3.1 AESTHETICS AND VISUAL RESOURCES

3.1.1 Introduction

This section describes the aesthetic and visual resource conditions at the project site and in the project vicinity; presents the regulatory framework applicable to the proposed project; and discusses the potential aesthetic impacts that could result from implementation of the proposed project. The primary aesthetic concerns associated with the proposed project are potential changes in aesthetic character of the project site; impacts to public viewsheds; and/or obstruction of existing views.

The project-specific information and analysis within this section is primarily based on project plans and site reconnaissance and photo documentation of the project site performed by RBF Consulting during the spring of 2007, and a subsequent site visit and documentation by EMC Planning Group in the fall of 2012.

3.1.2 Environmental Setting

Local Visual Resources

The project site consists of about 235 acres nestled in the mouth of a canyon extending westward into the foothills located at the western terminus of Paraiso Springs Road on the eastern slope of the Sierra de Salinas Foothills in the Salinas Valley, approximately seven miles west of the City of Greenfield. Elevations at the project site range from approximately 1,000 feet in the southern portion of the project site to slightly over 2,400 feet along the ridgelines. Views from the project site consist of scenic ridgelines north, west, and south, and the expansive Salinas Valley to the east. Surrounding land uses currently consist of agricultural uses and grazing, as well as several single-family residences located along Paraiso Springs Road located east of the project site. The existing topography and vegetation screens the project site from these residential uses. The project site is visible on the approach from Paraiso Springs Road and is identifiable by several tall palm trees.

Existing development within the project site consists of 15 vernacular cabins located along the hillside, a changing room, a recreation room, indoor and outdoor baths, six mobile homes, a lodge, a workshop, a yurt compound[1], and several small outbuildings as shown in Figure 2-4, Parcel Boundary and Site Characteristics, presented earlier, which shows an aerial view of the site characteristics. Photographs of the project site are shown in Figures 2.5a and 2.5b, presented earlier.

As shown in Figure 3.1-1, Views of the Project Site, the project site is very secluded and is difficult to see from adjacent public roadways. Several residences are located below and to the east of the project site on Paraiso Springs Road.

The project site is comprised of areas that contain both native and non-native landscape plantings, including eucalyptus, palm trees, live oak woodland, Diablan sage scrub, baccharis scrub, wetlands, and annual grasslands. The tall palm trees on site are a

[1] A yurt is a portable, covered, framed dwelling structure.

visually-distinctive feature that stand out within the foothills. On and surrounding the project site, the vegetation is typical to that of the California chaparral landscape, a semi-arid shrub dominated association of plants shaped by summer drought, winter rain and periodic wildfire.

Sensitive Viewpoints

Areas of visual sensitivity are those areas that may be visible from long distances, for long durations of time, or from public viewing points. They may include particularly distinctive or prominent landforms or vegetation; or they may represent sensitive juxtapositions of line, color, shape, and texture in their composition. Ridgelines, mountain faces, hillsides, open meadows, natural landmarks, and unusual vegetation are visually prominent from Paraiso Springs Road immediately adjacent to the project site and within the project site itself.

According to the *Central Salinas Valley Area Plan* (Monterey County 1987), several of the roads and canyons within the plan area exhibit scenic qualities sufficient to warrant their designation as a scenic highway or roadways. The County's Scenic Highway System is composed of roads and highways that have been designated as either State Scenic Highways or County Scenic Routes. The Central Salinas Valley contains areas of inspiring natural landforms and bucolic rural settings that can be appreciated from many of its roads and highways. In recognition of the desirability to preserve these scenic corridors for future generations, the Scenic Highway Element of the Monterey County General Plan has proposed that many scenic routes in the planning area be constructed or improved to meet the criteria of the Scenic Highway Program. One of the proposed scenic routes in the project vicinity is Arroyo Seco Road, which is nearly three miles and approximately 600 feet downslope from the project site. However, Arroyo Seco Road has not been officially designated as a scenic roadway.

Light and Glare

The existing source of light and glare in the project vicinity is primarily generated by rural residential development along Paraiso Springs Road to the east. No street lighting exists along local roadways; however, cars, and trucks are a potential source of light and glare. The project vicinity is primarily agricultural; therefore, there are very limited sources of light and glare.

3.1.3 Regulatory Background

Monterey County General Plan

The *Monterey County General Plan* was adopted by the Board of Supervisors in 1982. The following policies in the General Plan are applicable to aesthetics and visual quality at the project site. Goal 26 in the Monterey County General Plan aims to “promote appropriate and orderly growth and development while protecting desirable existing land uses.” Listed below are policies that achieve this goal:

Policy 26.1 The County, in coordination with the cities, shall manage the type, location, timing, and intensity of growth in the unincorporated area.

Photo 1: Looking west, view of the Sierra de Salinas foothills with the Paraiso Springs Rd. and the Site in the foreground.

Photo 2: Looking southeast, view of the Site and the Sierra de Salinas foothills to the north and south. Salinas Valley shown in the distance.

Source: RBF Consulting 2007

Figure 3.1-1

Views of the Project Site

Paraiso Springs Resort EIR

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Policy 26.1.1 The County shall discourage premature and scattered development.

Policy 26.1.6 Development which preserves and enhances the County's scenic qualities shall be encouraged.

Policy 26.1.10 The County shall prohibit development on slopes greater than 30 percent. It is the general policy of the County to require dedication of a scenic easement on a slope of 30 percent or greater. Upon application, an exception to allow development on slopes of 30 percent or greater may be granted at a noticed public hearing by the approving authority for discretionary permits or by the Planning Commission for building and grading permits. The exception may be granted if one or both of the following findings are made, based upon substantial evidence:

A) There is no alternative which would allow development to occur on slopes of less than 30 percent; or

B) The proposed development better achieves the resource protection objectives and policies contained in the Monterey County General Plan, accompanying Area Plans and Land Use Plans, and all applicable master plans.

Policy 26.1.20 All exterior lighting shall be unobtrusive and constructed or located so that only the intended area is illuminated, long range visibility is reduced, and off-site glare is fully controlled.

Central Salinas Valley Area Plan

The *Central Salinas Valley Area Plan* (Monterey County 1987*)* contains the following policies applicable to the proposed project:

Policy 26.1.6.1 (CSV) Development shall have appropriate review where it is permitted insensitive or highly sensitive areas as shown on the Scenic Highways and Visual Sensitivity Map.

Policy 40.1.2 (CSV) The County shall pursue measures to obtain official Scenic Road designation for Highway 146 and 25, Arroyo Seco Road, Bitterwater Road, and Elm Avenue

Monterey County Municipal Code

Monterey County Code Section 21.64.260 provides regulations for the protection of oak and other specific types of trees as required by the Monterey County General Plan, area plans, and master plans. Native oak trees six inches in diameter when measured two feet above the ground are protected under these regulations. Oaks which are 24 inches or greater in diameter are considered "landmark trees" and are afforded additional protection measures.

3.1.4 Analytical Methodology and Significance Threshold Criteria

Methodology

Aesthetics, as addressed in CEQA, refers to visual considerations. Aesthetics (or visual resource) analysis is a process to logically assess visible change and anticipated viewer response to that change. A common methodology for conducting visual analysis has been developed by the Federal Highway Administration, United Stated Department of Agriculture Forest Service, and the U.S. Soil Conservation Service. Some of these principles have been used in this assessment. As an initial step, such analysis begins with the identification of existing conditions with regard to visual resources and entails the following steps:

- Objective identification of visual features of the landscape;
- Assessment of the character and quality of those resources relative to overall regional visual character; and
- Assessment of the potential significance of features in the landscape to the people who see them and their sensitivity to the proposed changes to those features.

Viewshed is an area of the landscape that is visible from a particular location (e.g., an overlook) or series of points (e.g., a road or trail). To identify the importance of views of a resource, a viewshed may be broken into distance zones of foreground, middle ground, and background. Generally, the closer a resource is to the viewer, the more dominant it is and the greater its importance to the viewer. Although distance zones in viewsheds may vary between different geographic regions or types of terrain, a commonly used set of criteria identifies the foreground zone as 0.25 to 0.5 miles from the viewer; the middle ground zone as three to five miles from the viewer; and the background zone extend infinitely.

In the foreground zone, the observer is a direct participant, and the views include objects at close range that may tend to dominate the view. This zone is an important linkage because it sets a tone for the quality of a visual resource. Foreground views are valued at a maximum level.

In the middle ground zone, the observer focuses on the center of the viewshed. Views tend to include objects that are the center of attention if they are sufficiently large or visually different from adjacent visual features. Details will not be as sharp as the foreground view, but land features will still be distinguishable.

In the background zone, the observer can see less detail and distinction in landform and surface features. The emphasis of background views is an outline or edge. Silhouettes and ridges of one landmass against another are the conspicuous visual parts of the background, with skyline serving as the strongest line. Objects in the background eventually fade to obscurity and increasing distance.

Viewer sensitivity is based on the visibility of resources in the landscape, the proximity of viewers to the visual resource, the relative elevation of viewers to the visual resource, and the types and expectations of individuals and viewer groups. The criteria for identifying the importance of views are related in part to the position of the viewer relative to the resource.

Visual sensitivity also depends on the number and type of viewers and the frequency and duration of views. Generally, visual sensitivity increases with an increase in total number of viewers, the frequency of viewing (e.g., daily or seasonally), and the duration of views (i.e., how long a scene is viewed). Also, visual sensitivity is higher for views seen by people who are driving for pleasure; people engaging in recreational activities such as hiking, biking, or camping; and homeowners. Sensitivity tends to be lower for views seen by people driving to and from work or as a part of their work. Views from recreation trails and areas, scenic highways, and scenic overlooks are generally assessed as having high visual sensitivity.

The discussion of visual character enables the analysis to compare and contrast features within the proposed project site with those of the surrounding area. The discussion of visual quality analyzes the significance of the proposed project site as a visual resource within the setting. Visual quality is determined by analyzing three elements of the visual environment. Vividness, intactness, and unity are criteria that can be used to help evaluate the visual quality of natural and human-created landscapes. None of these is indicative of visual quality, and all three must be high to indicate superior visual quality.

Significance Threshold Criteria

As stated in Appendix G of the CEQA Guidelines, a project may create a significant impact related to aesthetics if it would:

- Have a substantial adverse effect on a scenic vista;
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- Substantially degrade the existing visual character or quality of the site and its surroundings; and/or
- Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area.

Impact Analysis

Alteration of a View from a Scenic Vista or a Scenic Roadway

There is no existing or proposed designated scenic highway in the vicinity of the project site (see Figure 3.1-2, Scenic Highway Corridors and Visual Sensitivity Map).

As described in the *Central Salinas Valley Area Plan* (Monterey County 1987), visually sensitive areas include the foothills of the Gabilan and Sierra de Salinas Foothills, Arroyo Seco watershed, and the Salinas Valley floor. Scenic resources are defined in the plan as "resources within the Planning Area which, because of their scenic value or unusual physical features should either be conserved or protected" (page 14).

According to (Figure 5 Scenic Highway & Visual Sensitivity) from the *Central Salinas Valley Area Plan* (Monterey County 1987), the project site location is considered "highly sensitive." Areas identified as highly sensitive are those possessing scenic resources which are most unique and which have regional or countywide significance and/or because of their prominence of ridgelines and frontal slopes with their unique vegetation, are important in giving the Planning Area its rural character.

In addition, according to the *Central Salinas Valley Area Plan* (Monterey County 1987), several of the roads and canyons within the area exhibit scenic qualities sufficient to warrant their designation as a scenic highway or roadway. The County's Scenic Highway System is composed of roads and highways that have been designated as either State Scenic Highways or County Scenic Routes. The Central Salinas Valley contains areas of inspiring natural landforms and bucolic rural settings, which can be appreciated from many of its roads and highways. In recognition of the desirability to preserve these scenic corridors for future generations, the Scenic Highway Element of the *Monterey County General Plan* has proposed that many scenic routes in the planning area be constructed or improved to meet the criteria of the Scenic Highway Program. One of the proposed scenic routes in the project vicinity is Arroyo Seco Road, which is nearly three miles and approximately 600 feet downslope from the project site.

The proposed project includes construction of a 103 one- and two-story clustered visitor-serving hotel units, conference facilities, and various wellness, education, and recreation facilities, all generally clustered in the valley floor as shown in Figures 2-6, Project Site Plan, and Figure 2-7, Conceptual Rendering of the Proposed Project, presented earlier. The proposed project also includes a separate residential development, which consists of 60 one- and two-bedroom timeshare units and 17 single-family residential timeshare villas. As shown in Figure 2-12, Planting Plan, the proposed project would include extensive landscaping of the grounds, parking facilities throughout the development, paths, hiking trails, pedestrian and vehicle bridges.

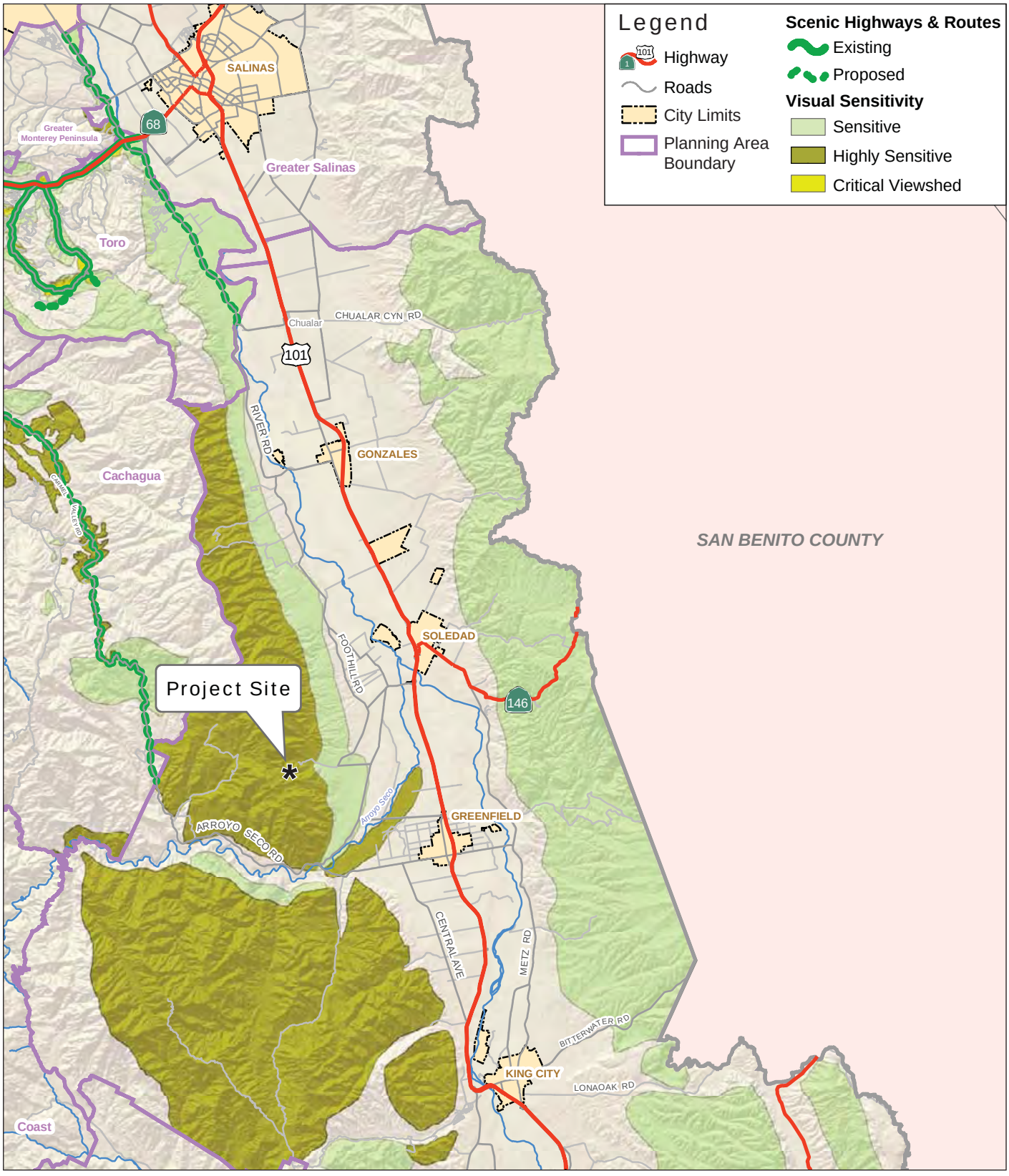
As shown in Figures 2-9a through 2-9h, presented earlier, the proposed elevations of the buildings at the project site would range from approximately 25 feet to 35 feet at the main resort. The elevation at the one-story casitas would be approximately 20 feet and the elevation of the two-story casitas would be approximately 30 feet. Elevation of the wine pavilion would be approximately 28 feet and the future institute would be approximately 20 feet.

Based on the elevations of the proposed buildings at the project site; the steep terrain, dense vegetation, topography difference, and distance from Arroyo Seco Road, the project site would not be visible from this roadway. Therefore, there are no impacts to scenic vistas and scenic roadways in the project vicinity.

Degradation of the Project Site

Impact 3.1-1: Implementation of the proposed project would substantially degrade the existing visual character or quality of the site and its surroundings. This would be considered a potentially significant impact. (Less than Significant with Mitigation)

The project site is located at the western terminus of Paraiso Springs Road on the eastern slope of the Sierra de Salinas Foothills in the Salinas Valley and consists of approximately 235 acres nestled in the mouth of a canyon extending westward into the foothills. The project site is bordered to the north, south, and west by the Santa Lucia Mountains and to the east by residences and agricultural fields. The surrounding land is designated by the *Monterey County General Plan* for farmland and rural grazing uses,



Source: RBF Consulting 2010

Figure 3.1-2

Scenic Highway Corridors and Visual Sensitivity Map

Paraiso Springs Resort EIR

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and is currently used for agriculture and vineyards (where slope allows), and grazing in the steeper areas. According to the *Monterey County Zoning Map* (2000), the project site is currently zoned Commercial-Visitor Serving.

The project site is visible on the approach from Paraiso Springs Road and is identifiable by several tall palm trees. Several single-family residential uses are located below and to the east of the project site on Paraiso Springs Road. The site has been inhabited by Native Americans, missionaries and as a resort. This has resulted in various types of development, as evidenced by the existing improvements including 15 vernacular cabins along the hillside, a changing room, a recreation room, indoor and outdoor baths, six mobile homes, a lodge, a workshop, a yurt compound[2], and several small outbuildings.

Development of the proposed project has the potential to change the visual character and quality of the project site by increasing the intensity and density of visitor-serving facilities, construction of roadways, and removal of approximately 191 trees, including all palm trees and 185 protected oak trees. However, the project will be centralized within the portion of the property which has historically supported development. The proposed project will limit its development footprint to approximately 50 acres of the 235 acre site. The footprint will largely be located at the lower portions of the site minimizing the impact to the site and the surrounding area.

Visually the most significant portions of the site relate to the steep slopes surrounding Paraiso Valley and Indian Valley. Approximately 66.7 percent of the project site is located on slopes greater than 30 percent as shown in Figure 3.1-3, Slope Analysis. The Hillside Village Condominium portion of the project is located along an east/west oriented ridge in the northern portion of the project site. This is the location of the existing 15 vernacular cabins. The timeshare condominium units proposed along this ridge will be visible from the Paraiso Valley floor and potentially from the upper section of Paraiso Springs Road approaching the site. This ridge is surrounded by topographic features that are much higher in elevation, so development at this location will not constitute ridgeline development. The presence of higher mountains forming the back drop of this location will minimize the impact to the visual character of the area. Protecting these surrounding landforms and the dominant natural features will help to mitigate the impact of this development upon the visual character of the area. Insuring protection of the higher and steeper slopes surrounding the project from future development will insure that the overall visual quality and character of the site is maintained.

Policy 26.1.10 of the *Monterey County General Plan* allows development on slopes greater than 30 percent in limited circumstances and requires dedication of a scenic easement on slopes of 30 percent or greater. The following mitigation measure has been provided to ensure consistency with Policy 26.1.10 of the *Monterey County General Plan*, and to mitigate impacts to the visual character and quality of the site.

[2] A yurt is a portable, covered, framed dwelling structure.

Mitigation Measure

MM 3.1-1a Prior to recording the Final Subdivision Map or issuance of any construction permits, the project applicant shall grant to the County scenic easements for all property exceeding 30 percent slope outside of the approved development of the proposed project in accordance with Policy 26.1.10 of the *Monterey County General Plan*. The Final Subdivision Map shall identify the areas within a "scenic easement" and note that no development shall occur within the areas designated as "scenic easement."

The development of the timeshare condominiums will be along a ridge that supports an Oak Woodland. Some of the trees proposed for removal as part of this project are in this area. The visual impact of the tree removal and the construction of the timeshare condominiums could have a potential impact to the visual character of the area. This impact can be minimized by replanting native oak trees around the proposed structures and streets to minimize the visibility of these structures and to maintain the integrity of the oak woodland. Therefore, the following mitigation measure is required:

Mitigation Measure

MM 3.1-1b The landscape plan prepared for the project shall place native oak trees around the timeshare condominiums to provide screening from the east of the site. The design of the landscaping shall integrate the buildings into the Oak Woodland setting such that the buildings, if visible, are viewed in the context of the Oak Woodland. Native Oak Trees shall be strategically placed at building corners and extending between buildings and natural landforms or existing native oak trees to integrate the buildings into the natural landscape.

Implementation of mitigation measure MM 3.1-1a and b would ensure consistency with Policy 26.1.10 of the *Monterey County General Plan* by designating slopes greater than 30 percent on the project site as "scenic easements" and would protect the slopes above and around the proposed project to protect the integrity of the natural landforms. This will protect the overall visual character of the site. The impact from that portion of the site which is potentially visible from off site will be minimized by implementation of a strategically designed landscape plan placing Native Oak Trees around the buildings and development to integrate the development into the natural oak woodland environment. With these mitigation measures and the standard condition associated with light and glare below the visual character of the site and surrounding area would be maintained and the impact associated with the proposed project would be reduced to a less than significant level.

Source: RBF Consulting 2010, , Hill Glazier Architects, EDSA 2005

Figure 3.1-3
Slope Analysis

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Increase in Light or Glare

Impact 3.1-2: The proposed project would introduce new sources of lighting that could adversely affect the existing visual resources in the area. Standard Monterey County conditions of approval regarding lighting would apply. (Potentially Significant .Considered to be less than significant impact with standard condition of approval).

The proposed project will introduce new light sources including, but not limited to, street lighting, and interior and exterior lighting of the proposed resort/hotel and timeshare units. Stationary light sources have the potential to adversely affect adjacent properties through a "spillover" effect. The nearest residential units to the project site are located to the east approximately one mile from the project site.

New light sources would result in a greater overall level of light at night adjacent to the project site, thus reducing night sky visibility, affecting the general character of the area. Policy 26.1.20 in the *Monterey County General Plan* states that "All exterior lighting shall be unobtrusive and constructed or located so that only the intended area is illuminated, long range visibility is reduced, and off-site glare is fully controlled." If lighting associated with the proposed project is not consistent with Policy 26.1.20 in the *Monterey County General Plan* this could be considered a potentially significant impact. In situations like this the County of Monterey implements the following standard condition of approval:

Standard Condition

PD014(B) – LIGHTING – EXTERIOR LIGHTING PLAN (VISUAL SENSITIVITY DISTRICT/ RIDGELINE DEVELOPMENT)

All exterior lighting shall be unobtrusive, down-lit, harmonious with the local area, and constructed or located so that only the intended area is illuminated and off-site glare is fully controlled. Exterior lights shall have recessed lighting elements. Exterior light sources that would be directly visible when viewed from a common public viewing area, as defined in Section 21.06.195, are prohibited. The applicant shall submit 3 copies of an exterior lighting plan which shall indicate the location, type, and wattage of all light fixtures and include catalog sheets for each fixture. The lighting shall comply with the requirements of the California Energy Code set forth in California Code of Regulations, Title 24, Part 6. The exterior lighting plan shall be subject to approval by the Director of the RMA - Planning Department, prior to the issuance of building permits. **(RMA – Planning Department)**

Implementation of this standard condition would ensure that the proposed project would have a less than significant impact by complying with Policy 26.1.20 in the *Monterey County General Plan* and insuring that there are not new light sources casting glare off site.

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3.2 AIR QUALITY

3.2.1 Introduction

This section analyzes the impacts associated with implementation of the proposed project on air quality including short-term construction emissions, long-term operational impacts, and potential impacts on sensitive receptors. This analysis is based on air quality modeling performed for the proposed project by EMC Planning Group based on the vesting tentative map (HG Architects 2012) shown on Figure 2-6, Project Site Plan (presented earlier), and the traffic impact analysis prepared by Hatch Mott MacDonald (2011), which is included in the appendices of the EIR. Information in this section is derived primarily from the following references and sources:

- U.S. Environmental Protection Agency (EPA)
- Federal Clean Air Act (FCAA)
- National Ambient Air Quality Standards (NAAQS)
- California Air Resource Board (CARB)
- California Clean Air Act (CCAA)
- State Office of Environmental Health Hazard Assessment (OEHHA)
- Monterey Bay Unified Air Pollution Control District (MBUAPCD)
- California Environmental Quality Act (CEQA) Air Quality Guidelines

Global climate change analysis in accordance with AB 32 (Global Climate Change) is contained in Chapter 3.4 Climate Change.

3.2.2 Environmental Setting

This section provides a general overview of the existing air quality conditions on a regional scale and within the vicinity of the project site.

Regional Setting

Monterey County, along with the counties of Santa Cruz and San Benito, lies within the North Central Coast Air Basin (NCCAB). Air quality within the basin is monitored by the Monterey Bay Unified Air Pollution Control District (MBUAPCD) which maintains three air quality monitoring stations (Salinas, Monterey, and Mid-Carmel Valley) in Monterey County. Basin air quality is regulated by a limited local source of emissions, and by the overall marine character of the climate. A semi-permanent high pressure cell in the eastern Pacific is the basic controlling factor in the climate of the NCCAB.

In the summer, the high-pressure cell is dominant and causes persistent west and northwest winds over the entire California coast. In the winter, the high pressure cell is the weakest and farthest south, under these conditions the inversion associated with the Pacific high pressure cell is typically absent in the NCCAB. Air frequently flows in a southeasterly direction out of the Salinas and San Benito valleys in the NCCAB. The predominant offshore flow during this time of year tends to aid in pollutant dispersal producing relatively healthful to moderate air quality throughout the majority of the region.

Winter daytime temperatures in the NCCAB average in the mid-50s during the day, with nighttime temperatures averaging in the low 40s. Summer daytime temperatures average in the 60s during the day, and nighttime temperatures average in the 50s. Precipitation varies within the region, but in general, annual rainfall is lowest in the coastal plain and inland valley, higher in the foothills, and highest in the mountains.

Project Site

MBUAPCD and CARB monitor the local ambient air quality at approximately 250 air-monitoring stations across the state. Air quality monitoring stations usually measure pollutant concentrations ten feet above-ground level; therefore, air quality is often referred to in terms of ground-level concentrations. The most common and widespread air pollutants of concern in include ozone, carbon monoxide, nitrogen oxides, particulate matter, reactive organic gases, sulfur dioxide, and lead (see Table 3.2-1, below).

Table 3.2-1 Common Air Pollutants

Pollutant	Properties	Major Sources	Related Health and Environmental Effects
Ozone (O_3)	Ground level ozone is created by the chemical reaction between oxides of nitrogen (NOx) and volatile organic compounds (VOC) in the presence of heat and sunlight. Ground level ozone is the principal component of smog.	Motor vehicle exhaust, Industrial emissions, Gasoline vapors, and chemical solvents.	Irritation of lung airways and inflammation; aggravated asthma; reduced lung capacity; and increased susceptibility to respiratory illnesses (i.e. bronchitis).
Suspended Particulate Matter	Suspended particulate matter is a term used to describe particles in the air, including dust, soot, smoke, and liquid droplets. Others are so small that they can only be detected with an electron microscope.	Motor vehicles, factories, construction sites, tilled agricultural fields, unpaved roads, and burning of wood.	Aggravated asthma; increases in respiratory symptoms; decreased lung function; premature death; and reduced visibility.
Carbon Monoxide (CO)	Carbon Monoxide is a colorless, odorless gas that is formed when carbon in fuel is not burned completely.	Fuel combustion; Industrial processes, and areas of high traffic density during peak hour traffic (localized sources of concern)	Chest pain for those that suffer from heart disease; vision problems; reduced mental alertness, and death (at high levels).
Nitrogen Oxides (NO_X)	Generic form for a group of highly organic gases, all of which contain nitrogen in varying amounts. Many of the nitrogen oxides are odorless and colorless.	Motor vehicles, electric utilities, and industrial, commercial, and residential sources that burn fuel.	Toxic to plants; reduced visibility, and respiratory irritant.
Sulfur Dioxides (SO_X)	Sulfur oxide gases are formed when fuel containing sulfur such as coal and oil is burned and when gasoline is extracted from oil or metals are extracted from ore.	Electric utilities (especially those that burn coal), and Industrial facilities that derive their products from raw materials to produce process heat.	Respiratory illness, particularly in children and the elderly and aggravates existing heart and lung diseases.
Reactive Organic Gases (ROG)	Precursor of ground-level ozone.	Petroleum transfer and storage, Mobile sources, and organic solvent use.	Potential carcinogen (e.g. benzene) and toxic to plants and animals.

Source: EPA 2013

The nearest monitoring station to the project site is located in King City, approximately 23 miles from the project site. However this station only monitors ozone and PM_{10}. Other monitoring stations within the vicinity include the Salinas #3 monitoring station, approximately 34 miles from the project site. The Salinas #3 is a state and local ambient monitoring station operated by the MBUAPCD. Although both the Salinas #3 station and the King City station are not located in the project vicinity, they provide a representative sample of the air quality in the basin (see Table 3.2-2, below).

Table 3.2-2 Local Ambient Air Quality Levels

Pollutant	Standards (Allowable Amount)		Year	Maximum Concentration	State/Federal Exceedences
	California	Federal Primary			
Ozone (O_3)	0.09 ppm 1 hour	NA	2007 2008 2009 2010 2011	0.067 0.088 0.077 0.078 0.078	0/NA 0/ NA 0/ NA 0/ NA 0/ NA
Ozone (O_3)	0.070 ppm 8 hour	0.075 ppm	2007 2008 2009 2010 2011	0.060 0.068 0.067 0.068 0.064	0/0 0/0 0/0 0/0 0/0
Carbon Monoxide (CO)	9.0 ppm 8 hour	9.0 ppm (8 hour)	2007 2008 2009 2010 2011	1.15 0.89 0.90 0.76 0.99	0/0 0/0 0/0 0/0 0/0
Nitrogen Dioxide (NO_2)	0.18 ppm 1 hour	0.053 ppm annual average	2007 2008 2009 2010 2011	0.050 0.049 0.040 0.036 0.040	0/NA 0/NA 0/NA 0/NA 0/NA
Particulate Matter (PM_{10})	50 µg/m3 24 hours	150 µg/m3 (24 hours)	2007 2008 2009 2010 2011	50.0 63.0 43.0 53.0 76.8	1/0 7/0 0/0 2/0 0/0
Fine Particulate Matter ($PM_{2.5}$)	No Separate Standard	35 µg/m3 (24 hours)	2007 2008 2009 2010 2011	19.2 17.8 18.7 16.2 19.7	NA/0 NA/0 NA/0 NA/0 NA/0

Source: Aerometric Data Analysis and Measurement System, Summaries from 2007 to 2011 as found at http://www.arb.ca.gov/adam/

Notes: Maximum concentration is highest recorded for state or federal data; Data is from the Salinas #3 station, with additional data from the King City – Peal Street station for ozone and PM_{10}. N/A: not applicable.

Pursuant to the California Clean Air Act, CARB is required to designate areas of the state as attainment, non attainment, or unclassified for any state standard. An "attainment" designation for an area signifies that pollutant concentrations do not violate the standard for that pollutant in that area. A "non attainment" designation indicates that a pollutant concentration violated the standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria. An "unclassified"

designation signifies that data do not support either an attainment or non attainment status. The California Clean Air Act divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category. The attainment status of the NCCAB is shown in Table 3.2-3, Attainment Status of the North Central Coast Air Basin.

