclusion

The impacts of operating future facilities will be less than significant.

Sheriff's Protection

Impact PSU-2: Development and land use activities contemplated in the 2007 General Plan may result in the need for new or expanded Sheriff's facilities. (Less-Than-Significant Impact.)

2030 Planning Horizon

Impact of Development with Policies

Implementation of the 2007 General Plan would increase the population of the unincorporated areas of Monterey County, resulting in a greater demand for Sheriff's protection. New or expanded Sheriff's facilities would be required, particularly near the proposed Pajaro, Boronda, Castroville, Chualar, and Fort Ord Community Areas.

2007 General Plan Policies

The 2007 General Plan proposes a number of policies to ensure that new or expanded Sheriff's facilities would be provided concurrently with future growth.

Public Services Element

As discussed under Impact PSU-1, Public Services Element Policies PS-1.1 through PS-1.6 would establish general standards for the provision of adequate public facilities. These policies would decrease the impact on sheriff facilities by that requiring future developments be developed concurrently with future sheriff stations. According to the policies, future sheriff stations must provide an Adequate Public Facility and Services (APFS) that meets or exceeds the required amount by the development. The development of new sheriff facilities concurrently with development would decrease the impact by providing an APFS.

Safety Element

As stated in Impact 1, Safety Element Policies S-6.1 through S-6.8 set forth emergency preparedness policies to ensure that the Sheriff's Office would have adequate resources to meet the demands of the 2030 population. Policies S-6.1 through S-6.8 would decrease impact on sheriff stations by ensuring that stations have the adequate resources in an emergency situation, which include emergency centers, information on the levels of emergency provided and prohibiting development in areas that cannot be reached by emergency vehicles.

Area Plan Policies

One supplemental Area Plan policy concerns Sheriff's services:

Greater Salinas Area Plan

Policy GS-1.1 requires that future development within the Butterfly Village portion of the Rancho San Juan Special Treatment Area provide adequate public services, including Sheriff's protection.

Development Impact Fees

PS-1.4 would require payment of a fair share of the cost of providing the APFS to serve the development. New development projects would be assessed impact fees to finance capital improvements for Sheriff's facilities. Payment of these fees would ensure that adequate facilities are provided concurrently with growth.

Significance Determination

The 2007 General Plan and Area Plan goals and policies are designed to accommodate growth in Community Areas while ensuring that new development provides adequate Sheriff's facilities and services to future residents. As a result, there would be no substantial impact on health and safety that might occur absent of such facilities.

There are no plans at the current time that describe the design, location, or operational characteristics of future facilities. Therefore, their environmental impacts cannot be determined with any certainty and are examined at only a general level of detail. New facilities and services would serve the Community Areas and Rural Centers (where demand is expected to be greatest) and likely would be located in those areas. Their impacts would be an indistinguishable part of the impacts of the community as a whole. These facilities are typically low-key. For example, traffic is generally insubstantial because it is spread throughout the day. Noise is similarly low because of the limited number of employees and because sirens are seldom, if ever used when vehicles leave the premises (unlike a fire station).

The potential significant adverse environmental effects associated with providing such facilities and services will be evaluated in future site-specific and facility-specific environmental reviews, with incorporation of mitigation as necessary to reduce the magnitude of these potential effects pursuant to Public Resources Code Section 21002.

Mitigation Measures

Impacts of these facilities will be generally part of the overall impacts resulting from development within the Community Areas and Rural Centers. No mitigation beyond the 2007 General Plan policies is necessary.

Significance Conclusion

Adequate sheriff's facilities will be provided in a timely manner such that impacts on the public health, safety and welfare are less than significant. Future sheriff's station operations will have a less-than-significant impact on nearby residences and other sensitive uses.

Buildout

Impact of Development with Policies

Increased development at 2092 buildout will increase demand for sheriff's facilities to serve a larger and more dispersed population. As with the 2030 Horizon, there are no plans available for future facilities, but they would reasonably be expected to be built in population centers. The typical impacts would be the same as those described above.

2007 General Plan Policies

The 2007 General Plan and Area Plan policies summarized above identify the public service and safety policies that will be in place to provide adequate sheriff services to future county residents.

Significance Determination

Mitigation Measures

Impacts of these facilities will be generally part of the overall impacts resulting from development within the Community Areas and Rural Centers. No mitigation beyond the 2007 General Plan policies is necessary.

Significance Conclusion

The impact of 2092 buildout on sheriff services would be less-than-significant because additional required services would be developed concurrently to buildout.

Public Schools

Impact PSU-3: Development and land use activities contemplated in the 2007 General Plan may result in the need for new or expanded school facilities. (Less-Than-Significant-Impact) Future schools may affect adjoining land uses. (Significant and Unavoidable Impact)

2030 Planning Horizon

Impact of Development with Policies

Future development anticipated by the 2007 General Plan would result in greater demands for public education facilities, particularly near the proposed Pajaro, Boronda, Castroville, Chualar, and Fort Ord Community Areas. The construction of new or expanded school facilities would be a potentially significant impact, depending on the site-specific situation.

2007 General Plan Policies

The 2007 General Plan establishes a number of policies that encourage new or expanded public school facilities to be provided concurrently with future growth.

Public Services Element

As discussed under Impact PSU-1, Public Services Element Policies PS-1.1 through PS-1.6 set forth general standards for the provision of adequate public facilities. The implementation of Public Services Element Policies PS-1.1 through PS-1.6 would decrease the impact on public schools by requiring that public education facilities be developed concurrently to the development. These new public education facilities would also be required to meet or exceed the required amount by the proposed development. Public Services Element Policies PS-7.1 through PS-7.4, and Policy 7.8 identify specific standards for the provision of educational facilities. These policies address planning and consultation among county officials and the affected school districts to decide on a site that is in or near the areas of development. In addition, these policies also require financial support be provided for the acquisition of future public school facilities to the affected district and for the developed public school facilities to serve as multi-purpose facilities for the community. The required financial support for public school facilities and developing the facilities in or near development areas will decrease the impact on public school facilities from the projected 2030 planning horizon.

Area Plan Policies

One supplemental Area Plan policy concerns public schools:

Greater Salinas Area Plan

Policy GS-1.1 requires that future development within the Butterfly Village portion of the Rancho San Juan Special Treatment Area provide adequate public services, including a school site.

Development Impact Fees

New development projects will be assessed impact fees in accordance with SB 50 to finance capital improvements for public school facilities by the affected school district. Payment of these fees would contribute to the financing of adequate facilities concurrently with growth, in addition to state funding and local school district construction bonds. As discussed above in the regulatory section, Government Code Section 65995(h) provides that payment of development impact fees in accordance with its provisions constitutes "full and complete mitigation of the impacts" of new development.

Significance Determination

Paying school impact fees mitigates the impact of new development on schools under Government Code Section 65995(h). Therefore, the policies of the 2007 General Plan will ensure that this impact will be less-than-significant.

The 2007 General Plan and Area Plan goals and policies are designed to accommodate growth in Community Areas while ensuring that new development provides adequate school facilities and services to future residents. There are no plans at the current time describing the design and operational characteristics of future school facilities. Therefore, their environmental impacts cannot be determined with any certainty and are examined at only a general level of detail. New school facilities and services would serve the Community Areas and Rural Centers (where demand is expected to be greatest) and likely would be located in those areas.

The potential significant adverse environmental effects associated with providing new or expanded school facilities and services would be evaluated in the future site-specific and facility-specific environmental reviews by the pertinent school districts. CEQA requires the districts to incorporate all feasible mitigation measures to reduce the magnitude of these potential effects (Public Resources Code Section 21002).

In practice, school facility construction is usually not subject to County land use regulations (Government Code Section 53094). Accordingly, the pertinent school district will be the lead agency for any CEQA analysis that

is undertaken. The County does not have sufficient information regarding specific locations, sizes, and types of future school facilities to reasonably analyze the potential impacts of specific facilities. That level of detailed analysis would be outside the scope of the 2007 General Plan EIR, which is analyzing the broader impacts of plan implementation.

That being said, there are certain impacts that are typical of school construction and operations. Construction impacts include noise, dust, and traffic during the time necessary to construct the school. Work is typically done during daylight hours, on weekdays. As a result, noise is usually at acceptable levels. Dust would be controlled by implementation of the BMPs required by the Monterey Bay Unified Air Pollution Control District. Traffic impacts consist of arrival and departure of work crews, and delivery of construction materials. The significance of traffic impacts depends upon the level of congestion on the streets that access the construction site. These impacts are usually localized.

When in operation, schools typically create significant peak-hour traffic congestion from the delivery and pick-up of students and when large events are held and, if associated with a lighted playing field, light and glare impacts. Noise may be bothersome to nearby residents at large campuses during the delivery and pick-up of students, and where playing fields are close to residences during recess or PE (although school noise is seldom in excess of significance thresholds). Noise would also be bothersome if the school included a stadium with a loudspeaker system.

Mitigation Measures

No mitigation beyond the 2007 General Plan policies is reasonable at this time because the significance of future impacts would be dependent upon school location, design, and operation features that are unknown at this time. Mitigation measures will be developed by the pertinent school districts at such time as they prepare future environmental analyses for specific school projects.

Significance Conclusion

Development under the 2007 General Plan will result in a less-than-significant effect on schools. Paying school impact fees, as required by state law and proposed Public Services Element policy PS-7.8, mitigates the impact of new development on schools under Government Code Section 65995(h).

New or expanded schools would result in significant, unavoidable effects. Significant traffic, noise, and lighting effects are most likely to occur at larger schools during school activities. At the present, there is insufficient information about future schools to determine exactly where and when significant effects will occur.

Buildout

Impact of Development with Policies

Buildout will result in the need for new schools. Since the adoption of Government Code Section 65995, California voters have consistently passed the necessary state bond measures to maintain SB 50's effectiveness. There is no reason to expect this support to change. As a result, future payment of school fees will continue to mitigate school impacts under the terms of Section 65995.

Although much of the additional development under buildout in 2092 would be the result of development on individual lots, schools will most probably be located in cities and communities, rather than in rural areas. The particular locations, sizes, and designs of these facilities cannot be known at this time. Typical impacts would be the same as described above for the 2030 horizon.

2007 General Plan Policies

The 2007 General Plan and Area Plan policies summarized above identify the public service policies that will be in place to provide adequate public school services to future county residents.

Significance Determination

Mitigation Measures

No mitigation beyond the 2007 General Plan policies is reasonable at this time because the significance of future impacts would be dependent upon school location, design, and operation features that are unknown at this time. Mitigation measures will be developed by the pertinent school districts at such time as they prepare future environmental analyses for specific school projects.

Significance Conclusion

Development under the 2007 General Plan will result in a less-than-significant effect on schools. Paying school impact fees, as required by state law and proposed Public Services Element policy PS-7.8, mitigates the impact of new development on schools under Government Code Section 65995(h).

New or expanded schools would result in significant and unavoidable effects. Significant traffic, noise, and lighting effects are most likely to occur at larger schools during school activities. At the present, there is insufficient information about future schools to determine exactly where and when significant effects will occur.

Libraries

Impact PSU-4: Development and land use activities contemplated in the 2007 General Plan may result in the need for new or expanded library facilities. (Less-Than-Significant Impact.)

2030 Planning Horizon

Impact of Development with Policies

Future growth anticipated by the 2007 General Plan would result in greater demands for library services. These demands would result in the need for new library or expanded facilities, particularly near the proposed Pajaro, Boronda, Castroville, Chualar, and Fort Ord Community Areas. Construction of these new or expanded facilities would have environmental impacts.

The County Free Library system currently has branches in the following communities: Aromas, Big Sur, Bradley, Carmel Valley, Castroville, Gonzales, Greenfield, King City, Marina, Pajaro, Parkfield, Prunedale, Salinas (Buena Vista), San Ardo, San Lucas, Seaside, and Soledad. Most are located in small buildings that are integrated into the communities. The smallest libraries in Bradley and Parkfield are open only two days a week. The Big Sur, Pajaro, San Ardo, and San Lucas branches are open only three days a week. The City of Salinas has its own library system.

2007 General Plan Policies

The 2007 General Plan proposes a number of policies to ensure that new or expanded library facilities would be provided concurrently with future growth.

Public Service Element

As discussed under Impact PSU-1, Public Services Element Policies PS-1.1 through PS-1.6 set forth general standards for the provision of adequate public facilities. Public Service Element Policies PS-1.1 through PS-1.6 would decrease the impact on libraries by requiring library facilities be developed concurrently with development and that the new or expanded facilities exceeds or meets the required services required by the new development. Public Services Element Policies PS-10.1 through PS-10.5 set forth policies that address funding for additional library services and accessibility by future residents. Policies PS-10.1 through PS-10.5 would decrease the impact by pursuing additional funding from the state and private contributions to ensure additional library services are provided.

Area Plan Policies

One supplemental Area Plan policy concerns library services:

Greater Salinas Area Plan Policy GS-1.1 requires that future development within the Butterfly Village portion of the Rancho San Juan Special Treatment Area provide adequate public services, including library services.

Development Impact Fees

New development projects will be assessed impact fees to finance capital improvements for library facilities. Payment of these fees would ensure that adequate facilities are provided concurrently with growth.

Significance Determination

The 2007 General Plan and Area Plan goals and policies are designed to accommodate growth in Community Areas while ensuring that new development provides adequate library facilities and services to future residents. However, there are no plans at the current time for specific library facilities. Therefore, their environmental impacts cannot be determined with any certainty and are examined at only a general level of detail. New or expanded facilities and services would serve the Community Areas and Rural Centers (where demand is expected to be greatest) and likely would be located in those areas.

Future library construction is expected to have typical construction impacts, including noise, dust, and traffic while work is going on. Community libraries of the sort envisioned to serve current and future residents are not typically large construction projects that result in significant effects. In any case, they will be subject to CEQA review and Public Resources Code Section 21002 requires that all feasible mitigation measures be adopted as necessary to reduce the magnitude of these potential effects. Their effects are expected to be less-than-significant.

Because future library facilities are expected to be located within the urbanizing areas their operational impacts will be largely indistinguishable from the overall impacts of the Community Area or Rural Center in which they may be located. Libraries are not typically large facilities or facilities that generate substantial amounts of traffic. Patrons visit throughout the days when they are open, so there are no peak hours of attendance. If located within a Community Area or Rural Center a substantial percentage of their patrons would be expected to walk or bicycle there. Therefore, impacts are expected to be less than significant.

Mitigation Measures

No mitigation beyond the 2007 General Plan policies is necessary. Should future CEQA analyses of library construction or expansion

identify potentially significant effects of specific library projects, mitigation will be required at that time.

Significance Conclusion

New and expanded library facilities to serve future populations will have less-than-significant impacts on the environment.

Buildout

Impact of Development with Policies

Buildout will result in the need for new libraries. Although much of the additional development under buildout in 2092 would be the result of development on individual lots, libraries will most probably be located in cities and communities. The particular locations, sizes, and designs of these facilities cannot be known at this time. Typical impacts would be the same as described above for the 2030 horizon and are expected to be less-than-significant.

2007 General Plan Policies

The 2007 General Plan and Area Plan policies summarized above identify the public service policies that will be in place to provide adequate library services to future county residents.

Significance Determination

Mitigation Measures

No mitigation beyond the 2007 General Plan policies is necessary. Should future CEQA analyses of library construction or expansion identify potentially significant effects of specific library projects, mitigation would be required at that time.

Significance Conclusion

New and expanded library facilities to serve future populations will have less-than-significant impacts on the environment.

Public Health

Impact PSU-5: Development and land use activities contemplated in the 2007 General Plan may result in the need for new or expanded public health facilities. (Less-Than-Significant Impact.)

2030 Planning Horizon

Impact of Development with Policies

Future growth anticipated by the 2007 General Plan would result in greater demands for public health services. These demands would result in the need for new public health facilities such as clinics or hospitals. The sizes and locations of these future facilities are unknown. At the present time, the Monterey County Health Department operates clinics in Marina, Salinas, and Seaside. The Department's public health nurses provide home visitation services as well.

2007 General Plan Policies

The 2007 General Plan proposes a number of policies to ensure that new or expanded public health facilities would be provided concurrently with future growth.

Public Service Element

As discussed under Impact PSU-1, Public Services Element Policies PS-1.1 through PS-1.6 set forth general standards for the provision of adequate public facilities, which would decrease the impact by requiring APFS be provided to future developments. Public Services Element Policies PS-8.1 and PS-8.2 promote a full range of health care programs for county residents and the establishment of needed health care services in areas with high population concentrations. The establishment of health care facilities in areas with high population and promotion of health care programs would decrease the impact by expanding the services. Public Service 8.4 requires nurse staffing be provided at levels that meet the health needs of the County's rural residents. This policy would also decrease the impact of the development by requiring the appropriate nurse staffing be provided.

Significance Determination

The 2007 General Plan goals and policies are designed to accommodate growth in Community Areas and Rural Centers while ensuring that new development provides adequate public health facilities and services to future residents. Future facilities would have construction and operational impacts. There are no plans at the current time for specific facilities and services. Therefore, their environmental impacts cannot be determined with any

certainty and are examined at only a general level of detail. New facilities and services would serve the Community Areas and Rural Centers (where demand is expected to be greatest) and likely would be located in those areas. Physical construction and resource demands associated with future site-specific public health facilities would be addressed in separate environmental reviews at such time as they are being proposed. Public Resources Code Section 21002 requires the incorporation of all feasible mitigation measures in order to reduce the magnitude of any potential effects identified in those later environmental analyses.

Public health facilities are usually located near their clientele, are commensurate in size to the community they will serve, and are most likely to be placed in the urbanized Community Areas and Rural Centers. Typically, these facilities would be health offices or clinics, not full hospitals. Construction impacts would likely include traffic from workers and deliveries, noise from construction, and dust if grading is necessary.

For the most part, operational impacts will be largely indistinguishable from the overall impacts of the Community Area or Rural Center in which the facility may be located. Such facilities typically have a steady stream of visitors during working hours, but do not result in the peak traffic, noise, or lighting impacts typically associated with a hospital.

Mitigation Measures

No mitigation beyond the 2007 General Plan policies is necessary.

Significance Conclusion

Given the expected size of an office or clinic serving a small community, construction impacts are expected to be less-than-significant. The operations of expected facilities would also be less than significant.

Buildout

Impact of Development with Policies

Buildout in 2092 will result in the need for new public health facilities. Due to the nature of these facilities, they will probably be located in cities and communities where they are accessible to their clients. The particular locations, sizes, and designs of these facilities cannot be known at this time. Typical impacts would be the same as described above for the 2030 horizon and are expected to be less-than-significant.

2007 General Plan Policies

The 2007 General Plan and Area Plan policies summarized above identify the public service policies that will be in place to provide adequate public health care services to future county residents.

Significance Determination

Mitigation Measures

No mitigation beyond the 2007 General Plan policies is necessary. Should future CEQA analyses of health facilities construction or expansion identify potentially significant effects of specific facilities, mitigation would be required at that time.

Significance Conclusion

New and expanded health facilities to serve future populations will have less-than-significant impacts on the environment.

Wastewater

Impact PSU-6: Development and land use activities contemplated in the 2007 General Plan may create additional demands for wastewater collection and treatment, resulting in a need for new or expanded wastewater treatment facilities. (Less-Than-Significant-Impact)

2030 Planning Horizon

Impact of Development with Policies

Implementation of the 2007 General Plan would result in urban development, which would generate wastewater. The increased generation of wastewater would cause a need for additional wastewater collection and treatment capacity, particularly near the proposed Pajaro, Boronda, Castroville, Chualar, and Fort Ord Community Areas. If sufficient capacity is not available, there is a potential that water quality would be degraded by discharges of untreated or under-treated wastewater.

Development in accordance with the 2007 General Plan AWCP would eventually result in 40 new artisan and 10 new full-scale wineries by 2030. Continuing the earlier assumptions of water use, a typical artisan winery would be expected to produce 90,000 gallons of wastewater annually. This is based on an estimated production rate of 1.5 gallons of wastewater for each gallon of wine (Monterey County Environmental Health Department *Subsurface Disposal System Design Criteria*—1/18/08). Full-scale wineries would produce the following levels of wastewater per year:

Table 4.11-7. Typical Winery Wastewater Production

Type/Size of Winery	Wastewater Production per Winery (gallons per year)
Artisan (25,000 cases)	90,000
Full-scale (75,000 cases)	1.89 million
Full-scale (175,000 cases)	4.4 million
Full-scale (375,000 cases)	9.45 million
Full-scale (750,000 cases)	18.9 million
Full-scale (1.5 million cases)	37.8 million

Daily disposal rates are not estimated because they depend on the level of wine production. Production levels vary depending upon the season, with peak activity during the crush. In all cases, disposal of these volumes of wastewater would require engineered wastewater treatment systems. These systems would be subject to compliance with CCRWQCB standards for water treatment and quality, and County standards for construction.

2007 General Plan Policies

The 2007 General Plan proposes a number of policies to ensure that new public facilities would be provided concurrently with future growth.

As discussed under Impact PSU-1, Public Services Element Policies PS-1.1 through PS-1.6 contain general standards for the provision of adequate public facilities. The policies under Goal PS-1 will require that new development projects in Community Areas and Rural Centers either provide or finance wastewater collection and treatment capital improvements. Such improvements would ensure that adequate facilities are provided concurrently with urban growth and that wastewater discharge complies with established water quality standards.

Public Services Element Polices PS-4.1 through PS-4.8 set forth policies that concern wastewater treatment. These policies address wastewater treatment facilities services, private and public funding, groundwater recharge with secondary or higher treatment reclaimed water, treatment criteria for future wastewater facilities, and septic disposal tanks. These policies create standards for wastewater treatment that would further minimize wastewater impacts on the environment. Moreover, policies under PS-4 encourage developers to contribute their fair share to the funding of future expansions or construction of new wastewater treatment facilities.

Area Plan Policies

Several Area Plan supplemental policies address wastewater.

Greater Salinas Area Plan

Policy GS-1.1 requires that future development within the Butterfly Village portion of the Rancho San Juan Special Treatment Area provide adequate infrastructure, including for wastewater.