Table 3.2-3 Attainment Status of the North Central Coast Air Basin.

Pollutant	State	Federal
Ozone (O_3)	Non-attainment	Attainment/Unclassified
Particulate Matter (PM_{10})	Non-attainment	Attainment
Particulate Matter ($PM_{2.5}$)	Attainment	Attainment/Unclassified
Carbon Monoxide (CO)	Monterey – Attainment San Benito – Unclassified Santa Cruz – Unclassified	Attainment/Unclassified
Nitrogen Dioxide (NO_2)	Attainment	Attainment/Unclassified
Sulfur Dioxide (SO_2)	Attainment	Attainment
Lead	Attainment	Attainment/Unclassified
Source: MBUAPCD 2013		

Other Pollutants

CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants. Additionally, because ambient concentrations of lead have decreased in the NCCAB, these pollutants are not measured at the monitoring stations.

Toxic Air Contaminants (TAC)

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

TACs can cause various cancers, depending on the particular chemicals, their type and duration of exposure. Additionally, some of the TACs may cause other health effects over the short or long term. TACs of particular concern for posing health risks in California are acetaldehyde, benzene, 1-3 butadiene, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, perchlorethylene, and diesel particulate matter.

Reactive Organic Gases and Volatile Organic Compounds

Volatile organic compounds (VOCs) are organic chemical compounds with sufficiently high vapor pressure such that they will tend to vaporize and enter ambient air under standard conditions. A wide range of carbon-based molecules, such as aldehydes, ketones, and hydrocarbons are VOCs. Hydrocarbons are organic gases, liquids, or solids that are formed solely of hydrogen and carbon. A sub-set of VOCs are reactive in the

context of ozone formation at urban (and possibly regional) scales. Reactive Organic Gases (ROGs) are defined to be those VOCs that are regulated because they lead to ozone formation. Both ROGs and VOCs can be emitted from the incomplete combustion of hydrocarbons or other carbon-based fuels. The major sources of VOCs 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).

Reactive VOCs may result in the formation of ozone and its related health effects. Carcinogenic forms of VOCs are considered toxic air contaminants ("air toxics"). There are no separate National Ambient Air Quality Standards for reactive VOCs, although some reactive VOCs are also toxic; an example is benzene, which is both a reactive VOC and a carcinogen.

Odors

Offensive odors rarely cause physical harm, however they can be very unpleasant, leading to considerable stress among the public and often generating citizen complaints to local governments and agencies. Facilities commonly known to produce odors include wastewater treatment facilities, chemical manufacturing, painting/coating operations, feedlots/dairies, composting facilities, landfills and transfer stations. Because offensive odors rarely cause physical harm and no requirements for their control are included in state and federal air quality regulations, the MBUAPCD has no rules or standards related to odor emissions, other than its nuisance rule. Any actions related to odors are based on citizen complaints to local government and the MBUAPCD.

3.2.3 Regulatory Background

Regulatory oversight for air quality in the NCCAB rests at the regional level with MBUAPCD, CARB at the state level, and the EPA Region IX office at the federal level.

Federal

Environmental Protection Agency

The principal air quality regulatory mechanism on the federal level is the Clean Air Act (FCAA) and, in particular, the 1990 amendments to the FCAA and the National Ambient Air Quality Standards (NAAQS) that it establishes. These standards identify levels of air quality for "criteria" pollutants that are considered the maximum levels of ambient (background) air pollutants considered safe, with an adequate margin of safety, to protect the public health and welfare. The criteria pollutants are O_3, CO, NO_2 (a form of NO_x), SO_2 (a form of SO_x), PM_{10}, $PM_{2.5}$, and lead (Pb); refer to Table 3.2-4: National and California Ambient Air Quality Standards. The EPA also has regulatory and enforcement jurisdiction over emission sources beyond state waters (outer continental shelf) and those that are under the exclusive authority of the federal government, such as aircraft, locomotives, and interstate trucking.

State

California Air Resources Board

The CARB, a department of the California Environmental Protection Agency (CalEPA), oversees air quality planning and control throughout California. Its responsibility lies with ensuring implementation of the 1989 amendments to the California Clean Air Act (CCAA), responding to the FCAA requirements and regulating emissions from motor vehicles sold in California. It also sets fuel specifications to reduce vehicular emissions.

The amendments to the CCAA establish California Ambient Air Quality Standards (CAAQS) and a legal mandate to achieve these standards by the earliest practicable date. These standards apply to the same criteria pollutants as the FCAA and also include sulfate, visibility, hydrogen sulfide, and vinyl chloride; refer to Table 3.2-4, National and California Ambient Air Quality Standards, below.

State Air Toxics Program

In addition to the criteria pollutants discussed above TACs are another group of pollutants of concern. 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 operations, 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. Health effects of TACs include cancer, birth defects, neurological damage, and death.

California regulates TACs through its air toxics program, mandated in Chapter 3.5 (Toxic Air Contaminants) of the Health and Safety Code (H&SC Section 39660 et. seq.) and Part 6 (Air Toxics "Hot Spots" Information and Assessment) (H&SC Section 44300 et. seq.). The CARB, working in conjunction with the state Office of Environmental Health Hazard Assessment (OEHHA), 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 use of best available control technology for toxics (T-BACT). The program is administered by the CARB. Air quality control agencies, including the MBUAPCD, must incorporate air toxic control measures into their regulatory programs or adopt equally stringent control measures as rules within six months of adoption by CARB.

The Air Toxics "Hot Spots" Information and Assessment Act, codified in the Health and Safety Code, requires operators of specified facilities in the MBUAPCD to submit to the MBUAPCD comprehensive emissions inventory plans and reports by specified dates (H&SC Section 39660 et. seq. and Section 44300 et. seq.). The MBUAPCD reviews the reports and then places the facilities into high-, intermediate-, and low-priority categories, based on the potency, toxicity, quantity, and volume of hazardous emissions and on the proximity of potential sensitive receptors to the facility. Facilities designated as high priority (Category A) must prepare a health risk assessment (HRA). If the HRA finds a significant risk, the surrounding population must be notified. The emissions inventory data are to be updated every two years.

Table 3.2-4 National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards [1]	Federal Standards [2]	
		Concentration [3]	Primary [3, 4]	Secondary [3, 5]
Ozone (O_3)	1 Hour	0.09 ppm (180 µg/m^3)	N/A	N/A
	8 Hour	0.070 ppm (137 µg/m^3)	0.08 ppm (157 µg/m^3)	0.08 ppm (157 µg/m^3)
Particulate Matter (PM_{10})	24 Hour	50 µg/m^3	150 µg/m^3	150 µg/m^3
	Annual Arithmetic Mean	20 µg/m^3	N/A	N/A
Fine Particulate Matter ($PM_{2.5}$)	24 Hour	No Separate State Standard	35 µg/m^3	35 µg/m3
	Annual Arithmetic Mean	12 µg/m^3	15 µg/m^3	15 µg/m3
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10 µg/m^3)	9 ppm (10 µg/m^3)	N/A
	1 Hour	20 ppm (23 µg/m^3)	35 ppm (40 µg/m^3)	N/A
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)	0.053 ppm (100 µg/m^3)
	1 Hour	0.18 ppm (339 µg/m^3)	100 ppb (188 µg/m^3)	N/A
Lead (Pb)	30 Day Average	1.5 µg/m^3	N/A	N/A
	Calendar Quarter	N/A	1.5 µg/m^3	1.5 µg/m^3
	Rolling 3-month Avg	N/A	1.5 µg/m^3	1.5 µg/m^3
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	N/A	0.030 ppm (80 µg/m^3)	N/A
	24 Hour	0.04 ppm (105 µg/m^3)	0.14 ppm (365 µg/m^3)	N/A
	3 Hour	N/A	N/A	0.5 ppm (1300 µg/m^3)
	1 Hour	0.25 ppm (655 µg/m^3)	75 ppb (196 µg/m^3)	N/A
Visibility-Reducing Particles	8 Hour (10 am to 6 pm)	Extinction Coefficient = 0.23 km@<70% RH	No Federal Standards	
Sulfates	24 Hour	25 µg/m3		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m3)		
Vinyl Chloride	24 Hour	0.01 ppm (26 µg/m3)		

ppm = parts per million; ppb = parts per billion; µg/ m3 = micrograms per cubic meter; mg/ m3 = milligrams per cubic meter; km = kilometers; RH = relative humidity; N/A = not applicable

Source: California Air Resources Board

Notes:

1. California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, suspended particulate matter (PM10), and visibility-reducing particles are values that are not to be exceeded. All other values are not to be equaled or exceeded. California ambient air quality standards (CAAQS) are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations. In 1990, the CARB identified vinyl chloride as a Toxic Air Contaminant and determined that there was not sufficient available scientific evidence to support the identification of a threshold exposure level. This action allows the implementation of health-protective control measures at levels below the 0.010-ppm ambient concentration specified in the 1978 standard.
2. Federal standards (other than for ozone, for particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. EPA also may designate an area as attainment/unclassifiable if (1) monitored air quality data show that the area has not violated the ozone standard over a three-year period; or (2) there is not enough information to determine the air quality in the area. For PM10, the 24-hour standard is attained when 99 percent of the daily concentrations, averaged over the three years, are equal to or less than the standard. For PM2.5, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.
3. Concentration is expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25 degrees centigrade (°C) and a reference pressure of 760 millimeters (mm) of mercury. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 mm of mercury (1,013.2 millibar); parts per million (ppm) in this table refers to ppm by volume (micromoles of pollutant per mole of gas).
4. Federal Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.
5. Federal Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

The CARB in 1998 identified diesel engine particulate matter as a TAC. Mobile sources (including trucks, buses, automobiles, trains, ships and farm equipment) are by far the largest source 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 are able to 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.

Before California listed particulate matter from diesel engine exhaust as a TAC, it had already adopted various regulations that would reduce diesel emissions. These regulations include new standards for diesel engine fuel; exhaust emission standards for new diesel trucks, buses, autos, and utility equipment; and inspection and maintenance requirements for health duty vehicles. Since listing diesel exhaust as a TAC, the CARB has been evaluating what additional regulatory action is needed to reduce public exposure. The CARB does not anticipate banning diesel fuel or engines; however, it may consider additional requirements for diesel fuel and engines, as well as other measures to reduce public exposure.

Local

Monterey Bay Unified Air Pollution Control District

The proposed project is located within the NCCAB, which is under the jurisdiction of the MBAUPCD. The MBAUPCD is responsible for regulating stationary, indirect and area sources of pollution within the NCCAB. The MBUAPCD's jurisdiction includes Monterey, Santa Cruz and San Benito counties. The MBUAPCD is one out of 35 air quality management districts that have prepared Air Quality Management Plans (AQMPs) to accomplish the five percent annual reduction goal required by the CCAA. As previously noted, the NCCAB is not in attainment of the CAAQS for PM_{10} and O_3. The NCCAB is in attainment of all NAAQS; in March 2007, the MBUAPCD adopted a *Federal Maintenance Plan for the Monterey Bay Region* for the federal 8-hour ozone standard.

Attainment of the PM_{10} CAAQS is addressed in the District's *Senate Bill 656 Implementation Plan*. This plan describes the greater vulnerability of coastal locations within the NCCAB to PM_{10} standards violations, due largely to the contribution from sea salt. It focuses primarily on controlling particulate sources related to fugitive dust and smoke related to combustion, but also addresses NO_x- and ROG-related particulate formation. Consistent with the requirements of SB 656, and with the difficulty in estimating future ambient concentrations of particulate matter substantially influenced by fugitive dust sources (even disregarding unusual burn events), this plan concentrates on identification of and implementation scheduling for available PM emission control measures. Implementation of these measures is currently underway.

CARB has established a state, health-based, air quality standard for ozone. Under the CCAA, areas not in compliance with this standard must prepare an ozone reduction plan.

The 1991 AQMP for the Monterey Bay Area was the first plan prepared in response to the CCCA of 1998 that established specific planning requirements to meet the ozone standard. The CCAA requires that the AQMP be updated every three years.

The 2008 AQMP relies on a multi-level partnership of governmental agencies at the federal, state, regional and local level. These agencies (EPA, CARB, local governments, Association of Monterey Bay Area Governments [AMBAG]) and the MBUAPCD are the primary agencies that implement the AQMP programs.

The main objective of the AQMP is to reduce emissions of certain air pollutants that lead to the formation of ozone, or "smog," in the lower atmosphere. The 2008 AQMP shifts emphasis from achieving the State's 1-hour ozone standard, to achieving the more stringent 8-hour requirement. Other air quality issues are included in this plan for informational purposes. The AQMP represents a comprehensive strategy to reduce ozone emissions from area and mobile sources. The AQMP includes specific measures that encourage cities and counties to develop and implement local plans, policies and programs to reduce auto use and improve air quality.

The MBUAPCD's primary means of implementing air quality plans and policies is through adoption and enforcement of rules and regulations. Some of the key rules that may be applicable to the proposed project are discussed below:

- Rule 200: Permits Required
- Rule 203: Application
- Rule 206: Standards for Granting Applications
- Rule 207: Review of New or Modified Sources
- Rule 214: Breakdown Conditions
- Rule 216: Permit Requirements for Wastewater and Sewage Treatment Facilities
- Rule 402: Nuisances
- Rule 432: New Source Performance Standards Subpart O, Sewage Treatment Plants
- Rule 439: Building Removals
- Rule 424: National Emissions Standards for Hazardous Air Pollutants (NESHAPS)
- Rule 1000: Permit Guidelines and Requirements for Sources Emitting Toxic Air Contaminants

The MBAUPCD has developed *CEQA Air Quality Guidelines* that are intended to facilitate the review and evaluation of air quality impacts for projects subject to CEQA. The advisory document provides lead agencies, consultants and project proponents with standardized procedures for assessing potential air quality impacts associated with a proposed project and prepare the environmental air quality section of environmental review documents.

Monterey County General Plan

The Monterey County General Plan was adopted by the Board of Supervisors in 1982. The following General Plan goals and policies are relevant to the proposed project.

Goal 20 Provide for the protection and enhancement of Monterey County's air quality. Listed below are policies that achieve this goal:

Policy 20.1.2 The County should encourage the use of mass transit, bicycles and pedestrian modes of transportation as an alternative to automobiles in its land use plans.

Policy 20.1.4 The County should concentrate commercial development in designated centers that may be more easily served by public transit.

Policy 20.2.1 The County shall condition approval of all new industrial and commercial development, including major modifications as defined by the Uniform Building Code, on meeting, as a minimum, federal and state ambient air quality standards and the rules and regulations of the Monterey Bay Unified Air Pollution Control District.

Central Salinas Valley Area Plan

The Central Salinas Valley Area Plan (1987) contains the following policies applicable to the proposed project:

Policy 14.3.1 (CSV) The County should encourage energy-efficient business and agricultural practices.

Policy 14.3.2 (CSV) The County should encourage the development and utilization of renewable energy sources such as solar, wind generation and biomass technologies in the Central Salinas Valley.

3.2.4 Analytical Methodology and Significance Threshold Criteria

Methodology

Regional area- and mobile-source emissions associated with proposed land uses, in addition to construction emissions were estimated using the California Emissions Estimator Model (CalEEMod) Version 2011.1.1 software, recommended by MBUAPCD. The CalEEMod platform allows calculations of both construction emissions and operational emissions from land use projects. It calculates the daily maximum and annual average for criteria pollutants as well as total or annual GHG emissions. The CalEEMod software utilizes emissions models USEPA AP-42 emission factors, CARB vehicle emission models, studies and studies commissioned by other California agencies such as the California Energy Commission and CalRecycle.

The CalEEMod program models construction emissions associated with land use development projects and allows for the input of project-specific information, including construction equipment information. The model also calculates indirect criteria pollutant and GHG emissions from processes "downstream" of the project under evaluation such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. CalEEMod also estimates changes in carbon sequestration potential due to changes in vegetation and the planting of trees. The model calculates a one-time only change in sequestration potential resulting in changes in land use such as converting vegetation to hardscape, and also calculates a carbon "offset" from planting new trees.

For this analysis, project-specific construction information is not yet available in detail sufficient to input specific construction activities by phase, or identify the type and number of construction equipment. Therefore; the default values for construction phasing and equipment were used, based upon an estimated operational date of 2023. The MBUAPCD CEQA Guidelines recommend determining construction dust emissions based on the total area of daily ground disturbance. Actual daily emissions would likely vary, depending on the specific construction activities conducted.

Emissions were calculated for both winter and annual conditions based primarily on the default parameters contained in the model, the proposed land uses, and supplemented by the trip generation rates contained in the traffic study prepared for the proposed project by Hatch Mott MacDonald (2011). CalEEMod default trip generation rates are the same rates identified by the Institute of Traffic Engineers (ITE), which are cited in the traffic report. However, the model's default description of certain land uses does not always match proposed uses. In this case, the proposed health and fitness component of the project default trip generation rate assumes a facility that is operating solely as a destination point for users, not as an ancillary use to the proposed resort. Therefore, the trip generation rate from the traffic study was used for this component of the proposed project.

Project-specific data inputs for calculating sequestration values were derived from the proposed the Biotic Assessment for Paraiso Springs Resort and Supplement prepared by Rana Creek Restoration (2005 and 2008, respectively) and from the project Planting Plan prepared by HG Architects (2011). The data inputs to determine the one-time only loss of sequestration potential are derived from comparing the vegetation survey summarized in the Biotic Assessment with current GIS data for Monterey County. Approximately 42 acres of existing vegetation would be affected by the project. Data inputs used to determine the carbon offset that may be realized by additional tree planting were estimated from the Planting Plan (approximately 450 new trees) less the number of replacement plantings required by the County (175 trees) at a ratio of 1:1. As these latter trees replace existing trees already present on the site, the project would not realize additional carbon sequestration from their replacement.

Significance Threshold Criteria

In accordance with CEQA, *State CEQA Guidelines* (including Appendix G) and agency and professional standards, a project impact would be considered significant if the proposed project 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 non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations; and/or
- Create objectionable odors affecting a substantial number of people.

MBUAPCD Significance Threshold Criteria

Operational Air Emission Thresholds

MBUAPCD's thresholds of significance for operational impacts, specific to the NCCAB, are shown in Table 3.2-5, Operational Air Emissions Thresholds.

Table 3.2-5 Operational Air Emissions Thresholds

Criteria Pollutant	Daily Thresholds (lbs)
Volatile Organic Compounds (VOC)	137
Oxides of Nitrogen (NO_x)	137
Particulate Matter (PM_{10})	82
Carbon Monoxide (CO)	550
SO_X as SO_2	150
Source: Monterey Bay Unified Air Pollution Control District (MBUAPCD), California Environmental Quality Act (CEQA) Air Quality Guidelines 2008.	

The MBUAPCD also uses many of EPA and State's requirements as the basis for determining the significance of air quality impacts under CEQA, including:

- Ambient Air Quality Standards. Exceedance of any national AAQS is considered a significant impact to air quality.
- New Source Review Offset Requirements. The MBUAPCD uses federal offset thresholds for PM_{10} and CO as criteria for significance (82 and 550 lb/day, respectively).
- Conformity. Federal regulations requiring that certain general and transportation projects conform to the State Implementation Plan (SIP) are used to help determine the cumulative significance of air quality impacts.
- Air Quality Management Plans. Project emissions that are not accounted for in the AQMP's emissions inventory are considered a significant cumulative impact to regional air quality.
- New Source Review Offset Requirements. Under State regulations, new or modified stationary sources that would emit 137 pounds per day or more of VOC or NOx are required to offset their emissions.

Construction Emissions Thresholds

Construction impact thresholds are as follows:

- Construction activities such as excavation, grading, and onsite vehicle/equipment use that generate 82 pounds or more of PM_{10} would have a significant impact on local air quality when they are located nearby and upwind of sensitive receptors. However, MBUAPCD-approved PM_{10} dispersion modeling may be used to refute (or validate) this determination. A construction site with minimal earthmoving activity would have potentially significant PM_{10} impacts when active construction covers 8.1 acres or more per day. A construction site with earthmoving activity would have potentially

significant PM_{10} impacts when active construction covers 2.2 acres or more per day. A project with dust emissions exceeding 82 pounds per day in a region with non-attainment for PM_{10} would make a significant contribution to that condition.

- Construction activities involving typical construction equipment (defined by the MBUAPCD CEQA Guidelines as scrapers, tractors, dozers, graders, loaders, and rollers) that temporarily emit precursors of ozone (i.e., reactive organic gases or oxides of nitrogen) are accommodated in the emission inventories of State and Federally required air plans and would not have a significant impact on the attainment and maintenance of ozone AAQS.
- Construction projects that may cause or substantially contribute to the violation of other State or National AAQS or that could emit toxic air contaminants that would present a substantial health risk to sensitive receptors could result in temporary significant impacts.

Localized Carbon Monoxide Emissions

According to the MBUAPCD CEQA Guidelines, the following would represent a potentially significant impact to roadway intersections or segments:

- Intersections or road segments that operate at LOS D or better that would operate at LOS E or F with the project's traffic;
- Intersections or road segments that operate at LOS E or F where the volume-to-capacity (V/C) ratio would increase 0.05 or more with the project's traffic;
- Intersections or road segments that operate at LOS E or F where delay would increase by 10 seconds or more with the project's traffic;
- Un-signalized intersections which operate at LOS E or F where the reserve capacity would decrease by 50 or more with the project's traffic (this criterion is based on the turning movement with the worst reserve capacity); or
- The project would generate substantial heavy-duty truck traffic, substantial traffic along urban street canyons, or substantial traffic near a major stationary source of CO.

Odors

According to the MBUAPCD, if the proposed project would emit pollutants associated with objectionable odors in substantial concentrations, this could result in significant impacts if odors would cause injury, nuisance, or annoyance to a considerable number of persons or endanger the comfort, health, or safety of the public.

Impact Analysis

Short-Term Construction Emissions

Impact 3.2-1:	The proposed project would result in short-term air quality impacts associated with construction activities, including grading, and operation of construction equipment at project site. This is considered a potentially significant impact. (Less than Significant with Mitigation)

Emissions produced during grading and construction activities are "short-term" because they occur only during construction. Construction emissions would include the

generation of fugitive dust, onsite generation of construction equipment exhaust emissions, and the off-site generation of mobile source emissions related to construction traffic.

Construction Equipment Emissions and Mobile Source Emissions from Construction Traffic

According to the project applicant, the proposed project would require the following construction equipment: dozers, scrapers; track and tire-mounted excavators; vibratory sheepfoot and steel drum rollers/compactors; backhoes; hoe rams/jack-hammers, graders; paving machines; concrete transit trucks/mixers; concrete pumps; cranes; lifts; pickup trucks; flatbed trucks; forklifts; truck-mounted drill rigs; chainsaws/chippers; electrical generators; dumpster trucks and water trucks; and pile driving rigs. According to the *MBUACPD CEQA Guidelines*, construction activities involving typical construction equipment that temporarily emit precursors of ozone (i.e., reactive organic gases or oxides of nitrogen) are accommodated in the emission inventories of State and Federally required air plans and would not have a significant impact on the attainment and maintenance of ozone AAQS. The construction equipment proposed would be considered typical construction equipment and therefore would be accommodated in the 2008 Air Quality Management Plan.

Particulate Matter

The proposed project would result in the disturbance of approximately 50 acres of the 235-acre project site and would involve the excavation of an estimated 162,073 cubic yards of soil. Of this amount, an estimated 38,584 cubic yards would be topsoil that would be removed from the project site and stockpiled for use in the landscape areas, the vineyard and/or on-site disposal. The remaining 123,489 cubic yards would be used as fill material within the project site. CHM2Hill 2005.

The offsite road improvements on Paraiso Springs Road will be constructed in four phases as shown on “Exhibit of Proposed Improvements” prepared by Atlas Land Surveys in 2011. Each phase would involve less than an acre of ground disturbance.

Construction activities are a source of fugitive dust (PM_{10}) emissions that may have a substantial, temporary impact on local air quality. In addition, fugitive dust may be a nuisance to those living and working in the project vicinity. Fugitive dust emissions are associated with land clearing, ground excavation, cut-and-fill operations, demolition, and truck travel on unpaved roadways. Dust emissions also vary substantially from day to day, depending on the level of activity, the specific operations, and weather conditions.

Fugitive dust from grading and construction is expected to be short-term and would cease following completion of the initial site development. Dust (larger than ten microns) generated by such activities can be both a local nuisance and contribute to a serious health problem in areas with existing nonattainment for PM_{10}.

The NCCAB is currently in non-attainment of the state PM_{10} standard. The NCCAB designation of non-attainment is based on exceedances measured at the Davenport, Moss Landing, Salinas, and King City monitoring stations. The *MBUAPCD CEQA Guidelines* state that construction activities (e.g., excavation, grading, on-site vehicles), which emit 82 pounds per day or more of PM_{10}, would have a significant impact on local air quality

when they are located nearby and upwind of sensitive receptors. Based on this emission threshold, if major earthmoving activity occurs on more than 2.2 acres per day, or minor grading on more than 8.1 acres per day, it would result in potentially significant PM_{10} emissions, which would be considered a potentially significant impact. To ensure that emissions do not exceed 82 pounds per day or more of PM_{10}, the following mitigation measure would ensure that the proposed project would have a less than significant impact from the emission of PM_{10} at the project site.

Mitigation Measure

MM 3.2-1 The applicant shall include dust control measures in grading plans, subject to review and approval by the County of Monterey Resource Management Agency – Planning Department. Grading plans shall require that active disturbed areas be watered at least twice daily and shall limit areas of active disturbance to no more than 2.2 acres per day for initial site preparation activities that involve extensive earth moving activities (grubbing, excavation, rough grading), and 8.1 acres per day for activities that involve minimal earth moving (e.g. finish grading) during all phases of construction activities, absent dust control measures. In the event ground disturbance exceeds these limits, grading plans shall require the project applicant to implement the following fugitive dust measures:

- Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard;
- Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites;
- Sweep daily (with water sweepers) all paved access roads, parking areas and staging areas at construction sites;
- Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets;
- Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more);
- Enclose, cover, water twice daily or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.);
- Limit traffic speeds on unpaved roads to 15 mph;
- Install appropriate best management practices or other erosion control measures to prevent silt runoff to public roadways;
- Replant vegetation in disturbed areas as quickly as possible;
- Install wheel washers for all exiting trucks, or wash off the tires or tracks of all trucks and equipment leaving the site;
- Limit the area subject to excavation, grading and other construction activity at any one time;

- Post a publicly visible sign which specifies the telephone number and person to contact regarding dust complaints (the person shall respond to complaints and take corrective action within 48 hours); and
- Ensure that the phone number of MBUAPCD is visible to the public for compliance with Rule 402 (Nuisance).

Implementation of this mitigation measure would reduce fugitive dust emissions from earthmoving activities by approximately 50 percent, depending on the activities conducted, which would ensure that the proposed project does not exceed the MBUAPCD thresholds for short-term construction emissions.

Short-term Construction Emissions During Demolition Activities

Impact 3.2-2: The proposed project would result in the demolition of four residences and associated structures within the project site which may contain asbestos and/or lead. This would be a potentially significant impact. (Less than Significant With Mitigation)

All of the existing structures on the project site would be removed as shown in Figure 2-11, Demolition Plan, presented earlier. These structures include the main lodge, the 15 vernacular cabins, a changing room, a recreation room, a workshop and several small buildings. The six mobile homes located within the project site would be sold and removed.

It is not known whether or not any of the buildings contain asbestos or lead paint as surveys have not been conducted, but it is likely that the buildings, which were constructed prior to approximately 1980, contain friable asbestos. Asbestos has been identified as a hazardous airborne contaminant. Existing MBUAPCD regulations require demolition activities be carried out in a manner to minimize asbestos released into the air. All demolition activities would be required to be undertaken according to OSHA standards to protect workers from asbestos and lead based paint. The proposed project would be required to comply with the National Emissions Standards for Hazardous Air Pollutants (NESHAPS) as set forth in the Code of Federal Regulations—40 CFR61, which is designed to prevent "visible emissions" of asbestos when buildings are renovated or demolished. NESHAPS specifies work practice requirements to limit asbestos emissions from building demolition and renovation activities, including the removal and associated disturbance of asbestos containing materials. The requirements for demolition and renovation activities include asbestos surveying, notification, asbestos containing materials removal procedures and time schedules, asbestos containing materials handling and clean-up procedures, and storage, disposal, and landfilling requirements for asbestos-containing waste materials. All operators are required to maintain records, including waste shipment records, and are required to use appropriate warning labels, signs, and markings.

In addition, demolition of buildings that have the potential to contain asbestos would be required to comply with the MBUAPCD's Rule 306 that requires reporting and investigation of certain buildings with asbestos as established under federal law. The proposed project must also comply with MBUAPCD Rule 304 (Asbestos NESHAP Fees), which determines fees for asbestos removal.

Mitigation measures MM 3.7-3a and MM 3.7-3b in Section 3.7, Hazards and Hazardous Materials would require that each structure is inspected by a qualified environmental specialist for the presence of asbestos containing materials (ACMs) and lead based paints (LBPs). If ACMs and LBPs are found during the investigations, a remediation program shall be developed to ensure that these materials are removed and disposed of by a licensed contractor in accordance with all federal, state and local laws and regulations, subject to approval by the MBUAPCD, and the County of Monterey Environmental Health Department, as applicable. Any hazardous materials that are removed from the structures will be disposed of at an approved landfill facility in accordance with federal, state and local laws and regulations. With implementation these mitigation measures and compliance with applicable laws and regulations, the proposed project would not result in the emission of asbestos.

Long-Term Operational Emissions

Impact 3.2-3:	The proposed project would result in long-term stationary and vehicular emissions, which would not exceed the MBUAPCD thresholds. This would be a less than significant impact.

The proposed project would result in long-term stationary and vehicular emissions.

Stationary Source Emissions

Indirect stationary source emissions would be generated due to an increased demand for electrical energy, which is generated from power plants utilizing fossil fuels. Electric power generating plants are distributed throughout the NCCAB and state, and their emissions contribute to the total regional pollutant burden.

Area Source Emissions

Area source emissions are generally a function of land use (e.g. number of rooms in the resort hotel, timeshare units, residential homes), activity (e.g., fuel use), and emission factor (e.g., mass of pollutant emitted per fuel usage). These include the following:

- Natural gas fuel combustion. The primary use of natural gas within the project site would be for space heating, water heating, and cooking in residential and non-residential buildings.
- Hearth fuel combustion. This source includes wood stoves, wood fireplaces, and natural gas-fired stoves.
- Landscape fuel combustion. This source includes exhaust and evaporative emissions from landscaping equipment including lawnmowers, rototillers, shredders/grinders, trimmers, chain saws, and hedge trimmers, used in residential and commercial applications.
- Consumer products. This source category comprises a wide range of products including air fresheners, automotive products, household cleaners, and personal care products.
- Architectural coatings. This source includes reactive organic gases (ROG; similar to VOCs) emissions resulting from the evaporation of solvents contained in paints, varnishes, primers, and other surface coatings, from residential and nonresidential structures.

Mobile Source Emissions

Mobile source emissions may include, but would not be limited to the following: exhaust emissions of ROG, carbon monoxide (CO), carbon dioxide (CO_2), oxides of nitrogen (NO_X), and respirable particulate matter (PM_{10}); tire wear emissions of PM_{10}; and brake wear emissions of PM_{10}.

The amount of mobile source emissions associated with the proposed project is based on land use designations, trip rates (i.e., number of vehicle trips per day per land use unit), assumptions regarding the vehicle fleet (e.g., analysis year, vehicle type and technology class), trip lengths (i.e., miles traveled per trip), and pollutant emission factors (i.e., mass of pollutant emitted per mile traveled). According to the traffic impact analysis prepared for the proposed project by Hatch Mott MacDonald (2008), the proposed project would result in approximately 324 trips under average conditions (70 percent occupancy) and 472 trips per day under capacity conditions (100 percent occupancy).

The operational emissions, which include both area and mobile emissions resulting from the proposed project, were analyzed using the CARB-approved CalEEMod software model (see Appendix B for more detail). Long-term operational emissions are presented below in Table 3.2-6, Long-term Operational Emissions.