Carmel Valley Master Plan

Policy CV-1.8 requires that cluster development be consistent with wastewater application rates of the Carmel Valley Wastewater Study, which generally would require clustering of five units or less on a minimum of 5 acres of land.

Toro Area Plan

Policy T-5.1 encourages higher densities in areas where wastewater treatment facilities can be made available.

Significance Determination

Implementation of the 2007 General Plan would increase wastewater generation and therefore would require new or expanded treatment facilities. The above-listed 2007 General Plan and Area Plan policies will adequately address the need for new or expanded wastewater facilities. There are no plans at the current time for these facilities and services. Therefore, their environmental impacts cannot be determined with any certainty and are examined at only a general level of detail. New facilities and services would serve the Community Areas and Rural Communities (where demand is expected to be greatest) and likely would be located in those areas. Additional facilities would be installed in the Salinas Valley at the wineries that would develop under the 2007 General Plan AWCP.

All of the facilities may include wastewater treatment plants, related ponds, and collection pipelines. When specific facilities are proposed, they would be subject to CEQA review, mitigation of any significant impacts that may be identified would be required where feasible (Public Resources Code Section 21002), and would be required to meet CCRWQCB and County water quality standards.

The details of physical construction and resource demands associated with future wastewater facilities and services are unknown at this time. They may result in construction impacts such as traffic, noise, and dust. Typically, wastewater facilities result in air quality (odor) impacts during operation. Water quality impacts from new wastewater treatment facilities are expected to be minimal as a result of the effluent limitations and discharge specifications that will be imposed by the CCRWQCB as part of the Waste Discharge Requirements. The CCRWQCB typically also restricts overflow and spills. Otherwise, the impacts of new wastewater treatment facilities

would be part of the impacts associated with growth in the Community Areas and Rural Centers, or development of the specific winery.

At the same time, municipal wastewater treatment facilities do not usually generate substantial amounts of traffic, result in light and glare, or result in water quality or flooding impacts (they are subject to permitting by the CCRWQB that will specifically require avoidance of such impacts). Assuming that they will be located in Community Areas or Rural Centers, they would have a limited potential to adversely affect biological resources. Similarly, most of the winery corridor is in agriculture. Prospective winery-related wastewater treatment facility sites would therefore be likely to have low habitat value.

Mitigation Measures

The implementation of the proposed 2007 General Plan policies and existing regulations, particularly those of the CCRWQCB, would ensure that potential impacts from new wastewater treatment facilities would be less than significant. No mitigation is necessary.

Significance Conclusion

Potential impacts would be less than significant.

Buildout

Impact of Development with Policies

Buildout in 2092 will substantially increase the level of development within the County. In particular, there will be more development on individual lots distributed outside the Community Areas and Rural Centers. This will require the construction or expansion of wastewater treatment facilities, including on-site treatment, beyond 2030 levels.

2007 General Plan Policies

The 2007 General Plan and Area Plan policies summarized above identify the public service policies that will be in place to provide adequate wastewater treatment services to future county residents.

Significance Determination

Future policies and treatment standards are unknown; however, we may assume that they will be at least as protective of water quality as current standards. Furthermore, the specific location and size of future wastewater treatment plants are not known at this time. However, the construction or expansion of a treatment plant would have to minimize impacts through the CEQA compliance. PS-4.12 mandates development of Onsite Wastewater Management Plans for areas with high concentrations of development that are served primarily by individual sewage systems. The CCRWQCB's WDR

waiver for on-site systems places further restrictions on their use and operation. These policies and regulations will avoid significant effects from new or expanded facilities. Thus, the expansion or construction of new facilities would be less than significant.

Mitigation Measures

The implementation of the proposed 2007 General Plan policies and existing regulations, particularly those of the CCRWQCB, would ensure that potential impacts from new wastewater treatment facilities would be less than significant. No mitigation is necessary.

Significance Conclusion

This impact would be less-than-significant.

Storm Water Drainage

Impact PSU-7: Development and land use activities contemplated in the 2007 General Plan may result in the need for new or expanded stormwater drainage facilities. (Less-Than-Significant Impact.)

2030 Planning Horizon

Impact of Development with Policies

Future growth anticipated by implementation of the 2007 General Plan, particularly in the Community Areas and Rural Centers, would result in more impervious surface coverage, which would result in additional storm water runoff. An increase in storm water runoff has the potential to degrade water quality by increasing erosion, sedimentation, and siltation in waterbodies. Without new drainage facilities, the runoff would endanger public safety, and threaten water quality. Accordingly, new and expanded stormwater drainage facilities would be required, particularly near the proposed Pajaro, Boronda, Castroville, Chualar, and Fort Ord Community Areas.

2007 General Plan Policies

The 2007 General Plan proposes a number of policies to ensure that new public facilities would be provided concurrently with future growth.

Public Service Element

As discussed under Impact PSU-1, Public Services Element Policies PS-1.1 through PS-1.6 set forth general standards for the provision of adequate public facilities.

Safety Element

Safety Element Polices S-3.1 through S-3.7 address stormwater drainage. Safety element PS-3.1 requires that post-development runoff shall not be greater than pre-development peak flow drainage through the implementation of onsite stormwater detention. Safety element policy 3.3 through 3.7 requires management of stormwater runoff by establishing a County Flood Management Program, maintaining areas with high peak flow that generate erosion in a GIS database, and a Drainage Design Manual. These management policies will decrease stormwater runoff through detention and prevent flooding, which would prevent the endangerment of future residents.

Area Plan Policies

Several Area Plan supplemental policies address storm water drainage.

North County Area Plan

Policy C-4.1 requires that newly developed areas that drain into Merritt Lake and Tembladero Slough be annexed to MCWRA in order to provide for the maintenance of drainage facilities.

Carmel Valley Master Plan

Policy CV-4.2 stipulates that a comprehensive drainage maintenance program be established by the either sub-basins or valley-wide watershed zones. Policy CV-4.3 requires that a fee be imposed for onsite improvements for development projects to help finance the improvement and maintenance of the drainage facilities identified in the Master Drainage Plan for Carmel Valley.

Cachagua Area Plan

Policy CACH-4.1 stipulates that commercial mining, timber, and other resource production operations be designed so that additional runoff, additional erosion, or additional sedimentation would not occur off the project site.

South County Area Plan

Policy SC-5.4 requires that storm water facilities in new urban development be designed to mitigate impacts on agricultural lands located downstream.

Significance Determination

The 2007 General Plan and Area Plan goals and policies are designed to accommodate growth in Community Areas while ensuring that new development provides adequate storm water drainage facilities to future residents. Specifically, Safety Element Policy 3.3 requires that drainage facilities to mitigate the post-development peak flow impact of new development must be installed concurrent with new development. Enforcement of this policy would ensure that storm drainage facilities are provided with new development.

There are no plans at the current time for specific facilities and services. Therefore, their environmental impacts cannot be determined with any certainty and are examined at only a general level of detail. New facilities and services would serve the Community Areas and Rural Communities (where demand is expected to be greatest) and likely would be located in those areas. When specific facilities are proposed, they would be subject to CEQA review; mitigation of any significant impacts that may be identified would be required where feasible (Public Resources Code Section 21002).

Conventional storm drainage facilities have generally consisted of detention or retention basins drainage pipelines, and related facilities such as curbs and gutters. Where basins are not maintained properly, they may harbor disease vectors such as mosquitoes. However, this is not commonly a problem due to the vector control activities of the County's Environmental Health Division. Most, if not all, of the impacts of the facilities would be part of the impacts associated with growth in the Community Areas and Rural Centers. Although these conventional stormwater drainage methods have functioned to manage flooding, these designs have not managed stormwater sufficiently to decrease impacts to water quality. Impacts to water quality occurs when stormwater is discharged into the receiving waterbodies. Therefore, impacts would be significant.

Mitigation Measure

Mitigation Measure PS-1: The County will add the following policy to the 2007 General Plan:

Policy S-3.9: require all future developments to implement the most feasible number of Low Impact Development (LID) techniques into their stormwater management plan. The LID techniques may include, but are not limited to, grassy swales, rain gardens, bioretention cells, tree box filters, and preserve as much native vegetation as feasible possible on the project site.

Significance Conclusion

The implementation of LID techniques along with 2007 General Plan policies will reduce the amount of runoff that is produced by developments and impacts to water quality. The encouragement of LID techniques and the

2007 General Plan policies will reduce stormwater impact to a less-than-significant level.

Buildout

Impact of Development with Policies

The 2007 General Plan buildout in 2092 will result in substantial new residential development outside of Community Areas and Rural Centers. Unless regulated, the increase in impermeable surfaces would result in greater runoff and require downstream facilities to control stormwater runoff. The size, location, and operation of these facilities cannot be reasonably identified at this time.

2007 General Plan Policies

The 2007 General Plan and Area Plan policies summarized above identify the public service and safety policies that will be in place to provide stormwater management services to future county residents.

Significance Determination

Typically, such facilities would have the same characteristics and impacts as described above. Assuming that County and state regulations and policies are at least as restrictive as under the 2007 General Plan, the impacts of additional impervious surfaces would be significant to water quality.

Mitigation Measures

The County's adoption of policy PS-3.9, as described above, would reduce impacts to water quality.

Significance Conclusion

With the state regulations, Monterey County policies and adoption of policy PS-3.9 buildout impacts to stormwater would be less than significant.

Solid Waste

Impact PSU-8: Development and land use activities contemplated in the 2007 General Plan may result in a need for new solid waste facilities or non-compliance with waste diversion requirements. (Less-Than-Significant Impact.) Future solid waste facilities would have a significant effect on the environment. (Significant and Unavoidable)

2030 Planning Horizon

Impact of Development with Policies

Buildout of the 2007 General Plan would result in urban development, which would generate solid waste. The increased generation of solid waste would create a need for new or expanded solid waste facilities, such as transfer stations, materials recovery facilities, and landfills—particularly near the proposed Pajaro, Boronda, Castroville, Chualar, and Fort Ord Community Areas. In addition, the increased generation of solid waste would result in non-compliance with State waste diversion requirements.

2007 General Plan Policies

The 2007 General Plan proposes a number of policies to ensure that public services would be provided concurrently with future growth.

Public Services Element

As discussed under Impact PSU-1, Public Services Element Policies PS-1.1 through PS-1.6 provide general standards for the provision of adequate public services. As previously discussed, policies under PS-1 would require the concurrent development of solid waste facilities along with development. Furthermore, the new or expanded facilities must provide an amount that meets or exceed that of the development. Public Services Element Policies PS-5.1 through PS-5.4 set forth policies that address recycling programs that will reduce waste, increase recycle material; promote the recycle of construction debris and new disposal sites. Public Service policies PS-5.1 through PS-5.4 would decrease generated solid waste by increasing recyclable material. Public Services Element Policies PS-6.2 through PS-6.4 address future solid waste disposal sites' location, planning, environmental impacts, surrounding land use. Public Safety policies PS 6.1 and PS 6.5 address the development of future efficient diversion programs and waste handling facilities that are in accordance with State-required diversion and recycling goals. Policies under PS-6 would decrease potential social impacts that would arise from the location of a future solid waste facility.

Area Plan Policies

No Area Plan policies address solid waste.

Landfill Capacity

As shown in Table 4.11-5, approximately 56 million cubic yards of capacity is remaining in the four active landfills in Monterey County. In addition, as noted in the policies listed above, the County is pursuing additional landfill capacity through expansion of existing sites or development of new sites. Accordingly, landfill capacity is expected to be adequate to serve the needs of the 2007 General Plan 2030 planning horizon.

Agricultural Winery Corridor Plan

Development of wineries and tasting rooms under the AWCP would generate solid waste and recycling volumes. Wineries in particular generate by-products of the grape crushing process, such as pomace. Much of these by-products are suitable for composting. As summarized in Table 4.11-5, Monterey County has adequate landfill capacity to meet the short-term and long-term needs of the wine-related facilities developed under the AWCP.

Significance Determination

Implementation of the 2007 General Plan would increase solid waste generation, and therefore would require additional landfill capacity and new or expanded transfer stations and recycling facilities. As summarized in Table 4.11-5, the four active landfills located in Monterey County have adequate capacity to accommodate additional solid waste generated by implementation of the 2007 General Plan.

There are no plans at the current time for new facilities and services. The existing facilities have sufficient capacity to meet the needs of future growth to 2030 and no new facilities would be necessary. Therefore, no significant impacts would result.

Mitigation Measures

No mitigation beyond the 2007 General Plan policies is necessary.

Significance Conclusion

This impact would be less-than-significant.

Buildout

Impact of Development with Policies

None of the existing landfills have a permitted lifespan that reaches the end of the 2092 buildout period. Accordingly, the combination of waste production from existing and future development would exceed the capacity of current landfills. Landfill sitting is traditionally difficult because of the need to find a suitable site and the public controversy that typically accompanies permitting of the site. This becomes more problematic as residential development becomes more dispersed, as will occur at buildout.

2007 General Plan Policies

The 2007 General Plan and Area Plan policies summarized above identify the public service policies that will be in place to provide solid waste services to future county residents.

Significance Determination

There is a reasonable likelihood that future landfill expansion or the permitting of new landfills in the County will be controversial and have significant environmental impacts. However, the County would determine the specific site for a future landfill after considering comments from county residents and complying with CEQA. Although CEQA requires mitigation measures to be implemented, it can be expected that the expansion or construction of new landfill facilities would have significant and unavoidable environmental impacts.

Mitigation Measure

Mitigation Measure PS-2: The County will add the following policy to the 2007 General Plan:

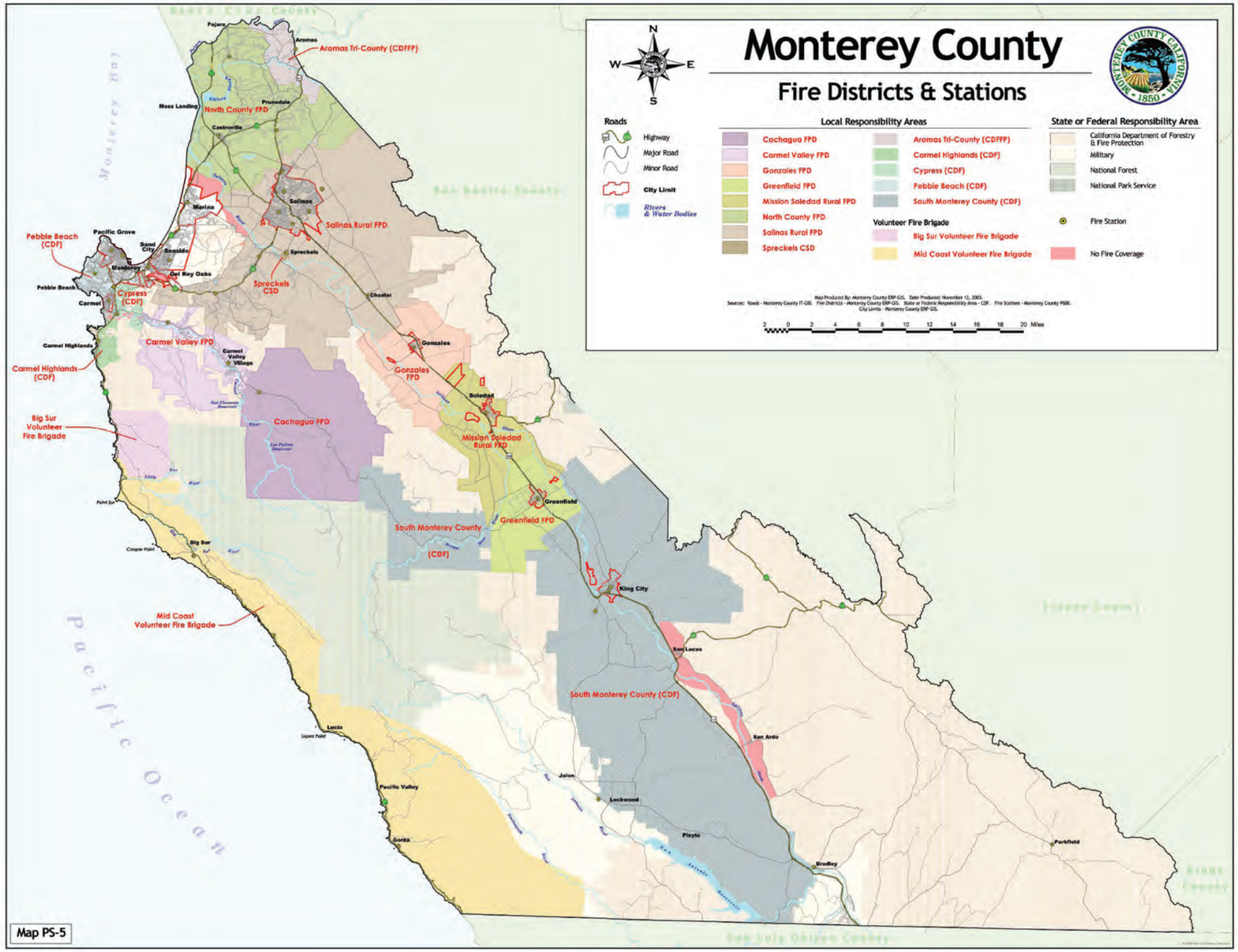
Policy PS-5.5. The County will review its Solid Waste Management Plan on a 5-year basis and institute policies and programs as necessary to exceed the wastestream reduction requirements of the California Integrated Waste Management Act. The County will adopt requirements for wineries to undertake individual or joint composting programs to reduce the volume of their wastestream.

Significance Conclusion

2007 General Plan policies and proposed PS-5.5 policy would not be enough to mitigate impacts to landfill services. This impact would be significant and unavoidable.

4.11.5 Level of Significance after Mitigation

2030 Planning Horizon would increase the population in the county, which would require public utility services prior to development approval. The 2007 General Plan and proposed policies would mitigate impacts to public service utilities. Buildout impacts would be addressed with the existing County policies and any future policies that may exist at that time. CEQA compliance would also be required for all future expansion and new facilities that may be constructed. Thus, 2030 impacts would be mitigated to a less than significant level. Buildout impacts in 2092 would also be less than significant, except impacts from future landfills, which would be significant and unavoidable.



Source: Monterey County 2006 General Plan Update.

Michael Brandman Associates

MONTEREY COUNTY GENERAL PLAN EIR

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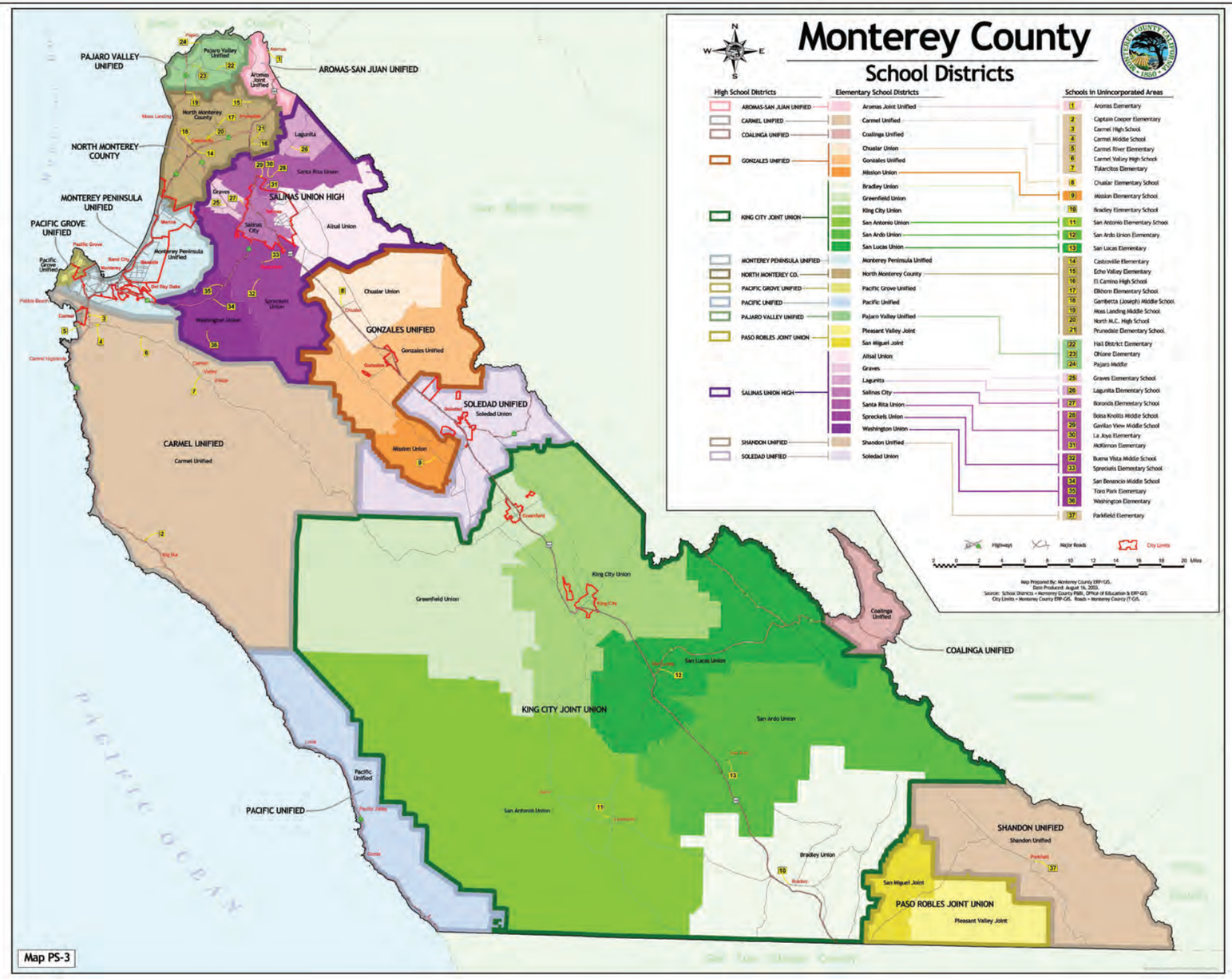
Exhibit 4.11.1
Fire Protection Agencies

Monterey County
School Districts



High School Districts	Elementary School Districts	Schools in Unincorporated Areas
AROMAS-SAN JUAN UNIFIED	Aromas Joint Unified	1 Aromas Elementary
CARMEL UNIFIED	Carmel Unified	2 Captain Cooper Elementary
COALINGA UNIFIED	Coalinga Unified	3 Carmel High School
GONZALES UNIFIED	Chualar Union	4 Carmel Middle School
	Gonzales Unified	5 Carmel River Elementary
	Mission Union	6 Carmel Valley High School
KING CITY JOINT UNION	Bradley Union	7 Tularcitos Elementary
	Greenfield Union	8 Chualar Elementary School
	King City Union	9 Mission Elementary School
	San Antonio Union	10 Bradley Elementary School
	San Ardo Union	11 San Antonio Elementary School
	San Lucas Union	12 San Ardo Union Elementary
MONTEREY PENINSULA UNIFIED	Monterey Peninsula Unified	13 San Lucas Elementary
NORTH MONTEREY CO.	North Monterey County	14 Castroville Elementary
PACIFIC GROVE UNIFIED	Pacific Grove Unified	15 Echo Valley Elementary
PACIFIC UNIFIED	Pacific Unified	16 El Camino High School
PAJARO VALLEY UNIFIED	Pajaro Valley Unified	17 Elkhorn Elementary School
PASO ROBLES JOINT UNION	Pleasant Valley Joint	18 Gambetta (Joseph) Middle School
	San Miguel Joint	19 Moss Landing Middle School
SALINAS UNION HIGH	Alisal Union	20 North M.C. High School
	Graves	21 Prunedale Elementary School
	Laguna	22 Hall District Elementary
	Salinas City	23 Ohlone Elementary
	Santa Rita Union	24 Pajaro Middle
	Sprecklels Union	25 Graves Elementary School
	Washington Union	26 Laguna Elementary School
SHANDON UNIFIED	Shandon Unified	27 Boronda Elementary School
SOLEDAD UNIFIED	Soledad Union	28 Bosa Knolls Middle School
		29 Gavilan View Middle School
		30 La Joya Elementary
		31 McKinnon Elementary
		32 Buena Vista Middle School
		33 Sprecklels Elementary School
		34 San Benancio Middle School
		35 Toro Park Elementary
		36 Washington Elementary
		37 Parkfield Elementary

Highways · Major Roads · City Limits

0 2 4 6 8 10 12 14 16 18 20 Miles

Map Prepared By: Monterey County ERP/GIS.
Date Produced: August 16, 2005.
Source: School Districts = Monterey County P&BI, Office of Education & ERP-GIS.
City Limits = Monterey County ERP-GIS. Roads = Monterey County IT-GIS.

Source: Monterey County 2006 General Plan Update.

Michael Brandman Associates

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Exhibit 4.11.2
School Districts

4.12 Parks, Recreation and Open Space

4.12.1 Abstract

Residents and visitors alike enjoy the spectacular natural beauty of Monterey County's parks and open spaces. The region includes an ecologically diverse native landscape, including beaches, undeveloped coastal dunes, wetlands, a dramatic rocky shoreline, redwood canyons and coastal peaks. Multiple federal, state, county governments and local districts own and operate parks, recreational facilities, and open space in Monterey County. Management agencies include the U.S. National Parks Service (NPS), the U.S. Forest Service (USFS), Bureau of Land Management (BLM), California State Parks (CSP), Monterey County, and local park agencies and districts. The County parks system encompasses about 10% of the County's total park acreage (Monterey County 2007a). Notable public lands and open space include Los Padres National Forest, the Big Sur Coast state parks, as well as Lake Nacimiento, Lake San Antonio, and Laguna Seca Regional Parks. Trails in the county include the Monterey Bay Coastal Trail, which spans 29 miles of the coast between the City of Marina and the community of Pebble Beach.

With implementation of the 2007 General Plan, future demand for parks, recreation and open space would include greater demand for both neighborhood-scale parks within urbanized areas, as well as regional scale parks serving the outlying areas of the County. Parks, recreation and open space policies are addressed throughout the 2007 General Plan, including the Land Use Element, Open Space and Conservation Element, and the Public Services Element. All potential parks, recreation and open space impacts associated with implementation of the 2007 General Plan would be less than significant with mitigation.

4.12.2 Introduction

This section identifies and evaluates issues related to parks, recreation and open space within the 2007 General Plan action area.

The "Environmental Setting" discussion below describes the current setting of the action area. The purpose of this information is to establish the existing environmental context against which the reader can then understand the environmental changes caused by the action. The environmental setting information is intended to be directly or indirectly relevant to the subsequent discussion of impacts.

The environmental changes associated with the action are discussed under "Impact Analysis." This section identifies impacts, describes how they would

occur, and prescribes mitigation measures to reduce significant impacts, if necessary.

4.12.3 Environmental Setting

4.12.3.1 Parks and Open Space

Parks and publicly held open space within the County provide a range of uses addressing a variety of park-related needs, from intensive recreational activities scaled to meet regional demands (such as Laguna Seca Recreation Area and Lake San Antonio), to passive recreational activities catering to the individual experience and natural resource preservation (such as Garland Ranch Regional Park and Jacks Peak County Park). These lands are owned and managed by several different agencies, each with slightly different mandates and management objectives. Multiple agencies manage parks and open space in Monterey County, including the NPS, USFS, BLM, U.S. Fish and Wildlife Service (USFWS), CSP, California Department of Fish and Game (DFG), Monterey Peninsula Parks District, Monterey County Parks Department and local municipalities (see Exhibit 4.12.1).

Federally-Owned Land

The federal government owns and manages several hundred thousand acres of land in Monterey County, including Los Padres National Forest, Pinnacles National Monument, the Salinas River National Wildlife Refuge and a broad array of BLM lands.

Los Padres National Forest

The Los Padres National Forest (LPNF) encompasses nearly two million acres (1,752,400 acres) in the coastal mountains of central California. LPNF extends along the coast from the Big Sur area of Monterey County to the western edge of Los Angeles County. The northern non-contiguous portion of the LPNF in Monterey County can be seen in Exhibit 4.12.1. Elevations within the LPNF range from sea level to 8,831 feet. The LPNF is managed by the USFS, and is divided into a northern division and a southern division The northern division totals 314,674 acres and includes all of the acreage in Monterey County and northern San Luis Obispo County (USFS 2008a). The northern division is administered by the Monterey Ranger District. Segments of three rivers in LPNF are designated as national Wild and Scenic Rivers: the Big Sur River (Monterey County), Sespe Creek (Ventura County) and the Sisquoc River (Santa Barbara County). An 18.4 miles segment of the Arroyo Seco River within the county is being considered for addition to the national Wild and Scenic Rivers system (USFS 2008b). Activities permitted within the LPNF include hiking, camping, mountainbiking, off-highway vehicle travel, picnicking, and many other outdoor recreation activities.

Several large wilderness areas are set aside within the LPNF, including the Ventana Wilderness, located in the San Lucia mountains of Monterey County. The Ventana Wilderness was designated within the LPNF in the 1970s (USFS 2008c). The California Wilderness Act of 1984 added about 2,750 acres to the Ventana Wilderness. In 1992, the Los Padres Condor Range and River Protection Act and added about 38,800 acres to the Ventana Wilderness and created the approximately 14,500-acre Silver Peak Wilderness within the LPNF. In 2002, the Big Sur Wilderness and Conservation Act expanded the Ventana Wilderness for the fifth time, adding nearly 35,000 acres and increasing the total acreage of the Ventana Wilderness to its present size of 240,026 acres. Access in Wilderness Areas is allowed by foot or horseback only; motorized or mechanized travel, including mountain bikes, is prohibited.

Pinnacles National Monument

Pinnacles National Monument was created by Theodore Roosevelt in 1908 to protect the remains of an ancient volcano, and is currently managed by the NPS. The Pinnacles National Monument encompasses 26,000 acres of land in the Gabilan Mountains east of Soledad on State Highway 146. Most of the monument area is located in San Benito County, but a small portion of the national monument is located in eastern Monterey County. The monument is known for its' massive monoliths, spires and sheer-walls. These rock formations provide for large 'pinnacles' that attract rock climbers. Permitted activities within the monument include camping, hiking, caving, rock climbing, and bird watching.

Salinas River National Wildlife Refuge

The Salinas River National Wildlife Refuge is located approximately 11 miles north of the City of Monterey where the Salinas River empties into Monterey Bay. The refuge is managed by the USFWS and encompasses several habitat types including sand dunes, salt marsh, river lagoon, riverine, and a saline pond. The refuge provides habitat for several threatened and endangered species, including the California brown pelican, Smith's blue butterfly, the western snowy plover, the Monterey sand gilia, and the Monterey spineflower. The Salinas River National Wildlife Refuge is open to the public, though there are no facilities beyond a parking lot and footpaths. Permitted activities include fishing, hunting (seasonal), photography and wildlife observation.

Elkhorn Slough National Estuarine Research Reserve

The Elkhorn Slough National Estuarine Research Reserve (ESNERR) is one of 26 National Estuarine Research Reserves established nationwide as field laboratories for scientific research, estuarine education and habitat stewardship. Elkhorn Slough is a seven-mile arm of the Monterey Bay located half way between the cities of Santa Cruz and Monterey. ESNERR is owned and managed by the DFG and it operates in partnership with the federal National Oceanic and Atmospheric Administration (NOAA) and the local, non-profit Elkhorn Slough Foundation. The 1,400-acre reserve hosts programs that promote education, research, and conservation in Elkhorn Slough. There are five miles of trails that meander through oak woodlands, tidal creeks, and freshwater marshes. Elkhorn Slough is renowned for its birding opportunities during fall, winter, and spring.

Bureau of Land Management Holdings

The BLM administers several thousand acres of land throughout Monterey County. Holdings include land in Fort Ord and on the Monterey Peninsula, and rugged land adjacent to the Los Padres National Forest. Camping, equestrian activities, hiking and mountain biking are allowed on the Monterey Peninsula holdings. The BLM land near the Los Padres National Forest is mostly inaccessible and is designated as a Wilderness Study Area.

State Parks

The California State Parks (CSP) owns and operates 20 park units in Monterey County, totaling 17,567 acres. Most of these units are on or near the coast. Several of these state parks, including the Marina State Beach in Marina, Point Lobos State Reserve in Carmel, and the Julia Pfeiffer Burns State Park on the Big Sur Coast attract visitors from throughout California and around the world. Table 4.12-1 lists the location and acreage of each of the state park units in Monterey County.

Table 4.12-1. State Park Units in Monterey County

Unit	Location	Acreage
Andrew Molera State Park	Big Sur Coast	4,766
Asilomar State Beach	Pacific Grove	107
Carmel River State Beach	Carmel	297
Fremont Peak State Park	Prunedale	162
Garrapata State Park	Carmel Highlands	2,940
Hatton Canyon Property	Carmel	130
John Little State Reserve	Big Sur Coast	21
Julia Pfeiffer Burns State Park	Big Sur Coast	3,762
Limekiln State Park	Big Sur Coast	711
Marina State Beach	Marina	171
Monterey District Headquarters	Monterey	6
Monterey State Beach	Monterey	100
Monterey State Historical Park	Monterey	10
Moss Landing State Beach	Moss Landing	60
Pfeiffer Big Sur State Park	Big Sur Coast	1,107
Point Lobos Ranch Property	Carmel	1,329
Point Lobos State Reserve	Carmel	1,325
Point Sur State Historical Park	Big Sur Coast	80
Salinas River State Beach[a]	Moss Landing	282
Zmudowski State Beach[a]	Moss Landing	194

[a] Park boundaries overlap with another county.

Source: California Department of Finance 2006b.

The Fort Ord Dunes State Park is an additional state park currently being considered for development in Monterey County, and is currently in the environmental review stage. Located along Highway 101 on Monterey Bay, the proposed 990 acre Fort Ord Dunes State Park has four miles of shoreline historically associated with Fort Ord. The Final General Plan and Environmental Impact Report for Fort Ord Dunes State Park was approved by the State Parks and Recreation Commission in September 2004.

Monterey Peninsula Regional Park District

The Monterey Peninsula Regional Park District (Regional Park District) is a special parks and open space district located on the Monterey Peninsula. The voters of Monterey County approved a specific ballot measure which created the

Regional Park District (MPRPD) in November 1972. The park district boundaries were set to match the Monterey Peninsula College District, and a Board of Directors was formed to oversee operations and policy-making. The MPRPD was entrusted to acquire lands for the express purpose of preserving open space and providing recreational opportunities. The MPRPD has protected approximately 20,000 acres of open space and acquired, or helped to acquire, a total of 24 parks and open spaces along the Monterey Peninsula, Big Sur Coast, Cachagua and Carmel Valley. The MPRPD acquires land through funds derived from a 0.5% allocation of property tax collected within its boundaries, along with matching federal and state funds.

In 2004, voters in the MPRPD approved a ballot measure creating the MPRPD Parks, Open Space and Coastal Preservation benefit assessment district. The voters agreed to an assessment of approximately $19/yr. per single family dwelling equivalent in order to provide funding for MPRPD to continue preserving and protecting parks and open space. Table 4.12-2 summarizes the MPRPD's parks and preserves.

Table 4.12-2. Monterey Peninsula Regional Park District Parks and Preserves

Park/Preserve	Location	Accessibility
Bloomquist Open Space Preserve	Upper Carmel Valley	Access by permit only
Cachagua Community Park	Cachagua	Open to public
Frog Pond Wetland Preserve	Del Rey Oaks	Open to public
Garland Ranch Regional Park	Carmel Valley	Open to public
Laidlaw-Apte Pine Forest Preserve	Carmel Highlands	Access by permit only
Landfill Dunes Preserve	Seaside	Open to public
Locke-Paddon Community Park	Marina	Open to public
Marina Dunes Preserve	Marina	Open to public
Mill Creek Redwood Preserve	Big Sur	Access by permit only
Palo Corona Regional Park	Carmel	Access by permit only
San Clemente-Blue Rock Open Space	Carmel Valley	Closed to public
South Monterey Bay Dunes	Sand City	Open to public

Source: Monterey Peninsula Regional Park District 2007.

Monterey County Parks Department

The Monterey County Parks Department is responsible for the operation and maintenance of a system of nine regional parks and two lakes encompassing over 12,155 acres of land and 10,000 acres of lakes. San Antonio Lake, located southeast of Jolon and Lockwood in the South County area, encompasses 12,000 acres and is the largest county-operated recreational area. Toro Park is the

second largest county-operated park facility and is 4,783 acres in size. These county-owned public lands provide open space and recreational opportunities primarily on a regional scale for unincorporated areas of the County, rather than at the neighborhood level. Royal Oaks Park and Manzanita Park serve the residents of North County. Jacks Peak and Toro Park are located adjacent to Monterey-Salinas Highway 68 and serve residents from the Monterey Peninsula and the Greater Salinas Area. San Lorenzo Park, just north of King City, serves residents of the Salinas Valley and visitors to the county. The Lake San AntonioRecreation Area and the Laguna Seca Recreation Area/Raceway serve visitors from throughout California, the nation, and the world—in addition to county residents. Each of these County parks is described in further detail below.

Jacks Peak County Park

Jacks Peak Park encompasses 525 acres, and is located within the Greater Monterey Peninsula Area Plan (Exhibit 4.12.1). Its central feature is Jacks Peak, the highest point on the Monterey Peninsula, rising 1,068 feet above Monterey and Carmel, with a view of Monterey Bay. The day-use park allows picnics and day hiking. Over 8 miles of trails, including a self-guided nature trail, wrap around Jacks Peak and throughout the remainder of the park.

Laguna Seca Recreation Area

The 542 acre Laguna Seca Recreation Area, located within the former Fort Ord area, is home to both the recreation area as well as the Mazda Raceway at Laguna Seca. The recreation area is within a short driving distance from the Monterey Peninsula, Salinas Valley, Carmel Valley and Big Sur. The recreation area has 172 tent and RV campsites. In addition, the recreation area offers multiple picknicking areas, a rifle and pistol range, off-highway motorcross areas, and off-highway vehicle areas. The Trackview Pavilion (Red Bull Energy Center) is also available to rent for large events. The world-famous Mazda Raceway Laguna Seca is home to the Skip Barber Racing School, as well as multiple car-racing events throughout the year.

Lake San Antonio

Lake San Antonio is Monterey County's largest freshwater recreation area, and is located within the South County Area Plan, adjacent to Fort Hunter Liggett. The lake is formed by an earthfill dam on the San Antonio River and was completed in 1965. The lake and dam are owned by the Monterey County Water Authority. Lake San Antonio offers year-round activities including picnicking, camping, fishing, hiking, swimming, boating and water-skiing. Lake facilities include the Lake San Antonio Marina, a small general store and a dry storage yard. Lake San Antonio has over 500 campsites as well.

Manzanita Park

Manzanita Park is a large, recreational facility and nature preserve located southwest of Prunedale. The park is 500 acres in size, with 50 acres set aside for youth recreation while the rest of the land is a nature preserve. The park is operated by the North County Youth Recreation Association and is open during their scheduled events which vary throughout the year. Scheduled events

typically include baseball games, softball games, soccer games, BMX racing, batting cage practice, and dog training events.

Royal Oaks Park

Royal Oaks Park was established in 1966 and is the oldest park in the Monterey County Parks system. This 122-acre day use facility is situated in an oak-studded valley southeast of Pajaro along Mayer Road, within the North County Coastal Land Use Plan area. The park facilities include numerous picnic tables, large-group accommodations, a softball field, playground equipment, basketball, volley-ball and tennis courts, and many miles of hiking trails.

San Lorenzo Park

San Lorenzo Park is located along the banks of the Salinas River, at the base of the Santa Lucia Mountains. The park is located on the outskirts of King City, and is within the South County Area Plan (Exhibit 4.12.1). San Lorenzo Park offers multiple facilities including picnic areas, playgrounds, horseshoe pits, volleyball courts, softball areas, 90 campsites and a walking trail along the banks of the Salinas River. The park also contains the Monterey County Agricultural and Rural Life Museum.

Toro Regional Park

Toro Regional Park is located within the Toro Plan Area and is six miles from downtown Salinas, and 13 miles from the Monterey Peninsula along Hwy 68 (Exhibit 4.12.1). Toro Regional Park was first opened in 1971 and contained 4,756 acres. A large, 849-acre ranch known as Marks Ranch has recently been secured by Monterey County and the Big Sur Land Trust. The newly acquired ranch will be annexed to Toro Park. Park facilities at Toro Park include an equestrian staging area and riding trails, two softball fields, playgrounds, horseshoe pits, volleyball courts, mountain biking trails and over 20 miles of hiking trails.

San Antonio Lake

Lake San Antonio is a freshwater recreation area 20 miles inland from the Central Coast in southern Monterey County. The lake is formed by the damming of the San Antonio River and is approximately 5000 surface water acres. San Antonio Lake is open year round for hiking, biking equestrian use, camping, water skiing, fishing, and wakeboarding. There are over 4-miles of lake shore camping on the north shore.

Lake Nacimiento

Nacimiento Lake is located in northern Monterey County, but it is managed by the County of Monterey. Similarly to Lake San Antonio, Lake Nacimiento is formed by the Nacimiento dam. The lake covers 5,000 acres of surface waters and approximately 165 miles of shoreline. The area provides recreational facilities for camping, hiking, biking, boating, and equestrian use among other recreational opportunities.

4.12.3.2 Open Space

The State General Plan Guidelines define open space as including land used for the managed production of resources, such as forestlands, rangeland, agricultural lands, and areas of economic importance for the production of food or fiber. Under these guidelines, open space can serve specific purposes, including preservation of natural resources, continued managed production of resources, outdoor recreation, and health and safety.

As described above, a substantial amount of parkland and open space in the county is owned by the federal and state government. This includes Los Padres National Forest, multiple properties owned by BLM, the state parks discussed above, and the two large military bases. The two military bases are Camp Roberts which is now owned by the California National Guard, and Fort Hunter Liggett owned by the Department of the Defense. Camp Roberts is located south of Bradley along Hwy 101, and borders San Luis Obispo County. Camp Roberts was constructed in 1940 to train soldiers during the Korean War, and encompasses over 43,000 acres. Fort Hunter Liggett is the largest United States Army Reserve command post. Fort Hunter Liggett comprises 165,000 acres is bounded by the Santa Lucia Mountains to the east, Los Padres National Forest to the north and west, and the San Luis Obispo County line to the south. The Fort also contains the headwaters of the Nacimiento River. Limited public access for camping and hunting is allowed on these lands. Overall, the use of these military lands is strictly controlled by the military, and is beyond the area of influence of the 2007 General Plan Action Area.

Under the State Guidelines, outdoor recreational land use is also considered open space, thus based on the definition golf courses are considered open space. The County does not own or manage any recreational golf courses for the public; however, any proposed golf course within open space requires a County permit.

Much of the open space in Monterey County is not formally designated or recognized as such, but exists as undeveloped slopes or canyons owned by private citizens in rural areas. This form of open space, though not formally protected by an open space designation may exist because of site conditions or zoning/slope restrictions that reflect physical constraints and resources.

There are also small neighborhood parks throughout the County that are incorporated into the design of large subdivisions per the County's park dedication ordinance. These are designed to meet the specific needs of the residents in the area and diverse age and recreational interests per Section 19.12.010 of the Monterey County Code, described below under "Regulatory Framework."

4.12.3.3 Trails

There are hundreds of miles of hiking, equestrian and bike trails in Monterey County. Notable hiking trails in Monterey County within the Los Padres National Forest include Arroyo Seco trails, Little Sur Camp, the Blue Rock Ridge Trail, the Pine Ridge Trail and the Santa Lucia Trail. In addition, according to the Ventana Wilderness Alliance, there are over fifty hiking trails within the Ventana Wilderness alone. Many of the state parks also include extensive trail systems, including the Andrew Molera State Park trails, the Pfeiffer Big Sur State Park trails, the Point Lobos State Reserve trails, and the Fremont Peak State Park trails.

The Monterey Bay Coastal Trail is 29 miles long and winds through several Monterey County communities, including Pebble Beach, Pacific Grove, Monterey, Sand City, Seaside, and Marina. The trail is used by both joggers, skaters, walkers and cyclists.