Table 3.2-6 Long-term Operational Emissions

Un-Mitigated Emission Source	**Pollutants (pounds per day - winter)**				
	Reactive Organic Gases (ROG)	**Nitrogen Oxides (NO_x)**	**Carbon Monoxide (CO)**	**Particulate Matter (PM_{10})**	**Sulfur Dioxide (SO_x)**
Indirect Stationary Source	0.36	3.27	2.68	0.25	0.02
Area Source Emissions	65.71	0.18	14.66	1.93	0.01
Mobile Source Emissions	6.86	14.94	60.21	13.73	0.11
Emissions Total	72.93	18.39	77.55	15.91	0.14
MBUAPCD Threshold	137.00	137.00	550.00	82.00	150.00
Is Threshold Exceeded?	No	No	No	No	No

Source: EMC Planning Group 2013

Note: As identified in the discussion under Impact 3.12-1: Intersection and Roadway Segments Level of Service Impacts, the net trip generation after subtracting the reduction in employee and guest trips is 405 trips per day at build out of the site and assuming full occupancy. Therefore, this analysis (using 472 trips per day under capacity conditions) is a conservative identification of operational emissions. Actual emissions would be lower.

The proposed project would result in long-term regional emissions of criteria air pollutants that would not exceed the MBUAPCD significance thresholds and therefore would not contribute to an existing or projected air quality violation, which would be considered a less than significant impact.

Exposure to Odorous Emissions

Impact 3.2-5:	The proposed project includes construction of a wastewater treatment facility located in the northeastern portion of the project site. The proposed wastewater treatment system also includes disposal of treated effluent by land application within the project site. However, compliance with the MBUPACD rules and regulations applicable to wastewater treatment facilities would ensure that sensitive receptors proposed as part of the proposed project would not be exposed to unpleasant odors. This would be a less than significant impact.

The project site contains several existing septic systems that served the existing development within the project site, and these are a potential existing source of odors. The existing septic tanks and leach fields will be demolished and a wastewater treatment system that would include disposal of the treated effluent by land application within the project site would be constructed.

The occurrence and severity of odor impacts within the project site depends on numerous factors, including the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of the receptors. While offensive odors rarely cause any physical harm, they can still be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and regulatory agencies. Projects with the potential to frequently expose members of the public to objectionable odors would be deemed to violate the MBUAPCD standards. The MBUPACD maintains permit guidelines for the construction of wastewater and sewage treatment facilities for any wastewater treatment plant serving more than one dwelling unit or for any industrial facility of combination thereof.

The septic systems would be replaced by a new wastewater treatment plant, which would also be a potential source of odors. The wastewater treatment plant would treat wastewater to a tertiary level (suitable for irrigation use). The collection system is extremely short, and therefore is not expected to generate appreciable odors. The treatment plant will be located indoors and is not expected to generate odors. Screenings and Solids from the treatment process will be washed so that their storage onsite inside the treatment building is not expected to generate odors.

The wastewater treatment plant would be constructed within a building in the northeastern portion of the project site about 450 feet from the nearest residence. Therefore, construction of sensitive receptors within the project site (e.g. residential lots and hotel units) would not be significantly affected by odors from the proposed on-site treatment. No off-site houses are located nearer to the proposed wastewater treatment site than the proposed on-site houses.

According to the MBUPACD, the project applicant would be required to comply with all MBUACPD rules and regulations, but particularly the following:

- Rule 200: Permits Required
- Rule 203: Application
- Rule 206: Standards for Granting Applications
- Rule 207: Review of New or Modified Sources

- Rule 214: Breakdown Conditions
- Rule 216: Permit Requirements for Wastewater and Sewage Treatment Facilities
- Rule 402: Nuisances
- Rule 432: New Source Performance Standards Subpart O, Sewage Treatment Plants
- Rule 1000: Permit Guidelines and Requirements for Sources Emitting Toxic Air Contaminants

Compliance with MBUAPCD rules and regulations related to permitting of permit and nuisance rules related to odors would help to control odorous emissions from the on-site treatment of wastewater at the project site. For instance, MBUAPCD Rule 402 (Nuisances) prohibits the discharge of air contaminants or other materials, which cause injury, detriment, nuisance, or annoyance to any considerable numbers of persons. With implementation of the rules and regulations of the MBUPACD, construction of a wastewater treatment facility would be considered a less than significant impact.

Toxic Air Contaminants (TACs)

Impact 3.2-6:	The proposed project includes construction of an enhanced on-site wastewater treatment system located in the northeastern portion of the project site. Compliance with MBUPACD rules and regulations applicable to wastewater treatment facilities would ensure that sensitive receptors within and in the vicinity of the project site would not be exposed to TACs. This would be a less than significant impact

No major existing stationary or area sources of toxic air contaminants (TACs) were identified in the project vicinity. The proposed project includes the construction of a hotel resort, which does not usually emit TAC sources of potential concern. However, the proposed project includes construction of a wastewater treatment facility. As a result, implementation of the proposed project may result in increased exposure of sensitive land uses to localized concentrations of TACs that could exceed MBUAPCD's recommended significance thresholds. However, the proposed project would be required to comply with MBUAPCD rules and regulations, including Rule 1000: Permit Guidelines and Requirements for Sources Emitting Toxic Air Contaminants. Compliance with the MBUAPCD rules and regulations would ensure that this impact would be considered less than significant. Therefore, no mitigation measures are necessary.

3.3 BIOLOGICAL RESOURCES

3.3.1 Introduction

In this section of the DEIR, impacts to biological resources associated with the proposed project are evaluated based on several reports prepared and submitted by the applicant. Some reports were peer reviewed by RBF Consulting under contract to the County; others were peer review by EMC Planning Group under contract to the County. In addition, a site investigation was conducted by an EMC Planning Group biologist. The documents used as the basis for analysis are as follows, presented in chrolological order:

- *Paraiso Hot Springs Biological Assessment (Final)* (Rana Creek Environmental Planning 2005)
- *Forest Management Plan for Residential Parcel APNs 418-361-004, 418-381-002, 418-381-021, Paraiso Springs, 34358 Paraiso Springs Road, Monterey County, California* (Forest City Consulting 2005)
- *Interim Report for the Bat Assessment Survey for Paraiso Springs Resort* (Central Coast Bat Research Group 2008)
- *Habitat Assessment for California Tiger Salamander and California Red-Legged Frog* (Rana Creek Environmental Planning 2008)
- *Paraiso Hot Springs Biological Assessment – Supplement* (Rana Creek Environmental Planning 2008)
- *Central Coast Bat Research Group. Report for the Bat Assessment Survey for Paraiso Springs Resort* (Central Coast Bat Research Group 2008)
- *Section 404 Wetland Delineation Paraiso Springs Resort* (WRA Environmental Consultants 2009)
- *Paraiso Springs California Tiger Salamander 2010 Spring Survey Results* (Biological Consulting Services 2010)
- *Paraiso Springs 2010 California Red-Legged Frog Visual Survey Results* (Biological Consulting Services 2010)
- *Biological Assessment for the Paraiso Springs Road Widening (WRA Environmental Consultants 2012)*
- *Paraiso Springs Resort – PLN040183: Stream Channel Modification* (CH2M HILL 2013)
- *Paraiso Springs Resort – Monterey County PLN 040183* (Regan Biological and Horticultural Consulting 2013)
- *Paraiso Springs Resort Riparian Impact Assessment* (WRA Environmental Consultants. 2013)

These documents are included in Appendix C.

Rana Creek Environmental Planning prepared a Biological Assessment for the site in 2005 and updated it in 2008 on behalf of the project applicant. The assessment consisted of the review of the project description, data collection during reconnaissance level surveys, and evaluation of maps and available literature from federal, state, and local agencies and databases. Field surveys were conducted between December 12, 2002 and March 11, 2003. Follow-up surveys were conducted in May 2005 and on March 11, 12,

13 and April 23, 2008. Rana Creek also prepared a habitat assessment for the California tiger salamander (*Ambystoma californiense*) and California red-legged frog (*Rana draytonii*), which consisted of a nighttime visual encounter spotlight survey for amphibians conducted on March 12 and April 23, 2008. A peer review was conducted by EcoSystems West on behalf of RBF Consulting for the County of Monterey Resource Management Agency-Planning Department.

In response to the peer review conducted by EcoSystems West, a wetland delineation and bat survey were also conducted. WRA Environmental Consultants surveyed the site on January 5-6, 2009 and prepared a Section 404 wetland delineation to assess potential wetlands and "other waters" subject to federal and/or state jurisdiction under Section 404 of the Clean Water Act, Section 401 of the Clean Water Act, and the Porter Cologne Act. WRA Environmental Consultants also visited the site on January 24, 2012 to assess biological resources along the proposed road widening area, and on March 29, 2013 to assess proposed bridge crossings. CH2M HILL Engineers visited the site on March 28, 2013 to assess proposed stream bank modifications.

Forest City Consulting inspected the project site and prepared a Forest Management Plan in July 2005. On March 25 and July 23, 2008, the Central Coast Bat Research Group conducted bat surveys of buildings and trees located within the project site. Biological Consulting Services also conducted California tiger salamander and California red-legged frog protocol-level surveys in 2010.

Regan Biological and Horticultural Consulting surveyed the site on March 25, 2013 to evaluate the potential for occurrence for ten special-status species that had not been previously addressed for this project. Finally, a site tour and brief biological reconnaissance survey was performed by EMC Planning Group on March 25, 2013.

This section of the DEIR describes existing biological resources within the project site including habitat types, the potential for sensitive plant and animal species to occur, and the species and trees present on the site. Portions of the project site that are currently developed or otherwise altered from natural conditions are also described. This section is also used to identify portions of the project site that are regulated as jurisdictional aquatic features including wetlands and streams or that may be considered a sensitive habitat or natural community under CEQA which is further described in Section 3.3.3 Regulatory Background. Existing conditions for biological resources within the project site are described first in terms of vegetation composition and aquatic function, and then by suitability for special status plant and wildlife species.

3.3.2 Environmental Setting

Regional Setting

Monterey County contains a diverse array of natural communities, ranging from oak woodlands in the Salinas Valley, to beach dunes in Marina, 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 many federally listed endangered and threatened

species in the County. More than 70,000 acres in the County are designated as critical habitat[3] by the United States Fish and Wildlife Service (USFWS) and ten recovery plans are in effect in the County. The County's rich soils and moderate climate make it an ideal place for invasive plant species to colonize.

Project Setting

The project site is comprised of areas that contain non-native landscaped plantings, eucalyptus trees, palm trees, oak woodland, Diablan sage scrub, baccharis scrub, riparian, wetlands, and annual grasslands. The eastern portion of the project site contains several structures. The buildings currently on the project site consist of fifteen vernacular cabins along the hillside, a changing room, a recreation room, indoor and outdoor baths, six mobile homes, a lodge, a workshop, a yurt compound[4], and several small outbuildings (Figure 2-3, Parcel Boundary and Site Characteristics, presented earlier).

Vegetation Types and Aquatic Features

Vegetation at the project site consists mostly of scrubs and grasslands as well as oak and mixed woodland (see Figure 3.3-1, Existing Vegetation Types and Aquatic Features within the Project Site).

The 2005 Biotic Assessment for Paraiso Springs Resort prepared by Rana Creek summarizes the results of biological surveys that were conducted on the project site in 2003. This report identified existing vegetation and land cover types, acreages, and conditions on the project site.

Based on the Site Plan (2005), Planting Plan (2005), and Vesting Tentative Map (2005) for the proposed project prepared by Hill Glazier Architects, a project impact area was created by EMC Planning Group. This project impact area is consistent with the 2009 and 2012 revisions to the Vesting Tentative Map. The project impact area is defined as any area within the project site where existing conditions would be altered by the proposed project. Using ESRI Geographic Information Systems (ArcGIS), the defined project impact area was overlaid on the Paraiso Hot Springs Resort vegetation map (Rana Creek 2003), to identify which vegetation types on the project site would intersect with the project impact area. Based on this comparison, the amount of each type of vegetation that would be impacted by the proposed project was calculated.

Table 3.3-1, below, shows existing vegetation types on the project site. Values are approximate and shown in acres.

[3] 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.

[4] A yurt is a portable, covered, framed dwelling structure.

Table 3.3-1 Existing Vegetation Types within the Project Site

Vegetation Type	Existing Conditions (acres)
Annual Grassland	28.41
Baccharis Scrub	7.65
Diablan Sage Scrub	117.38
Eucalyptus	1.54
Landscaped	2.85
Landscaped – Lawn	3.48
Mixed Hardwood Forest	39.62
Mixed Oak/Landscape Trees	1.11
Oak Woodland	22.60
Palm Trees	0.48
Pond	0.45
Riparian	2.05
Seasonal Wet Seep	0.21
Wetland	0.08
Total	***227.91***
Source: EMC Planning Group 2013, Rana Creek 2003	

Vegetation Types

Diablan Sage Scrub

The majority of the northern and western areas of the project site outside of the development area consist of Diablan sage scrub. The dominant species include chamise (*Adenostoma fasiculatum)*, California sagebrush (*Artemisia californica*), and black sage (*Salvia mellifera*).

Mixed Hardwood Forest

The north-facing slope on the south side of the project site is dominated by mixed hardwood forest. The dominant trees in this area are: coast live oak (*Quercus agrifolia*), blue oak (*Quercus douglasii*), California buckeye (*Aesculus californica*), and California bay (*Umbellularia californica*).

Sensitive plant species that may occur within this habitat type include Napa false indigo (*Amorpha californica* var. *napensis*), Toro manzanita (*Arctostaphylos montereyensis*), round-leaved filaree (*Erodium macrophyllum*), Congdon's tarplant (*Centromadia parryi* ssp. *congdonii*), Monterey spineflower (*Chorizanthe pungens*), robust spineflower (*Chorizanthe robusta*), umbrella larkspur (*Delphinium umbraculorum*), Norris' beard moss (*Didymodon norrisii*), pale-yellow layia (*Layia heterotricha*), hooked popcornflower (*Plagiobothrys undulates*), and Indian Valley bush-mallow

0 200 feet

Source: RBF Consulting 2010, Hill Glazier Architects, EDSA, Rana Creek Habitat Restoration 2005

Figure 3.3-1
Existing Vegetation Types and Aquatic Features within the Project Site
Paraiso Springs Resort EIR

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(*Malacothamnus aboriginum*). Sensitive wildlife species that may occur within this habitat type include California red-legged frog, California tiger salamander, Coast Range newt (*Taricha tarosa*), long-eared owl (*Asio otus*), sharp-shinned hawk (*Accipiter striatus)*, white-tailed kite (*Elanus leucurus*), and Monterey dusky-footed woodrat (*Neotoma macrotis luciana)*.

Annual Grassland

The grasslands within the project site consist mainly of annual non-native grasses with a few native grasses and forbs. The annual grasslands are typical of the hills and agricultural areas of the Salinas Valley. Plants include non-native soft chess (*Bromus hordeaceus*), foxtail chess (*Bromus madritensis* ssp. *rubens*), rattlesnake grass (*Briza maxima*), slender wild oats (*Avena fatua*), and English plantain (*Plantago lanceolata*). During spring, annual native wildflowers are present, including pink owl's clower (*Castelleja exserta*), blue dicks (*Dichelostemma capitatum*), and sky lupine (*Lupinus nanus*). The areas of annual grassland that have very few native species were most likely the areas that were farmed or historically had a high level of disturbance.

Sensitive plant species that may occur within this habitat type include round-leaved filaree, Lemmon's jewelflower (*Caulanthus lemmonii*), Pinnacles buckwheat (*Eriogonum nortonii)*, pale-yellow layia, Carmel Valley malacothrix (*Malacothrix saxatilis* var. *arachnoidea)*, hooked popcornflower, and Hickman's checkerbloom. Sensitive wildlife species that may occur within this habitat type include California red-legged frog, California tiger salamander, Coast Range newt, San Joaquin whipsnake (*Masticophis flagellum ruddocki)*, American peregrine falcon (*Falco peregrinus anatum)*, bank swallow (*Riparia riparia)*, Cooper's hawk (*Accipiter cooperii)*, burrowing owl (*Athene cunicularia*), long-eared owl, prairie falcon (*Falco mexicanus*), sharp-shinned hawk, white-tailed kite, American badger (*Taxidea taxus*), and Salinas pocket mouse (*Perognathus inornatus psammophilus*).

Oak Woodland

The oak woodland areas within the project site are in good health and have relatively few invasive weeds. Three species of oak occur on the property: coast live oak (*Quercus agrifolia*), blue oak (*Quercus douglasii*), and scrub oak (*Quercus berberidifolia*). Coast live oak is most dominant and common species within the project site. The understory of the oaks outside of the current camping area contain typical herbaceous species of oak woodlands including wood mint (*Stachys bullata*), hummingbird sage (*Salvia spathacea*), mugwort (*Artemisia douglasiana*), western bracken fern (*Pteridium aquilinum*), coffee fern (*Pellaea andromedaefolia*), and miner's lettuce (*Claytonia perfoliata*). The understory of the oak woodlands contain several native grass and grass-like species including blue wild-rye (*Elymus glaucus*), Coast Range melic (*Melica imperfecta*), leafy bent-grass (*Agrostis pallens*), foothill sedge (*Carex tumulicola*), and common rush (*Juncus effusus*). Shrubs in the understory include ocean spray (*Holodiscus discolor*), California coffeeberry (*Rhamnus californica*), spiny redberry (*Rhamnus crocea*), western poison oak (*Toxicodendron diversilobum*), and sticky monkey flower (*Mimulus aurantiacus*).

Baccharis Scrub

The dominant plant of this community is coyote brush (*Baccharis piluaris*). The baccharis scrub areas are located near the riparian areas and slopes along the eastern edge of the property.

Sensitive plant species that may occur within this habitat type include Napa false indigo, Toro manzanita, Congdon's tarplant, Jolon clarkia, Butterworth's buckwheat (*Eriogonum butterworthianum*), Pinnacles buckwheat, Santa Lucia bedstraw (*Galium clementis*), pale-yellow layia, Indian Valley bush-mallow, hooked popcornflower, and Hickman's checkerbloom. Sensitive wildlife species that may occur within this habitat type include California red-legged frog, California tiger salamander, Coast Range newt, American peregrine falcon, bank swallow, Cooper's hawk, long-eared owl, sharp-shinned hawk, big-eared kangaroo rat (*Dipodomys venustus elephantinus*), and Salinas pocket mouse.

Landscaped

A majority of the project site that is proposed for development consists of areas of non-native landscaping and disturbance-adapted non-native plants. A large area of lawn dominated by non-native Kikuyu grass (*Pennisetum clandestinum*) is located in the middle of the currently developed areas. Other common landscaping plants include: Peruvian pepper tree (*Schinus molle*), African daisy (*Osteospermum fruticosum*), pink cosmos (*Cosmos binnatus*), jade plant (*Crassula argentea*), Japanese honeysuckle (*Lonicera japonica*), and regal geranium (*Pelargonium domesticum*).

Sensitive wildlife species that may occur within this habitat type include American peregrine falcon, bank swallow, Cooper's hawk, long-eared owl, prairie falcon, sharp-shinned hawk, and white-tailed hawk.

Eucalyptus

Red gum (*Eucalyptus camalsulensis*) and blue gum (*Eucalyptus globulous*) trees are present scattered thoroughout the project site, close to the currently developed areas. Dense aggregations are present in the southeast portion of the project site. These trees provide potential roosting and breeding habitat for birds. Sensitive wildlife species that may occur within this habitat type include Cooper's hawk and long-eared owl.

Palm Trees

A major feature of the developed area is the stand of non-native Mexican fan palms (*Washingtonia robusta*). The palms provide nesting habitat for a number of bird species, and are also used as granary trees by the acorn woodpecker (*Melanerpes formicivorus*). Sensitive wildlife species that may occur within this habitat type include Cooper's hawk, long-eared owl, and sharp-shinned hawk.

Aquatic Features

The project site is located in an arid region where drainages are typically ephemeral to intermittent. Only larger streams or those with major springs flow perennially. Paraiso Springs Resort, being a hot springs resort, is situated in an area with a naturally high groundwater table. However, upstream of the main springs and historic resort, the creek and surrounding lands are quite dry and the creek shows no signs of recent flows of any

significance. The creek likely only flows after larger rain events or prolonged storms upstream of the resort, and even then for short durations. Due to the lack of hydrology upstream of the resort, no defined riparian habitat exists along the creek in that area. The upper creek zone is dominated by scattered oak and bay trees and occasional buckeyes, but no willows or other trees typifying a true riparian zone occur (WRA Environmental Consultants, April 2013c).

However, in the vicinity of the resort there are active seeps and evidence of higher groundwater. From the resort downstream to the property boundary, the creek is perennial and supports some areas of riparian habitat. This riparian habitat is patchy and farther downstream toward the eastern property boundary it becomes more established and ubiquitous along the stream margin (WRA Environmental Consultants, 2013c).

Willow Riparian

The riparian community on the eastern portion of the project site is associated with the intermittent stream. Dominant tree species are California sycamore (*Plantanus racemosa*) and arroyo willow (*Salix lasiolepis*) with some non-native Mexican fan palm and Peruvian pepper trees. The understory is a mixture of mostly non-native grasses and forbs and also contains the non-native invasive species tree tobacco (*Nicotiana glauca*) and castor bean (*Ricinus communis*).

Sensitive plant species that may occur within this habitat type include umbrella larkspur and Norris' beard moss. Sensitive wildlife species that may occur within this habitat type include California red-legged frog, California tiger salamander, Coast Range newt, American peregrine falcon, bank swallow, Cooper's hawk, long-eared owl, sharp-shinned hawk, white-tailed kite, and Monterey dusky-footed woodrat.

Pond

A pond is located near the eastern entrance of the project site and is fed by water from the hot springs. The edges of the pond contain cattails (*Typha angustifolia*), slough sedge (*Carex obnupta*), and non-native water-loving weeds such as curly dock (*Rumex crispus*). The surface of the water is covered with duckweed (*Lemna* sp.). The area surrounding the pond consists of non-native annual grasses and forbs. Sensitive wildlife species that may occur within this habitat type include California red-legged frog, California tiger salamander, Coast Range newt, and bank swallow.

Seasonal Wet Seep/Wetland

The seasonal wet seep/wetland habitat is located in the middle of weedy annual grasslands. The seasonal wetland usually does not contain standing water, but the soil shows evidence of seasonal saturation and supports creeping wild-rye (*Leymus triticoides)*, common rush, spreading rush (*Juncus patens*), as well as non-native aquatic adapted plants including curly dock.

Sensitive wildlife species that may occur within this habitat type include American peregrine falcon, bank swallow, Cooper's hawk, long-eared owl, prairie falcon, sharp-shinned hawk, and white-tailed kite.

Developed Areas

The developed areas consist of existing structures and bare soil/roads. The structures are generally located in the eastern portion of the project site, whereas roads extend into the western portion. The buildings currently on the project site are listed above under Project Setting.

Special Status Plant Species

Based on the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) query, many special status plant species were determined to have potential to occur at the project site. However, focused field surveys conducted on the project site have found no evidence of any of these special status species.

An EMC Planning Group biologist updated the database searches for the CNDDB (CDFW 2013) and California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (CNPS 2013) for the Palo Escrito Peak, Soledad, North Chalone Peak, Sycamore Flat, Paraiso Springs, Greenfield, Junipero Serra Peak, Reliz Canyon, and Thompson Canyon U.S. Geological Survey (USGS) quadrangles. The biologist also reviewed the current USFWS list of protected species for Monterey County (USFWS 2013). This updated information confirmed that changes in common and scientific nomenclature and/or listing status, along with changes in special status species occurrences (occurrences for several new species documented) in the project vicinity had occurred since the original database searches were performed. An analysis of the additional ten special status species was therefore conducted by Regan Biological and Horticultural Consulting, and reviewed and incorporated into this report by EMC Planning Group, so they are now included in the table below along with the nomenclature and listing status changes for all applicable species. It should be noted that the great blue heron (*Ardea herodias*) and woven-spored lichen (*Texosporium sancti-jacobi*) were also on the updated CNDDB search list, but were not added to the tables or analyzed in this report because they have no protection status.

Table 3.3-2, Special Status Plant Species in the Project Vicinity, provides a summary of the CNDDB and CNPS database queries and project site survey results.

Special Status Wildlife Species

Based on the CNDDB queries, many special status wildlife species occur in the project vicinity quadrangles. Of these, the pallid bat, hoary bat, Yuma myotis, western red bat, and the Monterey dusky-footed woodrat were observed within the project site by Rana Creek. Table 3.3-3, Special Status Wildlife Species in the Project Vicinity, provides a summary of the CNDDB queries and project site survey results.

Table 3.3-2 Special Status Plant Species in the Project Vicinity

Common Name Scientific Name	Status	Habitat	Potential to Occur on Site	Found on Site
Bristlecone [Santa Lucia] fir *Abies bracteata*	CNPS 1B	Bristlecone [Santa Lucia] fir is located on steep rocky slopes in mixed evergreen forest located between 688-5,249 feet in elevation. Outer South Coast ranges, Santa Lucia range.	Habitat not located at the project site.	No
Napa false indigo *Amorpha californica* var. *napensis*	CNPS 1B	Napa false indigo is located in wooded shrubby or open slopes, or chaparral, below 7,545 feet in elevation. Flowers May to June.	Potential habitat at the project site.	No
Toro [Monterey] manzanita *Arctostaphylos montereyensis*	CNPS 1B	Toro [Monterey] manzanita is typically located in chaparral, coastal scrub, cismontane woodland, and sandy soils, with chaparral associates. Flowers January to March.	Potential habitat at the project site	No
Round-leaved filaree *California macrophylla*	CNPS 1B	Round-leaved filaree is located in open areas, grasslands, and scrub below 3,937 feet. Flowers January to March.	Potential habitat at the project site	No
Santa Cruz Mountains pussypaws *Calyptridium parryi* var. *hesseae*	CNPS 1B	Sandy soils in chaparral, oak woodland, and coniferous forest; 1965 feet to 3440 feet. Usually found in southwest San Francisco Bay/Santa Cruz Mountains area. Flowers May to August.	Not expected to occur. Outside known geographic and elevation range of species. Recorded in project vicinity from high elevation Junipero Serra Peak area in Ventana Wilderness, exact location unknown.	No
Lemmon's jewel-flower *Caulanthus lemmonii*	CNPS 1B	Lemmon's jewel-flower is located on dry exposed slopes, in chaparrel and coastal scrub. Found from 80 to 800 meters. Flowers March to May.	Potential habitat at the project site	No
Congdon's tarplant *Centromadia parryi* ssp. *congdonii*	CNPS 1B	Congdon's tarplant is typically located in seasonally wet grasslands below 328 feet in elevation. Flowers June to November.	Potential habitat at the project site	No
Monterey spineflower *Chorizanthe pungens* var. *pungens*	FT, CNPS 1B	The Monterey spineflower is typically found in sandy areas along the California coast from Monterey to San Francisco. It is a prostrate annual with basal leaves, grayish hairy stems up to one foot long, and dense, head-like clusters of minute white flowers within a six-parted, greenish floral envelope, each segment of which ends in a recurved spine.	Potential habitat at the project site.	No

Common Name Scientific Name	Status	Habitat	Potential to Occur on Site	Found on Site
Robust spineflower *Chorizathe robusta* var. *robusta*	FE, CNPS 1B	The robust spineflower is typically located in cismonte woodland at about 1,640 feet in elevation. Flowers April to July.	Potential habitat at the project site.	No
Jolon clarkia *Clarkia jolonensis*	CNPS 1B	Jolon clarkia occurs in closed-cone coniferous forest and coastal scrub on decomposed shale (mudstone) mixed with humus, at elevations of 98 to 820 feet. Flowers April to June.	Habitat not located at the project site.	No
San Francisco collinsia *Collinsia multicolor*	CNPS 1B	Usually found on coastal slopes in moist, shady, north-facing closed-cone coniferous forest and coastal scrub. Associated with decomposed shale (mudstone) and humus. Sea level to 1000 feet. Flowers March to May.	Not expected to occur. Habitat not located at the project site. Occurrence record in project vicinity is in foothills west of King City.	No
Umbrella larkspur *Delphinium umbraculorum*	CNPS 1B	Shaded woodland slopes. Eastern Santa Lucia range. Flowers May to June.	Potential habitat at the project site	No
Norris' beard moss *Didymodon norrisii*	CNPS 2	Cismonte woodland and lower montane coniferous forest. 656 to 1,968 feet.	Potential habitat at the project site	No
Butterworth's buckwheat *Eriogonum butterworthianum*	CR, CNPS 1B	Dry sandstone openings in coastal scrub and chapparal. Typically occurs between 2,132 to 2,296 feet. Flowers June to July.	Potential habitat at the project site	No
Pinnacles buckwheat *Eriogonum nortonii*	CNPS 1B	Rocky sandy slopes. Typically located at 984 to 2,296 feet in elevation. Flowers May to June.	Potential habitat at the project site.	No
Santa Lucia bedstraw *Galium clementis*	CNPS 1B	Outer South Coast ranges. North-facing slopes, open woodlands. Typically located at 3,608 feet to 5,839 feet.	Potential habitat at the project site	No
Santa Lucia dwarf rush *Juncus luciensis*	CNPS 1B	Wet, sandy soils of seeps, meadows, vernal pools, and streams from 980 to 6230 feet. Flowers April to July.	Not expected to occur. Outside known geographic range of species. Known in project vicinity from Junipero Serrra Peak area at about 2300 feet in elevation.	No
Pale-yellow layia *Layia heterotricha*	CNPS 1B	Cismonte woodland, coastal scrub, pinyon and juniper woodland, and valley and foothill grassland. Typically occurs at 984 to 5,577 feet in elevation.	Potential habitat at the project site.	No

Common Name Scientific Name	Status	Habitat	Potential to Occur on Site	Found on Site
Indian Valley bush-mallow *Malacothamnus aboriginum*	CNPS 1B	Rocky slopes, chaparral; inner South Coast ranges. Typically occurs between 492 to 5,577 feet in elevation. Flowers March to September.	Potential habitat at the project site.	No
Davidson's bush-mallow *Malacothamnus davidsonii*	CNPS 1B	Slopes and washes. Chaparral, cismontane woodland, and coastal scrub. 606 to 2,805 feet.	Potential habitat at the project site.	No
Arroyo Seco bush-mallow *Malacothamnus palmeri* var. *lucianus*	CNPS 1B	Chaparral. Dry rocky slopes, mostly near summits, but occasionally extending down canyons.	Potential habitat at the project site.	No
Santa Lucia bush-mallow *Malacothamnus palmeri* var. *palmeri*	CNPS 1B	Chaparral. Dry rocky slopes, mostly near summits, but occasionally extending down canyons. Typically occurs between 196 to 1,197 feet.	Potential habitat at the project site.	No
Carmel Valley malacothrix *Malacothrix saxatilis* var. *arachnoidea*	CNPS 1B	Rocky open banks and road cuts. Chaparral and costal scrub.	Potential habitat at the project site.	No
Kellman's bristle moss *Orthotrichum kellmanii*	CNPS 1B	Closed-cone coniferous forest and chaparral, on sandstone outrcrops overlooking the Pacific Ocean.	Habitat not located at the project site.	No
Hooked popcornflower *Plagiobothrys uncinatus*	CNPS 1B	Canyon sides, chaparral, cismonte woodland, and valley and foothill grassland. Gabilan and Santa Lucia Mountains from 984 to 2493 feet. Flowers April to May.	Potential habitat at the project site.	No
Chaparral ragwort *Senecio aphanactis*	CNPS 2	Drying alkaline flats in chaparral, cismontane woodland, and coastal scrub. Sea level to 1700 feet. Flowers January to April.	Not expected to occur. Habitat not located at the project site. Occurrence in project vicinity is in Pinnacles National Monument area.	No
Hickman's checkerbloom *Sidalcea hickmanii* ssp. *hickmanii*	CNPS 1B	Openings in chaparral; prefers dry ridges; 1100 to 3930 feet in Outer South Coast ranges (Santa Lucia Range, Monterey County). Flowers May to July.	Not expected to occur. Outside known geographic and elevation range of species (in project vicinity, found in Santa Lucia Range at elevations of 2400 to 5400 feet).	No