The goal of integrating a network of trails that strategically link schools and major recreational facilities can be found throughout the parks and recreation master plans adopted for individual cities within Monterey County. The trails complement existing roadways and infrastructure to aid in the movement of vehicles and pedestrians throughout the county, and enhance the quality of life by providing alternative modes of transportation.

4.12.3.4 Recreation Resources and Programs

The local communities in Monterey County operate a comprehensive system of municipal recreation programs that respond to the needs of Monterey County's children, youth, adults, and seniors. Local jurisdictions and private recreational organizations provide a wide variety of active recreation programs for the residents and visitors of Monterey County. Local jurisdictions work in cooperation through various joint use agreements to maximize the use of recreational facilities throughout the county. These cooperative efforts continue to foster the optimal use of parks and recreation resources and services available to the community through joint use of existing recreational facilities and partnerships with other recreation providers and for-profit agencies.

4.12.4 Regulatory Framework

Parks, open spaces and recreation facilities are subject to numerous laws and regulations. Summaries of state and local laws related to the management of these facilities are presented in this section.

4.12.4.1 State Policies

Quimby Act (California Government Code 66477)

The Quimby Act (California Government Code §66477) was passed in 1975 and authorizes cities and counties to pass ordinances requiring developers to set aside land, donate conservation easements, or pay fees for park improvements. This provision of the State Subdivision Map Act enables cities and counties to require the dedication of land and/or payment of in-lieu fees for parks and recreation purposes as a condition of approval of a tentative map or parcel map subdivision. The dedication of land and/or payment of in-lieu fees must be based on parkland dedication policies and standards established in the city or county general plan. Currently, only the County's subdivision ordinance outlines the policies and standards for dedication of parklands. The existing 1982 General Plan does not have specific policies or standards establishing the amount of parkland to be dedicated. This policy issue will be addressed further under 4.12.5, *Project Impacts*.

AB 1600 amended the Quimby Act in 1982 to hold local governments more accountable for imposing park development fees. The AB 1600 amendment requires agencies to clearly show a reasonable relationship between the public need for the recreation facility or park land and the type of development project upon which the fee is imposed. Cities and counties are required to show a strong direct relationship, or nexus, between the park fee exactions and the proposed project. Local ordinances must include definite standards for determining the proportion of the subdivision to be dedicated and the amount of the fee to be paid by the developer. AB 2936 was adopted as an amendment to the Quimby Act in 2002, and allows counties and cities to spend up to 10% of their Quimby Act fees to prepare master plans for park and recreation facilities every three years.

4.12.4.2 County Policies

Monterey County Code

Title 19 of the Monterey County Code establishes regulations pertaining to subdivision development in the County. Chapter 19.12 specifically outlines regulations pertaining to the dedication and reservations of easements. Section 19.12.010 of the Monterey County Code establishes the County's parks and recreation facilities standards. This code section was enacted pursuant to the authority granted to the County by the Subdivision Map Act and provides for additional parks, recreational facilities and open spaces as appropriate pursuant to the General Plan. As a condition of approval of a tentative map, the subdivider dedicates land, pays a fee in lieu thereof, or both, at the option of the County, for park or recreational purposes. The land dedicated or the fees paid, or both, must be used for local or regional community and neighborhood parks and recreational facilities in such a manner that the locations and use of such parks and recreational facilities bear a reasonable relationship to the use of the park and

recreational facilities by the inhabitants of the subdivision generating such dedication or fees, or both. The Code determines that the public interest, convenience, health, safety and welfare require that three acres of property for each one thousand (1,000) persons residing within the unincorporated area of the County be devoted to local park and recreation purposes. This acreage requirement is pro-rated based on the size of the project.

The primary intent of this Code section is to provide the land for recreation units on a local level of service which reasonably serves the subdivision or neighborhood, including but not limited to: tot lots, play field lots, playgrounds, neighborhood parks, playfields, community or district parks, and other specialized recreational facilities that may serve the family group and also senior citizens citizen and child care activities. Principal consideration is given to lands that offer:

1. A variety of recreational potential for all age groups;
2. Recreational opportunities within walking distance from residents homes;
3. Possibility for expansion or connection with school grounds;
4. Integration with hiking, riding and bicycle trails, natural stream reserves and other open space;
5. Coordination with all other park systems; and
6. Access to at least one existing or proposed public street.

The ordinance also establishes the circumstances under which an in-lieu fee may be accepted. For example, if the subdivision has less than fifty parcels, the subdivider would pay a fee equal to the land value of the portion of the park or recreational facilities required to serve the needs of the residents of the proposed subdivision. The money collected by the County can be used in accordance with the schedule developed pursuant to Section 19.12.010K for the purpose of acquisition, development, maintenance and operation of County regional park units and for developing new or rehabilitation of existing neighborhood or community park or recreational facilities reasonably related to serving the subdivision. These funds can also be used towards the purchase of necessary land and/or improvement of land for park or recreational purposes. The funds must be committed within five years after payment thereof or the issuance of building permits on one-half of the lots created by the subdivision, whichever occurs later. If the money is not committed, it would be distributed and paid to the current owners of the subdivision. At the time of the approval of the final map or parcel map, the Director of Parks and Recreation would develop a schedule specifying how, when, and where the land or fees will be used to develop or rehabilitate a park or recreational facilities to serve the residents of the subdivision.

2007 General Plan Goals and Policies

The 2007 General Plan Public Services Element establishes goals and corresponding policies to address parks and recreation impacts. The applicable goals and policies are discussed under the Impacts and Mitigation section below.

4.12.5 Project Impacts

4.12.5.1 Thresholds of Significance

Criteria for determining the significance of impacts related to parks and recreation are based on criteria set forth in Appendix G of the State CEQA Guidelines (14 Cal. Code Regs. § 15000 et seq.). Implementation of the 2007 General Plan would cause a significant impact to parks, recreation, and open space resources if it would result in any of the conditions listed below.

- Require new or expanded parks or recreational facilities, which were not contemplated in the general plan or
- Result in the physical deterioration of parks or recreational facilities due to increased use.

4.12.5.2 Impact Analysis

Implementation of the 2007 General Plan to the 2030 and 2092 planning horizons would increase demands on existing parks and recreation facilities in the county. Such demands would create a need for new or expanded facilities and would also potentially cause the physical deterioration of existing parks and recreation facilities.

New or Expanded Parks and Recreation Facilities

Impact PAR-1: Implementation of the 2007 General Plan would result in the need for new or expanded parks and recreational facilities, which were not contemplated in the general plan. (Less-Than-Significant Impact with Mitigation)

2030 Planning Horizon

Impact of Development with Policies

The County currently has an abundance of park, recreation and open space facilities. The Monterey County Parks system alone consists of nine regional parks, encompassing more than 12,000 acres of land and 10,000 acres of lakes. The County's current park standard establishes a park ratio of 3 acres

of parkland per 1,000 residents. The County's 2006 adjusted population estimate is 438,978 residents for both the incorporated county and unincorporated cities combined. In 2006, the existing need for parkland per the County's subdivision ordinance dedication ratio of 3:1000 for this combined city/county population was 1,317 acres (438,978*0.003). The projected population in 2030 is 602,731 residents within both the unincorporated county and incorporated cities. Using the parkland dedication ratio of 3:1000, 1,808 (602,731*0.003) acres of parkland would be needed to serve this population. Using the parkland dedication ratio of 3:1000, the County's existing parkland acreage of 12,000 acres exceeds the area needed to meet the current parkland/resident ratio by several thousand acres. In addition, multiple other parks, recreation and open spaces exist throughout the county under the jurisdiction of the federal government, state agencies, MPRPD and local municipalities.

Nevertheless, future population growth anticipated by the 2007 General Plan to the 2030 planning horizon would increase demands on existing parks and recreation facilities near population centers within the county. The 2007 General Plan includes policies to address this increased demand for parks, recreation and open space services.

2007 General Plan Policies

The 2007 General Plan policies summarized below establish comprehensive measures to ensure the proposed project meets the need for new or expanded parks and recreational facilities.

Land Use Element

The Land Use Element guides decision makers, planners and the general public as to the ultimate pattern of development within the unincorporated areas of the county. It designates the general distribution, location and extent of land uses, such as housing, business, industry, open space, agriculture, natural resources, recreation, and public/quasi-public uses (Monterey County 2007). The location and density of uses prescribed by the Land Use Element are integrally linked to policies for the protection of environmental resources included in the Conservation/Open Space Element.

Land Use Element Policy LU-2.7 (open space) states that open space should be provided in and/or on the fringes of residential areas. Land Use Element Policy LU-2.23 (Community Areas) states that Community Areas shall be designed to achieve a sustainable, balanced, and integrated community offering various types of land use designations including "a variety of recreational opportunities and public amenities integrating enhancement of existing natural resources into the community where possible." (Monterey County 2007.)

Land Use Element Policy LU-2.34 (Urban Residential) establishes regulations for three categories of Urban Residential land including Medium Density Residential (MDR), High Density Residential (HDR) and Mixed Use (MU). Both MDR and HDR categories allow for a range of land uses, including recreational, public and quasi public lands. MDR areas are appropriate for a range of residential uses (1-5 units/acre) and housing types, recreational, public and quasi public, and other uses that are incidental and subordinate to the residential use and character of the area.

Land Use Element Policy LU-2.35 (Rural Residential) establishes regulations for three categories of Rural Residential land, including Low Density Residential (LDR), Rural Density Residential (RDR) and Resource Conservation (RC). Both LDR and RDR categories allow for a range of land uses, including recreational, public and quasi-public lands. The RC designation would apply in primarily rural residential or agricultural areas with sensitive resources, as well as areas planned for resource enhancement. RC lands would create important open space amenities for the entire community, and in some cases would provide drainage and flood control facilities in conjunction with open space. A range of passive to active activities are envisioned, including park and recreation facilities that can be accomplished without significant structural development and also complement, protect and enhance the resources.

Land Use Element Policy LU-6.1 (Public/Quasi-Public designations) establishes the Public Quasi-Public (PQP) land use designation. The PQP land use designation would accommodate publicly or privately owned land uses such as schools, parks, regional parks, public works facilities and hospitals that serve the public at large.

Land Use Element Policy LU-6.2 (Agency-owned lands) establishes that lands that are owned by a federal, state, or local public agency may be designated as PQP. Land management regulations and policies for those lands would be established accordingly by each applicable federal, state or local public agency.

Land Use Element Policy LU-6.3 (Planning Coordination) and 6.4 (Public Lands) requires that the County's planning activities be coordinated with the planning efforts undertaken by other public agencies with landholdings in Monterey County. The planning for public lands adjacent to private lands should be undertaken as a joint effort between all of the affected agencies and private property owners.

Land Use Element Policy LU-7.1 (Water Bodies) establishes priorities for multiple uses of major water bodies in the county, including water supply, flood control and hydroelectric power generation. Recreation is established as the secondary priority and

compatibility between multiple uses of major water bodies and surrounding land uses shall be considered.

Land Use Element Goal LU-8 (Open Space) encourages the provision of open space lands as part of all types of development, including residential, commercial, industrial and public development.

Land Use Element Policy LU-8.1 (Planning Process) requires that the open space needs of the community and new development be reviewed and addressed through the planning process.

Land Use Element Policy LU-8.2 (Clustering) establishes that clustering, consistent with the other policies of this 2007 General Plan, is considered a means of maximizing permanent open space within new development.

Land Use Element Policy LU-8.3 and 8.4 (Development Credit) requires that lands would be set aside for future park and recreation development sites, and incorporated into new urban and rural development. As part of development review and approval, on-site development density credit consistent with the underlying land use designation shall be given for developable lands placed in permanent open space as part of a development. Use of the on-site development density credit will be allowed only if environmental, health and public safety factors permit.

Land Use Element Policy LU-8.4 (Open space integration) requires that, wherever possible, open space lands provided as part of a development should be integrated into an area-wide open space network. Land Use Element Policy LU-8.5 (Open space buffers) establishes that development should consider use of open space buffers on the perimeter and integrated into the development.

Implementation of the Land Use Element policies described above would establish comprehensive measures to avoid and minimize adverse impacts to parks and recreation facilities, and meet the need for new or expanded parks and recreational facilities. Land use designations would allow for a range of land uses, including recreational, open space and quasi-public lands. In addition, the County's planning activities would be coordinated with the planning efforts undertaken by other public agencies with landholdings in the County.

Conservation and Open Space Element

The Conservation and Open Space Element guides the County in the long-term conservation and preservation of open space lands and natural resources while protecting private property rights (Monterey County 2007). The County's intent is to enable greater cooperation

among public agencies and the public to share management responsibilities in accomplishing the shared goal of conserving and protecting the resources of the region.

Conservation and Open Space Element Goal OS-1 (Scenic Resources) establishes policies to retain the character and natural beauty of Monterey County by preserving, conserving and maintaining unique physical features, natural resources and agricultural operations.

Conservation and Open Space Element Policy OS-1.7 (Development Rights) establishes a voluntary, transfer of development rights program to direct development away from areas with unique visual or natural features, critical habitat, or prime agricultural soils shall be established.

Conservation and Open Space Element Policy OS-1.10 (Trails Program) recognizes the value of trails in Monterey County, and establishes policies to develop a county-wide trails program, including bike paths (Class 1), walking and equestrian facilities used by the general public. Specific trails shall be addressed in each Area Plan. General parameters include voluntary dedication of trails, recognition of crop safety in siting trails and appropriate design

Implementation of the Open Space and Conservation Element policies described above would minimize impact to parks and recreation. The proposed county-wide trails program in Policy OS-1.10 would create a trail system throughout the county. Further, Policy OS-1.7 and OS-1.1 would minimize impacts by setting aside areas with unique physical characteristics for the general public. The transfer of development rights would lessen the impacts by creating new parkland and recreation area. The implementation of the policies depicted above would establish comprehensive measures to avoid and minimize adverse impacts to parks and recreation facilities, and meet the need for new or expanded parks and recreational facilities within the county.

Public Services Element

The Public Service Element also contains specific policies that govern parks and recreational facilities in the County. Public Services Element Goal PS-11 (Stewardship) calls for maintaining and enhancing the county's parks and trails system in order to provide recreational opportunities, preserve natural scenic resources and significant wildlife habitats and good stewardship of open space resources.

Public Service Element Polices PS-11.1 (parks acquisition) states that priority shall be given to the acquisition of land, development, and maintenance of new parks in areas that are deficient in park services and in rapidly growing areas. Evaluation of this need would include consideration of the costs for development of facilities as well as ongoing management and maintenance. After evaluation of regional needs, locations where park acquisition should be pursued in concert with willing property owners would be identified. Evaluation of this need would include consideration of the costs for development of facilities as well as on-going management and maintenance. After evaluation of regional needs, locations where park acquisition should be pursued in concert with willing property owners would be identified.

Public Service Element Polices PS-11.2 (park ratios) establishes that park acquisition, development, and maintenance guidelines based upon acreage, population, parkland ratios and consideration of natural resource values that will provide adequate park and recreation facilities for existing and future residents shall be established. Broad public participation in the development of these guidelines would be assured.

Public Service Element Polices PS-11.3 (parks distribution) outlines that, in cooperation with other park and public lands agencies, an equitable geographic distribution of neighborhood, community and regional park facilities commensurate with the needs of the surrounding residents shall be established.

Public Service Element Polices PS-11.4 (Youth camping) encourages interpretive and recreational services such as youth campaign in parklands.

Public Service Element Polices PS-11.5 (Other park agencies) promotes the full utilization of park and recreation facilities owned and/or operated by other agencies is encouraged.

Public Service Element Polices PS-11.6 (Funding Sources) requires that county funding sources and special operating agreements shall be used to make County parks and recreation facilities available and ensure their on-going maintenance.

Public Service Element Polices PS-11.7 (Accessibility) stipulates that accessibility, in terms of affordability, physical access and hours of operation of the County's park and recreation facilities shall be assured to the maximum extent practicable.

Public Service Element Polices PS-11.8 (Lake San Antonio Park) proposes that, in order to join the separated portions of the Lake San Antonio Park, acquisition of the publicly owned lands at the Old

Hacienda and the northern Lake San Antonio area shall be sought if Fort Hunter-Liggett is closed.

Public Service Element Polices PS-11.9 (Parkland acquisition) outlines that a wide range of mechanisms to acquire and maintain parkland, including a variety of funding sources such as land donations, public conveyances from other agencies and development impact fees shall be utilized.

Public Service Element Polices PS-11.10 (Quimby Act) establishes that, pursuant to the provisions of the State Subdivision Map Act, residential subdivision projects shall be conditioned to provide and maintain park and recreation land and facilities or pay in-lieu fees in proportion to the extent of need created by the development.

Public Service Element Polices PS-11.11 (Management Plans) stipulates that management plans for all County park and recreational areas and facilities, emphasizing protection of environmental resources and best management practices for open space on these lands, shall be prepared and adopted. Public Service Element Polices PS-11.12 (Management Plans, cntd.) requires that parks for more active uses shall be distinguished from parks and open space areas rich in biological resources suitable for more passive enjoyment of those resources. Management Plans shall reflect these differences and specify appropriate management for each use.

Public Service Element Polices PS-11.13 (Long-term management) requires that new park facilities shall not be opened to public use until adequate, long-term facility management is provided. Public Service Element Polices PS-11.14 (Community Area Plans) stipulates that all Community Area Plans shall identify adequate sites for park and recreation facilities.

Implementation of the Public Service Element Policies described above would establish comprehensive measures to avoid and minimize adverse impacts to parks and recreation facilities, as well as meet the need for new or expanded parks and recreational facilities within the county. The Public Service Element Policies establish general standards for the provision of public facilities concurrently with future growth. Included are policies that direct growth where adequate facilities currently exist, policies that seek to achieve acceptable level of park service standards through improvements funded by fair share impact fees and planned capital improvements, and require that only new developments that have or can provide adequate concurrent public services and parks facilities be approved.

Area Plan Policies

The Area Plans contain specific supplemental policies that assist in ensuring that potential increased demand on parks and recreation services from implementation of the 2007 General Plan are addressed.

North County Area Plan

North County Area Plan Policy NC-3.5 (critical habitat) requires the preservation of critical habitat areas as open space. In addition, when an entire parcel cannot be developed due to this critical habitat preservation policy, a low intensity, clustered development would be permitted.

North County Area Plan Policy NC-3.7 (Trails plan committee) would establish a new Trails Plan committee to be appointed by the Board of Supervisors. The new committee would be tasked with developing a Trails Plan for the North County area that would be consistent with General Plan Policy OS-1.10 (Trails Program). The new Trails Plan would include a trails map and implementation policies for the North County area. Recreational trail and equestrian trial easements would be developed where feasible, and would be located within County-required easements of private roads.

Greater Salinas Area Plan

Greater Salinas Valley Area Plan Policy GS-1.1 (Butterfly Village Special Treatment Area) designates approximately 671 acres located north of San Juan Grade Road and east of Harrison Road as a "Special Treatment Area," or STA. This designation would permit a planned development including a public park including trails, public parking, and a series of drainage ponds. It would also preserve sensitive habitat areas as open space. A community health and wellness center would also be included, and it would provide a variety of health, fitness and nutrition uses.

Greater Salinas Valley Area Plan Policy GS-5.1 (Public Services) stipulates that portions of Gabilan Creek be evaluated for a linear park as defined by the County's Parkland Classification System at such time when the County can support another regional park. In the interim, the policy requires that Gabilan Creek be maintained in a natural riparian state, maintained in a free-flowing state devoid of dams, allowed its natural flood capacity through required setbacks conforming to the 100-year floodplain, and kept free from urban encroachment by residential development through required dedication of land in the floodplain corridor.

Central Salinas Valley Area Plan

Central Salinas Valley Area Plan Policy CSV-1.1 (Paraiso Hot Springs) designates Paraiso Hot Springs as a STA. Recreation and visitor serving land uses for the Paraiso Hot Springs Special Treatment Area may be permitted in accordance with a general development plan and other discretionary approvals such as subdivision maps, use permits and design approvals. The STA may include such uses as a lodge, individual cottages, a visitor center, recreational vehicle accommodations, restaurant, shops, stables, tennis courts, aquaculture, mineral water bottling, hiking trails, vineyards, and orchards. Central Salinas Valley Area Plan Policy CSV-1.12 (Permits) requires that all recreation and visitor-serving commercial land uses shall require a use permit.

Central Salinas Valley Area Plan Policy CSV-1.7 (Millers Lodge) designates the historical "Millers Lodge" as a STA to recognize historical day use, camping, recreation, and residential uses that have been present on the parcel since the 1940's. This STA designation would allow the owners to apply for a use permit and general development plan. This policy would not permit expansion or intensification of the Miller's Lodge property beyond what is currently developed (as of adoption of the 2007 General Plan), nor allow any new uses not already occurring on the site.

Greater Monterey Peninsula Area Plan

Greater Monterey Peninsula Area Plan Policy GMP-1.4 (open space) stipulates that development proposals include compatible open space uses located between other developed areas.

Greater Monterey Peninsula Area Plan Policy GMP-1.5 (environmentally sensitive areas) necessitates the provision of open space and low-intensity educational and recreational uses in environmentally sensitive areas and in areas of high visual sensitivity.

Greater Monterey Peninsula Area Plan Policy GMP-1.7 (White Rock Club) designates the White Rock Club, an existing recreational facility consisting of 100 cabin sites and one gatehouse, as a STA. Development within the White Rock Club would be subject to the policies of the Rural Grazing land use designation. In addition, only the repair and remodeling of the existing 100 cabin sites would be allowed without a specific Use Permit. No additional cabin sites would be allowed. Conversion of the cabins to permanent residential units would also not be permitted without a Use Permit.

Greater Monterey Peninsula Area Plan Policy GMP-1.8 (San Clemente Ranch) designates the San Clemente Ranch as an STA.