Notes:
FE: Federally Listed Endangered
FT: Federally Listed Threatened
SR: State-listed Rare
CNPS: California Native Plant Society rare plant rank classification:
1B. Rare or Endangered in California and elsewhere
2. Rare or Endangered in California, more common elsewhere

Table 3.3-3 Special Status Wildlife Species in the Project Vicinity

Common Name Scientific Name	Status	Habitat	Potential to Occur on Site	Found on Site
Invertebrates				
Arroyo Seco short-tailed whipscorpion *Hubbardia secoensis*	CSA	Arroyo Seco short-tailed whipscorpion is typically located on rock undersurfaces on granite cliff talus in moist, lush oak canyons.	Potential habitat	No
Pinnacles shieldback katydid *Idiostatus kathleenae*	CSA	Known only from Pinnacles National Monument. Found there in bottom of broad arroyo, where stream is usually dry by mid-July. *Baccharis* spp., *Erigonum fasciculatum*, and *Adenostoma fasciculatum* abundant.	Potential habitat	No
Bay checkerspot butterfly *Euphydryas editha bayensis*	FT	The Bay checkerspot bufferfly is typically located on native grasslands on outcrops of serpentine soil in the vicinity of the San Francisco Bay.	No habitat	No
Pinnacles optioservus riffle beetle *Optioservus canus*	CSA	Pinnacles optioservus riffle beetle is an aquatic beetle. Found on rocks and in gravel of riffles in cool, swift, clear streams.	No habitat	No
Ubick's leptonetid spider *Calileptoneta ubicki*	CSA	Known only from the type locality in Arroyo Seco, Monterey County. One male taken under granite.	No habitat	No
Monterey socalchemmis spider *Socalchemmis monterey*	CSA	Known only from localities in Monterey County: Los Padres National Forest, Arroyo Seco, and Cone Peak trail.	Habitat requirements unknown	No
Tulare cuckoo wasp *Chrysis tularensis*	CSA	Found in Arroyo Seco Camp.	Habitat requirements unknown	No
Fish				
Steelhead – south/central California coast DPS (Distinct Population Segment) *Oncorhynchus mykiss irideus*	FT, CSC	Spawns in the spring in cool or cold streams with a gravel bottom, and clear and swift-running water.	No habitat	No
Amphibians				

Common Name Scientific Name	Status	Habitat	Potential to Occur on Site	Found on Site
California red-legged frog *Rana draytonii*	FT, CSC	California red-legged frog is typically located in the lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to upland habitat.	Potential habitat Potential breeding site	No
California tiger salamander *Ambystoma californiense*	FT, CT	California tiger salamanders are typically located in grassland and open woodland habitats. Need underground refuges, especially ground squirrel burrows, and vernal pools or other season water sources for breeding. This amphibian was historically distributed throughout most of the Central Valley, adjacent foothills, Coast Ranges, Santa Barbara County, and the Santa Rosa Plain in Sonoma County.	Potential habitat Potential breeding site	No
Coast Range newt *Taricha torosa*	CSC	Coast Range newt is typically found in open woodland habitats. Need underground refuges, especially ground squirrel burrows, and vernal pools or other seasonal water sources for breeding.	Potential habitat Potential breeding site	No
Reptiles				
Silvery legless lizard *Anniella pulchra pulchra*	CSC	Occurs in moist, warm, loose soil with plant cover. Moisture is essential. Occurs in sparsely vegetated areas of beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks. Leaf litter under trees and bushes in sunny areas and dunes stabilized with bush lupine and mock heather often indicate suitable habitat.	Marginally suitable potential habitat. However, this habitat is located outside the proposed impact areas, in sandy soil along the terrace of the spring-fed drainage channel. No potentially significant impacts to this species are expected.	No
San Joaquin whipsnake *Masticophis flagellum ruddocki*	CSC	Open, dry habitat with little or no tree cover. Found in valley grassland and saltbush scrub in the San Joaquin Valley.	Potential habitat	No

Common Name Scientific Name	Status	Habitat	Potential to Occur on Site	Found on Site
Western pond turtle *Emys marmorata*	CSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation. Inhabits permanent or nearly permanent bodies of water in many habitat types below 5,905 feet. Requires basking sites such as partially submerged logs, vegetation mats, or open mud banks and suitable upland habitat (sandy banks or grassy open fields) for egg-laying.	Marginal potential habitat	No
Coast horned lizard *Phrynosoma blainvillii*	CSC	Inhabits open areas of sandy soil and low vegetation in valleys, foothills and semiarid mountains from sea level to 8,000 feet in elevation. Found in grasslands, coniferous forests, woodlands, and chaparral, with open areas and patches of loose soil. Often found in lowlands along sandy washes with scattered shrubs and along dirt roads, and frequently near ant hills.	Potential habitat. However, the most suitable habitat is located away from the impact areas. Given the low probability of occurrence in impact areas, and because this animal would vacate the area ahead of construction activities, any potential project impact would be less than significant.	No
Birds				
Cooper's hawk *Accipiter cooperii*	CSA	Woodlands, chiefly of open, interrupted or marginal type. Nest sites mainly in riparian growths of deciduous trees.	Potential foraging habitat	No
Long-eared owl *Asio otus*	CSC	Riparian bottomlands with tall willows and cottonwoods.	Potential foraging habitat	No
Sharp-shinned hawk *Accipiter striatus*	CSA	Ponderosa pine, black oak, riparian deciduous, mixed coniferous, and Jeffery pine habitats. Pefers riparian areas. North-facing slopes, with plucking perches are critical requirements. Nests usually within 278 feet of water.	Potential foraging habitat	No

Common Name Scientific Name	Status	Habitat	Potential to Occur on Site	Found on Site
Golden eagle *Aquila chrysaetos*	CFP	Occurs in a variety of habitats including forests, canyons, shrub lands, grasslands and oak woodlands. Nests are constructed on platforms on steep cliffs or in large trees.	Potential foraging habitat. However, the low potential for project impacts due to the loss of minimal potential foraging habitat is less than significant.	No
Burrowing owl *Athene cunicularia*	CSC	Nesting habitat consists of open areas with mammal burrows. They use a wide variety of arid and semi-arid environments, with well-drained, level to gently sloping areas characterized by sparse vegetation and bare ground.	Potential habitat	No
White-tailed kite *Elanus leucurus*	CFP	Rolling foothills and valley margins with scattered oaks, and river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	Potential foraging habitat	No
American peregrine falcon *Falco peregrinus anatum*	CFP	Typically located near wetlands, lakes, rivers, or other waters; on cliffs, banks, dunes, and mounds; also human-made structures.	Potential foraging habitat	No
California condor *Gymnogyps californianus*	FE/CE	Usual habitat is mountainous country at low and moderate elevations, especially rocky and brushy areas with cliffs available for nest sites. Foraging habitat includes grasslands, oak savannas, mountain plateaus, ridges, and canyons. Condors often roost in snags or tall open-branched trees near important foraging grounds.	Marginally suitable potential foraging habitat. However, this closely monitored species is not known to occur near (within 10 miles of) the project site; it is not expected to be impacted by the project. No nesting/roosting habitat is present on the site.	No
Bank swallow *Riparia riparia*	CT	Colonial nester. Nests primarily in riparian and other lowland habitats. Requires vertical banks/cliffs with fine-textured soils near streams, rivers, lakes, or ocean to dig nesting holes.	Potential foraging habitat	No

Common Name Scientific Name	Status	Habitat	Potential to Occur on Site	Found on Site
Prairie falcon *Falco mexicanus*	CSA	Dry, open terrain, either level or hilly. Breeding sites located on cliffs. Forages far afield, even to marsh and ocean shores.	Potential foraging habitat	No
Mammals				
Pallid bat *Antrozous pallidus*	CSC	Deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must provide some protection.	Nesting in the workshop and hillside cabins	Yes
Monterey dusky-footed woodrat *Neotoma macrotis luciana*	CSC	Forest habitats of moderate canopy and moderate to dense understory.	Nesting in riparian areas on eastern portion of the site	Yes
Hoary bat *Lasiurus cinereus*	CSA	Prefers open habitat mosaics with access to trees for cover, and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Requires water.	Detected in the lower Indian Valley	Yes
Yuma myotis *Myotis yumanensis*	CSA	Optimal habitat is open forests and woodlands with sources of water over which to feed. Distribution is closely tied to bodies of water. Maternity colonies occur in caves, mines, buildings, or crevices.	Detected in palm trees near hot springs, the eastern portion of the workshop building, and in lower Indian Valley	Yes
Western red bat *Lasiurus blossevillii*	CSC	Roosts primarily in trees, 2 to 40 feet above the ground, from sea level up to mixed coniferous forests. Prefers habitat edges and mosaics with trees that are protected from above and open below, and open areas for foraging.	Detected in lower Indian Valley	Yes
American badger *Taxidea taxus*	CSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Need sufficient food (e.g. borrowing rodents), friable soils, and open uncultivated ground.	Potential habitat	No
Big-eared kangaroo rat *Dipodomys venustus elephantinus*	CSC	Chapparal-covered slopes of the southern part of the Gabilan range, in the vicinity of Pinnacles National Park. Forages under shrubs and in the open. Burrows for cover and for nesting.	Potential habitat	No

Common Name Scientific Name	Status	Habitat	Potential to Occur on Site	Found on Site
Fringed myotis *Myotis thysanodes*	CSA	A wide variety of habitats; optimal habitats are pinion juniper, valley foothill hardwood, and hardwood-coniferous. Uses caves, mines, buildings, or crevices for maternity colonies and roosts.	Potential habitat	No
Long-eared myotis *Myotis evotis*	CSA	Found in all brush, woodland, and forest habitats from sea level to approximately 8,858 feet. Prefers coniferous woodlands and forests. Nursery colonies in buildings, crevices, spaces under bark, and snags. Caves used primarily as night roosts.	Potential habitat	No
Salinas pocket mouse *Perognathus inornatus psammophilus*	CSC	Annual grassland and desert shrub communities in the Salinas Valley. Fine-textured, sandy, friable soils. Burrow for cover and nesting.	Potential habitat	No
Townsend's big-eared bat *Corynorhinus townsendii*	CSC	A wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limited. Extremely sensitive to human disturbance.	Potential habitat	No
Western mastiff bat *Eumops perotis californicus*	CSC	Many open, semi-arid to arid habitats, including coniferous and deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in crevices in cliff faces, high buildings, trees, and tunnels.	Potential habitat	No
Western small-footed myotis *Myotis ciliolabrum*	CSA	Wide range of habitats; mostly arid woody and brushy uplands near water. Seeks cover in caves, buildings, mines and crevices. Prefers open stands in forests and woodlands. Requires water.	Potential habitat	No
San Joaquin kit fox *Vulpes macrotis mutica*	FE, CT	Annual grassland and desert scrub communities in the Salinas Valley. Fine-textured sand, friable soils. Burrows for cover and nesting.	Not expected to occur due to current geographic range of species. Not observed in project vicinity since 1975.	No

Notes:
FE: Federally listed as Endangered
FT: Federally listed as Threatened
CSA: California Special Animal – refers to all taxa the CDFW is interested in tracking, regardless of their protection status (includes Watch List species)
CSC: CDFW Species of Special Concern
CFP: CDFW Fully Protected Animal
CE: Listed as Endangered in California
CT: Listed as Threatened in California

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3.3.3 Regulatory Background

Federal

Endangered Species Act of 1973 (16 U.S.C § 1531 et Seq.)

The Endangered Species Act (ESA) provides a program for the conservation of threatened and endangered plants and animals and the habitats in which they are found. Section 7 of the federal ESA requires federal agencies, in consultation with the Secretary of the Interior, to ensure that their actions do not jeopardize the continued existence of endangered or threatened species, or result in the destruction or adverse modification of critical habitat of these species. Federally listed and proposed listed terrestrial species fall under the jurisdiction of the U.S. Fish and Wildlife Service (USFWS) and aquatic species fall under the jurisdiction of the National Marine Fisheries Service (NMFS).

The ESA contains provisions for the protection of plant and animal species formally listed, proposed for listing, or candidates for listing as endangered or threatened species. The ESA prohibits the harassment and unauthorized take of a listed species or habitat known to support a listed species. The ESA also contains measures regarding the establishment of critical habitat for listed species. Critical habitat is defined in the ESA as a specific geographic area that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. The ESA requires that projects that occur in areas of designated critical habitat do not adversely modify critical habitat to the point that it will no longer aid in the species' recovery.

Clean Water Act Sections 404 and 401 (33 U.S.C. §§ 1341-1344; California Water Code § 13160)

Section 401 of the Clean Water Act (CWA) requires that any project applying for a federal license or permit obtain a certification from the State to ensure that any fill or other discharge into “Waters of the United States” is in compliance with applicable effluent discharge limitations. Section 404 of the CWA protects "Waters of the United States" from discharge of fill material. Waters of the United States are defined broadly as waters susceptible to use in commerce (i.e. waters used for navigation, shellfish production), including interstate waters and wetlands, all other waters (intrastate water bodies, including wetlands), and their tributaries (33 CFR § 328.3). The scope of CWA jurisdiction covers areas that are defined by either an “ordinary high water mark” (e.g. streams, ponds, and lakes) or are determined to meet the definition of a “wetland” or other “special aquatic site” based on physical and biological factors. Both are referred to as “Waters of the United States”. Federal jurisdiction under the CWA extends to those “Waters of the United States” that are adjacent to, directly connected to, or have a "significant nexus" to navigable waters. Federal jurisdiction under Section 404 of the CWA does not include wetlands, waters, or streams that are isolated or that do not have a significant nexus to navigable waters[5].

[5] Based on U.S. Supreme Court decisions in Solid Waste Agency of Northern Cook County (SWANCC) v. U.S. Army Corps of Engineers (2001), known as “SWANCC”, and Rapanos v. United States and Carabell v. United States (2006), known as “Rapanos”

The U.S. Army Corps of Engineers (USACE) San Francisco District oversees the implementation of Section 404 of the CWA for the site. In order to obtain approval for unavoidable impacts to federal jurisdictional wetlands, streams, or ponds, the proposed project will need to obtain a permit from the USACE as required by Section 404 of the CWA. Prior to issuing a Section 404 CWA permit for the project site, the USACE must determine if the issuance of that permit has the potential to affect species, or affect habitat for species, that are listed under the ESA, pursuant to Section 7 of the ESA. Because the proposed project will be required to apply for a Section 404 permit, a Section 401 permit will also be required. The Regional Water Quality Control Board (RWQCB) for the Central Coast (Central Coast RWQCB) is responsible for implementing Section 401 of the CWA for the site. To comply with Section 401 of the CWA, the proposed project will need to apply for a Certification of Waste Discharge Requirements from the RWQCB.

Migratory Bird Treaty Act (16 U.S.C. § 703-712)

The Migratory Bird Treaty Act (MBTA) of 1918 implements various treaties and conventions between the U.S. and Canada, Japan, Mexico, and the former Soviet Union for the protection of migratory birds. Under the MBTA, taking, killing, or possessing migratory birds is unlawful. There are no known migratory wildlife corridors in the project vicinity. Hence, the proposed action would not interfere with the movement of any native or migratory bird or with established migratory corridors. If construction activity occurs during the avian (bird) nesting/breeding season (i.e., February 1 through September 15), and nests are observed within the project area, a pre-construction survey will be conducted to determine the presence of any birds that are protected by the MBTA. If MBTA-protected active bird nests are present, then construction will be delayed until the young have fledged. The site may support breeding birds that fall under the MBTA.

State

California Endangered Species Act (Fish and Game Code § 2081(b)

Under the California Endangered Species Act (CESA), the California Department of Fish and Wildlife (CDFW) has the responsibility for maintaining a list of threatened and endangered species and fully protected species (California Fish and Game Code Section 2070). The CDFW also maintains a list of “candidate species,” which are species that the CDFW has formally noticed as being under review for addition to either the list of endangered species or the list of threatened species. The CDFW also maintains lists of “species of special concern”. Pursuant to the requirements of CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any state-listed endangered or threatened species may be present in the project area and determine whether the proposed project will have a potentially significant impact on such species. In addition, CDFW encourages informal consultation on any proposed project that may impact a candidate species.

State of California Porter Cologne Act (California Water Code §§ 13260, 13263)

The Porter-Cologne Act protects "Waters of the State", defined as "any surface water or groundwater, including saline waters, within the boundaries of the state [of California]" from discharge of fill material (California Water Code, Division 7, § 13050 and 13376). “Waters of the State” include all “Waters of the United States” that are within federal

jurisdiction under Section 404 of the CWA, as well as wetlands, streams, and ponds that are considered isolated by the USACE. Under new proposed guidelines, RWQCB jurisdiction would extend to the top of the bank or edge of riparian habitat, whichever is further. The California State Water Quality Control Board (SWQCB) is responsible for the implementation of the Porter-Cologne Act. The Central Coast RWQCB is responsible for implementation of the Porter-Cologne Act for the project site. Pursuant to the Porter-Cologne Act, the project is required to obtain a Certification of Waste Discharge Requirements from the Central Coast RWQCB for any placement of fill in "Waters of the State". Application for a Certification of Waste Discharge Requirements from the RWQCB covers both the Porter-Cologne Act and Section 401 of the CWA.

California Fish and Game Code

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, any take of fully protected species is prohibited.

Sections 1600-1607 of the California Fish and Game Code regulate streams and associated riparian habitat. The CDFW implements these sections of the Code through the Lake and Streambed Alteration Program. Any impacts to streams (regulated from the top of bank) or riparian habitat in California must receive approval through a Lake and Streambed Alteration Agreement from CDFW. The CDFW is also responsible for regulating habitats designated as sensitive in the California Natural Diversity Database (CNDDB), including wetlands, streams, and other sensitive habitats.

Oak Woodlands Conservation Act (Senate Bill 1334)

Effective January 1, 2005, County governments statewide must comply with Senate Bill 1334, which requires mitigation for projects with significant oak woodland impacts. This Act was incorporated into the California Public Resources Code (PRC) Section 21083.4 in 2005. A project with significant oak woodland impacts must conform to both the state's mandated program that establishes habitat mitigation standards, as well as local conservation measures adopted by the applicable County.

California Environmental Quality Act (CEQA)

CEQA requires complete review of projects within the State of California undertaken or permitted by any State or local agency. CEQA requires review of species and communities regulated by the above listed statutes. In addition, species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations or by the CDFW or the USFWS may also meet the CEQA definition of rare. Impacts to plant species listed on the CNPS Rare Plant Rank List 1B or List 2 in the Inventory of Rare and Endangered Plants of California (CNPS 2013) must also be

evaluated. The contents of this report provide the necessary information for a complete review and disclosure of potential project impacts and mitigation for biological resources within the project site.

Local

Monterey County General Plan

The *Monterey County General Plan* was adopted by the Board of Supervisers in 1982. Goal 7 in the *Monterey County General Plan* aims to "preserve the diversity and conserve the extent of the County's native vegetation" and Goal 9 aims to "conserve the abundance and diversity of the County's wildlife." Listed below are policies that achieve these goals:

Policy 7.1.1 Development shall be carefully planned in, or adjacent to, areas containing limited or threatened plant communities, and shall provide for the conservation and maintenance of the plant communities.

Policy 7.2.1 Landowners and developers shall be encouraged to preserve the integrity of existing terrain and natural vegetation in visually sensitive areas such as hillsides and ridges.

Policy 7.2.2 Native and native compatible species, especially drought resistant species, shall be utilized to the extent possible in fulfilling landscaping requirements imposed as conditions of discretionary permits.

Policy 9.1.1 Development shall be carefully planned in areas known to have particular value for wildlife and, where allowed, shall be located so that the reasonable value of the habitat for wildlife is maintained.

Policy 9.1.2 Development shall be carefully planned in areas having high value for fish and wildlife reproduction.

Central Salinas Valley Area Plan

The *Central Salinas Valley Area Plan* contains the following policies applicable to the proposed project:

11.1.6 (CSV) The County shall identify environmentally sensitive habitat areas which are unique, limited, and fragile resources; and promote conservation of these habitat areas within the Central Salinas Valley.

Monterey County Tree Preservation Ordinance

Monterey County Code Section 21.64.260 provides regulations for the protection of oak and other specific types of trees as required by the Monterey County General Plan, area plans, and master plans. Native oak trees six inches in diameter when measured two feet above the ground are protected under these regulations. Oaks which are 24 inches or greater in diameter are considered "landmark trees" and are afforded additional protection measures.

3.3.4 Analytical Methodology and Significance Threshold Criteria

Methodology

To evaluate the biological resources found or potentially occurring within the project site, database reviews were conducted, and biologists conducted extensive field studies on the project site. Descriptions of the database reviews and field studies are provided below.

Literature and Database Reviews

Special status species include those plant and wildlife species that have been formally listed, are proposed as endangered and threatened, or are candidates for such listing under the federal ESA or CESA. These Acts afford protection to listed threatened or endangered species. In addition, Fully Protected Species under Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code; CDFW Species of Special Concern, which are wildlife species that face extirpation in California if current population and habitat trends continue; USFWS Birds of Conservation Concern; sensitive species included in USFWS Recovery Plans; and CDFW special status invertebrates are considered special status species. Although CDFW Species of Special Concern generally have no protective legal status, they are given special consideration under the CEQA.

In addition to regulations governing listed, candidate, and fully protected species, most birds in the United States, including non-special status species, are protected by the MBTA. Under this legislation, destroying active nests, eggs, and young is illegal. Plant species listed on the CNPS Rare Plant Rank Lists 1B and 2 are also considered special status species. Impacts to these plant species are considered significant according to the CEQA.

The CNDDB and CNPS inventory were queried to identify known or potential populations of special status plant and animal species that have been documented in the project vicinity. The National Wetlands Inventory was also queried to locate aquatic habitat within five miles of the project site.

Field Investigations

Rana Creek conducted field surveys between December 12, 2002 and March 11, 2003. Additional surveys were conducted in May 2005. The timing of the surveys was adequate to assess the habitat types and potential presence of special status species of plants and animals. Visual surveys were conducted by walking throughout the property and focusing on structures, streamside areas, and portions of the site that interfaced with surrounding un-developed areas. The project site was inspected for sensitive species and communities. Plant identification was validated using The Jepson Manual and An Illustrated Guide to the Flowering Plants of Monterey County. The surveys and associated vegetation mapping were conducted using a global positioning system (GPS) survey unit in conjunction with an aerial photograph.

In March and April 2008, Rana Creek Habitat Restoration conducted additional field assessments, which included the following:

- Searching for individuals of sensitive species, including those listed in the CNDDB search results;

- Conducting focused surveys for sensitive plant surveys, with timing appropriate for locating target species in new herbaceous growth, bloom, or fruiting stages;
- Searching for diagnostic animal signs (e.g., nests, tracks);
- Examining burrows and any other special habitat features;
- Taking representative photographs of the project site; and
- Visually assessing wetland boundaries.

In March and April 2008, habitat assessments for the California tiger salamander and California red-legged frog were conducted including nighttime visual encounter spotlight surveys for amphibians. These surveys followed the night survey methodology in the USFWS California red-legged frog protocol. In June 2008, a larval survey for amphibians was also completed.

WRA Environmental Consultants surveyed the site on January 5-6, 2009 and prepared a Section 404 wetland delineation to assess potential wetlands and "other waters" subject to federal and/or state jurisdiction under Section 404 of the Clean Water Act, Section 401 of the Clean Water Act, and the Porter Cologne Act. WRA Environmental Consultants also visited the site on January 24, 2012 to assess biological resources along the proposed road widening area.

Central Coast Bat Research Group conducted surveys for sensitive bat species in March and July 2008. All of the buildings currently on the project site were investigated to determine if bats are using the structures for day roosting, night roosting, or maternity roosts. The day roost and maternity roost assessments were conducted during the day. Any bat presence signs such as guano, staining, or culled insect parts were identified and quantified, when possible. Acoustic monitoring was also done to collect acoustic files of the echolocation calls of bats. The Anabat system is commonly used for the survey of bats and is effective at identifying many bat species. The Anabat system uses a bat detector to detect bat ultrasonic echolocation calls in the field and a zero-crossing unit to convert the detected signals into frequency/time graphs. The graphs allow for bat species identification. Species are identified by their vocal signature graphs by comparing calls recorded during previous mist-netting activities, calls recorded from bats that are visually identified at the time of recording, and by comparing calls with existing bat vocal signature library databases. Anabat acoustic detector units were deployed around the project area and ran four consecutive nights (March 13 to March 17, 2008).

Forest City Consulting conducted a site assessment in 2005 to determine the type and number of trees present within the project site, as well as the condition of the trees, and prepared a Forest Management Plan.

Biological Consulting Services conducted California tiger salamander and California red-legged frog protocol-level spring surveys in 2010. Regan Biological and Horticultural Consulting assessed the site for several special-status species in 2013. Finally, WRA Environmental Consultants assessed proposed riparian impacts and CH2M HILL Engineers assessed the proposed stream channel modifications in 2013.

Significance Threshold Criteria

In accordance with CEQA, State CEQA Guidelines, agency and professional standards, a project impact would be considered significant if the project 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 CDFW or USFWS.
- 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 CDFW or USFWS.
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- 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.
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- Conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Communities Conservation Plan (NCCP), or other approved local, regional, or state HCP.

Impact Analysis

Table 3.3-4, below, shows vegetation types on the project site under existing and proposed conditions. Values are approximate and shown in acres.

Potential Disturbance of Special Status Plant Species

The dominant vegetation type present on the project site is Diablan sage scrub. Other major vegetation types include mixed hardwood forest, annual grassland, oak woodland, and baccharis scrub. As shown below in Table 3.3-4, Existing Vegetation Types and Proposed Impacts within the Project Site, the main vegetation types that would be impacted by the proposed project include annual grassland and oak woodland. As shown in Table 3.3-2, Existing Special Status Plant Species in the Project Vicinity, no special status plant species with potential to occur were found within the project site during focused surveys conducted by Rana Creek between December 12, 2002 and March 11, 2003; in May 2005; and in March and April 2008. Therefore, no special status plant species are known to be present on the site, and implementation of the proposed project is not anticipated to result in impacts to any special status plant species.

Table 3.3-4 Existing Vegetation Types and Proposed Impacts within the Project Site

Vegetation Type	Existing Conditions (acres)	Proposed Conditions (acres)	Vegetation Impacted by Proposed Project (acres)
Annual Grassland	28.41	7.91	20.5
Baccharis Scrub	7.65	4.95	2.70
Diablan Sage Scrub	117.38	114.68	2.70
Eucalyptus	1.54	0.54	1.00
Landscaped	2.85	0.65	2.20
Landscaped – Lawn	3.48	2.28	1.20
Mixed Hardwood Forest	39.62	38.62	1.00
Mixed Oak/Landscape Trees	1.11	0.61	0.50
Oak Woodland	22.60	13.80	8.80
Palm Trees	0.48	0.18	0.30[1]
Pond	0.45	0.45	0.00
Riparian	2.05	1.45	0.60
Seasonal Wet Seep	0.21	0.00	0.21
Wetland	0.08	0.00	0.08
Total	***227.91***	***186.12***	***41.79***

Source: EMC Planning Group 2013, Rana Creek 2003

Note: The Applicant has indicated that all palm trees will be removed. Therefore, this acreage is 0.00.

Potential Disturbance of Special Status Animal Species

Impact 3.3-1: The proposed project provides highly suitable habitat for special status bat species, Monterey dusky-footed woodrat (*Neotoma macrotis luciana*), and burrowing owl (*Athene cunicularia*). Though not observed on the site, several other special status animal species also have the potential to be impacted by the project, as outlined in Table 3.3-3. Project activities may result in harm to special status animals during vegetation removal, grading, building demolition, and equipment movement. This is considered a potentially significant impact. (Less than Significant with Mitigation)

Occurrences of four special status bat species [pallid bat (*Antrozous pallidus*), hoary bat (*Lasiurus cinereus*), western red bat (*Lasiuris blossevillii*), and Yuma myotis (*Myotis yumanensis*)], as well as the Monterey dusky-footed woodrat, were found within the project site during surveys conducted by Rana Creek. Also, although the species was not observed on the site, potential burrowing owl habitat is present (Regan Biological and Horticultural Consulting 2013) and this species has been observed in the project vicinity in 2007 at three locations in the nearby Soledad area (CDFW 2013). Project activities such as vegetation removal, grading, building demolition, and equipment movement may result in unanticipated harm to these special status animal species.

Special-Status Bats. Central Coast Bat Research Group surveyed all of the buildings within the project site to determine if the bats were using the structures for day roosting, night roosting, or maternity roosting. The Central Coast Bat Research Group observed the following bat species within the buildings at the project site: pallid bat, hoary bat, western red bat, Yuma myotis, California myotis (*Myotis californicus*), long-legged myotis (*Myotis volans*), and big brown bat (*Eptesicus fuscus*).

The CDFW protects non-listed bat species and their roosting habitat, including individual roosts and maternity colonies. Refer to California Fish and Game Code Section 86; 2000; 2014; 3007; 4150; and Title 14 of California Code of Regulations. If harmed during building demolition, grading, and/or construction activities at the project site, potential impacts to protected bat species would be considered potentially significant. Implementation of the following mitigation measure would reduce this impact to a less than significant level.

Mitigation Measure

MM 3.3-1a Prior to initiation of project activities including, but not limited to, vegetation, snag, or tree removal and demolition of structures within the project site, or loud construction-related noise within the work area, the project applicant shall implement the following measures:

- Conduct pre-construction surveys for bats over a minimum of four visits at least 15 days prior to the beginning of tree/vegetation removal, building demolition, and other project activities, to determine if the area is being actively utilized by bats for spring/summer maternity colonies (usually from April to September). All structures within the project site shall be surveyed with the exception of the house trailers, fire equipment room, and the main pump house. These surveys shall also include determining if any trees or buildings marked for removal have characteristics that make them suitable bat roosting habitat (e.g., hollows, broken limbs, crevices, etc.). For any trees/snags that could provide roosting space for bats, thoroughly evaluate the trees/snags to determine if a colony is present prior to trimming or cutting. Visual inspection and acoustic surveys may be utilized as initial techniques. Removal of any native riparian tree shall be preceded by a thorough visual inspection of foliage to reduce the risk of displacing or harming roosting bats. If no roosting bats are observed, no further mitigation would be required.
- If a tree or structure is determined not to be an active roost site, it may be immediately trimmed or removed. If the tree or structure is not trimmed or removed within four days of the survey, repeat night survey efforts.
- Removal of occupied trees/snags or structures shall be mitigated for by the installation of a snag or other artificial roost structure within suitable habitat located in the project site, outside the impact area. With the input from a professional bat specialist and coordination

with the CDFW, alternative roost structure(s) shall be designed and installed to provide suitable habitat for evicted or displaced bats. Depending on the species, artificial roost structures may not be appropriate. If necessary, coordinate with the CDFW for acceptable mitigation alternatives.

- Protect maternity colonies that have pre-volant young (not yet able to fly). If active bat roosts are observed during the maternity roosting season, the roost shall not be disturbed until after all juvenile bats are able to fly from the roost. The project biologist must confirm there are no pre-volant young present before a colony is displaced. It is assumed that after September 1, colonies have no pre-volant young.
- Coordinate with the CDFW and a biologist that is permitted to handle special status bats to develop appropriate exclusion methods if necessary. The California Fish and Game Code stipulates that bats may be excluded from occupied roosts during two time periods; between September 1 and October 15, and between February 15 and April 15. If bats are found roosting within these time frames, it may be necessary to passively exclude them from trees or structures scheduled for removal. If necessary, prior to initiating project activities, passive exclusion methods shall be installed for a minimum of two weeks and monitored by a qualified biologist within the appropriate time frames above. At a minimum, monitoring efforts shall include conducting acoustic and evening emergence surveys.

Monterey Dusky-Footed Woodrat (*Neotoma macrotis luciana*). The Monterey dusky-footed woodrat is a CDFW 'Species of Special Concern'. During the assessment of the project site by Rana Creek, four Monterey dusky-footed woodrat nest/house structures were found within the willow riparian habitat at the project site, which is not located within the development footprint/impact area of the proposed project. However, Monterey dusky-footed woodrats could potentially move into the development footprint in the interim between the surveys and project implementation. Vegetation/tree removal, clearing activities, demolition of existing man-made structures, and initial ground disturbing activities may destroy potential refuge sites and entrap or kill woodrats, which would be considered a potentially significant impact. Implementation of the following mitigation measure would reduce this impact to a less than significant level.

Mitigation Measure

MM 3.3-1b The project applicant shall have a qualified biologist examine the impact area for Monterey dusky-footed woodrat nests before and during any initial vegetation, woody debris, and/or tree removal, or other initial ground disturbing activities. If a woodrat nest/house structure is encountered in the area of disturbance, avoid disturbing the structure or evicting the individuals. The project applicant shall coordinate with the CDFW to establish protective buffer widths around the structures and install exclusion zones around each structure before initiating tree/vegetation removal and ground disturbing activities. If a woodrat is incidentally encountered in the work area and does not voluntarily move

out of the area, a biological monitor, with the appropriate CDFW permits, shall be on call during project activities to relocate the animal out of the construction area to the nearest safe location (as approved and authorized by the CDFW). Woodrats shall not be handled without prior agency authorization from the CDFW. If project activities cannot avoid any existing, underground, or unidentified woodrat nest structure in the work area, notify and coordinate with the CDFW to develop appropriate avoidance and/or alternative habitat creation and recovery strategies.

Burrowing Owl (*Athene cunicularia*). The burrowing owl is a CDFW "Species of Special Concern." During the assessment of the project site by Regan Biological and Horticultural Consulting in 2013, no burrowing owl was observed, but suitable habitat is present on the site for the species, and it is known to occur in the project vicinity in the nearby Soledad area.

Suitable burrowing owl habitat includes annual and perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Suitable owl habitat may also include trees and shrubs if the canopy covers less than 30 percent of the ground surface. Burrows are the essential component of burrowing owl habitat: both natural and artificial burrows provide protection, shelter, and nests. Burrowing owls typically use burrows made by fossorial mammals, such as ground squirrels or badgers, but also may use man-made structures, such as cement culverts; cement, asphalt, or wood debris piles; or openings beneath cement or asphalt pavement (Regan Biological and Horticultural Consulting 2013).

The project site has a number of potential burrowing owl habitat areas where ground squirrel burrows are apparent on south-facing slopes along main access paths and roads adjacent to the existing buildings. Implementation of the following mitigation measure would reduce potential impacts to this species to a less than significant level.

Mitigation Measure

MM 3.3-1c The County project applicant shall have a qualified biologist conduct a two-visit (i.e. morning and evening) burrowing owl presence/absence pre-construction survey at areas of suitable habitat on and adjacent to the proposed impact area no less than 14 days prior to the start of construction. Surveys shall be conducted according to methods described in the Staff Report on Burrowing Owl Mitigation (CDFW 2012). If pre-construction "take avoidance" surveys performed during the breeding season (February through August) or the non-breeding season (September through January) for the species locate occupied burrows near the construction area, then consultation with the CDFW would be required to interpret survey results and develop project-specific avoidance and minimization approaches.

Other Special Status Animals. Although not observed on the project site, due to the presence of suitable habitat, several other special status animals as identified in Table 3.3-3 have low potential to occur on the site. If present, there is a possibility that they may be directly impacted by project construction activities. This does not apply to nesting

bird species, which are addressed separately below. Implementation of the following mitigation measure would reduce potential impacts to these special status animal species to a less than significant level.

Mitigation Measure

MM 3.3-1d The project applicant shall have a qualified biologist conduct construction monitoring during intial ground disturbance activities, so that if any special status animals are encountered within the impact area, they can be detected and avoided during construction and allowed to passively relocate outside the impact area. If animals are in immediate danger due to construction and a special handling permit is not required for that species, then the monitoring biologist shall relocate the animal(s) to a safe area on the site, outside the project impact area.

California Tiger Salamander and California Red-Legged Frog Potential Habitat

California red-legged frog and California tiger salamander were not observed within the project site during protocol assessments and surveys. Although the project site provides suitable habitat for these species, the site does not contain USFWS-designated critical habitat areas and several factors have contributed to reducing the potential habitat quality for these species and their likelihood to be present at the project site. Therefore, these species are not expected to occur and therefore no adverse impacts to them are expected due to project implementation.

Protocol habitat assessments and night visual encounter surveys were conducted in March and April 2008 for California red-legged frog and California tiger salamander at the project site by Rana Creek. The assessments included evaluating the potential habitat within the site for both aquatic and upland habitat as outlined in the USFWS protocol for these species. No special status species were found during the surveys. The project site appears to provide suitable habitat for California red-legged frog and California tiger salamander, but certain factors including the water quality of the pond may have reduced habitat quality for these species and their likelihood to occur on the project site.

A man-made, mud-bottom pond that is approximately 0.1-acre in size is located at the eastern end of the project site. The pond was covered approximately 80 percent with emergent vegetation, the majority of which was cattails. The pond dries in May or June during years of average rainfall. The pond was filled with rainwater at the time of the spring 2008 survey, but used to be fed by water coming from the hot springs on the property, as was the case during the 2003 survey. A small drainage fed by spring water runs north-south near the pond. Overhanging riparian vegetation was present around the drainage, which held 1.5 inches of slow-moving water. A small water seep was observed outside of the property boundary, past the eastern fence line. This seep had little standing water and was located beneath large oak trees.

Water samples were taken from the pond and results showed elevated levels of dissolved solids, sulfates, fluoride, and exceptionally high levels of iron and magnesium with a low pH (indicating acidity). One Pacific treefrog (*Pseudacris regilla*) egg mass, as well as mosquito larvae were observed during the survey conducted in March 2008. Approximately 50 Pacific treefrogs and one western toad (*Bufo boreas*) were heard and

observed in the pond during the night survey. A larval survey conducted on June 3, 2008 found no amphibian larvae, and no juvenile or adult Pacific treefrogs, western toads, or special status species.

The pond appears to provide breeding habitat for amphibians given that mating Pacific treefrogs and egg masses were observed there. The project site pond, drainage, and nearby uplands appear to provide potentially suitable habitat for both California red-legged frog and California tiger salamander. However, no eggs, tadpoles, juveniles, or adults of these special status species have been located on the property. Whereas the required habitat components for these species appear to be present, the likelihood they are present on the project site is substantially reduced by the following factors:

- Chemical properties of the pond: During the time when the pond was being filled by hot spring water, the high mineral content of the water and other chemical factors may have prevented amphibians from breeding or reduced their breeding success. Over the years of water filling and evaporation, there appears to be an increasing concentration of minerals and salts as indicated by the water quality test samples, which may explain why no amphibians were observed during the 2003 surveys.
- Hydroperiod and depth of the pond: In years of normal rainfall, the pond appears to go dry around May or June, which is an ideal situation for California red-legged frog and California tiger salamander. However, the large amount of emergent vegetation at the pond may contribute to early drying of the pond, which would lead to desiccation and death of amphibian eggs and larvae before they undergo metamorphosis and the animals can move away from the pond.
- Known localities of California red-legged frog and California tiger salamander: The CNDDB reveals that the closest documented California red-legged frog and California tiger salamander occurrences are greater than 9 miles from the project site. Current known extremes of travel between breeding and upland areas for these two species are one mile and 3.1 miles, respectively.
- Absence of any amphibian species during the June larval survey: During the June larval survey conducted by Rana Creek, no larval stage or metamorphs of any kind of amphibian were observed. A survey of a different off-site pond, similar to the pond located within the project site, revealed substantial larval activity, despite low depth and rapid desiccation of the pond.

California red-legged frog and California tiger salamander are not expected to occur on the project site based on the following facts: California red-legged frog and California tiger salamander were not observed within the project site during the focused surveys conducted by Rana Creek; the high mineral content of the water and other chemical factors may have prevented amphibians from breeding or reduced their breeding success; the high amount of vegetation within the pond may lead to desiccation and death of amphibian eggs and larvae before they undergo metamorphosis; and the distance to the nearest documented California red-legged frog and California tiger salamander occurrences. Therefore, the proposed project would have no adverse impact on these species, and no mitigation is warranted.

Substantial Adverse Effect on Protected Wetlands/Waterways and Associated Riparian Habitat

Impact 3.3-2:	The project site contains approximately 0.82-acre of wetlands and 3,983 linear feet of waterways that may be considered USACE/RWQCB/CDFW jurisdictional waters, along with associated riparian habitat under jurisidiciton of the CDFW. The proposed project has been designed to avoid the majority of the wetlands on the project site; however, project implementation would result in the loss of approximately 0.16-acre of wetlands on the project site. Disturbance of these wetlands during construction of the proposed project would be a significant impact. Also, proposed project components including the installation of new bridges, culvert removals, and pond installation in the main drainage channel; these stream modifications would have a substantial adverse effect on the jurisdicitional stream channel and associated riparian habitat. This would also be a significant impact. (Less than Significant with Mitigation)

Wetland Research Associates (WRA) Environmental Consultants conducted a wetland delineation of the project site in January 2009 to assess the presence of potential wetlands and waterways subject to federal and/or state jurisdiction under Section 404 of the Clean Water Act, Section 401 of the Clean Water Act, and under the Porter Cologne Act. A total of 0.82-acre of wetlands and 3,983 linear feet of waterways that may be considered jurisdictional under Section 404 of the Clean Water Act were delineated within the project site. These areas may also be considered state wetlands under Section 401 of the Clean Water Act and Porter Cologne Water Quality Act. The wetland areas include riparian waterways, seasonal wetlands, and freshwater marsh dominated by hydrophytic vegetation. These areas also contained hydric soils and wetland hydrology indicators. Additionally, some of the wetland areas are adjacent to tributaries of a navigable "Waters of the U.S." and therefore meet the definition of jurisdictional wetlands and "other waters" under Section 404 of the Clean Water Act.

Based on the USACE regulatory guidance issued following the Rapanos decision, there are no drainages within the project site that meet the definition of a perennial Relatively Permanent Water (RPW). A blue-line drainage flows through the project site to the Arroyo Seco River, a RPW. The drainage flows through the project site into the Salinas Valley where it is conveyed via agricultural drainage ditches and several culverts to the Arroyo Seco River. The Arroyo Seco River is located approximately six miles downstream from the project site. After this confluence, the Arroyo Seco River flows into the Salinas River, a Traditional Navigable Water (TNW), approximately 8.82 river miles (5.74 air miles) from the project site. No significant barriers to flow are visible on aerial photographs along the Arroyo Seco to its confluence with the Salinas River.

Wetlands in the project site have either direct surface connections with the drainage or are connected to the drainage through overland or groundwater flows as they are situated within 150-250 feet of the drainage.

The blue-line drainage supports riparian vegetation within the lower half of, and downstream of the project site. The bottom substrates of this drainage are sand, cobble, and bedrock. The drainage is not known to support special status species.

"The upper half of the stream flows on a very intermittent basis with shallow water depths…The existing stream banks are heavily vegetated with native and non-native vegetation; vegetation is denser in the lower portion of the stream, where a small amount

of hot-springs runoff flows constantly. Existing vegetation includes mature trees, shrubs and grasses/weeds. With the exception of those portions of the stream currently contained in culverts, the existing riparian vegetation provides a significant root structure that helps stabilize the stream banks and appears to have successfully limited stream bank erosion and migration for many years" (CH2M HILL Engineers 2013c).

While the proposed project was designed to avoid impacting the majority of wetland features within the project site, the proposed project would result in impacts to approximately 0.16-acre of jurisdictional wetlands. These areas are considered low-quality seasonal wetlands that are dominated by non-native invasive Bermuda grass (*Cynodon dactylon*). These wetlands occur in landscaped lawn areas of the site and are regularly maintained via mowing. The remaining 0.66-acre of wetland located within the project site would be avoided by the proposed project. The non-impacted wetlands include the higher quality riparian and freshwater marsh wetlands which have diverse assemblages of native herbs, shrubs, and trees which provide habitat for a variety of wildlife species.

Impacts to the 0.16-acre of jurisdictional wetlands at the project site would however be considered a significant impact. As the proposed project would result in impacts to less than half an acre of non-tidal wetlands, it would qualify under the USACE Nationwide Permit (NWP) program. In addition, the project applicant would be required to prepare a Storm Water Pollution Prevention Plan (SWPPP) according to Mitigation Measure 3.5-5a to ensure that the proposed project does not result in the sedimentation of the wetlands proposed for preservation on the site.

The existing intermittent stream channel present on the site includes 3,983 linear feet of jurisdictional Waters of the U.S.; however, the existing wetland delineation report for the project was based on preliminary site plans and assumed no impact to this jurisdictional stream channel (WRA Environmental Consultants 2009). The current site plans would cause the following potentially significant impacts to federally- and state-regulated stream channel resources and riparian habitats of this stream channel on the project site. For all proposed stream channel modifications, it is estimated that no more than 0.2-acre of impacts to riparian vegetation (predominantly willows) will result from the construction of bridges, removal of culverts, and construction of an in-stream pond (WRA Environmental Consultants 2013c).

Riparian habitat adjacent to the drainage includes oak woodlands and willow stands that may be impacted in several discreet areas (WRA Environmental Consultants 2013b). A stream channel assessment was conducted for proposed impacts to riparian vegetation associated with the construction of new bridges, culvert removals, and creation of an in-stream pond. The three proposed bridges include one near the eastern end of the site (most downstream), one near the middle of the site, and one near the western end of the site (most upstream). In addition, the project includes the removal of a short culvert where the existing main entrance road crosses the creek, and the removal of a much longer culvert farther upstream where an in-stream pond is also proposed (WRA Environmental Consultants 2013c).

Impacts Associated with Installation of Three New Bridges

Two stream channel crossings for new roadways are proposed, consisting of approximately 50-foot-long clear-span concrete slab bridges on pile foundations. Rock slope protection will be installed on the channel banks beneath and approximately 25 feet upstream and downstream of the bridge abutments for erosion and scour protection, and disturbed channel areas will be revegetated with native grasses via hydroseeding (CH2M HILL 2013b and 2013c). A third bridge of similar design will also cross the proposed new pond, described below (CH2M HILL 2013b and 2013c).

The installation of the three new bridges will require three areas of rock armoring (i.e., rip-rap) to be installed in and around the bridges to serve as bank protection. The amount of rip-rap necessary is estimated, based on the Stream Channel Setback Plan (CH2M HILL 2012b), to be approximately 1,125 cubic feet (125 linear feet by three feet deep by three feet wide).

"The lower bridge is farthest downstream in the project area and will be the main stream crossing on the new entrance road…the downstream portion of the creek is the wettest and supports the most well-defined riparian corridor. In the vicinity of the proposed bridge, the riparian habitat is dominated by an overstory of willows with California blackberry, snowberry, and poison oak dominating the understory. Oak trees are the predominant tree above the top of bank in this area. The riparian corridor is approximately 100 feet wide where the bridge is proposed (with slightly more of the habitat on the southern side of the creek which is situated lower than the northern bank). Assuming a 75-foot-wide bridge, the impact to riparian habitat in this area would be 7,500 square feet (less than 0.2 acres). The exact number of willow trees that will need to be removed is difficult to say since the exact layout of the bridge has not been determined but it is anticipated that less than five in total will be removed, and maybe as few as one or two" (WRA Environmental Consultants 2013c).

"The middle bridge is proposed in a portion of the stream channel which is currently culverted and is proposed for restoration as part of the reconstruction. The existing vegetation in this area would not be considered riparian" (WRA Environmental Consultants 2013c).

"The upper bridge is proposed in an area where the creek channel is ephemeral with infrequent flow events. Vegetation in this area is dominated by oak trees with poison oak and scrub habitat (dominated by California sage and black sage). These dry-habitat species even occur within the channel banks themselves which is further indication of the arid nature of the upstream habitats. Therefore, no impacts to riparian vegetation will occur through the upper bridge installation" (WRA Environmental Consultants 2013c).

These direct impacts to jurisdictional in-channel and adjacent riparian habitat resources will require permits from the USACE, CDFW, and RWQCB. The impact of these features will also require the applicant to provide compensatory mitigation as stipulated in the required permits.

Impacts Associated with Removal of Culverts

For the removal of existing small diameter metal culverts, the stream channel bed and banks would be reconstructed to match the existing channel section adjacent to the culvert removal areas, and disturbed channel areas would be revegetated with native grasses (CH2M HILL 2013b and 2013c). Within most areas proposed for culvert removal, the drainage channel will be restored and native vegetation will be planted. However, within a 300-foot section of the channel, an in-stream pond will be created and filled using the overflow from the spring as discussed further below (WRA Environmental Consultants 2013b).

"The existing culvert along the main road is downstream of the resort proper thus the creek is perennial in this area. However the proximity of the culvert to the development has resulted in the planting of landscaped specimens in this area. The upstream portion of the culvert is relatively open with 1-2 palm trees present but the downstream portion of the culvert is dominated by a thicket of many non-native palms. Removal of the culvert and revegetating the area with native willows, California blackberry, and oaks above the top of bank will be a benefit to the creek system…Approximately 50 feet of stream can be restored in this reach through the culvert removal" (WRA Environmental Consultants 2013c).

"Where the creek is culverted for over 250 feet...this area represents the dividing line between the dry, upper portion of the creek and the lower, wetted portion. Upstream of the culvert there is minimal vegetation along the banks and no overstory trees to speak of. Downstream of the culvert outfall there is a large area dominated by arundo (an invasive creek species) and many non-native palm trees. A buckeye and several oaks were also observed in this vicinity however the non-native plants were dominant along the creek downstream of the culvert and no native riparian vegetation was observed. While the bridge and a turnaround will occupy portions of the restored bank in this area, other portions will be available for conducting riparian restoration. The daylighting of the 250+ feet of culvert…and providing some riparian restoration in this area will provide enhanced aquatic functions and values to the riparian corridor" (WRA Environmental Consultants 2013c).

The proposed culvert removals within the drainage will require permits from the USACE, CDFW, and RWQCB. The impact of these features will also require the applicant to provide compensatory mitigation as stipulated in the required permits, some of which is the riparian restoration mentioned above as part of the project design.

Impacts Associated with Installation of a New Pond

The proposed new ornamental pond will have a surface area of approximately 15,000 to 20,000 square feet and a depth of 5 to 10 feet. It will be constructed in an area where the stream currently is contained in an existing culvert and will be connected to the existing stream channel at the westerly and easterly ends of the pond; the stream connections are anticipated to be graded transitions and armored with landscape-type amenities, such as boulders (CH2M HILL 2013c).

Because the new pond will be partially sited within the stream channel, it will require permits from the USACE, CDFW, and RWQCB. The impact of this feature will also require the applicant to provide compensatory mitigation as stipulated in the required permits.

Impacts Associated with Development Encroaching into 50-Foot Stream Setback

The project proposes new development within the County's 50-foot stream channel setback zone in several separate areas. Rock slope protection (rip-rap or bank armoring) was originally proposed in all development areas that would encroach into this setback zone; this erosion control would include a three-inch-thick rock lining of the low flow portion of the channel (CH2M HILL 2012b). However, this would greatly impact riparian vegetation, possibly causing erosion, and therefore recent site evaluation has instead proposed the following project design features:

- New erosion control measures, such as rock slope protection, shall be limited to the proposed stream crossings (bridges) and culvert removals, and existing riparian vegetation should be maintained as the primary erosion control feature in other areas (CH2M HILL 2013c).
- Rock slope protection or bio-mechanical erosion control measures shall be installed at new bridge abutments, and upstream and downstream of abutments for approximately 25 feet, to provide scour protection at these structures (CH2M HILL 2013c).
- Where new buildings encroach within 50 feet of the existing channel top of bank, building foundations shall be evaluated prior to final project design to determine if strengthening and/or deepening building foundations is necessary to provide additional protection from anticipated channel erosion or scour (CH2M HILL April 2013c).

The mitigation measures presented below would reduce potentially significant impacts to protected wetlands and jurisdictional stream channel resources (with associated riparian vegetation) to a less than significant level.

Mitigation Measures

MM 3.3-2a Prior to issuance of any County permits, or application to any other regulatory agency for permits, the applicant/developer shall prepare engineered civil plans specifically identifying the impacts to the on-site wetlands, stream channel, and riparian habitat resources. A biologist shall analyze this information and determine the extent of impacts to biological resources. The applicant/developer will have a qualified biologist or wetlands specialist update the 2009 project wetland delineation report to include the current construction plans, and show specific calculations of the amount of impacted jurisdictional wetlands, stream channel (bed and bank), and riparian habitat.

Once the impacts have been quantified, a qualified biologist shall develop a detailed mitigation program to provide compensation for anticipated project impacts to jurisdictional wetland and waterway resources. The mitigation program shall achieve no net loss of habitat values and

functions due to impacts to wetlands, the stream channel, and associated riparian habitat. The mitigation program shall include an agreement to continue to monitor and refine the mitigation effort until the success criteria as stated within the program is achieved.

MM 3.3-2b All necessary permits and agreements shall be obtained from the USACE, CDFW, and RWQCB prior to issuance of any County permits.

For all impacts to "Waters of the U.S." and other wetland features on the site under the jurisdiction of the USACE, CDFW, and/or RWQCB, agency permitting will be required along with compensatory replacement identified through the mitigation program required by mitigation measure 3.3-2a, above. The County of Monterey shall require that the project applicant prepare and submit a USACE Clean Water Act Section 404 Nationwide Permit application, a RWQCB Section 401 Water Quality Certification application, and a CDFW Section 1602 Streambed Alteration Agreement application. After the necessary regulatory permits are obtained, the proposed mitigation efforts shall be implemented according to all stipulated permit conditions.

The project applicant shall comply with all wetland/waterway/riparian habitat replacement requirements and/or impact minimization measures stipulated in the approved regulatory permits. All wetlands/waters and/or riparian habitat impacts must be fully mitigated, either through habitat replacement/restoration, habitat creation, or purchase of wetland/riparian habitat credits from an approved mitigation bank.

Disturb Wildlife Corridors or Migratory Bird Corridors

Impact 3.3-3: Implementation of the proposed project may result in temporary direct disturbance to nesting raptors and migratory birds, should they be present on the site near construction activities. This would be considered a potentially significant impact. (Less than Significant with Mitigation)

Construction activities that require disturbance of trees or other vegetation potentially containing active bird nests could cause direct impacts to nesting raptors and/or migratory birds. Disturbance of active nests within the project site would be considered a potentially significant impact that could lead to nest failure/abandonment. Construction could also result in noise, dust, increased human activity, and other indirect impacts to nesting raptors or migratory birds in the project vicinity. Potential nest abandonment, mortality to eggs and chicks, as well as stress from loss of foraging areas would also be considered a potentially significant impact. Implementation of the following mitigation measure would reduce this impact to a less than significant level.

Mitigation Measure

MM 3.3-3 The project applicant shall have a qualified biologist conduct nesting bird surveys no more than 30 days prior to ground disturbance or vegetation removal during the nesting season for local avian species (February 1 through September 15). The qualified biologist shall conduct a focused

survey for active nests of raptors and migratory birds within and in the vicinity of the construction area. If active nests are located during pre-construction surveys, the USFWS and/or CDFW (as appropriate) shall be notified regarding the status of the nests and any agency recommendations regarding nest avoidance measures shall be implemented by the project applicant and monitored by the qualified biologist. Furthermore, construction activities shall be restricted as necessary to avoid disturbance of the nest until it is no longer active. Restrictions may include establishment of exclusion zones (no ingress of personnel or equipment at a minimum radius of 100-feet around the nest, with distance to be determined by the qualified biologist) or alteration of the construction schedule. No action is necessary if construction will occur outside the nesting season.

Loss of Coast Live Oak Woodland Habitat and Oak Trees

Impact 3.3-4: Implementation of the proposed project would result in the permanent alteration of site conditions that would result in the removal of approximately 7.5 acres of coast live oak woodland habitat and up to 191 trees, including 185 protected oak trees. This is considered a significant impact. (Less than Significant with Mitigation)

The proposed project includes development of approximately 50 acres of the overall project site with 27 acres proposed for development of structures and hardscape, and 27 acres for landscaping. The project site contains an estimated 11,000 trees, the majority of which are oak trees. The woodland canopy of the project site is comprised of various species of oaks, mainly the coast live oak (*Quercas agrifolia*). The proposed project will require a use permit for the removal of approximately 191 trees, including 185 protected oak trees (Forest City Consulting 2005). This is equal to the proposed removal of 1.7 percent of the estimated number of on-site trees.

Of the protected oak trees proposed for removal, 86 trees have a diameter at breast height (DBH) of 6 to 11 inches; 67 trees have a DBH of 12 to 23 inches; and 32 trees have a DBH of at least 24 inches. Therefore, approximately 53 percent of the coast live oak trees proposed for removal are greater than 12 inches in DBH. Ten coast live oak trees or approximately 5.4 percent of the trees proposed for removal have been documented as in poor health - either dead, diseased, or an existing safety hazard (Forest City Consulting 2005). Five non-protected trees would also be removed including: two cypress (*Cupressus* sp.) trees that are dead, one pepper tree that has root rot, one willow with heart rot, and a blue gum eucalyptus with heart rot.

Tree removal at the project site is subject to the requirements of Section 21.64.260 of the Monterey County Zoning Ordinance (Title 21). According to the ordinance, no protected tree shall be removed without a use permit unless the trees are diseased or hazardous, as designated by a qualified forester, or exempt from the provisions of the ordinance.

Oak woodlands are also protected under the Oak Woodlands Conservation Act and PRC Section 21083.4. An oak woodland is any acre with a native oak species in the genus *Quercus* that has a diameter at breast height (DBH) of 5 inches or greater and is not

subject to timber harvest or exempt pursuant to Section 21083.4(d) of the PRC. Approximately 7.5 acres of coast live oak woodland habitat would be removed as a result of project implementation. This is considered a significant impact.

In addition to tree removal, oak woodland habitat and specific trees may experience adverse impacts during the construction activities at the project site. Construction activities associated with development of the proposed project may result in root system damage. Cutting or other damage to roots during excavation and soil compaction due to vehicle operation can both cause damage to the root system, thus reducing the tree's vigor and potentially leading to the death of the tree. Since the majority of the root system of a tree extends to its dripline, excavation or soil compaction within the dripline of protected trees could result in adverse effects, which is considered a potentially significant impact.

Implementation of the following mitigation measures would ensure that tree removal is in accordance with Section 21.64.260 of the Monterey County Zoning Ordinance and the Oak Woodlands Conservation Act/PRC Section 21083.4, and that those trees proposed for preservation are not adversely affected by construction activities associated with the proposed project.

Mitigation Measures

MM 3.3-4a Prior to the issuance of grading permits, the project applicant shall submit a Final Forest Management Plan for review and approval by the County that minimizes the removal of coast live oak (*Quercas agrifolia*) trees in accordance with the recommendations in the Forest Management Plan that was prepared for the proposed project by Forest City Consulting in July 2005. The Final Forest Management Plan shall be prepared by a County-approved arborist or forester, and shall include an oak tree restoration (mitigation and monitoring) plan that identifies the final number and acreage of protected oak trees to be removed during construction, and the replacement of these oak trees at an initial 3:1 ratio as a means of promoting minimum 1:1 long-term tree replacement in compliance with Section 21.64.260 of the Monterey County Zoning Ordinance and the Oak Woodlands Conservation Act/PRC Section 21083.4.

Tree replacement within the project site shall occur as appropriate in open space areas and shall not exceed more than 1 tree per 10 foot by 10 foot block of available space. If a specific lot does not allow for replanting of trees, then the project applicant shall have a qualified forester identify an alternate location for replanting on the project site. All trees shall be replaced with coast live oak trees obtained from on-site sources or shall be grown from local native seed stock in sizes not greater than five gallons, with one gallon or smaller being preferred to increase chances of successful adaptation to the project site conditions. Replacement trees shall be monitored and maintained for a minimum of seven years after planting. The oak tree restoration plan shall be subject to review and approval by the County.

MM 3.3-4b The project applicant shall implement the following tree protection best management practices during construction activities within the project site and include these measures on construction contracts for the proposed project, subject to review and approval by the County of Monterey Resource Management Agency-Planning Department:

- Prior to issuance of any permits, the Resource Management Agency – Planning Department shall review the project plans for impacts to protected oak trees. The review of these plans shall focus on adjusting the plans to minimize tree removal and to minimize impacts to trees proposed for retention.
- Construction activities shall be kept within the development area.
- A temporary physical barrier, (temporary fencing) shall be used to protect the forested area outside of the development area. All areas protected by the tree protection fence shall be considered off-limits during all stages of construction and shall not be used to park cars, store materials, pile debris, or place equipment.
- Specific trees to be retained located within the development area shall be surrounded by a fence at the outermost edge of the dripline, or at the limit of improvements where development is approved within the dripline.
- A qualified arborist or forester shall inspect the placement of the temporary protection fencing to ensure maximum protection of the retained trees before any heavy equipment is moved onto the site or any construction activities begin.
- Any construction activities or trenching within the areas protected by the tree protection fencing shall be done either by hand using hand equipment or under the supervision of a qualified arborist or forester. In such cases, roots over one inch in diameter shall not be cut or severed.
- When possible, utilities shall be placed in the same trench to minimize rootzone disturbance. Not more than one trench is permitted within the dripline of any tree.
- Roots encountered during trenching, grading, and excavation that are not to be retained will be cleanly cut to promote re-growth and to prevent increased damage from breaking the root closer to the tree than is necessary.
- When pruning trees for construction, branches subject to breakage shall be pruned when such pruning will not cause significant damage to the health and vitality of the tree. All recommended pruning shall be performed by a certified arborist or registered forester and occur prior to commencement of grading.
- All construction contracts for the proposed project shall include a provision for requiring that all contractors and subcontractors

performing work on the proposed project be given a copy of the Forest Management Plan and conditions of approval, and that they agree to implement the provisions of the Plan.

MM 3.3-4c To comply with the Oak Woodlands Conservation Act and PRC Section 21083.4, the tree replacement mitigation described above shall also apply to 50 percent of the 7.5-acre proposed impact to oak woodlands. The project applicant shall also contribute funds to the Oak Woodlands Conservation Fund, as established under subdivision (a) of Section 1363 of the Fish and Wildlife Code, for the purpose of purchasing oak woodlands conservation easements, as specified under paragraph (1) of subdivision (d) of that section and the guidelines and criteria of the Wildlife Conservation Board. This measure shall mitigate the remaining 50 percent of oak woodland impacts, equivalent to approximately 3.75 acres of oak woodland removal.

Implementation of the above mitigation measure would minimize the loss of coast live oak woodland habitat and removal of coast live oak trees in accordance with the Oak Woodlands Conservation Act and PRC Section 21083.4, and Section 21.64.260 of the Monterey County Zoning Ordinance. Therefore, the impacts to oak woodland habitat and oak trees would be reduced to a less than significant level.

Habitat Conservation Plans

The proposed project is not located within an area associated with an adopted Habitat Conservation Plan. Therefore there will be no impact associated with a Habitat Conservation Plan.

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3.4 CLIMATE CHANGE

3.4.1 Introduction

This section describes the scientific context for understanding the causes and effects of climate change, regulations designed to address climate change, the approach for addressing the potential effects of the proposed project on climate change, and the range of actions described in the proposed project that may be implemented to reduce the potential climate change impacts.

Information in this section used for analytical purposes is derived primarily from the following references and sources:

- *Climate Change Scoping Plan* (California Air Resources Board 2008)
- *Supplement to the AB 32 Scoping Plan Functional Equivalent Document* (California Air Resources Board 2011b)
- *Quantifying Greenhouse Gas Mitigation Measures* (California Air Pollution Control Officers Association 2010)

3.4.2 Environmental Setting

This section provides a general overview of climate change on a global scale.

Global Climate Change

Global climate change is a subject that has gained statewide, national and international attention. Reports released by the State of California indicate that climate change could have profound impacts on California's water supply and usage. In the report prepared by the California Climate Change Center, "Our Changing Climate: Assessing the Risks to California" (2006), the state's top scientists consider global warming to be a very serious issue requiring changes in resource, water supply, and public health management. Natural processes and human activities such as fossil fuel combustion, deforestation and other changes in land use are resulting in the accumulation of greenhouse gases (GHGs) such as carbon dioxide (CO_2) into the atmosphere. An increase in GHG emissions is said to result in an increase in the earth's average surface temperature, commonly referred to as global warming, which is expected to affect weather patterns, average sea level, ocean acidification, and precipitation rates.