Development within the San Clemente Ranch would be subject to the policies of the Rural Grazing land use designation. The existing recreational facilities on the ranch consist of 101 cabin sites, 5 permanent residents, tennis courts, a swimming pool and fishing ponds. The reconstruction, remodeling or rebuilding of approved cabins or development of new cabins on approved cabin sites would be allowed with appropriate Planning and Building Inspection Department and Health Department permits. Conversion of the 101 cabins to permanent residential units would not be permitted. The use of the cabins would remain a recreational use, and occupancy would be restricted to no more than 45 consecutive days.

Greater Monterey Peninsula Area Plan Policy GMP-3.8 (open space) encourages the designation of open space in areas of diverse habitats and ecologically important zones. Policy GMP-3.9 (critical habitat) promotes the preservation of critical habitat areas as open space.

Greater Monterey Peninsula Area Plan Policy GMP-3.11 (Trails) stipulates that riding and hiking trails would be acquired and developed with the intent of creating a coordinated, area-wide trails system. All motorized vehicles would be prohibited from using these trails. Highest priority trails are identified.

Greater Monterey Peninsula Area Plan Policy GMP-3.12 (trail acquisition) establishes that trail acquisition and development procedures address design standards, trail location, construction standards, liability questions, patrol and enforcement, trail restrictions or limitations, maintenance and operation plans, and burden of cost.

Greater Monterey Peninsula Area Plan Policy GMP-3.13 (Bike paths) calls for the dedication of trail easements as a condition of development approval, notwithstanding Policy OS-1.10(b), as development of bike paths and a coordinated, area-wide trails system are essential for circulation, safety and recreation in the Greater Monterey Peninsula Planning Area.

Greater Monterey Peninsula Area Plan Policy GMP-5.1 (Regional cooperation) encourages cooperation between the county, Monterey Peninsula Regional Park District and peninsula cities in developing a joint program to increase the amount of useable parks and recreation facilities within the Greater Monterey Peninsula area.

Greater Monterey Peninsula Area Plan Policy GMP-5.2 (development review) requires that each development proposal be evaluated by the County to determine the extent to which such development may help further the County's parks and recreation facility goals, objectives, and policies.

Carmel Valley Master Plan

Carmel Valley Master Plan Policy CV-1.3 (open space) requires that open space uses be located between the development areas in order to clearly define them, and to maintain a distinction between the more rural and more suburban areas of the valley.

Carmel Valley Master Plan Policy CV-1.8 (cluster development) sets criteria for cluster development, including a stipulation that it be used to protect visible open space and is in compliance with other applicable policies. In addition, open space for clustered developments must be dedicated in perpetuity.

Carmel Valley Master Plan Policy CV-3.14 (trails) calls for the creation of a network of shortcut trails and bike paths to interconnect neighborhoods, developments, and roads. These trails would be closed to motor vehicles and their intent is to facilitate movement within the Carmel Valley without the use of automobiles.

Carmel Valley Master Plan Policy CV-3.15 (development rights) allows public and private agencies such as the Big Sur Land Trust, the Monterey Regional Park District, and others to acquire development rights or accept easements and dedications for significant areas of biological, agricultural, or other open space land.

Carmel Valley Master Plan Policy CV-3.19 (Trail easements) calls for the dedication of trail easements as a condition of development approval, notwithstanding Policy OS-1.10(b), as development of bike paths and a coordinated, area-wide trails system are essential for circulation, safety and recreation in the Carmel Valley Planning Area.

Carmel Valley Master Plan Policy CV-5.7 (school recreation sites) promotes the expansion of existing school facilities for recreational uses, including land next to Carmelo School and Middle School.

Toro Area Plan

There are no specific policies related to parks, recreation or open space in the Toro Area Plan.

Cachagua Area Plan

Cachagua Area Plan Policy CACH-1.4 (Ventana Wilderness) requires that new development adjacent to the Ventana Wilderness not impact the purpose of the wilderness area.

Cachagua Area Plan Policy CACH-1.5 (Sydicate Camp) designates Syndicate Camp as a STA, an existing recreational facility consisting

of 24 cabin sites. Development within Syndicate Camp would be subject to the policies of the Rural Grazing land use designation, except those policies relating to density of development. The reconstruction, remodeling or rebuilding of approved cabins or development of new cabins on approved cabin sites would be allowed with appropriate Planning and Building Inspection Department and Health Department permits. Permanent residency is allowed.

Cachagua Area Plan Policy CACH-3.8 (trail easements) calls for the dedication of trail easements as a condition of development approval, notwithstanding Policy OS-1.10(b), as development of bike paths and a coordinated, area-wide trails system are essential for circulation, safety and recreation in the Cachagua Planning Area.

Cachagua Area Plan Policies CACH-5.2 and CACH-5.3 stipulate that public and private parkland development obtain a use permit and be limited to facilities that are scaled in relationship to and compatible with existing infrastructure and the rural environment. Private sector recreational opportunities that are compatible with policies in the Cachagua Area Plan would be considered. Private recreational development opportunities would include campgrounds, riding stables, guest ranches, pack stations, and music, religious, art and nature retreats.

South County Area Plan

South County Area Plan Policy SC-1.2 (clustered development) promotes clustered development in all areas where development is permitted in order to make the most efficient use of land and to preserve agricultural land and open space.

South County Area Plan Policy SC-5.5 (commercial recreation) requires that commercial recreational facilities for boating, water sports, camping, and similar uses at any proposed park site be of moderate size, compatible with surrounding uses, and be consistent with all resource protection and hazard avoidance policies.

South County Area Plan Policy SC-5.6 (Camp Roberts) stipulates that the County work with Camp Roberts to establish a park site on the Salinas River at Camp Roberts.

Agricultural Winery Corridor Plan

The northern end of the River Road/Arroyo Seco Road/Central Avenue Corridor contains the River Road-Las Palmas residential areas, which include active neighborhood parks accessible to area residents. The Jolon Road Corridor is near the regional recreational venues of Lake Nacimiento, Lake San Antonio, and the Los Padres National Forest. The other areas of the AWCP contain agricultural

lands and do not contain parks or recreational facilities. In addition, there are no specific policies related to parks, recreation or open space in the AWCP.

Community Area Policies

Fort Ord Master Plan—Fort Ord Land Use Element

The Fort Ord Master Plan Land Use Element contains a description of all the Base Land Use Designations. These Base Land Use Descriptions are compatible and consistent with the Land Use descriptions that pertain to the Monterey County area contained in the adopted Fort Ord Reuse Plan. These Base Land Use Descriptions are summarized below in relation to parks, recreation and open space policies.

The Low Density Residential, Medium Density Residential and High Density Residential Base Land Use Designations allow for a range of residential product types. In addition to residential uses, community centers and parks are allowed in these designations. Commercial recreation is also allowed in designated overlay districts.

The Visitor Serving Base Designation allows hotels and resorts, conference centers, restaurants, commercial recreation, and retail support uses. The Open Space Recreation Base Designation allows public parks and recreation activities not prohibited by overlay designations, habitat management, public amphitheaters, environmental education facilities, and commercial recreation.

The Habitat Management Base Designation allows habitat management, ecological restoration, environmental educational activities and facilities, and passive recreational activities, such as hiking, bike riding, horse riding, and picnicking in accordance with adopted habitat plans.

The School/University Base Designation allows public primary and higher educational facilities, habitat management, environmental education and support uses such as offices, sport facilities, maintenance uses, university housing, and convenience retail.

The Public Facility/Institutional Base Designation allows facilities that have public institutional ownership or benefit. Such uses may include habitat management, light industrial and R&D, corporation and maintenance yards, public utilities, training grounds, offices, educational facilities, and youth camps.

CSUMB/Recreational Planning Area

The California State University Monterey Bay (CSUMB) Recreational Planning Area is located at the Northern end of the County area of Fort Ord and is comprised of two Planning Districts. The first Planning District includes lands conveyed or subject to future public benefit conveyance to CSUMB. The second Planning District includes the former landfill site that is expected to be conveyed to the University of California. The CSU Planning District totals approximately 800 acres and is comprised of an existing residential area and a reserve are for future development needs of the campus. The County Recreation/Habitat Protection District includes approximately 340 acres designated as Open Space/Recreation and Habitat Management, with a component of commercial use and another smaller area of 88 acres to be used for active recreation and habitat protection.

The former (capped) landfill includes approximately 141 acres that are to be used for park and open space. All uses allowed in the base designation are allowed by this overlay district. Region-serving recreation facilities, such as an amphitheater may be appropriate. In addition, approximately 57 acres (the area not located in the landfill cap) is also designated for park and open space use and may be used for road right-of-way and commercial recreational uses including an 18-hole golf course and a regional-serving equestrian center.

Reservation Road Planning Area

The Reservation Road Planning area includes five Overlay Districts, including the UC Habitat Management District, the Youth Camp District, and the County Habitat Management District. This UC Habitat Management District totals approximately 167 acres for habitat management. All uses specified in the Base Designation are allowed except as prohibited by the adopted Fort Ord habitat management plan. The Youth Camp District totals approximately 125 acres located on the south side of Intergarrison Road. This District is designated for Public Facilities and is envisioned to be a youth camp to be operated by the County or an outside agency. The County Habitat Management Planning District totals approximately 374 acres for habitat management. Allowed uses and activities are be specified in the Habitat Management Plan.

Parker Flats (Residential) District

This Planning District totals approximately 946 acres. The District was intended to accommodate a residential community of up to 3,184 residential units on 520 acres, at an overall density of up to 5 units per gross acre, neighborhood serving retail commercial uses on a one-acre site, visitor-serving uses (potentially including hotel and

golf course development) on 194 acres, and 231 acres of open space preserve. Due to a land swap agreement, the final land uses for the Parker Flats Residential District will be determined in a future Specific Plan for the area. However, this future Specific Plan would incorporate multiple development and design objectives. These development and design objectives include providing public spaces for community activities and recreation accessible to the future residents, and using the natural areas of the District to create distinctive edges to neighborhoods that are walkable for residents. In addition, the Specific Plan would coordinate the design and character of a perimeter regional trail to provide an effective boundary between the residential community and the adjacent BLM protected habitat area. The Specific Plan would also consider providing centralized equestrian facilities as emenities for the new neighborhoods to take advantage of the trails within the adjacent BLM lands.

York Road Planning Area

This Planning Area is located at the southwest end of the County's Fort Ord area adjacent to the existing Ryan Ranch development within the City of Monterey. The Planning Area is designated as Office Park/R&D and includes a 25 acre interim park site. Development will be subject to the preparation and approval of a Specific Plan or other planned development mechanism and constraints.

Bureau of Land Management/Recreation Area

This area contains approximately 16,000 acres comprised of the four Planning Districts, including an Open Space and Habitat District and the Laguna Seca Regional Park District. The Open Space and Habitat District encompasses approximately 15,000 acres designated for open space and habitat management under the jurisdiction of BLM. Allowed uses in this District would be in conformance with adopted habitat conservation plans. The Laguna Seca Regional Park District contains approximately 591 acres and is designated for Public Facilities to be used in expanding Laguna Seca Regional Park.

Fort Ord Master Plan Recreation/Open Space Land Use Policies

Objective A of the Fort Ord Master Plan Recreation/Open Space Land Use policies encourages land uses that respect, preserve and enhance the natural resources and open spaces at the former Fort Ord.

Recreation/Open Space Land Use Policy A-1 states the County shall encourage the conservation and preservation of irreplaceable natural resources and natural resources. Program A-1.1 requires the County

to identify natural resources and open space, and incorporate them into its Greater Monterey Peninsula Area Plan and zoning designations.

Recreation/Open Space Land Use Policy A-2 stipulates that the County shall encourage the provision of public open space lands as part of all types of development, including residential, commercial and institutional. Program A-2.1 requires the County to evaluate and provide for the need for public open space as part of review of development projects.

Objective B of the Fort Ord Master Plan Recreation/Open Space Land Use policies calls for using open space as a land use link and buffer. Program B-1.2 states the County shall create an open space plan for former Fort Ord showing the linkage of all open space areas within the County as well as linking to open space and habitat areas outside the County areas. Program B-2.1 calls for the County to review each application for a development entitlement for compatibility with adjacent open space land uses, and require suitable open space buffers to be incorporated into the development plans. Program B-2.2 encourages clustering of all types of land uses. Program B-2.3 calls for the County to designate open space areas, wherever possible, on the perimeter of all development undertaken at the former Fort Ord.

Objective C of the Fort Ord Master Plan Recreation/Open Space Land Use policies calls for using open space as a land use link and buffer reserving sufficient lands for community and neighborhood parks and recreation facilities in the Fort Ord area and adjacent communities. Program C-1.1 requires the County to amend its Greater Monterey Peninsula Area Plan and zoning ordinance to designate appropriate park and recreation facilities at the former Fort Ord to serve the needs of their community area, appropriate and consistent with the recreation standards established for the Fort Ord Reuse Plan and the County Subdivision Ordinance, which identifies a Standard of 3 acres per 1,000 people.

Program C-1.2 requires the County to designate land uses for the following park locations and acreages: a) 10 acres for a neighborhood park in the Eucalyptus Road Planning Area, and b) a minimum of 200 acres in permanent open space within the Eucalyptus Road residential planning area. Program C-1.4 necessitates that the County amend its Greater Monterey Peninsula Area Plan map to include this land as Park and Open Space.

Recreation/Open Space Land Use Policy C-2 specifies that the County provide sufficient resources to operate and maintain the park facilities at the former Fort Ord. Program C-2.1 requires the County provide in the for a minimal recreation program in the budget at the

time that each park is developed. In addition, the County should also provide a budget for a complete recreation and park maintenance program when the population to be served by the park reaches one thousand residents. Program C-2.2 requires that each park in the Fort Ord portion of the County should be developed and the recreation equipment should be in place when approximately 50% of the residential dwelling units that will be served by the park have been constructed and occupied.

Objective E of the Fort Ord Master Plan Recreation/Open Space Land Use calls for the County to coordinate open space and recreation land use with other affected agencies at the former Ford Ord, such as the California Department of State Parks and Recreation (CDPR) and BLM. Program E-1.1 stipulates that the County shall assist the CDPR to develop and implement a Master Plan for ensuring consistency of future uses of areas in the coastal zone including the management of the Fort Ord coastal dunes and beaches for the benefit of the public by restoring habitat, recreating the natural landscape, providing public access, and developing appropriate day use and overnight lodging facilities (limited to a capacity of 40 rooms). Program E-1.2 requires the County to assist CDPR to carry out a dune restoration program for the Fort Ord Dunes State Park. Program E-1.5 establishes that the proposed community park facility in the Recreation/HMP District in the CSUMB/Recreation Planning Area (Fort Ord Reuse Plan Polygon 17a) will use about 30 acres of land currently dominated by oak woodland for an equestrian center and other recreational facilities. The park will serve as a gateway to trails in the BLM area. Program E-1.6 allows for the Youth Camp District in the Reservation Road Planning Area (Fort Ord Reuse Plan Polygon 17b) to be rehabilitated for an existing travel camp, and that the County shall assure that this planned use is compatible with adjacent land uses.

Significance Determination without Mitigation

Future population growth associated with implementation of the 2007 General Plan would increase demands on existing parks and recreation facilities in the County. Such demands would create a need for new or expanded parks, recreation and open space facilities. The above-listed 2007 General Plan and Area Plan policies address the need for parks and recreation facilities.

In addition, Section 19.12.010 of the Monterey County Code requires that a project must provide 3 acres of property for each 1,000 persons for parks and recreation purposes, or a pro-rated acreage based on the size of the property. However, this requirement is not mirrored in the 2007 General Plan policies, as is necessary in order to apply the Quimby Act. Therefore, the effectiveness of the County's Quimby Act ordinance is hindered by the lack of standards in the existing 1982 General Plan. This shortcoming would be

resolved by the adoption of Mitigation Measure PAR-1, described below. This mitigation measure would ensure that sufficient new localized park and recreation land is acquired during the development process so that adequate facilities and/or funds are provided. Potential environmental impacts that may occur as a result of new or expanded park and recreational facilities would be analyzed as a part of a separate, site-specific environmental process.

In addition, Conservation and Open Space Element Policy OS-1.10 (Trails Planning) restricts the County's ability to implement extensive trails planning because the dedication of trails easements is considered a voluntary action under this policy. As a result, new trail easements along adopted trail corridors may not be required as a condition of subdivision approval. This could result in gaps where some trail easements have been obtained, making it impracticable to develop the easement into a trail. However, the County would still receive adequate funds for recreational facilities with new development through the Quimby Act. In addition, as described above, there is already a significant amount of open space within the County (Federal, State, Regional and Local) in relation to the population.

Potential parks, recreation and open space impacts under the 2007 General Plan would be less than significant through the 2030 planning horizon.

Mitigation Measures

The following mitigation measure is recommended in order to ensure the use of the Quimby Act in obtaining local park and recreation facilities.
Mitigation Measure PAR-1:

Proposed 2007 General Plan policy PS-11.10 will be amended to read: "Pursuant to the provisions of the State Subdivision Map Act, residential subdivision projects shall be conditioned to provide and maintain park and recreation land and facilities or pay in-lieu fees in proportion to the extent of need created by the development. *The ratio of park and recreation facilities to residents will be at least three acres for each one thousand residents.*"

Significance Conclusion

In summary, future growth associated with the 2007 General Plan would increase demands on existing parks and recreation facilities through the 2030 planning horizon. Existing available parks and recreation facilities available in Monterey County greatly exceed the county's established ratio of 3 acres of parks per 1,000 residents. As a result, the increase in demand would not exceed the threshold standard. Mitigation Measure PR-1 is not necessary to avoid an impact on parks and recreation facilities, but would ensure that the county can implement its Code Section 19.12.010. Therefore, impacts to parks, recreation and open space facilities would be less than significant.

Buildout

Impact of Development with Policies

As discussed earlier, the County currently has an abundance of park, recreation and open space facilities. The Monterey County Parks system currently consists of nine regional parks, encompassing more than 12,000 acres of parkland and 10,000 acres of lakes. The County's current park standard establishes a park ratio of 3 acres of parkland per 1,000 residents. The County's buildout population estimate is 932,322 residents in both the incorporated county and unincorporated cities combined. Therefore, the estimated of parkland needed to serve this buildout population per the County's dedication ratio of 3:1000 for this combined city/county population is 2,796 acres (932,322*.003). Using the parkland dedication ratio of 3:1000, the County's existing parkland acreage of 12,000 acres exceeds the area needed to meet the buildout parkland/resident ratio by several thousand acres. In addition, multiple other parks, recreation and open spaces exist throughout the county under the jurisdiction of the federal government, state agencies, MPRPD and local municipalities.

Buildout of the 2007 General Plan to 2092 would result in a more extensive development pattern than currently exists in the County. In addition to existing park and recreation facilities, the Quimby Act would require the construction or expansion of parks, recreation and open space facilities beyond 2030 levels whenever land is subdivided. The 2007 General Plan and Area Plan goals and policies listed above would be implemented, along with Section 19.12.010 of the Monterey County Code and Mitigation Measure PAR-1.

2007 General Plan Policies

The 2007 General Plan policies summarized under the 2030 planning horizon establish comprehensive measures to avoid and minimize adverse impacts to parks and recreation facilities, and meet the need for new or expanded parks and recreational facilities. For example, implementation of the Public Service Element policies described above would establish comprehensive measures to avoid and minimize adverse impacts to parks and recreation facilities, as well as meet the need for new or expanded parks and recreational facilities within the county. The Public Service Element Policies establish general standards for the provision of public facilities concurrently with future growth. Included are policies that direct growth where adequate facilities currently exist, policies that seek to achieve acceptable level of park service standards through improvements funded by fair share impact fees and planned capital improvements, and require that only new developments that have or can provide adequate concurrent public services and parks facilities be approved.

Significance Determination

Future population growth associated with implementation of the 2007 General Plan through 2092 buildout would increase demands on existing parks and recreation facilities in the County. Such demands would largely be met by existing parks, recreation or open space facilities. The above-listed 2007 General Plan and Area Plan policies adequately address the need for new parks and recreation facilities and provide mechanisms to acquire and develop these facilities. For example, Section 19.12.010 of the Monterey County Code, in conjunction with Mitigation Measure PAR-1, requires that a project must provide 3 acres of property (or pay an in-lieu fee) for each 1,000 persons for parks and recreation purposes, or a pro-rated acreage based on the size of the property. Potential environmental impacts that may occur as a result of new or expanded park and recreational facilities would be analyzed as a part of a separate, site-specific environmental process.

Conservation and Open Space Element Policy OS-1.10 (Trails Planning) hinders the County's ability to implement trails planning because dedication of these trails easements would be voluntary. While trails may be obtained through purchase of easements or property, budgetary constraints limit that approach. As a result, new trail easements along adopted trail corridors may not be contiguous, even over the 2092 buildout period. Because the county has parks and recreation facilities in excess of its expressed goal, the possibility of not fully implementing the trails plan is not a significant effect. Potential parks, recreation and open space impacts under the 2007 General Plan would remain less than significant through the 2092 planning horizon.

Mitigation Measures

Mitigation Measure PAR-1. See the description above.

Significance Conclusion

In summary, future growth associated with the 2007 General Plan would increase demands on existing parks and recreation facilities through the 2092 planning horizon. Such demands would be met by existing parks and recreation facilities, which already exceed the county standard for area. Implementation of the 2007 General Plan and Area Plan policies, Section 19.12.010 of the Monterey County Code, and Mitigation Measure PAR-1 would ensure that sufficient new parks and recreation land is acquired during the development process so that adequate facilities are provided at the local level. Therefore, impacts to parks, recreation and open space facilities would be less than significant with mitigation.

Physical Deterioration of Park Facilities

Impact PAR-2: Population growth associated with implementation of the 2007 General Plan would potentially create additional demands on existing parks and recreational facilities, thereby resulting in the physical deterioration of such facilities. (Less-Than-Significant Impact with Mitigation.)

2030 Planning Horizon

Impact of Development with Policies

Future growth anticipated by the 2007 General Plan would increase demands on existing parks and recreation facilities in the County. Such additional demands would potentially cause the physical deterioration of these existing parks facilities. For purposes of this impact analysis, only the potential deterioration and wear and tear on parks and recreation facilities within the Monterey County Parks District and the Monterey Peninsula Regional Park District is considered. Impacts to federal and state parks, recreation, and open space facilities within Monterey County would continue to be addressed within federal and state management budgets. In addition, many of the federal and state parks and open spaces are used by residents of the County, residents of California, and tourists from around the world. It would be difficult to determine the wear and tear on these federal and state lands from use by County residents without conducting a detailed survey of park and open space users.