California is a substantial contributor of global greenhouse gases, emitting a net of over 457 million tons of carbon dioxide (CO_2) equivalents (CO_2e) a year in 2009 (CARB 2011b). Greenhouse gases are global in their effect (CARB 2011c). Because primary greenhouse gases have a long lifetime in the atmosphere, accumulate over time, and are generally well mixed, their impact on the atmosphere is mostly independent of the point of emission. The State of California passed the Global Warming Solutions Act of 2006 (AB 32), which seeks to reduce GHG emission generated in California. AB 32 states:

> Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels

resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.

More information about AB32 is provided in the "Regulatory" section below.

Greenhouse gas emissions generated in Monterey County represent a small fraction of the statewide emissions inventory. In 2006, the County conducted a GHG emissions inventory as part of its general plan update (General Plan 2010). In 2006, 1,394,404 metric tons of CO_2e was estimated to have been generated in the County (Monterey County 2008, Table 4.3-11). As with most cities and counties in the state, the primary source of GHG emissions is the transportation sector (cars and trucks). These on-road sources of emissions accounted for about 46 percent of all emissions generated in the County compared with the approximately 15 percent of total emissions created by electricity generation, 14 percent by industrial processes, 14 percent from combustion of natural gas, eight percent from agricultural equipment fuel use, and two percent from landfill emissions.

Global Climate Change Gases

The natural process through which heat is retained in the troposphere[6] is called the "greenhouse effect." The greenhouse effect traps heat in the troposphere through a three fold process as follows: shortwave radiation emitted by the Sun is absorbed by the Earth; the Earth emits a portion of this energy in the form of longwave radiation; and greenhouse gases in the upper atmosphere absorb this longwave radiation and emit this longwave radiation both into space and back toward Earth. This "trapping" of the longwave (thermal) radiation emitted back toward the Earth is the underlying process of the greenhouse effect.

The most abundant greenhouse gases are water vapor and carbon dioxide. While many other trace gases have greater ability to absorb and re-radiate longwave radiation, these gases are not as plentiful in the atmosphere. For this reason, and to gauge the potency of greenhouse gases, scientists have established a Global Warming Potential for each greenhouse gas based on its ability to absorb and re-radiate longwave radiation.

Greenhouse gases include, but are not limited to, the following:[7]

- **Water Vapor (H2O).** Although water vapor has not received the scrutiny of other greenhouse gases, it is the primary contributor to the greenhouse effect. Natural processes, such as evaporation from oceans and rivers and transpiration from plants, contribute 90 percent and 10 percent of the

[6] The troposphere is the bottom layer of the atmosphere, which varies in height from the Earth's surface to 10 to 12 kilometers.

[7] All Global Warming Potentials are given as 100 year GWP. Unless noted otherwise, all Global Warming Potentials were obtained from the Intergovernmental Panel on Climate Change. Climate Change (Intergovernmental Panel on Climate Change, *Climate Change, The Science of Climate Change – Contribution of Working Group I to the Second Assessment Report of the IPCC,* 1996).

water vapor in our atmosphere, respectively. The primary human related source of water vapor comes from fuel combustion in motor vehicles; however, this is not believed to contribute a significant amount (less than one percent) to atmospheric concentrations of water vapor. The Intergovernmental Panel on Climate Change has not determined a Global Warming Potential for water vapor.

- **Carbon Dioxide (CO_2).** CO_2 is primarily generated by fossil fuel combustion in stationary and mobile sources. Since the start of the industrial revolution in about 1750, the concentration of CO_2 in the atmosphere has increased about 39 percent (EPA 2011). Carbon dioxide is the most widely emitted greenhouse gas and is the reference gas for determining Global Warming Potentials for other greenhouse gases. The Global Warming Potential of carbon dioxide is 1. In 2009, 86.1 percent of California's greenhouse gas emissions were carbon dioxide (CARB 2011b).
- **Methane (CH_4).** Methane is emitted from biogenic sources, incomplete combustion in forest fires, landfills, manure management, and leaks in natural gas pipelines. In the United States, the top three sources of methane come from landfills, natural gas systems, and enteric fermentation. The Global Warming Potential of methane is 21.
- **Nitrous Oxide (N_2O).** Nitrous oxide is produced by both natural and human related sources. Primary human related sources include agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic acid production, and nitric acid production. The Global Warming Potential of nitrous oxide is 310.
- **Hydrofluorocarbons (HFCs).** HFCs are typically used as refrigerants for both stationary refrigeration and mobile air conditioning. The use of HFCs for cooling and foam blowing is growing as the continued phase out of chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs) gains momentum. The Global Warming Potential of HFCs range from 140 for HFC-152a to 6,300 for HFC-236fa.
- **Perfluorocarbons (PFCs).** Perfluorocarbons are compounds consisting of carbon and fluorine. They are primarily created as a byproduct of aluminum production and semi conductor manufacturing. Perfluorocarbons are potent greenhouse gases with a Global Warming Potential several thousand times that of carbon dioxide, depending on the specific PFC. Another area of concern regarding PFCs is their long atmospheric lifetime (up to 50,000 years). The Global Warming Potential of PFCs range from 5,700 to 11,900. Energy Information Administration 2001.
- **Sulfur hexafluoride (SF_6).** Sulfur hexafluoride is a colorless, odorless, nontoxic, nonflammable gas. It is most commonly used as an electrical insulator in high voltage equipment that transmits and distributes electricity. Sulfur hexafluoride is the most potent greenhouse gas that has been evaluated by the Intergovernmental Panel on Climate Change with a Global Warming Potential of 23,900. However, its global warming

contribution is not as high as the Global Warming Potential would indicate due to its low mixing ratio compared to carbon dioxide (four parts per trillion [ppt] in 1990 versus 365 parts per million [ppm]). EPA 2006b.

In addition to the six major greenhouse gases discussed above (excluding water vapor), many other compounds have the potential to contribute to the greenhouse effect. Some of these substances were previously identified as stratospheric ozone depletors; therefore, their gradual phase out is currently in effect. The following is a listing of these compounds:

- **Hydrochlorofluorocarbons (HCFCs).** HCFCs are solvents, similar in use and chemical composition to CFCs. The main uses of HCFCs are for refrigerant products and air conditioning systems. As part of the Montreal Protocol, all developed countries that adhere to the Montreal Protocol are subject to a consumption cap and gradual phase out of HCFCs. The United States is scheduled to achieve a 100 percent reduction to the cap by 2030. The Global Warming Potentials of HCFCs range from 93 for HCFC-123 to 2,000 for HCFC-142b. EPA 2006d.
- **1,1,1 trichloroethane.** 1,1,1 trichloroethane or methyl chloroform is a solvent and degreasing agent commonly used by manufacturers. The Global Warming Potential of methyl chloroform is 110 times that of carbon dioxide. EPA 2006d.
- **Chlorofluorocarbons (CFCs).** CFCs are used as refrigerants, cleaning solvents, and aerosols spray propellants. CFCs were also part of the Environmental Protection Agency's Final Rule (57 FR 3374) for the phase out of O3 depleting substances. Currently, CFCs have been replaced by HFCs in cooling systems and a variety of alternatives for cleaning solvents. Nevertheless, CFCs remain suspended in the atmosphere contributing to the greenhouse effect. CFCs are potent GHGs with Global Warming Potentials ranging from 4,600 for CFC 11 to 14,000 for CFC 13. EPA 2006a.
- **Ozone (O3).** Ozone occurs naturally in the stratosphere where it is largely responsible for filtering harmful ultraviolet (UV) radiation. In the troposphere, ozone acts as a greenhouse gas by absorbing and re-radiating the infrared energy emitted by the Earth. As a result of the industrial revolution and rising emissions of oxides of nitrogen (NOX) and volatile organic compounds (VOCs) (ozone precursors), the concentrations of ozone in the troposphere have increased. Due to the short life span of ozone in the troposphere, its concentration and contribution as a greenhouse gas is not well established. However, the greenhouse effect of tropospheric ozone is considered small, as the irradiative forcing of ozone is 25 percent of that of carbon dioxide. Intergovernmental Panel on Climate Change 2007.

3.2.3 Regulatory Background

For projects being undertaken in California, the CEQA process is used as a primary tool in the analysis of climate change impacts. Government and agency guidance on climate change impact analysis methodology relevant to the proposed project is summarized below.

State

California Assembly Bill 1493

Assembly Bill (AB) 1493, passed in 2002, put in place GHG emissions standards for light trucks and automobiles. The standards were initially contested by the United States Environmental Protection Agency (EPA), but in June 2009, the EPA dropped its opposition to the standards. The standards cover model years 2012 to 2016 and raise passenger vehicle fuel economy to a fleet average of 35.5 miles per gallon (mpg) by 2016. California is committed to further strengthening these standards requiring a 45 percent GHG reduction from the 2020 model year vehicles. The standards are an important component of the state's effort to reduce GHG emissions.

California Executive Order S-3-05

In June 2005, Governor Schwarzenegger established California's greenhouse gas emissions reduction targets in Executive Order S-3-05. The Executive Order established the following goals: Greenhouse gas emissions should be reduced to 2000 levels by 2010; greenhouse gas emissions should be reduced to 1990 levels by 2020; and greenhouse gas emissions should be reduced to 80 percent below 1990 levels by 2050. The Secretary of the California EPA (the Secretary) is required to coordinate efforts of various agencies in order to collectively and efficiently reduce greenhouse gases. Some of the agencies involved in the greenhouse gas reduction plan include Secretary of Business, Transportation, and Housing Agency, Secretary of Department of Food and Agriculture, Secretary of Resources Agency, Chairperson of the CARB, Chairperson of the Energy Commission, and the President of the Public Utilities Commission. The Secretary is required to submit a biannual progress report to the Governor and State Legislature disclosing the progress made toward greenhouse gas emission reduction targets. In addition, another biannual report must be submitted illustrating the impacts of global warming on California's water supply, public health, agriculture, and the coastline and forestry, and reporting possible mitigation and adaptation plans to combat these impacts.

California Assembly Bill 32

The Legislature enacted AB 32, the California Global Warming Solutions Act of 2006, which Governor Schwarzenegger signed on September 27, 2006 to further the goals of Executive Order S-3-05. Assembly Bill 32 represents the first enforceable statewide program to limit greenhouse gas emissions from all major industries, with penalties for noncompliance. The CARB has been assigned to carry out and develop the programs and requirements necessary to achieve the goals of Assembly Bill 32. The foremost objective of the CARB is to adopt regulations that require the reporting and verification of statewide greenhouse gas emissions. This program would be used to monitor and enforce compliance with the established standards. The first greenhouse gas emissions limit is equivalent to the 1990 levels, which are to be achieved by 2020. The CARB is also

required to adopt rules and regulations to achieve the maximum technologically feasible and cost effective greenhouse gas emission reductions. Assembly Bill 32 allows the CARB to adopt market based compliance mechanisms to meet the specified requirements. Finally, the CARB is ultimately responsible for monitoring compliance and enforcing any rule, regulation, order, emission limitation, emission reduction measure, or market based compliance mechanism adopted. In order to advise the CARB, it must convene an Environmental Justice Advisory Committee and an Economic and Technology Advancement Advisory Committee.

In accordance with Assembly Bill 32, the CARB developed a Climate Change Scoping Plan that outlines the State's strategy to achieve the 2020 greenhouse gas emissions limit. The Scoping Plan includes a comprehensive set of actions designed to reduce overall greenhouse gas emissions in California. The Scoping Plan was adopted by the CARB in December 2008.

Key elements of the recommendations for reducing emissions to 1990 levels by 2020 include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewable energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation-related greenhouse gas emissions for regions throughout California, and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing State laws and policies, including California clean car standards, goods movement measures, and the Low Carbon Fuels Standards; and
- Creating targeted fees, including a public goods charge on water use fees on high global warming potential gases, and a fee to fund the administrative costs of the State's long-term commitment to AB 32 implementation.

Since the Scoping Plan was adopted, many of the measures included in it have been implemented or are in the process of being implemented. Among the most notable of the measures is California's cap-and-trade program. Under cap-and-trade, an overall limit on GHG emissions from capped sectors has been established and facilities subject to the cap will be able to trade permits (allowances) to emit GHGs. The program started on January 1, 2012, with an enforceable compliance obligation beginning with 2013 GHG emissions. The program applies to facilities that comprise 85 percent of the state's GHG emissions.

In August 2011, the CARB released a supplement to the AB 32 Scoping Plan Functional Equivalent Document (CARB 2011b). The Supplement was prepared to provide a more in-depth analysis of the five alternatives to the Scoping Plan that were originally included in that document. The supplemental analysis was conducted in response to litigation brought against CARB which challenged the adequacy of the alternatives analysis contained in the Scoping Plan. The Final Supplement includes an update of the business as usual GHG emissions projections that were contained in the Scoping Plan. The update

emissions projections consider the recent economic downturn and reduction measures from the original Scoping Plan that are already in place or in the process of implementation. The updated 2020 business as usual emissions forecast of 507 million metric tons of CO_2e ($MMTCO_2e$) is lower than that contained in the original 2008 Scoping Plan. With this forecast, only a 16 percent reduction below business as usual GHG emissions levels would be needed to return to the 1990 level of 427 $MMTCO_2e$ by 2020.

California Senate Bill 97

SB 97 was signed in August 2007. SB 97 directed OPR to prepare, develop, and transmit to the California Natural Resources Agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions by July 1, 2009. The Natural Resources Agency was required to certify or adopt those guidelines by January 1, 2010. SB 97 describes the CEQA process as an appropriate tool for addressing and mitigating global warming impacts from new development projects that are subject to CEQA.

In July 2009, the California Natural Resources Agency published proposed amendments of regulations based on OPR's proposed revisions to CEQA to address GHG emissions. Numerous comments were submitted and in December 2009, the Natural Resources Agency adopted the proposed amendments, which went into effect in March 2010. Among the highlights of the changes are: local agencies are encouraged to adopt their own thresholds of significance, climate action plans can be used as a basis to determine whether the climate change impacts of individual projects are significant, and modifications to Appendix G of the CEQA Guidelines as a basis to ensure integration of climate change considerations into the CEQA analysis process.

California Senate Bill 375

The Sustainable Communities and Climate Protection Act of 2008 enhances California's ability to reach its AB 32 goals by promoting good planning with the goal of more sustainable communities. CARB is tasked with developing regional greenhouse gas emission reduction targets for passenger vehicles. CARB is to establish targets for 2020 and 2035 for each region covered by one of the state's 18 metropolitan planning organizations. Many of the regional targets have been set.

Each of California's metropolitan planning organizations then prepare a "sustainable communities strategy" that demonstrates how the region will meet its greenhouse gas reduction target through integrated land use, housing and transportation planning. Once adopted by the metropolitan planning organization, the sustainable communities strategy will be incorporated into that region's federal enforceable regional transportation plan. CARB is also required to review each final sustainable communities strategy to determine whether it would, if implemented, achieve the greenhouse gas emission reduction target for its region. If the combination of measures in the sustainable communities strategy will not meet the region's target, the metropolitan planning organization must prepare a separate "alternative planning strategy" to meet the target. The alternative planning strategy is not a part of the regional transportation plan.

Sustainable Communities also establishes incentives to encourage implementation of the sustainable communities strategy and alternative planning strategy. Developers can get

relief from certain environmental review requirements under CEQA if their new residential and mixed-use projects are consistent with a region's sustainable communities strategy (or alternative planning strategy) that meets the target.

The Association of Monterey Bay Area Governments is the local metropolitan planning organization responsible for preparing a sustainable communities strategy that includes Monterey County. The Association of Monterey Bay Area Governments has begun the process, and anticipates completing and adopting the strategy in summer 2014.

California Green Building Standards Code

The Green Building Standards Code (CALGreen), requiring all new buildings in the state to be more energy efficient and environmentally responsible, took effect on January 1, 2011. These comprehensive regulations will achieve major reductions in GHG emissions, energy consumption and water use. CALGreen requires developers of all new buildings constructed in California to:

- Reduce water consumption by 20 percent;
- Divert 50 percent of construction waste from landfills;
- Install low pollutant-emitting materials;
- Install separate water meters for nonresidential building indoor and outdoor water use;
- Install moisture-sensing irrigation systems for larger landscape projects; and,
- Requires mandatory inspections of energy systems (e.g., heat furnace, air conditioner and mechanical equipment) for nonresidential buildings over 10,000 square feet to ensure that all are working at their maximum capacity and according to their design efficiencies.

Local

Monterey Bay Unified Air Pollution Control District

The MBUAPCD has been in the process of developing guidance for evaluation of GHG emissions impacts for several years. In June 2011, the MBUAPCD proposed interim thresholds of significance for use in the CEQA analysis process. After release of the interim guidance, the MBUAPCD consulted with various stakeholders within the District regarding the proposed thresholds. However, to date, the MBUAPCD has not formally adopted thresholds of significant or other district-specific guidance regarding analysis of GHG impacts as part of the CEQA process.

Monterey County General Plan

To date, Monterey County has not adopted regulations or standards of significance pertaining to GHGs. The 1982 General Plan contains two polices whose implementation have benefits for GHG emissions reductions. Policy 14.3.1 notes that the County shall encourage energy-efficient businesses and agricultural practices, and Policy 14.3.2 notes that the County should encourage the development and utilization of renewable energy sources such as solar, wind generation, and biomass technologies in the Central Salinas Valley.

Monterey County Greenhouse Gas (GHG) Reduction Plan

The 2010 Monterey County General Plan contains a policy to develop and adopt a Greenhouse Gas (GHG) Reduction Plan within 24 months of General Plan adoption (Policy OS-10.11). Once the County adopts a qualified GHG reduction plan, compliance of future projects with that plan will be the basis for determining the significance of their impact on global climate change.

3.2.4 Analytical Methodology and Significance Threshold Criteria

Methodology

In June 2008, the California Office of Planning and Research OPR issued a Technical Advisory for addressing climate change as part of the CEQA process (California Office of Planning and Research 2008). The Technical Advisory identifies a series of analysis actions which constitute a recommended approach for analyzing impacts of projects on global climate change. The three steps are: 1) identify and quantify GHG emissions; 2) assess the significance of the impact on global climate change; and 3) if significant, identify alternatives and/or mitigation measures to reduce the impact below significance.

The California Emissions Estimator Model (CalEEMod) was used to model projected GHG emissions from the proposed project for both the short-term construction phase and the long-term operational phase. With the exception model inputs related to carbon sequestration as described below, the project and site data used as inputs to the model are described in Section 3.2, Air Quality.

Significance Threshold Criteria

Given that neither the MBUAPCD nor Monterey County have, to date, developed standards of significance for GHG emissions that would apply to the proposed project, the guidance provided in Section VII. Greenhouse Gas Emissions, contained in the Appendix G, Environmental Checklist Form, of the CEQA Guidelines is used as a basis for standards of significance.

As stated in Section VII, a project may have a significant effect on the environment if it would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
- Conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

Due to the nature of global climate change, it is not anticipated that any single development project would have a substantial effect on global climate change. It is difficult to deem a single development as individually responsible for a global temperature increase. In actuality, GHG emissions from the proposed project would combine with emissions emitted across California, the United States, and the world to cumulatively contribute to global climate change.

In this context, thresholds of significance for GHG emissions address whether the incremental cumulative contribution of a specific project to global climate change is

considered significant. However, quantified thresholds of significance for GHG emissions have not yet been adopted by the CARB, MBUACD, or the County. Consequently, assessment of what constitutes a volume of GHG emissions that directly or indirectly may have a significant impact on the environment is a qualitative judgment.

Regarding conflict with an applicable GHG reduction plan, because neither the MBUAPCD nor County have developed an applicable plan for the purpose of reducing GHG emissions, AB 32 serves as the only GHG reduction plan that has relevance to the proposed project. Implementation of the emissions reductions actions and programs identified in the Scoping Plan would enable California to meet AB 32 emissions reduction targets. Consequently, a qualitative assessment of project consistency with applicable Scoping Plan actions and programs is the methodology used by the County to assess whether a proposed project would conflict with AB 32.

As identified above, once the County adopts a qualified GHG reduction plan as called for in 2010 General Plan Policy OS-10.11, compliance of future projects with that plan will be the basis for determining the significance of their impact on global climate change.

Impact Analysis

Conflict with a Plan, Policy, or Regulation Adopted for the Purpose of Reducing Greenhouse Gases

As stated previously, the County utilizes a qualitative approach for considering whether or not a project is consistent with the applicable GHG reduction plan - AB 32. As implementation of the Scoping Plan actions and programs is designed to assure that California achieves AB 32 emission reduction goals, project consistency with the Scoping Plan actions and programs can be used as a measure of whether the proposed project is consistent with AB 32.

A complete list of CARB Scoping Plan strategies whose implementation would achieve AB 32 goals is referenced below in Table 3.4-1, Scoping Plan Strategies and Project Consistency. Of the 39 measures identified, those considered to be most applicable to the proposed project relate to electricity and natural gas use, and water conservation. Consistency of the proposed project with the applicable measures is evaluated in the text following the table.

Table 3.4-1 Scoping Plan Strategies and Project Consistency

ID #	Sector	Strategy Name	Applicable to Project?	Will Project Conflict With Implementation?
T-1	Transportation	Pavley I and II – Light-Duty Vehicle GHG Standards	No	No
T-2	Transportation	Low Carbon Fuel Standard (Discrete Early Action)	No	No
T-3	Transportation	Regional Transportation-Related GHG Targets	No	No
T-4	Transportation	Vehicle Efficiency Measures	No	No
T-5	Transportation	Ship Electrification at Ports (Discrete Early Action)	No	No

ID #	Sector	Strategy Name	Applicable to Project?	Will Project Conflict With Implementation?
T-6	Transportation	Goods-movement Efficiency Measures	No	No
T-7	Transportation	Heavy Duty Vehicle Greenhouse Gas Emission Reduction Measure – Aerodynamic Efficiency (Discrete Early Action)	No	No
T-8	Transportation	Medium and Heavy-Duty Vehicle Hybridization	No	No
T-9	Transportation	High Speed Rail	No	No
E-1	Electricity and Natural Gas	Increased Utility Energy efficiency programs More stringent Building and Appliance Standards	**Yes**	No
E-2	Electricity and Natural Gas	Increase Combined Heat and Power Use by 30,000GWh	No	No
E-3	Electricity and Natural Gas	Renewable Portfolio Standard	No	No
E-4	Electricity and Natural Gas	Million Solar Roofs	No	No
CR-1	Electricity and Natural Gas	Energy Efficiency	**Yes**	No
CR-2	Electricity and Natural Gas	Solar Water Heating	No	No
GB-1	Green Buildings	Green Buildings	**Yes**	No
W-1	Water	Water Use Efficiency	**Yes**	No
W-2	Water	Water Recycling	**Yes**	No
W-3	Water	Water System Energy Efficiency	No	No
W-4	Water	Reuse Urban Runoff	No	No
W-5	Water	Increase Renewable Energy Production	No	No
W-6	Water	Public Goods Charge (Water)	No	No
I-1	Industry	Energy Efficiency and Co-benefits Audits for Large Industrial Sources	No	No
I-2	Industry	Oil and Gas Extraction GHG Emission Reduction	No	No
I-3	Industry	GHG Leak Reduction from Oil and Gas Transmission	No	No
I-4	Industry	Refinery Flare Recovery Process Improvements	No	No
I-5	Industry	Removal of Methane Exemption from Existing Refinery Regulations	No	No
RW-1	Recycling and Waste Management	Landfill Methane Control (Discrete Early Action)	No	No
RW-2	Recycling and Waste Management	Additional Reductions in Landfill Methane – Capture Improvements	No	No
RW-3	Recycling and Waste Management	High Recycling/Zero Waste	No	No
F-1	Forestry	Sustainable Forest Target	No	No
H-1	High Global Warming Potential Gases	Motor Vehicle Air Conditioning Systems (Discrete Early Action)	No	No

ID #	Sector	Strategy Name	Applicable to Project?	Will Project Conflict With Implementation?
H-2	High Global Warming Potential Gases	SF6 Limits in Non-Utility and Non-Semiconductor Applications (Discrete Early Action)	No	No
H-3	High Global Warming Potential Gases	Reduction in Perflourocarbons in Semiconductor Manufacturing (Discrete Early Action)	No	No
H-4	High Global Warming Potential Gases	Limit High GWP Use in Consumer Products (Discrete Early Action, Adopted June 2008)	No	No
H-5	High Global Warming Potential Gases	High GWP Reductions from Mobile Sources	No	No
H-6	High Global Warming Potential Gases	High GWP Reductions from Stationary Sources	No	No
H-7	High Global Warming Potential Gases	Mitigation Fee on High GWP Gases	No	No
A-1	Agriculture	Methane Capture at Large Dairies	No	No

Source: California Air Resources Board, *Assembly Bill 32 Scoping Plan*, October 2008.

Electricity and Natural Gas. Scoping Plan strategy E-1 aims to reduce electricity demand by increased efficiency of Utility Energy Programs and adoption of more stringent building and appliance standards. The proposed project would include energy efficient features such as Energy Star rated appliances and fixtures. Therefore, the proposed project would not conflict with Action E-1.

Energy Efficiency. Scoping Plan strategy CR-1 refers to energy efficiency. Key energy efficiency strategies would include codes and standards, existing buildings, improved utility programs, solar water heating, and combined heat and power, among others. As previously stated, the proposed project would incorporate energy efficient building design, including on-site solar energy generation. Therefore, the proposed project would not obstruct implementation of Action CR-1.

Green Buildings. Scoping Plan strategy GB-1 expands the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings. The project must be constructed consistent with CalGreen standards. Also, the proposed project would comply with, and exceed, efficiency requirements set forth in Title 24 of the California Administrative Code. The proposed project would not conflict with Scoping Plan strategy GB-1.

Water Use. Scoping Plan strategy W-1 pertains to implementation water use efficiency measures. The project would be required to comply with the County's Municipal Code Chapter 15.12, Water Conservation, which identifies standards for water efficiency. Water use efficiency standards are also included in CalGreen standards. The proposed project is consistent with and would not obstruct this Scoping Plan strategy.

Scoping Plan strategy W-2 water recycling is part of the water use efficiency measures intended to reduce water usage and energy consumption. As stated above, the proposed project would demonstrate water conservation by offsetting a portion of potable water needed for irrigation and by recharging groundwater through infiltration and conformance with green building standards. Interceptor drainage ditches on hillsides above the developed areas are proposed to be constructed to deliver upland surface runoff around buildings, retaining walls, roadways, and other built structures. These drainage ditches would be constructed as grass-lined swales to the extent possible, to encourage water percolation and blend in with the surrounding landscape. The proposed project would not obstruct Scoping Plan strategy W-2.

Conclusion

Based on the County's qualitative approach to assessing whether a project conflicts with AB 32, the proposed project would not conflict with relevant Scoping Plan strategies due to inclusion of applicable GHG reduction measures. Therefore, there would be **no impact** resulting from a conflict with the applicable plan that has been adopted for the purposes of reducing greenhouse gases (AB 32).

Generate Greenhouse Gas Emissions

Impact 3.2-1:	The proposed project would generate greenhouse gas emissions, either directly or indirectly that may have a significant impact on the environment. (Cumulatively Significant and Unavoidable)

The proposed project will generate both direct and indirect GHG emissions. Direct emissions include emissions from construction activities, mobile sources (vehicles), and area sources. Indirect sources of GHG emissions would include those generated from production of electricity consumed: 1) in project buildings and other project operations; 2) to supply and treat water for the project; and 3) to treat and dispose of wastewater. Disposal of solid waste is also a source of indirect GHG emissions. GHG emissions would include CO_2, N_2O, and CH_4. The proposed project is not anticipated to generate other forms of GHG emissions in quantities that would facilitate a meaningful analysis.

Baseline GHG Emissions. Baseline GHG emissions are those which are generated under existing conditions (or at the time the NOP was circulated for public review). The difference between baseline emissions and the emissions generated by the proposed project would represent the net increase in GHG emissions generated by the project. Because there are few if any activities that were active within the project site at the time the NOP was circulated in 2008, and activities at the site have not intensified since that time, the volume of GHG emissions generated under baseline conditions is assumed to be zero.

Unmitigated Project GHG Emissions. An initial CalEEMod run was completed under the scenario where no GHG emission reduction measures are included in the proposed project. Results of the CalEEMod analysis for construction emissions are shown in Table 2.1 of the CalEEMod results included in Appendix X. Total unmitigated construction emissions for the five-year construction period are projected to be approximately 13,218.15 metric tons CO_2e. Results for operational emissions are taken from Table 2.2 contained in Appendix X and are summarized below in Table 3.4-2, Unmitigated Annual Operational Phase GHG Emissions.

Table 3.4-2 Unmitigated Annual Operational Phase GHG Emissions

GHG Source	Emissions Volume (metric tons/years)				
	Bio CO_2[1]	CO_2	CH_4	N_2O	CO_2e
Area	17.56	22.30	0.02	0.00	40.72
Energy	0.00	1,378.38	0.05	0.02	1,386.90
Mobile	0.00	1,506.65	0.07	0.00	1,508.09
Waste	103.48	0.00	6.12	0.00	231.92
Water	0.00	18.64	0.29	0.01	26.97
Total	121.04	2,925.97	6.55	0.03	3,194.60

Source: EMC Planning Group 2013

Note: 1The "Bio CO2" column represents the net change in CO2 from changes in land use from loss of baseline sequestration capacity to post-project sequestration value provided by the proposed project.

As shown in Table 3.4-2, annual GHG emissions are estimated at approximately 3,194.60 metric tons CO_2e.

The "Bio CO_2" column in Table 3.4-2 illustrates the net change in GHG emissions resulting from changes in land coverage that would result from project implementation. These changes include loss of existing trees and soil disturbance, Removal of trees and soil disturbance affect the capacity of these resources to "sequester" (retain and store) CO_2. When trees are removed from a site, the CO_2 stored in their biomass is typically released through burning or in the case where the trees decay in a landfill or other anerobic environment, release of CH_4. Based on the proposed project plans, it was assumed that: 1) approximately 175 oak trees and many other non-protected trees would be removed; oak trees would be replaced on a 1:1 basis as required per County ordinance, and 2) that 450 new trees (assumed to be hardwood trees) would be planted and would provide increased CO_2 sequestration value over the 20-year sequestration modeling horizon enabled by CalEEMod.

Mitigated Project GHG Emissions. A second CalEEMod run would normally be conducted to identify GHG emissions reductions that would accrue from incorporation of GHG reduction measures into a project. The net difference between the volume of unmitigated emissions and mitigated emissions would constitute the net GHG emissions volume generated by the project.

A number of applicant-proposed GHG reduction measures are described in Section 2.3, Project Objectives. The objectives address the intention to design and construct the project in accordance with recognized green building standards and to provide opportunities to reduce GHG emissions through a range of measures, where feasible. The following list reflects what is understood to be the GHG reduction measures proposed for inclusion in the project:

- construct the project consistent with accepted green building standards;
- provide a shuttle service for employees and guests;
- incorporate pedestrian pathways and trails;
- use of on-site electric service vehicles;
- incorporation of solar energy generation;
- use energy efficient building design;

- use programmable thermostats;
- use Energy Star appliances and fixtures;
- orient buildings to maximum solar exposure;
- exceed Title 24 requirements; and
- provide facilities for recycling.

CalEEMod allows a user to "activate" a range of possible GHG reduction measures that are included in the model. If the project being modeled includes sufficient detail about the specific measures and the measures are applicable to the project type, the measures can be activated in CalEEMod and the resulting emissions reductions calculated. CalEEMod includes only those reduction measures that have to date been shown to result in reliable, quantifiable emissions reductions in the context (e.g. urban, suburban, or rural location) of a proposed project. The measures are referenced from an August 2010 publication from the California Air Pollution Control Officers Association (CAPCOA) in which a multitude of potential GHG reduction measures and methodologies to quantify emissions reductions from each measure are identified (CAPCOA 2010). CalEEMod includes GHG reduction measures related to traffic, area source emissions, energy, water supply and conservation, and solid waste recycling.