2007 General Plan Policies

The 2007 General Plan contains policies that address potential impacts to parks and recreational facilities, as summarized under Impact PAR-1 above. The adoption of these policies would ensure that parks and recreation facilities are provided funding in order to meet the demands of future growth and avoid demands that would lead to physical deterioration of existing facilities. The primary funding source would come from new development projects that would be assessed impact fees to finance capital improvements for new and existing park and recreational facilities. Payment of these fees would ensure that adequate parks and recreation facilities and/or funds are provided concurrently with growth.

The Area Plans provide supplemental policies that address the concerns of ongoing maintenance and care for parks and recreation facilities. The policies address the funding mechanisms and long-term maintenance of these facilities by creating guidelines that specifically address parks and recreation facilities. These policies are also summarized under Impact PAR-1 above.

Significance Determination without Mitigation

The 2007 General Plan contains policies that address potential impacts to parks and recreational facilities, as summarized under Impact PAR-1. The adoption of these policies, along with Mitigation Measure PAR-1, would ensure that parks and recreation facilities are provided adequate funding in order to meet the demands of future growth, and to avoid demands that would lead to physical deterioration of existing and future park facilities. One of the primary funding sources for the Monterey County Parks Department would come from implementation of Section 19.12.010 of the Monterey County Code, and Mitigation Measure PAR-1. Payment of these fees would ensure that adequate parks and recreation facilities and/or funds are provided concurrently with growth. Other funding sources for the Monterey County Parks Department include day-use fees, and public grants. Such funding sources would help meet maintenance needs of the County park system through the 2030 planning horizon.

Impacts to the Monterey Peninsula Regional Parks Department (MPRPD) facilities would be mitigated by using funds derived from a 0.5% allocation of property tax collected within its boundaries, along with matching federal and state funds. In addition, the MPRPD has an assessment of approximately $19/yr. per single family dwelling equivalent in order to provide funding for MPRPD to continue preserving and protecting parks and open space.

Potential environmental impacts that may occur as a result of wear and tear on existing or future park facilities in Monterey County would be analyzed as a part of a separate, site-specific environmental process.

Mitigation Measures

Mitigation Measure PAR-1:

Proposed 2007 General Plan policy PS-11.10 will be amended to read: "Pursuant to the provisions of the State Subdivision Map Act, residential subdivision projects shall be conditioned to provide and maintain park and recreation land and facilities or pay in-lieu fees in proportion to the extent of need created by the development. *The ratio of park and recreation facilities to residents will be at least three acres for each one thousand residents.*"

Significance Conclusion with Mitigation

Implementation of the 2007 General Plan and Area Plan policies, and collection of development fees per Mitigation Measure PAR-1 would ensure that potential impacts related to deterioration of parks and recreational facilities would be less than significant. Collection of development fees would enable the County to require sufficient new parks and recreation facilities in order to avoid overuse of existing facilities. No additional mitigation is necessary.

Buildout

Impact of Development with Policies

Buildout of the 2007 General Plan through the 2092 horizon would result in increased demands on existing parks and recreation facilities. Such demands would cause the physical deterioration of these facilities beyond 2030 levels.

2007 General Plan Policies

The 2007 General Plan contains policies that address potential impacts to parks and recreational facilities, as summarized under Impact PAR-1. The adoption of these policies would ensure that parks and recreation facilities are provided adequate funding through the 2092 planning horizon, in order to meet the demands of future growth and avoid demands that would lead to physical deterioration of existing facilities.

In addition, the Area Plans provide supplemental policies that address the concerns of ongoing maintenance and care for parks and recreation facilities. The policies address the funding mechanisms and long-term maintenance of these facilities by creating guidelines that specifically address parks and recreation facilities. These policies are summarized under Impact PAR-1.

Significance Determination without Mitigation

The 2007 General Plan contains policies that address potential impacts to parks and recreational facilities, as summarized under Impact PAR-1. The adoption of these policies would ensure that parks and recreation facilities are provided adequate funding in order to meet the demands of future growth, and to avoid demands that would lead to physical deterioration of existing and future park facilities. Funding sources for the Monterey County Parks Department include day-use fees, and public grants. Such funding sources would help meet maintenance needs of the County park system through the 2092 planning horizon.

Impacts to the Monterey Peninsula Regional Parks Department (MPRPD) facilities would be mitigated by using funds derived from a 0.5% allocation of property tax collected within its boundaries, along with matching federal and state funds. In addition, the MPRPD has an assessment of approximately $19/yr. per single family dwelling equivalent in order to provide funding for MPRPD to continue preserving and protecting parks and open space.

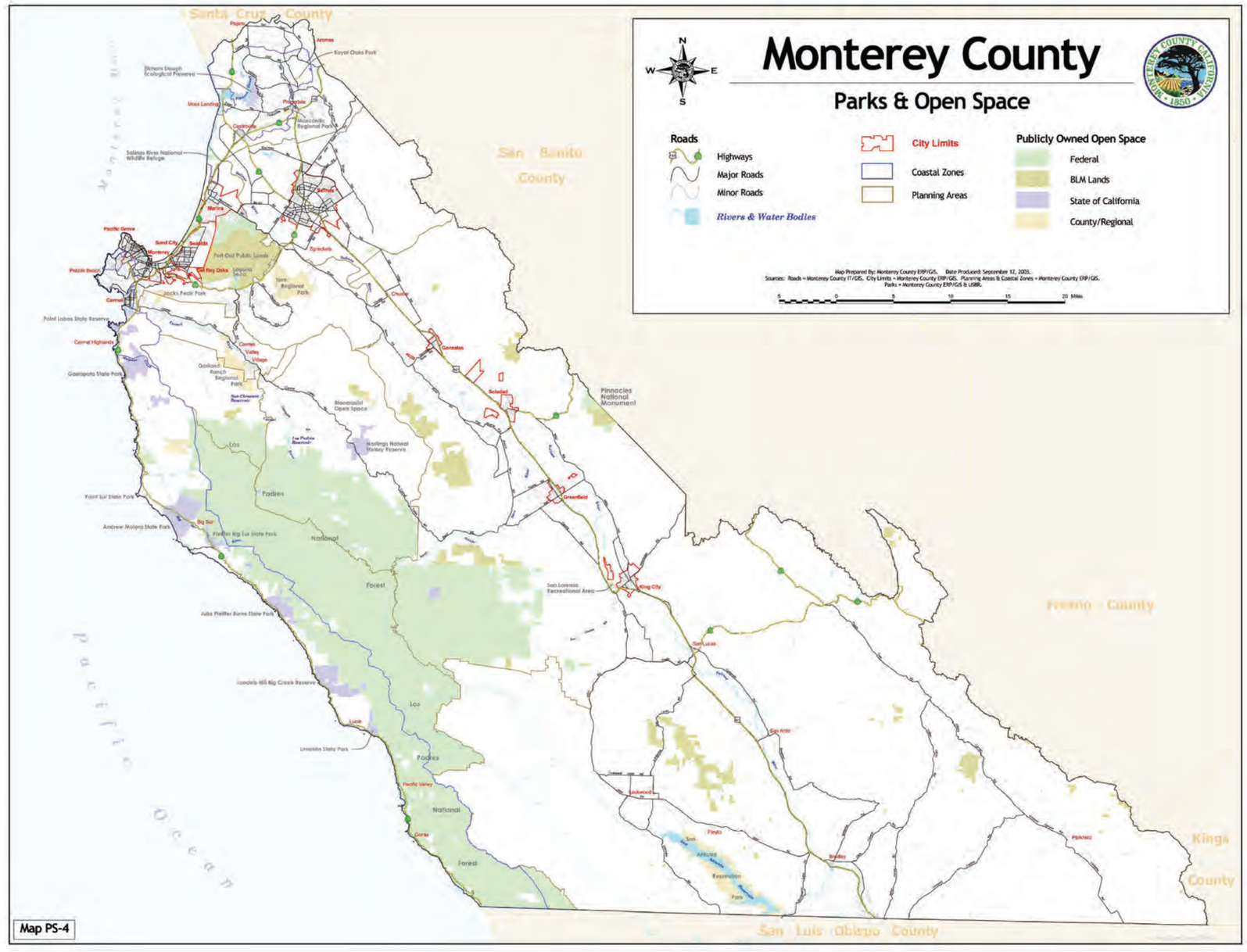
Potential environmental impacts that may occur as a result of wear and tear on existing or future park facilities in Monterey County would be analyzed as a part of a separate, site-specific environmental process.

Significance Conclusion

Implementation of the 2007 General Plan and Area Plan policies, and existing funding sources would ensure that potential impacts related to deterioration of parks and recreational facilities would be less than significant through buildout.

4.12.6 Level of Significance after Mitigation

All impacts related to parks, recreation and open space would be less than significant with implementation of the measures in the 2007 General Plan, Area Plans, Section 19.12.010 of the Monterey County Code, and Mitigation Measure PAR-1. No additional mitigation beyond Mitigation Measure PAR-1 would be required.



Source: Monterey County 2006 General Plan Update.

Michael Brandman Associates

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Exhibit 4.12.1
Parks and Open Space

4.13 Hazards and Hazardous Materials

4.13.1 Abstract

This section describes the existing hazardous conditions in Monterey County in relationship to aviation, wildland fires, hazardous materials, and emergency response management in the 2007 General Plan area. This section presents the federal, state, and local policies and regulations in relation to these hazards; and identifies impacts and mitigation measures associated with implementation of the 2007 General Plan. This section also identifies means in which hazardous materials associated with implementation of the 2007 General Plan could be accidentally released into the environment.

- **Aviation:** There are four general aviation airports, two military airstrips, and more than thirty private airstrips, helipads, and agricultural landing fields located in Monterey County.
- **Wildland Fires:** Many areas of Monterey County are highly susceptible to wildland fire hazards due to the rugged topography and large areas of densely forested areas. Lack of precipitation in the summer months also contributes to an increased risk of wildland fires in the county. Much of the county is designated as a high or very high fire hazard area by the California Department of Forestry and Fire Protection (CDFFP), with the exception of the Salinas Valley and the Monterey Peninsula (Exhibit 4.13.1).
- **Hazardous Materials:** A hazardous material is defined by the California Department of Toxic Substances Control (DTSC) as a material that poses a significant present or potential hazard to human health and safety or the environment if released because of its quantity, concentration, or physical or chemical characteristics (26 CCR 25501). Common hazardous materials include petroleum hydrocarbons, pesticides, volatile organic chemicals, and certain metals. There are more than 450 hazardous waste generators and more than 10 contaminated sites in the County.
- **Emergency Response**: Emergency evacuation routes are designated throughout the county, and emergency response activities are coordinated by the Monterey County Office of Emergency Services (OES).

All potential hazards and hazardous materials impacts from development and land use activities associated with implementation of the 2007 General Plan would be less than significant and would not require mitigation. Hazards such as tsunamis, seiches, and mudflows are discussed separately in Section 4.4, Geology, Soils and Seismicity. Flood hazards are discussed in Section 4.3, Water Resources.

4.13.2 Introduction

This section identifies issues related to hazards and hazardous materials in the 2007 General Plan action area.

The "Environmental Setting" discussion below describes the current setting of the 2007 General Plan action area. The purpose of this information is to establish the existing environmental context against which the reader can understand the environmental changes caused by implementation of the 2007 General Plan. The environmental setting information is intended to be directly or indirectly relevant to the subsequent discussion of impacts.

The environmental changes associated with the action are discussed under "Impact Analysis." This section identifies impacts, describes how they would occur, and prescribes mitigation measures to reduce significant impacts, if necessary.

4.13.3 Environmental Setting

4.13.3.1 Hazards

Aviation

There are four general aviation airports, two military airstrips, and more than 30 private airstrips and helipads in Monterey County. A description of the various aviation facilities in the county follows.

- Monterey Peninsula Airport, located on the outskirts of the City of Monterey, is the largest and busiest commercial airport in the county. The Federal Aviation Administration (FAA) indicates that 91,435 aircraft operations occur annually at the airport (Federal Aviation Administration 2008). The Monterey Peninsula Airport is located between Highway 68 and SR 218 just east of Del Rey Oaks, and south of Seaside (Exhibit 3.7). The airport borders the city limits of Monterey, Del Rey Oaks and Seaside. However, the Monterey Peninsula Airport is an independent Airport District, and is not incorporated into either the city limits of Monterey or the county. The Monterey Peninsula Airport District includes portions of Monterey, Pacific Grove, Del Monte Forest, Pebble Beach, Carmel-by-the-Sea, greater Carmel, Del Rey Oaks, Seaside, Sand City, the Monterey-Salinas Highway to Laureles Grade, and the west end of Carmel Valley (Monterey Peninsula Airport 2008).
- The City of Salinas Municipal Airport is the second busiest airport in the county. The airport is owned and operated by the City of Salinas and serves commercial, general aviation, and agricultural-related aircraft (e.g., crop dusters). The FAA indicates that 77,896 aircraft operations occur annually at the airport (Federal Aviation Administration 2008b). The airport is located

within the city limits of the City of Salinas, in the southeastern quadrant of the city (Exhibit 3.5). The airport is not located in the county's jurisdiction, and is not included within the boundaries of the Greater Salinas Area Plan.

- Marina Municipal Airport is a public airport located two miles east of the central business district of Marina. The FAA indicates that 40,000 aircraft operations occur annually at the airport (Federal Aviation Administration 2008c). The airport is owned and operated by the City of Marina, and primarily serves general aviation aircraft. Marina Municipal Airport is built at the site of the former Fritzche Army Air Field located adjacent to Fort Ord. The airport is not located in the county's jurisdiction, and is not included within the boundaries of the Fort Ord Master Plan area.
- Mesa del Rey Airport is located one mile northeast of King City, and primarily serves general aviation and agricultural-related aircraft. The airport is located within the city limits of King City, and is owned and operated by the city. The airport is not located in the county's jurisdiction, and is not included within the boundaries of the Central Salinas Valley Area plan. The FAA indicates that 3,500 aircraft operations occur annually at the airport (Federal Aviation Administration 2008d).
- The Schoonver Tactical Air Strip at Fort Hunter Liggett is capable of supporting C-130 Hercules and C-12 Huron operations. Fort Hunter Liggett also contains the Tusi Helipad and the Doolittle Aircraft Training Area, which is used for Close Air Support training by Navy aircraft from Naval Air Station Lemoore in Kings County. Fort Hunter Liggett is under the jurisdiction of the Department of Defense, and is not included within the boundaries of the South County Area Plan.
- McMillan Airfield at Camp Roberts is capable of supporting C-130 operations. McMillan Airfield is also currently used for Unmanned Aerial Vehicle operations and testing. Camp Roberts is located south of Bradley along Highway 101, and also borders San Luis Obispo County. McMillan Airfield is under the jurisdiction of the California National Guard, and is not included within the boundaries of the South County Area Plan.
- There are more than 30 private airstrips, agricultural landing fields, and helipads in the County. Locations of these aviation facilities include Salinas Valley State Prison, the San Ardo oil fields, and hospitals in Monterey, Salinas, and King City.

Wildland Fires

Wildland fires are a major hazard in many areas of Monterey County. Rugged topography, dry summers, and an abundance of fuel combine to make much of Monterey County susceptible to wildland fire hazards during the warmer seasons of the year. Much of the county is designated as a high or very high fire hazard area by the California Department of Forestry and Fire Protection (Cal Fire), with the exception of the Salinas Valley and the Monterey Peninsula (Exhibit 4.13.1).

The state mandates that Cal Fire prepare Wildland Fire Hazard Maps for each county, rating fire hazards as low, moderate, high, or very high. These classifications are based on slope, climate, fuel loading (vegetation), and water availability. Wildland fires are a hazard for the more densely populated areas of the county as well. For example, the Salinas Rural Fire District, which serves almost all of unincorporated Greater Salinas, indicates that wildland fires are the major cause of fires in its jurisdiction.

Large areas of rugged terrain with highly flammable vegetation have high wildland fire potential. The principal ingredients of wildland fires—fuel, topography, and weather—combine to make highly hazardous fire conditions throughout much of the county. To compound the problem, local topography tends to accentuate the spread of fires due to the varied movement of winds and makes fire fighting with heavy equipment very difficult or nearly impossible.

The very high fire hazard throughout many county areas makes them unsafe for development and occupancy unless strong fire safety measures are taken. Many areas under County jurisdiction are without an organized structural fire protection programs. Even where organized protection does exist, fire suppression may be hampered by lack of water, rugged terrain, and delayed response times.

4.13.3.2 Hazardous Materials

A *hazardous material* is defined by the California Environmental Protection Agency (Cal-EPA) Department of Toxic Substances Control (DTSC) as a material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released (*26 CCR 25501*). For the purposes of this discussion, hazardous materials consist of raw materials and products, and hazardous wastes consist of wastes that are generated by facilities and businesses or that remain on site as a result of past activities.

Hazardous materials are grouped into the following four categories, based on their properties:

- Toxic—causes human health effects;
- Ignitable—has the ability to burn;
- Corrosive—causes severe burns or damage to materials; and
- Reactive—causes explosions or generates toxic gases.

Hazardous waste is any hazardous material that is discarded, abandoned, or slated to be recycled. The criteria that render a material hazardous also make a waste hazardous. Hazardous materials and hazardous waste can result in public health hazards if released into the soil or groundwater; or through airborne releases in vapors, fumes, or dust. Soil and groundwater with concentrations of hazardous constituents higher than specific regulatory levels must be handled and disposed of as hazardous waste when excavated or pumped from groundwater.

This following section describes common hazardous materials used in Monterey County, as well as known and potential hazardous waste sites in the county.

Common Hazardous Materials Used in Monterey County

The Environmental Protection Agency's Resource Conservation and Recovery Act Information (RCRAInfo) database indicates that, as of March 17, 2008, there were 452 transporters, treaters, storers, and disposers of hazardous waste in Monterey County. The most common are commercial and industrial users such as agricultural producers, automotive repair, dry cleaners, gas stations, pest control, energy providers, and retailers. Institutional users of hazardous materials include schools, colleges, correctional facilities, utilities, hospitals, military installations, landfills, and other public agencies.

4.13.3.3 Contaminated Sites

The California Department of Toxic Substances Control (DTSC) EnviroStor Database indicates that, as of August 7, 2008, there were 28 contaminated sites in Monterey County that are listed in federal or state databases. These sites are summarized below in Table 4.13-1.

Table 4.13-1. Contaminated Sites in Monterey County

#	Site	Listing Status	Location
1	Berman Steel-Salinas	State Response	Salinas
2	Camp Roberts—Army National Guard	State Response	Camp Roberts
3	Chalone Peaks Middle School	School Cleanup	King City
4	Crazy Horse Sanitary Landfill	Federal Superfund—Listed	Salinas
5	Dynegy Moss Landing	Hazardous Waste—Operating Permit	Moss Landing
6	Embassy Suites Hotel	State Response	Seaside
7	Fanoe Ranch	Voluntary Cleanup	Gonzales
8	Firestone Tire & Rubber Co	Hazardous Waste—Non-Operating	Salinas
9	Firestone Tire (Salinas Plant)	Federal Superfund—Delisted	Salinas
10	Fort Hunter Liggett	State Response	Jolon
11	Fort Hunter Liggett, U.S. Army	Hazardous Waste—Non-Operating	Jolon
12	Fort Hunter Liggett-Cantonment Reuse	State Response	Jolon
13	Fort Ord—East Garrison (VCA)	Federal Superfund—Listed	Fort Ord
14	Fort Ord—University Villages (VCA)	Federal Superfund—Listed	City Of Marina
15	Fort Ord Redevelopment Authority (Early Transfer)	Federal Superfund—Listed	Fort Ord
16	Fort Ord State Park—MOU with DPR	Federal Superfund—Listed	City Of Marina
17	Fort Ord, CA	Federal Superfund—Listed	Fort Ord
18	Fort Ord—Del Rey Oaks Development	Federal Superfund—Listed	Monterey

#	Site	Listing Status	Location
19	Granite Canyon Marine Lab	State Response	Monterey
20	PG&E Moss Landing Switchyard	Hazardous Waste—Non-Operating	Moss Landing
21	PG&E Gas Plant Salinas	State Response	Salinas
22	PG&E, MGP Monterey	Voluntary Cleanup	Monterey
23	Point Pinos Lighthouse	State Response	Pacific Grove
24	Pure-Etch Co	Hazardous Waste—Non-Operating	Salinas
25	U.S. Army DLIFLC & POM	Hazardous Waste—Non-Operating	Fort Ord
26	Verticare Helicopters	State Response	Salinas
27	Berman Steel-Salinas	State Response	Salinas
28	Camp Roberts – Army National Guard	State Response	Camp Roberts

Source: California Department of Toxic Substances Control. EnviroStor Database. Accessed August 7, 2008.

4.13.3.4 Emergency Management

Office of Emergency Services

The Monterey County Office of Emergency Services (OES) is responsible for initiating and coordinating disaster and emergency preparation, response, recovery, and mitigation operations within Monterey County. OES develops and maintains various emergency plans, including incident response plans for certain types of incidents and coordinated emergency response plans for certain geographical threat areas. During an emergency condition, OES is the designated lead agency and activates the Emergency Operations Center.

Emergency Evacuation

Monterey County has designated emergency evacuation routes throughout the county. The evacuation routes are designated and maintained to ensure the safe and efficient movement of people, belongings, and emergency personnel including their support services during times of declared emergencies. These routes include U.S. 101, State Highways, several numbered county roads, and various other county roads. These routes are considered “Pre-designated Emergency Evacuation Routes” and may be deployed when necessary. These routes are listed in Table 4.13-2.