Most of the applicant-proposed reduction measures that are also included in CalEEMod must be further detailed/quantified before the emissions reductions can be calculated by CalEEMod. Examples include: 1) the proposed percentage by which a project will exceed Title 24 energy efficiency standards; 2) amount of total project electricity demand proposed to be generated by alternative energy sources (e.g. solar) and 3) the proposed number of Energy Star appliances to be installed and the percentage improvement in energy efficiency improvement for each type of appliance. These applicant-proposed measures have not been quantified to date. Consequently, potential emissions reductions from these measures cannot be quantified using CalEEMod.

Several of the applicant-proposed measures are not among those that can be activated in CalEEMod. Nevertheless, opportunities may exist to calculate potential GHG reductions from these measures using manual procedures contained in CAPCOA's guidance document. However, one or more of the following constraints to doing so exist: 1) applicant measures are not sufficiently detailed/quantified; 2) the proposed measures would not yield valid emissions reductions as determined by CAPCOA due to the rural versus urban or suburban setting of the project (e.g. mix of uses, and pedestrian pathways/trails); 3) the measures do not meet other criteria for qualifying for emissions reductions; or 4) emissions reduction potential has not or cannot be reliably quantified as determined by CAPCOA.

For the above noted reasons, to avoid speculation about the total volume of GHG emissions reductions that could accrue to the applicant's proposed measures, a mitigated project CalEEMod run has not been conducted, nor have other proposed reduction measures been manually quantified using CAPCOA guidance.

Conclusion

Based on CalEEMod results, the proposed project would generate approximately 3,194.60 metric tons of CO_2e per year during operations as reported in the CalEEMod results included in Appendix X and shown in Table 3.4-2, Unmitigated Annual Operational Phase GHG Emissions. At approximately 53 percent of the total project emissions, mobile source emissions from the proposed project would be the largest contributor to the total GHG emissions volume. GHG emissions from energy sources are the second highest contributor of GHGs at about 43 percent of the total.

The volume of GHG emissions reductions that may occur with implementation of the applicant's proposed GHG mitigation measures have not been quantified for reasons described above in the "Quantification of Project GHG Emissions" section. However, based upon experience with these types of measures, the applicant's proposed measures would not result in significant GHG reductions from mobile sources, the largest source of projected GHG emissions. Several of the reduction measures would result in reductions in energy related GHG emissions, as the measures are intended to improve energy efficiency and reduce energy demand. While it can be expected that implementation of the applicant's mitigation measures would result in an incremental reduction in GHG emissions volumes, the proposed project would nevertheless generate a substantial volume of GHG emissions that, when combined with other sources of GHG emissions, exacerbate global warming. This impact is cumulatively considerable and therefore, significant and unavoidable.

The applicant-proposed measures do address many of the GHG reduction opportunities that appear to be applicable to and feasible for the proposed project. Nevertheless, several additional measures identified in the CAPCOA guidance document are available which are applicable to the proposed project. These additional measures are included in the Mitigation Measures section. Implementation of the additional measures would contribute to a further incremental reduction in GHG emissions, thereby further lessening the impact of the proposed project on global climate change.

Mitigation Measure

MM 3.4-1 In addition to the GHG reduction measures proposed by the applicant, that applicant shall implement the following additional GHG reduction measures:

- Design the proposed project to meet California Green Building Standards Code (Title 24, "CALGreen") standards to help reduce energy demand;
- Obtain third-party HVAC commissioning and verification of energy savings (improves effectiveness of applicant proposed measure to exceed Title 24 energy efficiency requirements);
- Limit outdoor lighting requirements;
- Incorporate indoor water conservation measures such as use of low-flow toilets, shower heads, and faucets;

- Implement an electrical vehicle network (e.g. golf carts) within the project site for use by guests and service employees and provide electric vehicle parking and charging stations; and
- Prohibit use of gas powered landscape equipment.

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3.5 CULTURAL RESOURCES AND HISTORIC RESOURCES

3.5.1 Introduction

This section addresses archaeological and historic resources in relation to implementation of the proposed project. In evaluating these resources, this section includes an analysis of the potential project-related impacts to cultural resources and historic resources and includes measures for reducing the identified impacts.

The baseline for purposes of analysis of impact to historic resources is the time immediately preceding the November 2003 removal of the cottages, i.e., assuming presence of the cottages on the site. The reasons for this choice of baseline are:

- It allows for complete disclosure and analysis of the impacts associated with the unpermitted removal of the historic Victorian cottages;
- A component of the project is the after-the-fact demolition permit for the removal of the cottages. The after-the-fact demolition permit includes discretionary review pursuant to Monterey County Code Chapter 18.25 and requires review under CEQA.
- In 2005, the County prepared and circulated for public review an initial study/proposed Mitigated Negative Declaration for the after-the-fact demolition permit. County received a comment letter from the state Office of Historic Preservation (SHPO), which requested preparation of an EIR based on the contention that the "the illegal demolition occurred in order to facilitate the resort project with new construction" and therefore the whole of the action includes the unpermitted demolition. (Letter dated June 29, 2005 to Therese Schmidt.) To the extent that plans were underway for a resort on site at the time of the demolition, the use of the pre-demolition baseline is justified for analysis of the impact on historic resources.

Information in this section is derived primarily from the of cultural resource evaluations prepared for the project site as identified below:

<u>Archaeological Resources</u>

- *Preliminary Cultural Resources Reconnaissance at Paraiso Hot Springs Monterey County, California (*Archaeological Consulting, 1984*)*
  - Peer Review Letter re. Archaeological Study of the Paraiso Springs Project Site (Archaeological Consulting, 2012)
- *Cultural Resource Evaluation of Prehistoric Resources at the Paraiso Springs at 34358 Paraiso Springs Road in the County of Monterey (*Archaeological Resource Management [ARM], 2004*)*
  - Peer Review Letter re. Archaeological Study of the Paraiso Springs Project Site (Archaeological Consulting, 2012)
- *Cultural Resource Evaluation of the Paraiso Springs at 34358 Paraiso Springs Road in the County of Monterey (*ARM, 2008*)*
  - *Peer Review of the Cultural Resource Evaluation of the Paraiso Springs Report Project at 34358 Paraiso Springs Road in the County of Monterey by Archaeological Resources Management (*Pacific Legacy, 2008)

  - Peer Review Letter re. *Archaeological Study of the Paraiso Springs Project site (*Archaeological Consulting, 2012)
- *Cultural Resource Evaluation of Improvements to Paraiso Springs Road in the County of Monterey* (ARM, 2012)
  - Peer Review Letter re. Archaeological Study for the Improvements to Paraiso Springs Road (Archaeological Consulting, 2012)

Historic Resources

- *Evaluation of Historical Resource at the Paraiso Springs at 34358 Paraiso Springs Road in the County of Monterey* (ARM, 2004)
- *Revised Evaluation of Historical Resource at the Paraiso Springs at 34358 Paraiso Springs Road in the County of Monterey* (ARM, 2005)
- *Historic Resource Report – Paraiso Hot Springs Monterey County, California.* (Painter Preservation & Planning, 2008)
  - *Letter memo to RBF re: Peer Review of Historic Resource Report for Paraiso Hot Springs Prepared by Painter Preservation & Planning* (Galvin Preservation Associates [GPA], 2008)

These reports are exempt from the public records act and are not available for public review.

The regulatory setting discussion in this section is based on information contained in the *Monterey County General Plan* (1982) and the *Central Salinas Valley Area Plan* (1987).

3.5.2 Environmental Setting

Ethnographic and Historic Background

Much of background information presented below has been provided by the *Revised Cultural Resource Evaluation of Prehistoric Resources at the Paraiso Springs at 34358 Paraiso Springs Road in the County of Monterey* (ARM 2005).

Native Americans

Two Native American cultures existed in the vicinity of the project site. The Salinian Indians inhabited the territory along the central California coast between Lucia and an area north of San Luis Obispo. Their inland range was larger, stretching from the Soledad area to an area south of San Luis Obispo. The Salinian were bordered by Ohlone and Esselen groups to the north, Yokuts to the east, and the Chumash to the south. The Salinian language is categorized as belonging to the Hokan stock.

The Esselen Indians inhabited the territory along the central California coast between Point Lopez and Point Sur, and inland to the drainages of the northern Carmel River Valley. The understanding of the Esselen from actual contact and ethnographic research are very limited, but their general cultural lifeways are basically similar to other coastal Californian prehistoric peoples. They did have a distinct language that contrasted with their Salinan and Ohlone neighbors, but otherwise there were many similarities between the Esselen and their northern neighbors - the Rumsen Ohlone.

Both the Salinian and the Esselen were gatherers and hunters who utilized only the native flora and fauna with the exception of one domesticate, the dog. Yet, the abundance and high quality of natural resources allowed them to settle in semi-sedentary villages. These groups were typically organized in basic political units called "tribelets" consisting of 100 to 250 members. The "tribelet" was an autonomous social unit consisting of one or more permanent villages with smaller villages in a relative proximity. Parties went out from the major villages to locations within the tribal territory to obtain various resources.

The proximity of both mountainous and coastal regions in the Monterey Bay area made a diversity of resources available during different seasons to the native inhabitants. During the winter months, the low-lying flats near the Monterey Bay have abundant marine and waterfowl resources, while the nearby mountainous areas are best in the summer months for their nut, seed, and mammalian resources. A primary food source was acorns, which were abundant in autumn and easily stored for the remainder of the year. Other important resources include various plant foods, land animals, and the marine resources of the Monterey Bay. Fishing for salmon and steelhead in the creeks that emptied into Monterey Bay provided a seasonal resource. Shellfish processing sites were established above the rocky shores where abalone, mussels, clams, and various tide pool resources were gathered. Both large and small land mammals were typically hunted, trapped or poisoned. Many items, including shell beads and ornaments, were extensively traded with other groups as far away as the Great Basin of Nevada.

It is argued that contrary to usual conceptions of hunters and gatherers, native Californian groups, including the Salinian and Esselen, practiced a form of resource management that was close to agriculture. Bean and Lawton consider this pattern a "semiagricultural" stage which included quasi-agricultural harvesting activity and protoagricultural techniques. Some plants were pruned and reseeded seasonally for optimal production. Foods such as acorns were stored for many months at a time. Ethnographic accounts also report the repeated burning of woodlands grassbelt to increase animal and plant resources. This practice was likely to have made hunting conditions better by reducing scrubby growth and encouraging the growth of grasses and other plants that are appealing to grazers such as deer and elk. The plant growth succession after a burning is also rich in grains and legumes that were major food sources for Native Californians.

It is also claimed that the abundance of plant and animal resources in California and the development of ingenious technological processes allowed Native Californians to develop social structures beyond the normal parameters of hunting and gathering. These include extensive political systems, controlled production and redistribution of goods, and alliances and trade with other groups.

The hot springs at Paraiso were first utilized by Native Americans, prior to the time of the European contact. Evidence of Native American occupation in the surrounding areas dates back several thousand years.

Spanish Arrival and Colonization

Sebastian Vizcaino’s landing at present day Monterey in 1602 is the earliest documented contact with Native Americans in the area. Following Vizcaino’s landing, other Spanish ships may have stopped at Monterey, but contact was minimal until the initial overland

exploration of the area by Gaspar de Portolá in 1769. Portolá's expedition followed the coast, while subsequent exploration of the region by Pedro Fages in 1770 and 1772, Fernando Javier de Rivera in 1774, and Juan Bautista de Anza in 1776 traveled on the east side of the Santa Cruz Mountains, along a route which became known as El Camino Real.

Gaspar de Portolá founded Monterey in 1769, and in 1770, Padre Junipero Serra founded Mission San Carlos de Borromeo, which was later relocated to Carmel. Other missions, such as Mission Santa Cruz, founded in 1791; Mission San Juan Bautista, founded in 1797; Mission San Antonio de Padua, founded in 1771; Mission San Miguel, founded in 1797; and Mission Soledad, founded in 1791, are also located in the general area and had a dramatic effect on Native American populations. The Spanish attempted to convert the Native American population to Catholicism and incorporate them into the "mission system." The process of missionization disrupted traditional Native American (i.e., Costanoan) cultural practices, and they were generally slow to adapt to the mission system. The Spanish, however, were intent on implementing it, and by 1810, most Native Americans in the area were either incorporated into the mission or relocated to other local missions. This factor, coupled with exposure to European diseases, virtually ended the traditional life of Native Americans in the region.

During their exploration in the area in 1769, Portola and Father Juan Crespi are said to have attempted a conversation with the local Indian. They thought they recognized a single word, *soledad*, and felt that this was an appropriate name for this desolate, windy, hot location. Father Serra also spoke to a local Indian in 1771, during his return trip after the founding of Mission Carmel, and the woman repeated the work that sounded like *soledad*. This Spanish word for "solitude" was used as the name for the mission established in the area in 1791.

The Padres of Soledad Mission founded the area we now know as Paraiso Springs in 1791 as part of the Mission Lands. The lands directly to the southeast of the springs were cultivated, and the Paraiso Springs area, now approximately seven miles from the Soledad mission, became known as the Vineyard of Mission Soledad.

The place name *Paraiso* is the Spanish term for "paradise." The original name, attributed to the mission padres, is variously reported as "Eternidata Paraiso" or "paraso eternot," both of which mean "eternal paradise." Bathing and drinking from the springs was believed to have both refreshing and healing affects. Franciscan friars traveling between the missions of San Antonio du Padua and Carmel would stop at the springs to refresh themselves, and the Mission fathers encouraged the sick to bath and drink of its waters for their therapeutic and curative effects. Other names by which this area has been known include Arsenic Springs, Iron Springs, Paradise Springs, Hot Sulphur Springs, and Paraiso Hot Soda Springs.

Mexican Independence and the Ranchos

The Mexican period (ca. 1821-1848) in California is an outgrowth of the Mexican Revolution, and its accompanying social and political views affected the mission system. In 1833 the missions were secularized and their lands divided among the Californios as land grants called Ranchos. These ranchos facilitated the growth of a semi-aristocratic

group that controlled the larger ranchos. Owners of ranchos used local populations, including Native Americans, essentially as forced labor to accomplish work on their large tracts of land. Consequently, Native American groups across California were forced into a marginalized existence as peons or vaqueros on large ranchos.

The Paraiso Springs were known during the Mexican Period, and they were in frequent use by the missionaries due to their easy accessibility. The springs remained in the hands of the church into the Mexican Period, and were retained by the mission after the secularization of most mission lands in 1834. An inventory of the Soledad Mission in 1836 listed 5,000 vines, which were probably those located at Paraiso Springs.

The springs continued under the ownership of the church until the 1840s, when the lands of Mission Soledad were sold by the Mexican Governor of California, Pio Pico, to Feliciano Soberanes. After the beginning of the American period, Father Joseph Alemany, Archbishop of the Archdiocese of San Francisco brought suit to attempt to reclaim several different areas of lands owned by the Missions sold by the Mexican Government. The United States Land Commission agreed that the sales had been illegal, and in 1859 the Lands of Mission Soledad were returned to the church.

Anglo-American Expansion

The end of the Mexican-American War and the signing of the Treaty of Guadalupe Hidalgo in 1848 marked the beginning of the American period (ca. 1848 to Present) in California history. The latter half of the nineteenth century witnessed an ongoing and growing immigration of Anglo-Americans into the area, an influx also accompanied by regional cultural and economic changes. Indeed, Anglo-American culture expanded at the expense of Hispanic culture. Dispersed farmsteads slowly replaced the immense Mexican ranchos and the farming of various crops slowly replaced cattle ranching as the primary economic activity in the region. Larger and larger tracts of land were opened for farming, and these agricultural developments demanded a large labor force, sparking a new wave of immigration into the region. These trends (i.e., expansion of agriculture and immigration of workers to work on farms) have continued into the 20th century, and generally characterize the development of the area to the present.

In 1866 the church sold the Paraiso Springs to Mr. Pedro Zabala, a major land holder in Monterey County. Mr. Zabala owned the land until 1874, at which time it was sold to Reeve Brothers and Ledyard Fine, a partnership which was the first to operate the springs commercially as a resort. The resort went through a succession of owners and managers, including Captain J. G. Foster, founder of the Cliff House in San Francisco, and Charles Romie, a prominent local businessman. A hotel and many small cabins, along with other recreational facilities, were constructed. The resort grew in popularity through the 1890s and became one most well known hot springs in California, eventually earning it the title of “the Carlsbad of America.”

The 1890s saw new improvements to the resort, particularly in the buildings. The hotel was built by William and Mary Ford, who had inherited the springs from their brother, Charles Ford. By this time Paraiso Springs was a famous resort that was reached by stage from the Southern Pacific station at Soledad. There were 32 furnished cottages. A new water system had been put in for fire protection as well as a new irrigation system. By

1900 there were also a number of recreation improvements including a bowling alley, croquet grounds, lawn tennis court, shuffle board and stables, in addition to the large mineral swimming pond and plunges and tub baths (Painter Preservation & Planning 2008).

Also sometime in the 1890s, Claus Spreckels, known as the "Sugar King," maintained a cabin at Paraiso for his personal use. The bottled soda water from Paraiso Springs, billed as "Radio Active Arsenic Spring" water, won a prize at the 1904 World's Fair in St. Louis, Missouri.

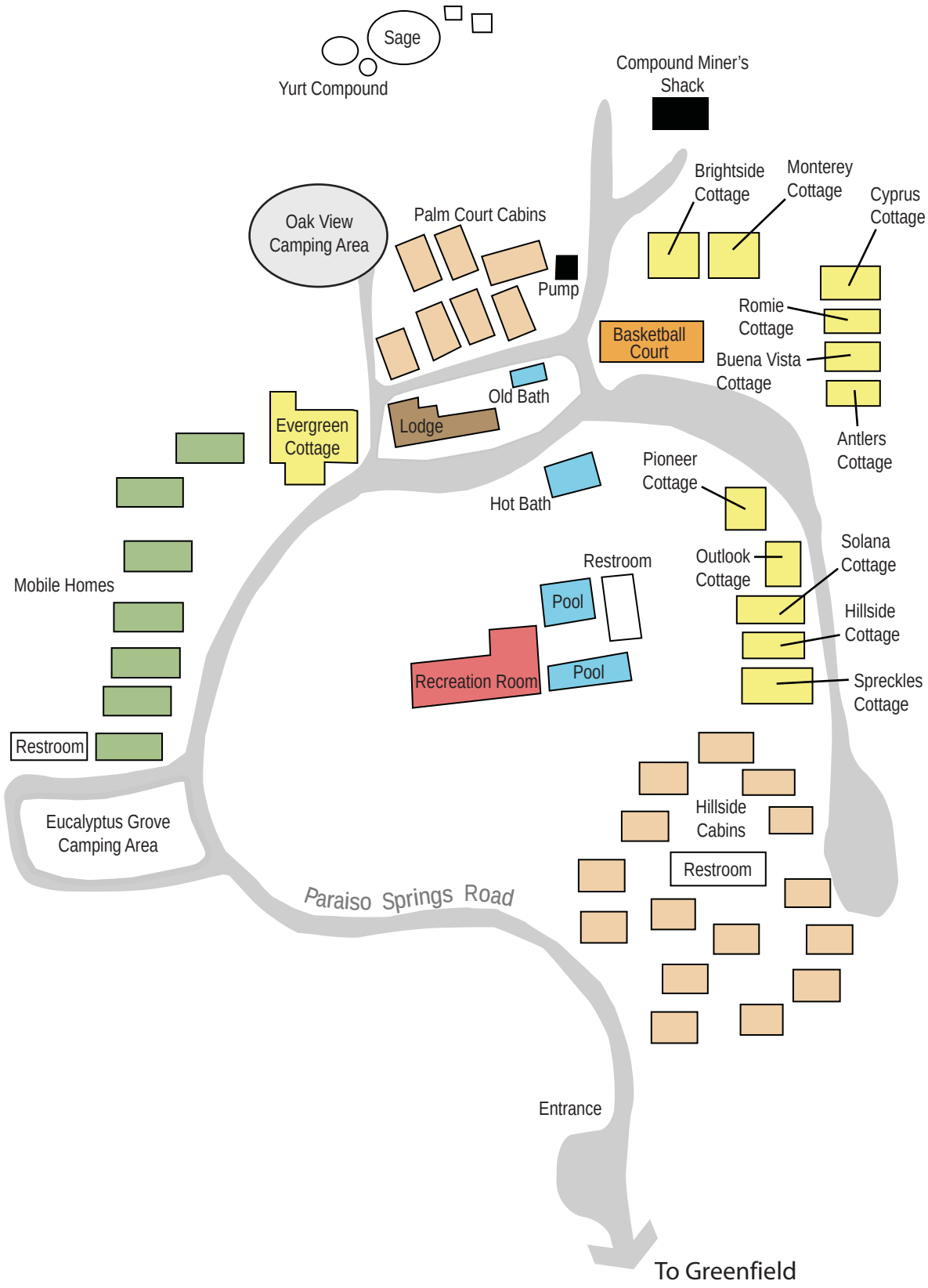
Despite these improvements and notoriety, Paraiso Springs began to decline with the broader fall in interest in the spa phenomenon that had peaked in the late 1800s. In 1891 a fire burned the handsome Italianta house on the hill to the north of the main resort areas, one of the more substantial buildings on the site. In 1928 the Paraiso Resort suffered a major fire. The hotel, two of the bath houses, a garage, the dance hall, and some other, smaller buildings were destroyed. Several of the old palm trees were burned, including one described as the tallest in California.

After a few years the resort was rebuilt. A survey of the springs and water sources created in 1934 shows the Annex; a kitchen and dining building at about the location of the lodge today; a bath house at about the location of the old baths north of the lodge today, the main swimming pool with changing rooms; 12 cottages north of the resort, and six cottages south of the resort (Preservation & Planning 2008).

There was a second major fire at Paraiso in 1954, which destroyed the rebuilt hotel and Annex. That same year the new owners, Roy and Jacqueline Ramey, built two bathhouses, two pump houses, a boiler room, a garage, and a Dance Hall. In 1958 the Outlook, Hillside and Solana Cottages were moved from Oakland to the site and remodeled. In 1966 the dining room, bar, dance hall and kitchen were remodeled and the Hillside Cabins, north and east of the main resort were built.

A 1984 sales prospectus for the property noted that 18 "furnished housekeeping cottages" were available on the site, nine of which were Victorian cottages. Additionally there were 15 one-room cabins (the Hillside Cabins). Other features included the lodge with the bars and associated facilities, the recreational building, the pools and changing rooms, workshop, pump house, boiler room and fire equipment room; plus space for 10 mobile home sites and 31 camping sites with associated restrooms. The prospectus noted 14 mineral springs. At the time Warren and Marge Perrine, who owned the property from 1971 to 1999, were in the process of restoring the Victorian cottages (Painter Preservation & Planning 2008, page 28).

Paraiso Springs is currently owned by Thompson Holdings, who purchased the property in 1999. The resort closed to the public in 2003. At this time, many of the structures described in the 1984 sales prospectus above were still on the property (Figure 3.5-1, Site Plan of Paraiso Hot Springs in 2003). In November 2003, 18 cottages were removed from the site, including the nine Victorian-era cottages and the newer cottages that had been



Source: RBF Consulting 2010

Figure 3.5.1

Site Plan of Paraiso Hot Springs in 2003

Paraiso Springs Resort EIR

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moved to the project site some time after 1966 including six buildings at Palm Court and three cottages in the northeast corner of the site, between the Spreckels and Pioneer Cottages (see Figure 2-14, Structures Demolished in November 2003, presented earlier).

Historic Resources

Historical resources are defined as buildings, sites, structures, objects, or districts that have been determined to be eligible for listing in the California Register of Historic Resources (CRHR), those resources included in a local register of historical resources as defined in section 5020.1(k) of the Public Resources Code, or any object, building, structure, site, area, place, record or manuscript which a lead agency determines, based on substantial evidence, to be historically significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military or cultural annals of California. PRC § 21084.1; 14 CCR § 15064.5.

Historic Resources on the Project Site

The discussion of historic resources on the project site has been provided by the Historic Resource Report – Paraiso Hot Springs Monterey County, California (Painter Preservation & Planning, 2008). The following historic surveys and/or evaluations have been conducted for Paraiso Hot Springs:

Monterey County Historical Inventory (1971). Paraiso Springs was included in the Monterey County Historical Inventory sponsored by the Monterey County Planning Commission in 1971 and adopted by the Monterey County Board of Supervisors on February 23, 1971 (County of Monterey 1971). The significance of Paraiso Hot Springs, which was listed under the category of "Spas and Resorts" in the inventory, was described as follows:

> "Paraiso Springs was part of 20 acres of land that was granted to the Spanish Padres by the King of Spain in 1791. The Padres located a health resort here and started a vineyard. It was a popular spa for families from San Francisco in the 1880's, and is in use today (Monterey County 1971)."

Typically, if an inventory or survey is adopted by a local agency, the resources listed in it are considered historically significant unless "the preponderance of evidence" demonstrates that they are not (CEQA 2013). This survey was not submitted to the state and correspondingly does not appear in the State Office of Historic Preservation's Historic Property Data File for Monterey County (Clovis pers. comm. 2008). However, by virtue of its listing on the local register, Paraiso Springs is considered a historic resource unless the preponderance of evidence shows otherwise.

California Inventory of Historic Resources (1976). Paraiso Hot Springs was surveyed in conjunction with a state-wide survey of historic sites in 1976 by the State of California Department of Parks and Recreation. It was published in their document, *California Inventory of Historic Resources.* Its stated significance at that time was its association with the theme of religion, for its early ownership and cultivation by the padres of the Soledad Mission. It was described in the same language as the previous survey:

> "Paraiso Hot Springs, Monterey County. Paraiso Springs was part of 20 acres of land that was granted to the Spanish padres by the King of Spain in 1791. The padres located a health resort here and started a vineyard. It was a popular spa for families from San Francisco in the 1880s, and is in use today. Ownership: Private."

Preliminary Cultural Resources Reconnaissance at Paraiso Hot Springs (1984). A cultural resources report conducted at the project site in 1984 by Archaeological Consulting briefly discusses historic resources. That report states that there were 55 structures at the hot springs "ranging from two-story Victorian houses to small outbuildings and including one approximately 4,000 square foot lodge building." It concludes that the project area contained potentially significant prehistoric and historic resources. The following summary was provided:

> "The appended materials suggest that the existing structures as a unit constitute a potentially significant historic resource. Paraiso Hot Springs Resort may constitute one of the few remaining complexes representing an important and generally little known portion of our history. Many similar complexes no longer exist, or have been changed or deteriorated to such an extent that little or no historic value remains."

A Department of Parks and Recreation (DPR) archaeological record form was completed for the property as a whole. C-263 consists of the historic buildings and locations at Paraiso Hot Springs, as noted in the Archaeological Consulting 1984 report.

Historic Resource Report – Paraiso Hot Springs (2008). Painter Preservation & Planning prepared a historic resource report in 2008 intending to document the site as it existed in 2003, prior to the removal of 18 structures. The report evaluated the historic significance of structures on site in 2003 and the impact of the subsequent removal of the buildings. The report also took a broader look at the site, evaluating it as a potential cultural landscape, in part because of the importance of the hot springs in the history of the site. Additionally, the landscape and architecture of the Paraiso Hot Springs were documented through the use of a classification system developed for this purpose by the National Park Service. The character and physical qualities of the landscape were described, including information about the conditions in 2003, when the historic buildings were demolished, followed by an evaluation and summary.

The Painter Preservation & Planning report looked at 26 potentially significant buildings that were present in 2003, 18 of which have since been demolished. Nine of the identified buildings were not evaluated due to their age or due to the fact that they had been moved and therefore were presumed to not be historically significant. Of the remaining 17 buildings that were evaluated as part of the report, eight were determined not to be historically significant due to a lack of integrity but nine were determined to be individually significant because they were eligible for listing on the California Register of Historic Resources (CRHR) individually due to their importance to the history of the project site, their reflection of important architectural trends at the time, their relative integrity, and their relative rarity on the project site and as part of the Victorian-era spa

movement in the Monterey region. A summary of these 26 structures is described in Table 3.5-1, Paraiso Springs Building Inventory, below.

Table 3.5-1 Paraiso Springs Building Inventory

Ref. # (1)	Name/Use	Construction Date	Information Source	Action	Significance Conclusion	Reason
1	Lodge	ca 1910; addns 1955,1958,	ARM 2005	Evaluate	Not Significant	Lack of integrity
2	Hillside Cabins	1966	ARM 2005	No evaluation	Not Significant	Due to age (2)
3	Mobile Homes	NA		No evaluation	Not Significant	Due to age
4	Recreation Room	1954	ARM 2005	Evaluate	Not Significant	Due to age
5	Changing Rooms	1954	Estimate	Evaluate	Not Significant	Due to age
6	Old Baths	ca. 1890; 1954	ARM 2005	Evaluate	Not Significant	Lack of integrity
7	Indoor Bath	1954	ARM 2005	Evaluate	Not Significant	Due to age
8	Workshop	ca. 1954	Estimate; ARM 2005	Evaluate	Not Significant	Lack of integrity
9	Yurt Compound	Contemporary	ARM 2005	No evaluation	NA	Due to age
10	Miner's Shack	NA	ARM 2005	No evaluation	NA	Not in project area
11	Restrooms & Showers	NA	ARM 2005	No evaluation	NA	Reference unclear as to structure
12	Evergreen Cottage	ca. 1880	Estimate	Evaluate	**Significant**	Victorian-era cottage
13	Brightside Cottage	ca. 1880	Estimate	Evaluate	**Significant**	Victorian-era cottage
14	Monterey Cottage	ca. 1880	Estimate	Evaluate	**Significant**	Victorian-era cottage
15	Cyprus Cottage	ca. 1880	Estimate	Evaluate	**Significant**	Victorian-era cottage
16	Romie Cottage	ca. 1880	Estimate	Evaluate	**Significant**	Victorian-era cottage
17	Buena Vista Cottage	ca. 1880	Estimate	Evaluate	**Significant**	Victorian-era cottage
18	Antlers Cottage	ca. 1880	Estimate	Evaluate	**Significant**	Victorian-era cottage

Ref. # (1)	Name/Use	Construction Date	Information Source	Action	Significance Conclusion	Reason
19	Pioneer Cottage	ca. 1880	Estimate	Evaluate	**Significant**	Victorian-era cottage
20	Outlook Cottage	Moved in 1958	ARM 2005	No evaluation	NA	Moved structure (3)
21	Solana Cottage	Moved in 1958	ARM 2005	No evaluation	NA	Moved structure
22	Hillside Cottage	Moved in 1958	ARM 2005	No evaluation	NA	Moved structure
23	Spreckels Cottage	ca. 1890	ARM 2005	Evaluate	**Significant**	Victorian-era cottage
24	Palm Court Cabins	ca. 1970	Estimate; aerial photos	No evaluation	NA	Moved structure
25	Pools	ca. 1990; ca 1954	Research; ARM 2005	Evaluate	Not significant	Lack of integrity
26	Accessory Structures	1954	Estimate; ARM 2005	Evaluate	No significant	Due to age

Source: Painter Preservation & Planning, February 2008, Table 1.

Notes:

(1) See Site Plan of Paraiso Hot Springs in 2003 (Figure 3.5- 1 presented earlier)

(2) "Due to age means the resource is outside of the Period of Significance and evaluation did not reveal any significance for these structures in 2003.

(3) A moved structure is not ordinarily eligible for listing on the CRHP unless the setting is similar to the previous setting of the structure.

The report also evaluated Paraiso Hot Spring significance as a cultural landscape, specifically as a historic vernacular landscape and made the following determinations:

- The **Area of Significance** for this property, as reflected in the buildings and site features extant in 2003, is "Entertainment/Recreation," defined as, "The development and practice of leisure activities for refreshment, diversion, amusement, or sport," commensurate with its history as a resort. This can be seen in the buildings and structures at Paraiso that provided for its use as a hot springs and resort, and the natural environment that made it a popular destination.
- The **Period of Significance** is 1872 to 1928, which reflects the date the first resort structures were built on the site to the date of the fire that destroyed the main hotel, which was the main organizing feature of the site after the springs themselves. Landscape features on the site are also evaluated for their presence and importance during this Period of Significance.
- The **architectural context** for the property addresses the Victorian Gothic Revival style, as well as Victorian-era vernacular structures, as seen in nine buildings of the 36 present on the site in 2003.
- The **historic context** of Paraiso Hot Springs is as a popular Victorian-era resort in Monterey County.