Table 4.13-2. Emergency Evacuation Routes

Road Designation	Routes		
U.S. Highways	U.S. 101		
State Highways	Highway 1	Highway 25	Highway 68
	Highway 129	Highway 146	Highway 156
	Highway 183	Highway 198	Highway 218
Numbered County Roads	Arroyo Seco Road (G17)	Bitterwater Road (G13)	Carmel Valley Road (G16)
	Fort Romie Road (G17)	Hall Road (G12)	Interlake Road (G14)
	Jolon Road (G14)	Jolon Road (G18)	Lake Drive (G19)
	Laureles Grade (G20)	Metz Road (G15)	Reservation Road (G17)
	River Road (G17)	San Juan Road (G11)	San Miguel Canyon Road (G12)
Other County Roads	Alisal Road	Aromas Road	Blackie Road
	Blanco Road	Bradley Road	Bryson-Hesperia Road
	Cachagua Road	Calera Canyon Road	Camphora Gloria Road
	Carpenteria Road	Castroville Boulevard	Cattlelmen Road
	Cholame Road	Chualar Canyon Road	Cooper Road
	Corral de Tierra Road	Crazy Horse Canyon Road	Davis Road
	Dolan Road	Echo Valley Road	Elkhorn Road
	Elm Avenue	Espinosa Road	Gloria Road
	Gonzales River Road	Harkins Road	Indian Canyon Road
	Indians Road	Johnson Canyon Road	Lockwood-San Lucas Road
	Lone Oak Road	Milpitas Road	Mission Road
	Molera Road	Nacimiento-Fergusson Road	Nashua Road
	Oasis Road	Old Stage Road	Palo Colorado Canyon Road
	Paris Valley Road	Parkfield-Coalinga Road	Peach Tree Road
	Pesante Road	Pine Canyon Road	Priest Valley Road
	Reliz Canyon Road	Robinson Canyon Road	Salinas Road
	San Benancio Road	San Juan Grade Road	San Lucas Road
	17 Mile Drive	Spreckels Road	Strawberry Road
	Tassajara Road	Vineyard Canyon Road	

Source: County of Monterey General Plan. Safety Element. 2007.

4.13.4 Regulatory Framework

4.13.4.1 Federal and State

Airport Land Use Compatibility Regulations

Planning boundaries are established for height, noise, and safety around each airport and active airfield. Airport planning activities also establish policies that determine the compatibility of new land uses proposed within each planning area

boundary. State Airport Land Use Law establishes an Airport Land Use Commission (ALUC) in most counties for the purpose of preparing comprehensive airport land use plans (CLUPs) for all general purpose airports within the county and to review existing and proposed land uses for consistency with the airport safety provisions of the CLUPs. The law requires a jurisdiction to submit its General Plan and other land use regulations to the ALUC for review and to amend the plan as may be necessary to achieve consistency with CLUPs adopted by the ALUC.

More specifically, the ALUC is a seven-member commission created under the authority of California State Aeronautics Act (Public Utility Code Section 21670). The primary purpose of the ALUC is to ensure that new land uses around public use airports do not create excessive noise and safety hazards for the public. Development proposals in the vicinity of local airports are referred to the ALUC by governing jurisdictions (county or incorporated city) for review. More detailed information on specific airports located within the county can be found in Section 4.8, Noise.

The Monterey County ALUC reviewed the 2006 General Plan Update (GPU4) for consistency with the CALUPs in December 2006. The ALUC found that the plan conformed to the CLUPs. Additionally, Federal Aviation Regulations (FAR) Part 77 defines a series of imaginary surfaces surrounding all public use airports. Any proposed object or structure that would penetrate any of these imaginary surfaces as they apply to the affected airport facilities is considered by the FAA to be an obstruction to air navigation. An obstruction to air navigation may not be a hazard to air navigation; however, the FAA presumes it to be a hazard and treats it as such until an FAA aeronautical study determines that it does not have a substantial adverse effect on the safe use of the navigable airspace by aircraft. The imaginary surfaces the FAA uses to determine whether a structure or an object would be an obstruction to air navigation includes the primary surface, approach surface, horizontal surface, conical surface, and transitional surfaces. The CLUPs determine compatibility of surrounding land uses based upon height restrictions, noise levels associated with the airport operations, and exposure of persons to crash hazards.

Comprehensive Environmental Response, Compensation, and Liability Act

Discovery of environmental health damage from disposal sites prompted the U.S. Congress to pass the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund). The purpose of CERCLA is to identify and clean up chemically contaminated sites that pose a significant environmental health threat. The Hazard Ranking System is used to determine whether a site should be placed on the National Priorities List (NPL) for cleanup activities.

Superfund Amendments and Reauthorization Act

The Superfund Amendments and Reauthorization Act (SARA) pertains primarily to emergency management of accidental releases. It requires formation of state and local emergency planning committees, which are responsible for collecting material handling and transportation data for use as a basis for planning. Chemical inventory data is made available to the community at large under the "right-to-know" provision of the law. In addition, SARA also requires annual reporting of continuous emissions and accidental releases of specified compounds. These annual submissions are compiled into a nationwide Toxics Release Inventory (TRI).

Hazardous Materials Transportation Act

The Hazardous Materials Transportation Act is the statutory basis for the extensive body of regulations aimed at ensuring the safe transport of hazardous materials via boat, rail, and highways, through air, or in pipelines. It includes provisions for material classification, packaging, marking, labeling, placarding, and shipping documentation.

Resource Conservation and Recovery Act

RCRA Subtitle C addresses hazardous waste generation, handling, transportation, storage, treatment, and disposal. It includes requirements for a system that uses hazardous waste manifests to track the movement of waste from its site of generation to its ultimate disposition. The 1984 amendments to RCRA created a national priority for waste minimization. Subtitle D establishes national minimum requirements for solid waste disposal sites and practices. It requires states to develop plans for the management of wastes within their jurisdictions. Subtitle I requires monitoring and containment systems for underground storage tanks that hold hazardous materials. Owners of tanks must demonstrate financial assurance for the cleanup of a potential leaking tank.

California Hazardous Waste Control Law

The Hazardous Waste Control Law (HWCL) is the primary hazardous waste statute in the State of California. HWCL implements RCRA as a "cradle-to-grave" waste management system in the state. HWCL specifies that generators have the primary duty to determine whether their wastes are hazardous and to ensure their proper management. HWCL also establishes criteria for the reuse and recycling of hazardous wastes used or reused as raw materials. HWCL exceeds federal requirements by mandating source reduction planning and a much broader requirement for permitting facilities that treat hazardous waste. It also regulates a number of types of wastes and waste management activities that are not covered by federal law with RCRA. The law is administered and

enforced by the California Department of Toxic Substances Control (DTSC). DTSC administers the Hazardous Waste Tracking System to follow hazardous wastes shipments through the state.

4.13.4.2 Local

Monterey County Hazardous Materials Program

The Monterey County Health Department, Division of Environmental Health, manages and regulates the storage, use, and disposal of hazardous wastes through the Hazardous Materials Program. Hazardous materials in use by businesses are reported to the Division under the Hazardous Materials and Business Plan Program. The Program provides measures for hazardous waste onsite treatment, spill prevention control and countermeasures for aboveground and underground storage tanks, site mitigation, and risk management and prevention. This program is administered by the Division under authority delegated by the state to it as a Certified Unified Program Agency (CUPA). The Division also fields the county's hazardous materials Emergency Response Team (ERT). The ERT responds to any hazardous materials incidents that may occur in the county.

Monterey County Office of Emergency Services

The Office of Emergency Services (OES) is an agency of the County Administrative Office. It has a full time staff of four County employees and a volunteer emergency communications coordinator. During emergency situations, when the Monterey County Operational Area Emergency Operations Center is activated, the Center employs an ad hoc staff comprised of up to 90 personnel from various county agencies, emergency response organizations, utilities and volunteer relief organizations from throughout the county. OES works in concert with other State and local governments and federal agencies to provide for coordinated and effective multi-agency response and relief during emergency situations.

4.13.5 Project Impacts

This section describes the CEQA impact analysis relating to hazards and hazardous materials for the project and the alternatives. It describes the methods used to determine the project's impacts and lists the thresholds used to conclude whether an impact would be significant. Measures to mitigate (avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany each applicable impact discussion.

4.13.5.1 Methodology

Impacts to public safety from hazards and hazardous materials and wastes due to upset conditions, accidental releases, or natural phenomena were evaluated in relation to the 2007 General Plan. Corresponding policies and elements were used to assess the adequacy to which the 2007 General Plan and the corresponding policies and elements address hazards- and hazardous materials–related impacts.

Using the criteria for determining significance described below, analysis of the hazards and hazardous materials impacts of the project on the community was made based on the location and condition of the potential hazardous materials release sites and on the current and planned uses of the location. Additionally, aviation hazards, wildland fire hazards, and hazards associated with inadequate emergency response access were assessed to determine the potential for impacts to residents. To evaluate impacts on the environment, the impact analysis (focused on impacts to humans) assessed potential impacts from accidents, explosions, and other releases.

4.13.5.2 Thresholds of Significance

Appendix G of the CEQA Guidelines was used to derive the significance thresholds which are used to determine whether the 2007 General Plan would have a significant environmental impact. The 2007 General Plan would result in a significant impact on hazardous materials if it would:

- create a significant hazard through the routine use, transport, or disposal of hazardous materials;
- create a significant hazard through reasonably foreseeable upset and accident conditions involving the release of hazardous materials;
- expose sensitive land uses (i.e., schools, hospitals, nursing homes) to hazardous materials;
- allow development to occur on contaminated lands, creating a significant public hazard;
- create an aviation safety hazard;
- expose persons or property to wildland fire risks; or
- interfere with the implementation of an emergency response or evacuation plan.

4.13.5.3 Impact Analysis

Implementation of the 2007 General Plan to the 2030 planning horizon and buildout in 2092 would potentially result in impacts due to potential public safety

hazards caused by the presence, use, manufacture, or transport of hazardous materials within the county. Additionally, aviation, wildland fire, and inadequate emergency response access could result in public safety impacts.

Exposure to Hazardous Materials

Impact HAZ-1: New development in accordance with the 2007 General Plan would expose persons to hazardous materials from routine use, transport, or disposal of hazardous materials or the release of hazardous materials. (Less-Than-Significant Impact.)

2030 Planning Horizon

Impact of Development with Policies

The 2007 General Plan would designate growth areas which include existing urban areas, Community Areas, Rural Centers, and AHOs. In addition, existing lots of record would develop under county zoning and subdivision requirements. Hazardous materials such as pesticides, fertilizers, petroleum, and vehicle fluids, asbestos-containing materials, lead paint, polychlorinated biphenyls (PCBs), underground storage tanks, and aboveground storage tanks may all be found in these areas. The former Fort Ord has unexploded , ordnance on portions of its site. Under the base reuse agreement, this ordnance must be removed or otherwise disarmed before the area can be developed. Hazardous materials including fuels, pesticides/herbicides, and industrial chemicals are routinely transported along county roads. In addition, soils in Monterey County contain naturally occurring asbestos, which can become hazardous as dust particles.

Exposure to sensitive groups is of special concern. This includes children, the infirm, and elderly. The 2007 General Plan does not propose any specific actions that would increase the exposure of sensitive groups. Exposure of persons to known and unknown hazardous materials during implementation of the 2007 General Plan to the 2030 planning horizon would potentially result in a significant impact.

2007 General Plan Policies

The 2007 General Plan and Area Plan policies summarized below set forth comprehensive measures to avoid and minimize adverse impacts from potential exposure effects from routine use, transport, and disposal of hazardous materials.

Policy S-5.2 provides that the Monterey County Operational Area Emergency Operations Plan shall include general procedures to implement the nationwide National Incident Management System (NIMS), statewide Standardized Emergency Management System

(SEMS), activate and operate the Operational Area Emergency Operations Center (EOC), coordinate responders, and implement other tactical response measures.

Area Plan Policies

None of the area plans contain policies related to hazardous materials.

Community Area Policies

Fort Ord Master Plan—Hazardous and Toxic Materials Safety

Fort Ord Master Plan Hazardous and Toxic Materials Safety Policy A-1 (Record of Decision reporting) ensures that the County monitors and reports to the public all progress made on the RA-ROD (Record of Decision).

Fort Ord Master Plan Hazardous and Toxic Materials Safety Policy B-1(RA-ROD implementation) states that the County shall monitor implementation procedures of the RA-ROD and work cooperatively with the U.S. Army and all contractors to ensure safe and effective removal and disposal of hazardous materials, ensure compliance with all applicable regulations and hazardous materials, and provide for the protection of the public during remediation activities.

Fort Ord Master Plan Hazardous and Toxic Materials Safety Policy B-2 (RA-ROD implementation at Fort Ord) requires that the County monitor implementation procedures of the RA-ROD and work cooperatively with the U.S. Army and all contractors and future users/operators of landfill or hazardous materials storage sites at the former Fort Ord.

Fort Ord Master Plan Hazardous and Toxic Materials Safety Policy C-1 (hazardous material management and disposal plans) ensures that the County requires hazardous material management and disposal plans for any future projects involving the use of hazardous materials.

Federal and State Hazardous Materials Statutes and Regulations

Federal and state statutes and regulations discussed above govern the transport, handling, storage, and disposal of hazardous wastes. Future land uses anticipated by the 2007 General Plan would be subject to these requirements.

Significance Determination

The 2007 General Plan Policies section above discusses applicable policies and explains how they would avoid and minimize adverse impacts from

hazardous materials. Additionally, as discussed above, federal and state statutes and regulations (including the DTSC's hazardous waste tracking authority), the Environmental Health CUPA (covering use, storage, and disposal as described above) and local response agencies such as the ERT, are in place to reduce potential exposure to hazardous materials, their routine transport, and potential spills. Therefore, the potential for hazardous material exposure related to implementation of the 2007 General Plan is less than significant.

Mitigation Measures

No mitigation is necessary.

Significance Conclusion

Implementation of the 2007 General Plan policies and compliance with the applicable laws and regulations would ensure that the use of hazardous materials would not create adverse risks to human health or the environment. Impacts in this regard would be less than significant.

Buildout

Impact of Development with Policies

Buildout of the General Plan in the year 2092 would result in potential localized exposure to hazardous materials in designated growth areas from new urban development permitted by the General Plan, in addition to those impacts discussed under the 2030 planning horizon. Hazardous materials such as pesticides, fertilizers, petroleum, and vehicle fluids, asbestos-containing materials, lead paint, PCBs, underground storage tanks, aboveground storage tanks, and unexploded ordnance could all be found in the areas planned for development. In addition, soils in Monterey County contain naturally occurring asbestos, which can become hazardous as dust particles. These impacts would potentially be significant.

2007 General Plan Policies

The 2007 General Plan contains goals and policies that address hazardous materials impacts from buildout of the 2007 General Plan; see discussion above under "2030 Planning Horizon."

Significance Determination

The regulation of hazardous materials and wastes has grown increasingly strict over the past several decades. This analysis assumes that the trend will remain constant and the future regulatory scheme will be at least as stringent as those currently in place. As discussed above, federal and state statutes and regulations are in place to reduce potential exposure to hazardous wastes and materials, including those in transit. The responsibilities of the County Division of Environmental Health as CUPA and its ERT group protect local

residents under the authority granted by the state. Therefore, the potential for hazardous material exposure is less than significant.

Mitigation Measures

No mitigation is necessary.

Significance Conclusion

Implementation of the 2007 General Plan policies and compliance with the applicable laws and regulations would ensure that the use of hazardous materials would not create adverse risks to human health or the environment. Impacts in this regard would be less than significant.

Aviation Hazards

Impact HAZ-2: The 2007 General Plan would establish new land uses that would potentially create aviation safety hazards. (Less-Than-Significant Impact.)

2030 Planning Horizon

Impact of Development with Policies

Development under the 2007 General Plan to the 2030 planning horizon would result in new urban development, including new residential, commercial, and public/institutional land uses in the vicinity of airports, private airstrips, and helipads. New development near aviation facilities, particularly multi-story structures or developments with aerial features such as antennas, would create potential significant hazards to aviation.

2007 General Plan Policies

The 2007 General Plan contains policies and concepts to address potential aviation hazards.

Circulation Element

Circulation Element Policies C-7.1 through C-7.4 requires that new development avoids creating any aviation hazards. Policy C-7.1 (airport land use compatibility) ensures that land use activities that interfere with the safe operation of aircraft shall be prohibited. Policy C-7.2 (mitigation for safety and noise impacts near airports) requires that land uses in areas that may be impacted by airport operations be compatible with those operations and incorporate measures to mitigate potential safety and noise impacts on those uses. Policy C-7.3 (safe operation of airports) ensures that measures to provide for the continued safe operation of airports shall be

implemented. Policy C-7.4 (land use compatibility with airport plans) states that land uses in the vicinity of public airports shall be consistent and compatible with the airport comprehensive land use plans. Policy C-7.5 (control of private airstrips and agricultural landing fields) requires that private airstrips and agricultural landing fields shall be controlled to ensure they:

a) do not permanently preclude cultivation of prime farmlands or farmlands of statewide importance;

b) are outside of flight paths to and from existing airports;

c) do not impact or limit public roadways and facilities; and

d) do not provide a hazard or annoyance for neighboring areas.

This policy reduces potential impacts from placement of, and changes to, private airstrips and agricultural landing fields.

Area Plan Policies

In addition to the policies identified above, the following Area Plan supplemental policies have been developed to address aviation hazards.

Greater Salinas Area Plan

The Greater Salinas Area Plan does not contain any policies related to aviation hazards. The Jefferson STA within the Area Plan was revised to conform to ALUC recommendations in order to avoid conflicts with the Marina Airport. Greater Monterey Peninsula Area Plan

Policy GMP-2.8 (development by area airports) requires that development directly beneath runway approaches of the Monterey Peninsula Airport and Marina Municipal Airport shall:

a) be of low intensity,

b) not generate electrical interference to radio communication between pilots and the air traffic control tower,

c) not contain sources of glare which would blind or confuse pilots and, and

d) be required to grant aviation easements to the Monterey Peninsula Airport District or other appropriate entity as a condition of development approval.

Policy GMP-4.2 (land use compatibility around the Greater Monterey Peninsula Airport and promotion of planning practices that are consistent with the Airport Land Use Plan) provides for reduction of aviation hazards by ensuring compatible land uses and consistency with the Airport Land Use Plan.

Cachagua Area Plan

Policy CACH-2.3 (permitting of airports and airstrips and compatibility with surrounding land uses) reduces aviation hazards by requiring airport and airstrip permits to be compatible with land uses.

Community Area Policies

Fort Ord Master Plan

The Fort Ord Master Plan does not contain any policies related to aviation hazards.

Significance Determination

The 2007 General Plan and Area Plan policies described above set forth comprehensive measures to avoid and minimize adverse impacts related to aviation by ensuring land use compatibility near airports and airstrips and by avoiding hazardous design and location of airports and airstrips. Additionally, federal and local regulations are in place to guide development in the vicinity of airports. Therefore, the potential for hazards related to aviation is less than significant.

Mitigation Measures

No mitigation is necessary.

Significance Conclusion

Implementation of the 2007 General Plan and Area Plan policies and programs, as well as compliance with applicable federal, state, and local airport land use compatibility regulations ensure that the implementation of new land uses would not create significant hazards regarding aviation. Impacts in this regard would be less than significant.

Buildout

Impact of Development with Policies

Buildout of the General Plan in the year 2092 would result in new development throughout the county, including on existing lots of record. Proposed development near aviation facilities, particularly multi-story structures or developments with aerial features such as antennas, would be subject to review by the ALUC to ensure that they are not creating potential hazards to aviation or to potential occupants of the projects. Impacts are considered less than significant.

2007 General Plan Policies

The 2007 General Plan contains goals and policies that address aviation hazard impacts from buildout of the 2007 General Plan, which are discussed above.

Significance Determination

The 2007 General Plan and Area Plan policies described above set forth comprehensive measures to avoid and minimize adverse impacts related to aviation by ensuring land use compatibility near airports and airstrips and by avoiding hazardous design and location of airports and airstrips. Additionally, federal and local regulations are in place to guide development in the vicinity of airports. Therefore, the potential for hazards related to aviation is less than significant.

Mitigation Measures

No mitigation is necessary.

Significance Conclusion

Implementation of the 2007 General Plan and Area Plan policies and programs, as well as compliance with applicable federal, state, and local airport land use compatibility regulations ensure that the implementation of new land uses would not create significant hazards regarding aviation. Impacts in this regard would be less than significant.

Wildland Fires

Impact HAZ-3: New development in accordance with the 2007 General Plan would increase exposure to wildland fires. (Less-Than-Significant Impact.)

2030 Planning Horizon

Impact of Development with Policies

Development under the 2007 General Plan up to the 2030 planning horizon would increase exposure to wildland fire risks, most notably in and around the Rural Centers that would develop within largely undeveloped rural areas outside the Salinas Valley. New development at the former Fort Ord and in the proposed Rural Centers of Bradley, Lockwood, Pleyto, and San Lucas would exposure of persons and property to moderate fuel areas at risk of wildland fires. In these areas, fuel loads from grass, brush, and/or trees are sufficient to sustain wildfires. Under dry, windy conditions, such fires can spread rapidly unless immediately attacked by fire services. Exhibit 4.13.1 illustrates fire hazard areas within the county.

Exposure of persons and property to wildland fires would be a potentially significant impact from implementation of the 2007 General Plan.

2007 General Plan Policies

The 2007 General Plan contains policies that would ensure that new fire facilities would be provided concurrently with anticipated growth.

Public Service Element

Public Service Element Policies PS-1.1 through PS-1.6 establish general standards for the provision of public facilities concurrently with future growth, which minimize impacts to emergency response and evacuation from new development. For example:

a) Policy PS-1.1 (establishment of Adequate Public Facilities and Services (APFS)) requires that adequate Public Facility and Services (APFS) requirements shall:

b) Ensure that APFS needed to support new development are available to meet or exceed the level of service standards of *Table PS-1* ("Infrastructure and Service Standards", next page) concurrent with the impacts of such development;

c) Encourage development in infill areas where APFS are available, while acknowledging the rights of property owner's to economically viable use of existing legal lots of record throughout the county; and

d) Seek to achieve acceptable level of service (LOS) standards through improvements funded by fair share impact fees and planned capital improvements (CIFP).

Policy PS-1.2 requires that the Adequate Public Facilities and Services (APFS) standards established in *Table PS-1*, "Infrastructure and Service Standards" be used to determine APFS appropriate for new discretionary development.

Policy PS-1.3 ensures that no discretionary application for new development shall be approved unless the County finds that APFS for that use exist or will be provided concurrent with the new development.

Policy PS-1.4 states that new development shall pay its fair share of the cost of providing APFS to serve the development.

Policy PS-1.5 ensures that improvements shall be installed concurrently with each phase of new development in accordance with an infrastructure phasing plan. An infrastructure phasing plan, if needed, shall be approved in concept at the time of project approval.

Policy PS-1.6 (requirement for developments to have adequate public facilities services and facilities for approval) only allows approval of those developments that have or can provide adequate concurrent public services and facilities.

Safety Element

Safety Element Policies S-4.1 through S-4.33 address potential impacts from fire hazards.

Policies S-4.1, S-4.2, and S-4.3 require promotion of educational awareness and participation between fire protection agencies and the general public about fire hazards. In particular, Policy S-4.2 requires that the County encourage and support fire protection agencies to provide communities they serve with educational materials on local fire hazards and how each community can be protected. This information should be continually available at the local fire station, local library, and other convenient locations and media. Policy S-4.3 states that the County shall encourage and support educational programs including but not limited to bilingual programs on fire safety by school districts in cooperation with fire protection agencies including Monterey County Office of Education (MCOE) and a nationally recognized fire safety education program county-wide. These outreach programs would decrease potential wildland fires through education and cooperation.

Policies S-4.4 through S-4.7 set out aframework for analyzing, identifying, and mapping wildland fire hazards. In particular, Policy S-4.4 requires that detailed scientific analysis of fire hazards in the County shall be provided periodically. Policy S-4.5 ensures that the wildland fire hazard severity map should be updated periodically as more precise information becomes available. Policy S-4.6 requires structural and other non-wildland fire risks within wildland urban interface areas be identified and maintained as a layer in the County's GIS in cooperation with fire officials and updated periodically. Policy S-4.7 requires that the County and authorities having jurisdiction develop and maintain a procedure to inform potential developers of the requirements for development in high and very high fire hazard areas. These policies call for avoiding significant wildfire areas thus reducing potential impacts.

Policies S-4.8, S-4.9, S-4.10, S-4.16, S-4.17, S-4.18, and S-4.19 establish minimum roadway access, entry, and maintenance standards to ensure access for fire vehicles, thereby reducing potential impacts from wildland fires. In particular, Policy S-4.9 states that roadways will be constructed and maintained in accordance with Monterey County Code Chapter 18.56 or the California Fire Code, as they may be updated from time to time, as determined by the fire authority having jurisdiction. Policy S-4.10

allows the County to require the creation of road maintenance agreements for all new private subdivision roads. Policy S-4.16 requires that new and reconstructed bridges be constructed in accordance with Monterey County Code Chapter 18.56 and the California Fire Code as amended. Policy S-4.17 states that drainage details for the road or driveway shall conform to current engineering practices, including erosion control Best Management Practices. Policy S-4.18 ensures that all access roads and driveways be maintained by the responsible parties to ensure the fire department safe and expedient passage at all times. Policy S-4.19 requires that gates on emergency access roadways be constructed in accordance with Monterey County Code and the California Fire Code.

Policies S-4.11, S-4.12, S-4.13, S-4.14, S-4.15, S-4.20, and S-4.21 require new developments to provide fire suppression systems such as firebreaks, fire-retardant building materials, automatic fire sprinkler systems, or water storage tanks, and institute a review process whereby fire protection agencies can comment on development plans. In particular, Policy S-4.11 states that the County shall require all new development to be provided with automatic fire protection systems (such as fire breaks, fire-retardant building materials, automatic fire sprinkler systems, and/or water storage tanks) approved by the fire jurisdiction. Policy S-4.12 ensures that the County shall require all modifications, additions, and remodeling of existing development exceeding thresholds adopted by the fire jurisdictions to be provided with automatic fire protection systems (such as fire breaks, fire-retardant building materials, automatic fire sprinkler systems, fire detection and alarm systems), water storage tanks and/or a Fuel Modification Zone plan as required by the fire jurisdiction. Policy S-4.13 states that the County shall require all new development to have adequate water available for fire suppression. The water system shall comply with Monterey County Code Chapter 18.56, NFPA Standard 1142, or other nationally recognized standard. The fire authority having jurisdiction and the County Department of Planning and Building Inspection, and all other regulatory agencies shall determine the adequacy and location of water supply and/or storage to be provided. Policy S-4.14 requires that water systems built, extended or modified to serve a new land use or a change in land use or an intensification of land use shall be designed to meet peak daily demand and recommended fire flow. Policy S-4.15 ensures that all new development shall be required to annex into the appropriate fire district. Where no fire district exists, project applicants shall provide verification from the most appropriate local fire authority of the fire protection services that exist. Project approvals shall require a condition for and a deed restriction notifying the property owner of the level of service available and acceptance of associated risks to life and property. Where annexations are mandated, the County shall negotiate a tax share agreement with the affected fire protection district. Policy S-

4.20 allows for a reduction of fire hazard risks to an acceptable level by regulating the type, density, location, and/or design and construction of development. Policy S-4.21 requires all permits for residential, commercial, and industrial structural development (not including accessory uses) to incorporate requirements of the fire authority having jurisdiction. This ensures that there will be proper infrastructure at new developments to reduce potential impacts from wildland fires.

Policies S-4.22 and S-4.23 provide that new developments must comply with applicable building and fire codes. Specifically, Policy S-4.22 states that every building, structure and/or development shall be constructed to meet the minimum requirements specified in the current adopted state building code, state fire code, Monterey County Code Chapter 18.56 and other nationally recognized standards. Policy S-4.23 requires the County to adopt the Fire Code document adopted by the State of California and appropriate amendments. This will allow for proper design at new developments to reduce potential impacts from wildland fires.

Policies S-4.24 and S-4.25 provides that new development must follow County-prescribed standards to enable emergency response vehicles to locate buildings more readily and reduce wildland fire impacts. In particular, Policy S-4.24 states that property addresses shall be required to be posted in accordance with Monterey County Code Chapter 18.56. Policy S-4.25 requires address issuance and street naming should be coordinated between the incorporated cities and the County in accordance with Monterey County Codes to avoid duplication or confusion to public safety agencies.

Policies S-4.27 through S-4.29 require creation of a design review process by County planning officials, applicants, and fire agency officials to address project design, landscaping, building standards, and other fire protection–related issues. In particular, Policy S-27 requires the County to continue to review the procedure for proposed development, including minor and major subdivisions, and provide for an optional pre-submittal meeting between the project applicant, planning staff, and fire officials. Policy S-4.28 states that the County shall provide a list of acceptable fire-resistant plants suited to each of the County's various micro-climates in accordance with *Policy OS-5.14* to avoid invasive species. This list should be developed with the cooperation of the County and fire authorities having jurisdiction, and made available at the Monterey County Planning Department. Policy S-4.29 assures that successive uses of individual buildings which require new permits for a new use comply with appropriate building standards.

Policies S-4.26, S-4.31, S-4.32, and S-4.33 describe fire protection design standards for utilities, swimming pools, and fuel modification

zones that willallow for reduction of wildland fire impacts through maximized fire protection design of new development. Specifically, Policy S-4.26 (fire hazards from utilities) states that when public facilities and aboveground utilities are located in very high or extreme fire hazard areas, special precautions shall be taken to mitigate the risks from wildfire and to ensure uninterrupted operation. Policy S-4.30 establishes that new swimming pools may be required to be plumbed to allow connection to firefighting equipment, if requested by the local fire jurisdiction. Policy S-4.31 ensures that a zone that can inhibit the spread of wildland fire shall be required of new development in fire hazard areas. Such zones should consider irrigated greenbelts, streets, and/or Fuel Modification Zones in addition to other suitable methods that may be used to protect development. The County shall not preclude or discourage a landowner from modifying fuel within the Fuel Modification Zone, or accept any open space easement or other easement over land within a Fuel Modification Zone that would have that effect. Policy S-4.32 states that property owners in high and very high fire hazard areas shall prepare an overall Fuel Modification Zone plan in conjunction with permits for new structures, subject to approval and to be performed in conjunction with the CDFFP and/or other fire protection agencies in compliance with State Law. Policy S-4 establishes that where new developments are required to provide for fuel modification zones, the cost of such construction shall be borne by the developer. Future maintenance of such fuel modification zones shall be in accordance with the fire defense standards adopted by the State of California.

Area Plan Policies

In addition to the policies identified above, the following Area Plan supplemental policy has been developed to address wildland fire hazards.

Cachagua Area Plan

Policy CACH-4.3 (encourages the formation of a fire district in this area to assist and ensure that a minimum level of fire protection is available to residents in the area plan boundaries) reduces potential wildland fire hazards by establishing and maintaining wildland fire protection in the Cachagua Area Plan vicinity.

Community Area Policies

Fort Ord Master Plan

Program B-2.4 (fire buffer) requires that the County shall designate a fire-resistant buffer between BLM lands and residential land use.

Program A-4.6 (wildfire protection measures) ensures that the County require the following measures of development in the residential lands adjacent to the habitat corridor to protect structures from wildfires and minimize the potential for erosion in the corridor:

- No structure shall be constructed immediately along the boundary of the residential area and the habitat corridor.
- A non-flammable surface (parking lots, green belt) shall be constructed where development in the residential area abuts the natural lands.
- Stormwater runoff and other drainage from the residential area shall be directed away from the habitat corridor.

Significance Determination

New development permitted by the 2007 General Plan would introduce residences and businesses to potential wildland fire hazards. However, the 2007 General Plan and Area Plan policies set forth comprehensive measures to avoid and minimize adverse impacts related to wildland fires by ensuring adequate fire facilities, encouraging public fire education, mapping wildland fire hazard areas, upholding building and development standards for reduction of susceptibility to fire, requiring new development to meet fire infrastructure standards, and establishing and maintaining thorough fire protection within the county. Additionally, development impact fees would be assessed for all new development projects so that adequate facilities are provided concurrently with growth. Finally, although agricultural land has a low susceptibility to wildland fire risks, new development constructed under the 2007 General Plan and ACWP would be required to comply with all applicable provisions of the revised California Building Standards Code, including those that pertain to fire prevention. Therefore, the potential for hazards related to wildland fires is less than significant.

Mitigation Measures

No mitigation is necessary.

Significance Conclusion

The implementation of the 2007 General Plan and Area Plan policies and programs, and the collection of development impact fees, would ensure that wildland fire risks are minimized to the maximum extent feasible. Impacts in this regard would be less than significant.

Buildout

Impact of Development with Policies

Buildout of the 2007 General Plan in the year 2092would increase exposure to wildland fire risks, most notably in and around the Rural Centers described above and where existing lots of record are in high or moderate risk areas.

Additionally, wildland fire risks would occur within the some of the areas where existing lots of record are located and are most acute on the Jolon Road segment of the AWCP.

2007 General Plan Policies

The 2007 General Plan contains goals and policies that address wildland fire impacts from buildout of the 2007 General Plan and are discussed above under "2030 Planning Horizon."

Significance Determination

The 2007 General Plan and Area Plan policies set forth comprehensive measures to avoid and minimize adverse impacts related to wildland fires by ensuring adequate fire facilities, encouraging public fire education, mapping wildland fire hazard areas, upholding building and development standards for reduction of susceptibility to fire, requiring new development to meet fire infrastructure standards, and establishing and maintaining thorough fire protection within the county. Additionally, development impact fees would be assessed for all new development projects so that adequate facilities are provided concurrently with growth. Finally, although agricultural land has a low susceptibility to wildland fire risks, new development constructed under the 2007 General Plan and ACWP would be required to comply with all applicable provisions of the revised California Building Standards Code, including those that pertain to fire prevention. Therefore, the potential for hazards related to wildland fires is less than significant.

Mitigation Measures

No mitigation is necessary.

Significance Conclusion

The implementation of the 2007 General Plan and Area Plan policies and programs, and the collection of development impact fees, would ensure that wildland fire risks are minimized. Impacts would be less than significant.

Emergency Response and Evacuation

Impact HAZ-4: Development under the 2007 General Plan would establish new land uses that would interfere with the implementation of an emergency response or evacuation plan. (Less-Than-Significant Impact.)

2030 Planning Horizon

Impact of Development with Policies

Development under the 2007 General Plan up to the 2030 planning horizon would establish new urban uses in currently undeveloped or under-developed areas. This development may adversely affect the County's ability to implement its emergency response plan or impair the use of evacuation routes during an emergency situation.

Although the AWCP would maintain the existing agricultural land use patterns of the Salinas Valley, development of new wineries could inadvertently impair the County's implementation of an emergency response or evacuation plan.

Interference with an emergency response plan or evacuation routes due to buildout of the General Plan and ACWP may be a potentially significant impact.

2007 General Plan Policies

The 2007 General Plan contains a number of policies that would ensure that anticipated growth does not impair emergency response.

Public Service Element

As noted under Impact HAZ-3, Public Service Element Policies PS-1.1 (establishment of Adequate Public Facilities and Services (APFS)), PS-1.2 (APFS standards used to determine appropriate APFS for new development), PS-1.3 (developments must have APFS for discretionary application approval), PS-1.4 (requirement of APFS fair share payments by new development), PS-1.5 (concurrent installment of improvements with new development construction), and PS-1.6 (requirement for developments to have adequate public facilities services and facilities for approval) establish general standards for the provision of public facilities concurrently with future growth. These minimize impacts to emergency response and evacuation from new development.

Safety Element

The Safety Element establishes specific policies that address emergency response and evacuation. Policies S-5.1 (implementing emergency plans), S-5.2 (requirements for the Monterey County Operational Area Emergency Operations Plan (MCOAEOP)), S-5.3 (maintenance and update of coordinated Emergency Response Plans), S-5.4 (training program requirements), S-5.5 (enhancement of emergency preparation), and S-5.6 (enhancement of inter-jurisdictional coordination) encourage interagency cooperation between emergency responders and public safety providers, particularly in terms of training and developing emergency response, management, and evacuation plans, which will allow for better organization and response when emergency aid is needed. More particularly, Policy S-5.5 states that emergency preparation shall be enhanced by:

a. Continuing to improve preparedness programs and utilizing the best practices to increase public awareness, educate and organize the public to respond appropriately to disasters, in addition to public safety and emergency service providers.

b. Providing emergency and disaster related information to the public as events occur and coordination with utility providers during disaster events.

c. Maintaining an ongoing program to train building and safety personnel in risk assessment and ensure that County building codes keep current with state requirements.

Policy S-5.6 requires inter-jurisdictional coordination be enhanced by maintaining agreements with local, state and federal agencies to provide coordinated emergency response. The Monterey County Operational Area Emergency Plan shall be maintained and enhanced in consultation with all applicable agencies.

Policy S-5.7 (maintaining GIS mapping of hazards) states that the County shall maintain current mapping and Geographic Information System (GIS) databases on the location of hazards within Monterey County, and shall develop programs for sharing of information with other jurisdictions and provide appropriate access to databases for emergency public service providers to improve delivery of public safety services. This policy enables the County to be aware of hazards in the planning area to avoid such hazards and respond to emergencies in those areas more efficiently.

Policy S-5.8 requires that emergency services in all areas of the County shall continue to be improved. Priority for those improvements shall be given to the areas of greatest need. Policy S-5.9 establishes that emergency roadway connections may be developed where distance to through streets is excessive, or where a

second means of emergency ingress or egress is critical. New residential development of three units or more shall provide more than one access route for emergency response and evacuation unless exempted by the Fire jurisdiction. Such protection requirements shall be consistent with adopted fire safety standards. Policy S-5.10 requires that critical facilities under County jurisdiction shall be located, designed, and operated in a manner that maximizes their ability to remain functional in a disaster event. Policy S-5.11 allows a Development Impact Ordinance to obtain and maintain an acceptable level of emergency services shall be enacted so that new development, to the extent permitted under State law, shall provide its fair share of funding for public facilities and equipment concurrent with the development. The funds collected under this ordinance shall be designated for the establishment of the public safety facilities serving the new development either by a newly established public safety jurisdiction or by the existing public safety jurisdiction into which the development exists or is annexed.

Policy S-5.12 requires that new roads, bridges, and utility lines be designed and constructed in accordance with applicable seismic safety standards. Policy S-5.13 establishes that utilities serving new development should be sited and constructed to minimize the risks from hazards to the greatest extent feasible.

Policies S-5.14 (designation of potential evacuation routes) and S-5.15 (designation of Tsunami Evacuation Routes) establish emergency evacuation route procedures, which will enable the public to safely escape danger in case of emergency. Policy S-5.14 states that all public thoroughfares, private roads, and deeded emergency accesses shall be considered potential evacuation routes. The Monterey County Coordinated Emergency Response Plans shall provide basic information on the evacuation routes for specific areas. The routes listed in *Table S-1* of the General Plan as well as any other route deemed appropriate to the situation may be considered "Pre-designated Emergency Evacuation Routes" and may be employed during tactical situations at the discretion of the Monterey County Sheriff and/or the Incident Commander. Policy S-5.15 defines Tsunami Evacuation Routes as any route in an incorporated or unincorporated area leading inland away from the coastline to elevations twenty feet or higher.

Policy S-5.16 (inventory of at-risk unreinforced masonry buildings) establishes the need for inventories of at-risk structures and buildings, including unreinforced masonry buildings, shall be developed by the County to the extent feasible. Measures to abate potentially dangerous buildings through retrofitting or demolition shall be identified and encouraged.

Policies S-6.1 (emergency service availability consideration), S-6.2 (emergency service priority based on highest population), S-6.3 (establishment of Development Impact Ordinance for protection coverage and emergency services facilities), S-6.4 (Community Area development based on emergency response time), S-6.5 (countywide fire and ambulance service-level goals), and S-6.6 (development of informational brochures regarding level of fire and ambulance service) establish specific performance standards such as staffing ratios and response times so that the County's emergency response systems are always adequate. Policy S-6.1 requires that the availability of sheriff, ambulance and fire services shall be considered prior to approving the creation of new lots or the intensification of use on an existing lot, pursuant to *Table PS-1* (Public Services Element). Policy S-6.2 establishes that the provision of services shall be prioritized to give the highest priority to areas where the highest concentrations of people reside. Policy S-6.3 requires that a Development Impact Ordinance shall be established to provide adequate protection coverage and emergency services (sheriff, fire, etc) facilities consistent with State law and the standards in *Table PS-1* (Public Services Element).

Policy S-6.4 states that establishment of new or expansion of existing Community Areas shall not be allowed in areas where emergency response times exceed the standards in *Table PS-1* (Public Services Element). Policy S-6.5 establishes countywide service level goals for fire and ambulance/emergency service as:

- 8 minutes or less, 90% of the time in urban areas (Community Areas);
- 12 minutes or less, 90% of the time in suburban areas (Rural Centers):
- 45 minutes or less, 90% of the time in rural areas (Areas outside designated Community Areas or Rural Centers). (See *Policy S-5.11*)
- 45 minutes or less, 90% of the time in rural areas (Areas outside designated Community Areas or Rural Centers). (see Policy S-5.11)

Policy S-6.7 (address marking requirements) ensures that public safety measures including sequential house numbering, non-repetitive street naming, standardized lettering of house numbers in subdivision design, lighting, and park designs that allow for adequate view from streets shall be included in the design and construction of new development. This policy will allow emergency response vehicles to access emergency locations more efficiently.

Area Plan Policies

Carmel Valley Master Plan

Policy CV-4.4. (emergency access) states that the County shall require emergency road connections as necessary to provide controlled emergency access as determined by appropriate emergency service agencies (Fire Department, OES). The County shall coordinate with the emergency service agencies to periodically update the list of such connections.

Significance Determination

New urban development permitted by the 2007 General Plan may impair the County's implementation of an emergency response or evacuation plan by the 2030 planning horizon. The implementation of 2007 General Plan policies would ensure that adequate emergency access, evacuation, and management procedures are in place, and public safety providers and emergency responders are properly prepared to respond to a major emergency. The policies and programs would reduce the risks of land uses interfering or impairing emergency response times and the ability to execute evacuations during emergencies. Additionally, they would provide for adequate emergency response infrastructure and staffing so that all areas of the county would have the proper emergency services. Therefore, impacts in this regard would be less than significant.

Mitigation Measures

No mitigation is necessary.

Significance Conclusion

Implementation of the 2007 General Plan policies and programs would reduce potential emergency response and evacuation impacts to a less-than–significant level.

Buildout

Impact of Development with Policies

Buildout of the 2007 General Plan in the year 2092 would establish new urban uses in currently undeveloped or under-developed areas, which may adversely affect the County's ability to implement its emergency response plan or impair the use of evacuation routes during an emergency situation. Impacts are considered potentially significant.

Although the AWCP would maintain the existing agricultural land use patterns of the Salinas Valley, development of new wineries could inadvertently impair the County's implementation of an emergency response or evacuation plan. Impacts are considered potentially significant.

2007 General Plan Policies

The 2007 General Plan contains goals and policies that address impacts to emergency response and evacuation resulting from buildout of the 2007 General Plan. These are discussed above under "2030 Planning Horizon."

Significance Determination

New urban development permitted by the 2007 General Plan may impair the County's implementation of an emergency response or evacuation plan. The implementation of 2007 General Plan policies would ensure that adequate emergency access, evacuation, and management procedures are in place, and public safety providers and emergency responders are properly prepared to respond to a major emergency. The policies and programs discussed under "2007 General Plan Policies" explain how the project would reduce the risks of land uses interfering or impairing emergency response times and the ability to execute evacuations during emergencies. Additionally, they would provide for adequate emergency response infrastructure and staffing so that all areas of the county would have the proper emergency services. Therefore, impacts in this regard would be less than significant.

Mitigation Measures

No mitigation is necessary.

Significance Conclusion

Implementation of the 2007 General Plan policies and programs would ensure potential emergency response and evacuation impacts to a less-than-significant level.

4.13.6 Level of Significance after Mitigation

All hazards and hazardous materials impacts would be less than significant and would not require mitigation.