The report concluded that the project site as a whole does not meet the CRHR as a rural historic landscape or as a historic district due to an overall lack of integrity. This is due to the fact that the property has undergone numerous physical changes over the course of the past 80-100 years, such that the property no longer contains enough of the physical character defining features from the property's period of significance to adequately convey the property's historic significance. Therefore, the property as a whole is not a historical resource for the purposes of CEQA.

Archaeological Resources

A unique archeological resource means an archeological 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: (1) contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information; (2) has a special and particular quality such as being the oldest of its type or the best available example of its type; or (3) is directly associated with a scientifically recognized important prehistoric or historic event or person. See PRC § 21083.2(g); 14 CCR § 15064.5.

The California Historical Resources Information System (CHRIS) assigns a unique primary number (i.e. P-35-24) to an archaeological resource based upon the county in which it was encountered. Archaeological resources are generally assigned a trinomial (i.e. CA-MNT-XXX). CA-MNT-XXX refers to the numbering of prehistoric or historical archaeological sites; CA refers to California; MNT refers to Monterey County. The site number does not have a hierarchical meaning. Archaeological resources, which date to the historic period are given the suffix "H" and resources with both prehistoric and historical components are given the suffix "/H." These recordation numbers serve to identify the resource for the purpose of future archival study, research, and management. Many sites are recorded with both types of numbers.

If unrecorded prehistoric or historic period cultural materials are encountered during the course of an archaeological survey, site recordation forms are prepared. These consist of Department of Parks and Recreation (DPR 523) forms, including, but not limited to: Primary Record, Archaeological Record, and Site Map forms. The completed forms are submitted to the local information center of the CHRIS.

Archaeological Resources on the Project Site

The following discussion of archaeological resources on the project site is primarily based on the *Cultural Resource Evaluation of the Paraiso Springs at 34358 Paraiso Springs Road in the County of Monterey* (ARM, 2008) which included surface reconnaissance of the site.

During the course of the 2008 ARM evaluation, a study of the maps and records at the Northwest Information Center of the California Historical Resources Information System was conducted. The archival research revealed that there are two recorded archaeological sites located within the project area. These are: CA-MNT-302 and CA-MNT-303.

- **CA-MNT-302**. This site was recorded by Prince on July 7, 1954. It is described as two bedrock mortars, designated as A and B. The mortars are located approximately

50 yards west of Paraiso Springs Road just outside the main gate of the project site. A surface scatter of pottery shreds is also noted to the east of Paraiso Springs Road. This project site record provided direct evidence of prehistoric Native American utilization of the Paraiso Hot Springs. The presence of these bedrock mortars was confirmed during site visits conducted in 1984 by Archaeological Consulting and in 2004 and 2008 by ARM. No changes were noted regarding their previously recorded (1954 and 1984) condition. The pottery scatter shown on the original site maps was not noted in the field. An updated site record was completed for CA-MNT-302.

- **CA-MNT-303**. This site was recorded by Prince on July 7, 1954. The site is described as a bedrock mortar. It is located at Paraiso Hot Springs, approximately sixty feet northwest of the Paraiso Springs swimming pool. The presence of this bedrock mortar was confirmed during site visits conducted in 2004 and 2008. No changes were noted regarding its previously recorded (1954 and 1984) condition. An updated site record was completed for CA-MNT-303.

It is likely that additional subsurface materials associated with Native American utilization/habitation of the springs are present within the area surrounding the two mortar sites. This area, located in the northeastern portion of the project site, is identified on the USGS map as "Indian Valley."

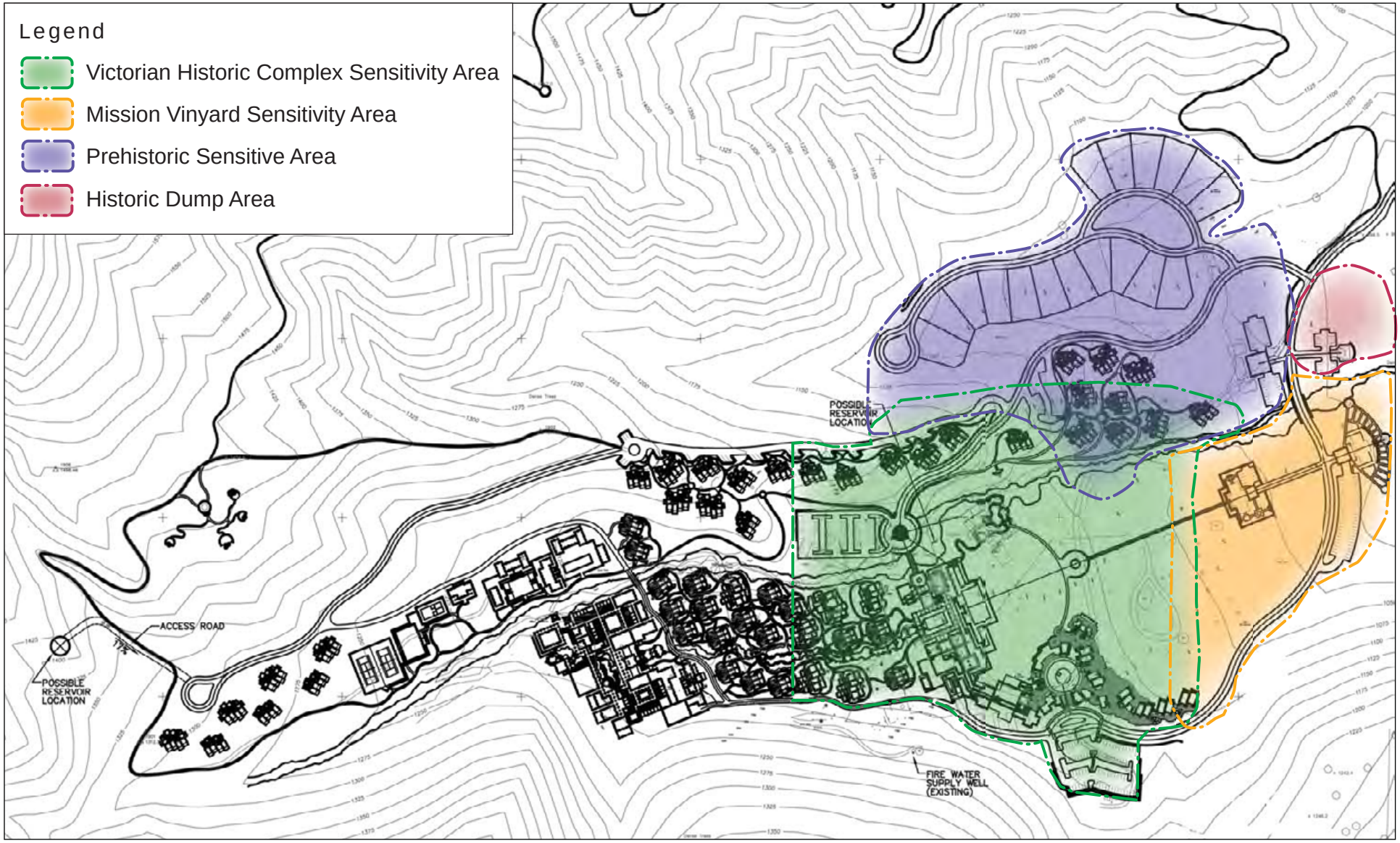
The dump site on the property, located along a small drainage south of the entrance to Paraiso Springs, has been identified as having potential to yield information important to understanding the historic usage of the site as a commercial resort from the late 19th century to the mid-20th century (ARM 2008).

Although some areas could still potentially contain subsurface cultural materials, no extended (subsurface) investigations have been attempted to determine whether subsurface deposits exist around the bedrock mortars or elsewhere. In addition, the two bedrock mortar sites were not placed in an open space or scenic easement to provide permanent protection.

As a component of the 2004 and 2008 ARM report, an archaeological sensitivity map was developed identifying four generalized areas of concern on the Paraiso Springs property: the Prehistoric Sensitivity Area, the Mission Vineyard Sensitivity Area, the Victorian Historic Complex Sensitivity Area, and the Historic Dump Area (Figure 3.5-2, Archaeological Sensitivity Area).

Archaeological Resources within the Road Improvement Area

Minor road improvements associated with the project will occur along a linear transect approximately 1.3 miles in length following Paraiso Springs Road (See Figure 2-10, Paraiso Springs Road Improvement Area, presented earlier). One cultural resource, described as a "small surface scatter containing five pieces of FCR (fire altered rock), one possible mano, and one piece of chert debitage" was identified during the 2012 survey of the road area by ARM. The site is described as being "five meters in diameter."



Source: RBF Consulting 2010, ERM 2008, Hill Glazier Architects 2005

Figure 3.5-2
Archaeological Sensitivity
Paraiso Springs Resort EIR

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3.5.3 Regulatory Background

Local

Monterey County General Plan

Goal 12 in the *Monterey County General Plan* (1982) aims to "encourage the conservation and identification of the County's archaeological resources." Listed below are policies that achieve this goal:

Policy 12.1.1 The County shall take such action as necessary to compile information on the location and significance of its archaeological resources so this information may be incorporated into the environmental or development review process.

Policy 12.1.3 All proposed development, including land divisions, within high sensitivity zones shall require an archaeological field inspection prior to project approval.

Policy 12.1.4 All major projects (i.e., 2.5 acres or more) that are proposed for moderate sensitivity zones, including land divisions shall require an archaeological field inspection prior to project approval.

Policy 12.1.6 Where development could adversely affect archaeological resources, reasonable mitigation procedures shall be required prior to project approval.

Policy 12.1.7 All available measures, including purchase of archaeological easements, dedication to the County, tax relief, purchase of development rights, consideration of reasonable project alternatives, etc., shall be explored to avoid development on sensitive archaeological sites.

Goal 52 is "to designate, protect, preserve, enhance, and perpetuate those structures and areas of historical, architectural, and engineering significance which contribute to the historical heritage of Monterey County's historical heritage and diverse cultural background by encouraging the systematic collection and preservation of historic records and artifacts and the promotion of related cultural events." Listed below is the policy to achieve this goal:

52.1.1 The County shall compile and maintain a current inventory of cultural resources in unincorporated areas of the County and encourage the same of incorporated cities.

Historic Resources are also discussed under the Public Services and Facilities section of the General Plan as follows:

> Preservation of the County's historic and cultural resources, like its natural resources, has become an important planning issue. Monterey County has had a particularly rich historic past and contains 49 sites of national and/or state significance. In addition to those historic sites on national and state registers, the

County has identified about 220 sites on the County historic inventory. The County recognizes the need to discover and identify places of historical significance and preserve the physical evidence of its historic past. Therefore, it has initiated the development of a countywide historic preservation ordinance. Through the Parks Department's Historical Coordinator and Historical Advisory Committee, a set of policies has been developed aimed at preserving those sites which have proven historical significance. All the policies stress provision of incentives to property owners such as property tax reductions and other forms of subsidy. These policies constitute the County's Historic Preservation Plan. Monterey County General Plan 1982 page 148.

County of Monterey Municipal Code

The County's provisions governing historic resources can be found in Section 18.25: Preservation of Historic Resources of the County of Monterey Municipal Code. The following subsection contains the criteria by which a resource is determined to be historically significant.

18.25.070 Review Criteria. An improvement, natural feature, or site may be designated an historical resource and any area within the County may be designated a historic district if such improvement, natural feature, site, or area meets the criteria for listing on the National Register of Historic Places, the California Register of Historic Resources, or one or more of the following conditions are found to exist:

A. Historical and Cultural Significance

1. The resource or district proposed for designation is particularly representative of a distinct historical period, type, style, region, or way of life;
2. The resource or district proposed for designation is, or contains, a type of building or buildings which was once common but is now rare;
3. The resource or district proposed for designation was connected with someone renowned;
4. The resource or district proposed for designation is connected with a business or use which was once common but is now rare;
5. The resource or district proposed for designation represents the work of a master builder, engineer, designer, artist, or architect whose talent influenced a particular architectural style or way of life;
6. The resource or district proposed for designation is the site of an important historic event or is associated with events that have made a meaningful contribution to the nation, State, or community; and
7. The resource or district proposed for designation has a high potential of yielding information of archaeological interest.

B. Historic, Architectural, and Engineering Significance

1. The resource or district proposed for designation exemplifies a particular architectural style or way of life important to the County;
2. The resource or district proposed for designation exemplifies the best remaining architectural type of a community; and

3. The construction materials or engineering methods used in the resource or district proposed for designation embody elements of outstanding attention to architectural or engineering design, detail, material or craftsmanship.

C. Community and Geographic Setting

1. The proposed resource materially benefits the historic character of the community;
2. The unique location or singular physical characteristic of the resource or district proposed for designation represents an established and familiar visual feature of the community, area, or county;
3. The district is a geographically definable area, urban or rural possessing a significant concentration or continuity of site, buildings, structures, or objects unified by past events, or aesthetically by plan or physical development; and
4. The preservation of a resource or resources is essential to the integrity of the district.

Monterey County zoning ordinances provide for the identification and protection of historic resources.[8] These ordinances include Chapter 21.54, section 21.64.270. chapter 21.66.050 of the Monterey County zoning ordinance which provide development standards to assure the maintenance and protection of the County's archaeological resources. These ordinances emphasize avoidance of cultural resources as the preferred means of reducing potentially significant effects.

Central Salinas Valley Area Plan

The *Central Salinas Valley Area Plan* (1987) contains the following policies applicable to the proposed project:

Policy 28.1.1.1 (CSV) Recreation and visitor serving land uses for the Paraiso Hot Springs property may be permitted in accordance with a required comprehensive development plan. The resort 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 fire safety, access, sewage treatment, water quality, water quantity, drainage, and soil stability issues.

Policy 12.1.8 (CSV) The Central Salinas Valley Archaeological Sensitivity Map shall be used to identify archaeological resources within the Planning Area. The map shall be updated when new information becomes available.

[8] Historic resource means any structure, object, fence, site or portion of a site which has a significant historic, archaeological, architectural, engineering or cultural value (Title 21.54).

Paraiso Springs is identified as an area of high archaeological sensitivity on Figure 4 – Cultural Resources, and the "Paraiso Springs and Archaeological Site" is listed as a "Structure of Architectural Significance" in Table 2 of the Central Salinas Valley Area Plan.

3.5.4 Analytical Methodology and Significance Threshold Criteria

Methodology

Historical Resources

The methodology for historical resources evaluation consisted of an archival and records search, and on-site surveys. A records search at the Northwest Information Center was conducted. Additionally, archival research was conducted for the larger Bay Area, including:

- The California Historical Society, San Francisco;
- The California State Library, Sacramento;
- The California Railroad Museum Research Library, Sacramento;
- The Julia Morgan archives at University of California at San Luis Obispo, San Luis Obispo;
- The Bancroft Library, Berkeley; and
- The University of California at Berkeley Earth Sciences Map Collection and Library Berkeley.

Photographs and archival material available at Paraiso Hot Springs were also examined.

Original research and survey work at the project site included the following:

- Site visits conducted in September and December 2007, in January 2008, and in September 2012 and photographs were taken to document the project site as it exists today;
- Review of historic maps, photographs and postcards, and aerial photographs to provide information on the project site as it existed in the past;
- Review of tourist guides published by the Southern Pacific Railroad and others that detailed the facilities found on the project site;
- Interview conducted with Anita Mason, local historian, and Meg Clovis, Historic Preservation Officer for the County of Monterey; and
- Walking tour of the project site provided by owner John Thompson and manager Chano Reyes on two different occasions, and a subsequent walking tour of the site in 2012 provided by owner John Thompson.

The Historic Resource Report – Paraiso Hot Springs Monterey County, California (Painter Preservation & Planning 2008) included an evaluation of Paraiso Springs as a cultural landscape, specifically as a historic vernacular landscape. The individual buildings and structures were also evaluated as part of this report for their eligibility for listing on the CRHR. The evaluation of historic individual and grouped landscape elements (including the architecture) followed the format recommended by the National

Park Service in their bulletin, *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes*. The evaluation of historic buildings meets the State of California's regulatory framework for compliance with the California Environmental Quality Act and follows the guidelines established in the National Park Service's bulletin, *How to Apply the National Register Criteria for Evaluation*.

The historic reports were peer reviewed by Galvin Preservation Associates in 2008.

Cultural Resources

The evaluation of cultural resources considers three separate studies that they covered part or all of project site: Archaeological Consulting (1984), ARM (2004), and ARM (2008). A separate archaeological study was also conducted for the Paraiso Springs Road Improvement area in 2012 (ARM).

The methodology for cultural resources evaluation consisted of an archival search, a surface reconnaissance, an evaluation of the potential significance of the property according to the CRHR, and development of a written report of the findings with appropriate recommendations. The archival research included a study of the maps and records at the Northwest Information Center of the California Historical Resources Information System, to determine if any archaeological sites or resources were reported in or around the subject area. Historic documentation regarding Paraiso Springs was also consulted.

The surface reconnaissance was carried out to determine if traces of historic or prehistoric archaeological materials exist within the project site. Exposed soils were examined for cultural material including early ceramics, Native American cooking debris, and artifacts of stone, bone, and shell. The field evaluation also considered the locations of older structures as possible indicators of the presence of subsurface historic deposits of potentially significant antiquity. A report was written containing the archival information, record search number, the survey findings and appropriate recommendations. A copy of this evaluation was sent to the State of California archaeological office by requirements of State of California procedure.

The cultural reports for both the project area and the road improvement area were peer reviewed for adequacy and sufficiency for the proposed development by Archaeological Consulting in 2013.

Significance Threshold Criteria

Appendix G of the CEQA Guidelines, Initial Study Checklist, includes significance criteria associated with cultural resources. Accordingly, a project would typically have a significant impact on cultural resources if the project would:

- Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5[9];
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5;
- Disturb any human remains, including those interred outside of formal cemeteries.

Significance Criteria for Historic Significance

There are four "tests" for the historic significance of a property in the State of California. They are used by the State of California and local agencies to determine whether impacts to a historic site as a result of a project proposal have the potential to create a significant adverse affect under CEQA. As Identified in Section 15064.5 of the CEQA guidelines, in order to be determined significant, a historical resource must meet one or more of the following four criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important to our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or representing the work of a master, or possessing high artistic values; or
4. Has yielded, or has the potential to yield, information important in prehistory or history.

In addition to meeting one or more of the above criteria, a property must also retain its integrity. Integrity is defined as a function of a property's location, design, setting, materials, workmanship, feeling and association. According to these criteria, a property must retain enough of its historic character or appearance to be recognizable as a historical resource and convey the reasons for its significance. The seven aspects of integrity are defined as follows:

1. Location is the place where the historic property was constructed or the place where the historic event occurred;
2. Design is the combination of elements that create the form, plan, space, structure, and style of a property;
3. Setting is the physical environment of a historic property;
4. Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property;
5. Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory;

[9] CEQA Guidelines section 15064.5 defines "substantial adverse change" as: physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.

6. Feeling is a property's expression of the aesthetic or historic sense of a particular period of time; and
7. Association is the direct link between an important historic event or person and a historic property.

Impact Analysis

Historic Resources – Historic Vernacular Landscape (Historic District)

The concept of a Historic District can be used to evaluate the Paraiso Springs complex of buildings and landscape features as they stood in 2003. Historic Districts are usually complexes of structures or other historic features that together convey them in history such as architectural style, industrial production, economic enterprise, or other human activity. The integrity of the complex must be intact enough to convey the primary theme of the Historic District.

At Paraiso Springs, hot springs/spas resort activity was the historic theme. In 2003, only nine structures from the historic era of the late Victorian period (typically described as the period in California dating from the 1860's to 1910) remained. Missing from the complex were the primary structures that related to the resort theme and overall community. These include the hotel, the annex, the post office, the schools, and numerous other buildings that existed during and shortly after the Victorian period.

Subsequent development activity since the early 1900's activity has further diminished the historic landscape character of the project site. This has occurred through the rebuilding of structures due to fires, the relocation of structures to the site (e.g. mobiles homes and cottages), and the addition of more contemporary structures (e.g. the Yurt compound and Hillside cabins).

Paraiso Hot Springs does not retain integrity as a historic vernacular landscape. While many of the natural and cultural site features are intact as they were developed and existed during the resort's heyday in the Victorian era, a surprising amount of change in the landscape has also taken place. This fact, combined with the fact that the historic Victorian-era structures made up only about twenty-five percent of built environment of the site in 2003, led to the determination that Paraiso Hot Springs does not retain sufficient integrity to be considered a historic vernacular landscape, specifically a historic district, for purposes of CEQA. Therefore implementation of the project would have **no impact** on a historic vernacular landscape.

Historic Resources – Historic Structures

Impact 3.5-1:	Nine Victorian-era cottages present in 2003 were determined to be historic resources. Demolition of these structures without a permit in 2003 is a significant impact. (Significant and Unavoidable)

CEQA Guidelines establish that a "historical resource" is a property that is listed in or determined eligible for the California Register of Historical Resources.

The historic resource evaluation determined that nine of the Victorian-era cottages present in 2003 were individually historically significant because they met the eligibility

criteria for inclusion in the California Register of Historical Resources individually due to their importance to the history of the site, their reflection of important architectural trends at the time, their relative integrity, and their relative rarity on the project site and as part of the Victorian-era spa movement in the Monterey region. The Victorian-era cottages reflected the heyday of Paraiso Springs as a Victorian-era resort. Paraiso Springs at this time was promoted by the Southern Pacific Railroad and other organizations as a destination for its hot springs and spa, the natural environment and climate, and the wholesome food and activities that could be found there. This finding reflects the historic context included in the historic resource evaluation which emphasizes Paraiso Hot Springs as a popular Victorian-era resort in Monterey County. None of the remaining structures on the project site are considered historic resources for the purposes of CEQA.

These nine historically significant structures include the following:

- Evergreen Cottage (ca. 1880)
- Brightside Cottage (ca. 1880)
- Monterey Cottage (ca. 1880)
- Cyprus Cottage (ca. 1880)
- Romie Cottage (ca. 1880)
- Buena Vista Cottage (ca. 1880)
- Antlers Cottage (ca. 1880)
- Spreckels Cottage (ca. 1890)

If a building or other potential resource in the State of California is deemed a historic resource for purposes of CEQA, demolition is considered a "substantial adverse change." Therefore, the non-permitted demolition of the nine historic Victorian- era cottages in 2003 is considered to be a significant impact.

The project is unusual in that the impacts to the nine identified historical resources have already occurred and therefore an analysis of ways to avoid or minimize impacts is a moot point. There are no mitigation measures that would reduce the historic resource impact to a less than significant level.

Section 15126.4 of the CEQA Guidelines requires consideration and mitigation measure to minimize significant effects even when the mitigation measures will not reduce the impact to a level of less than significant. Section 15126.4(b)(2) identifies "*documentation of an historical resource, by way of historic narrative, photographs or architectural drawings*" as mitigation for the effects of demolition of the resource when the mitigation cannot reduce the impact to a less than significant level. To this end, measures should be taken to document the resources and provide opportunities for interpretation of what was on the site into the future as a means of preserving and conveying the history of the Hot Springs to future generations and to visitors to the site.

The following mitigation measures shall be required:

Mitigation Measures

MM 3.5-1a Earth-moving activities associated with the project shall be monitored by a qualified archaeologist or architectural historian. If historic irrigation or related water conveyance structures are discovered during grading or construction, the following step shall be taken immediately upon discovery:

There shall be no further excavation or disturbance of the project site or any nearby area reasonably suspected to overlie adjacent structures until the find can be evaluated by a qualified archaeologist or architectural historian and, if determined significant, until appropriate mitigation measures are formulated, with the approval of the lead agency, and implemented. Mitigation shall include that the structure be thoroughly documented, preserved and interpreted, as appropriate.

MM 3.5-1b The project applicant shall prepare and provide to the Monterey County Historical Society archival-quality reproductions of their own historic archives, as well as copies of additional historic archives as may be available from the California State Library and California Historical Society, that portray the historic character and setting of Paraiso Springs during the late nineteenth century. The historic archives shall be subject to review and approval by the Monterey County Historic Resources Review Board.

The project applicant shall submit archival-quality reproductions of the approved historic archives (described above) and any future archival and site research on the property that is not currently catalogued with the Monterey County Historical Society, the Monterey Public Library, and the California State Library for their permanent records

MM3.5-1c The project applicant shall provide a grant of $10,000 to the Monterey County Historical Society to assist with accessioning, cataloging, displaying and archiving the collection with the goal to reach the broadest and most relevant audience.

MM3.5-1d The project applicant shall prepare a full-color brochure that describes the history of the project site (including Native American, Spanish, Mexican and American periods), that can be placed in a number of venues, including the Soledad Mission, local museums and other visitor-oriented locations, as well as any visitor-serving facilities on-site. The brochure shall include a map of the historic interpretive trails plan (described in Mitigation Measure 3.5-1-e), so that it can be used as a compendium for on-site interpretation. The applicant shall identify a plan and be responsible for all expenses associated with brochure development and the annual reproduction and distribution of these brochures, for as long as the resort is in operation. The full-color brochure shall be subject to review and approval by the Monterey County Historic Resources Review Board.

MM 3.5-1e The project applicant shall prepare an historic interpretive trails plan that will be constructed on the project site. This plan shall include a designated pedestrian trail with scenic vista points and permanent interpretive signage that describes the historic events (including the Esselen Indians, Spanish Mission influences, and Victorian-era spa resort), features, and names (such as Romie's Glen) of Paraiso Springs. Construction of the trail and interpretive signage shall be completed at the applicant/developer's expense, prior to occupancy of any portion of the project site. The historic interpretive trails plan shall be subject to review and approval by the Monterey County Historic Resources Review Board.

MM 3.5-1f The project applicant shall provide an interpretive exhibit prominently placed within the new hotel lobby, or other appropriate location on site that is open to the public, that documents the historic events (including Native American, Spanish, Mexican and American periods) at Paraiso Hot Springs. The exhibit shall be subject to review and approval by the Monterey County Historic Resource Review Board.

Implementation of the above mitigation measures will ensure that the history of the individual structures and undiscovered potentially historic structures are documented and provide interpretive opportunities into the future. However, because these historic resources cannot be recreated elsewhere, this would remain a significant and unavoidable impact.

Archaeological Resources – Project Site

Impact 3.5-2:	The proposed project has the potential to disturb, destroy, or adversely affect the integrity of recorded sites CA-MNT-302 and CA-MNT-303, both of which are significant archaeological resources. This is considered a potentially significant impact. (Less than Significant with Mitigation)

Two significant archaeological resources have been recorded on and adjacent to the proposed project site. In addition, due to historical documentation of the presence of Native American activities in the vicinity of the project site, and the possibility of the existence of subsurface cultural deposits from early historical use of the springs, there is the potential for disturbance of yet undiscovered archaeological resources that may be historic or unique. Significant cultural resources (both identified and undiscovered) could be damaged during land alteration activities associated with the proposed project as identified in the *Cultural Resource Evaluation of the Paraiso Springs at 34358 Paraiso Springs Road in the County of Monterey* (ARM 2008). Disturbance of historic or unique archaeological resources is a significant impact. Implementation of the following mitigation measures would reduce this potential impact to less than significant.

Mitigation Measures

MM 3.5-2a To ensure that no inadvertent damage occurs to CA-MNT-302 and CA-MNT-303 during development of the proposed project, prior to any earthmoving or construction activities, the two bedrock mortar sites shall be subjected to an extended Phase I (subsurface) survey to determine whether subsurface cultural materials are present. Once their dimensions

have been determined the areas identified as containing cultural resources shall be placed within an open space or scenic easement. Exclusionary fencing shall be placed around these easement areas prior to the beginning of the project so that the potential for accidental impacts will be minimized. The location of the fencing shall be shown on the improvement plans.

A report with the findings of the extended Phase I subsurface survey shall be submitted to, and reviewed and approved by, the RMA Director of Planning prior to issuance of a grading permit. If the subsurface survey reveals that implementation of the project or project features would adversely affect one or both of the resources, the project design shall be modified to avoid the resources and the resources shall be protected in place. All design changes are subject to approval by the Director of the RMA Planning Department.

MM 3.5-2b After completion of the Phase I subsurface survey and report in compliance with MM3.5-2a above, and to ensure that no inadvertent damage occurs to CA-MNT-302 and CA-MNT-303 or other yet undiscovered cultural resources, the project developer shall contract with a qualified archaeologist, acceptable to the Monterey County RMA Director of Planning, to prepare a mitigation monitoring plan consistent with the provisions of this mitigation measure and with the professional ethics of the archaeologist. The plan shall be approved by the Director of Planning prior to issuance of a grading permit.

The qualified archeologist shall implement the monitoring plan during grading and/or construction-related activities within the following four areas: the Prehistoric Sensitivity Area, the Mission Vineyard Sensitivity Area, the Victorian Historic Complex Sensitivity Area, and the Historic Dump Area.

The archaeological monitoring plan shall include the following provisions:

- The timing and frequency of this monitoring shall be at the discretion of the qualified archaeologist. Monitoring in any area may be discontinued by the project archaeologist when it becomes evident that no additional monitoring is necessary.
- Any artifacts or other cultural materials noted by the monitor will be collected and stored for subsequent analysis. It may be necessary to temporarily halt earth moving activities while such materials are collected.
- If a significant cultural feature or deposit is discovered, earth moving activities may be halted for the purpose of identifying the deposit. If deemed necessary, the feature or deposit shall be sampled or salvaged according to a mitigation and data recovery plan developed with the concurrence with the RMA-Planning Department.

- Any collected materials will be subjected to appropriate analyses, and then be curated in the public domain at an appropriate archaeological curation facility.
- At the end of the project a final report shall be produced documenting and synthesizing all data collected. This report will include recording and analysis of materials recovered, conclusions and interpretations, identification of the curation facility where the materials are stored, and additional recommendations as necessary.

The archaeological monitor shall submit a weekly report of the monitoring activities to the RMA Director of Planning.

The archaeological monitor shall have the authority to stop all work if potentially significant cultural features or materials are uncovered. The RMA Director of Planning shall be notified immediately of the discovery. Earth-moving activities will not commence until appropriate mitigation measures are formulated and implemented, with the approval of the RMA Director of Planning.

MM 3.5-2c The following language shall be included within any permits or authorizations pertaining to the project site:

"If, at any time, potentially significant cultural features or materials are discovered, work shall be halted in the immediate vicinity until the find can be evaluated by the project archaeologist and, if determined significant, until appropriate mitigation measures are formulated, with the approval of the RMA Director of Planning, and implemented."

Implementation of mitigation measures MM 3.5-2a-c would ensure that the proposed project does not result in advertent damage to known archaeological resources or undiscovered archaeological resources in known sensitivity areas within the project site, which would ensure that the proposed project results in a less than significant impact to these resources. The impact is less than significant with mitigation.

Archaeological Resources – Paraiso Springs Road Improvement

Impact 3.5-3:	The required road improvements along Paraiso Springs Road would disturb, destroy, or adversely affect the integrity of a significant archaeological resource. This is considered a significant impact. (Less than Significant with Mitigation)

A significant cultural resource has been identified within the road improvement project area at Paraiso Springs Road in the *Cultural Resource Evaluation of Improvements to Paraiso Springs Road in the County of Monterey* (ARM 2012). In addition, due to historical documentation of the presence of Native American activities in the vicinity of the road improvements, there is the potential for disturbance of additional, yet undiscovered, archaeological resources that may be historic or unique.

Significant cultural resources (both identified and undiscovered) could be damaged during road improvement activities associated with the proposed project. Disturbance of

historic or unique archaeological resources is a significant impact. Implementation of the following mitigation measures would reduce this potential impact to less than significant.

Mitigation Measures

MM 3.5-3a To ensure that no damage occurs to the identified cultural resource during planned road improvement activity along Paraiso Springs Road, the project applicant shall do the following:

a. Contract with a qualified archaeologist to identify the exact dimensions of the site and formally record the resource;

b. Place exclusionary fencing around the limits of the resource as identified by the archaeologist prior to earthmoving activities so that the potential for accidental impacts is eliminated; and

c. The applicant shall provide evidence that the site has been recorded prior to approval of the final improvement plans for the off-site road improvements to Paraiso Springs Road, subject to review and approval by the County RMA Planning Department.

MM 3.5-3b To ensure that no inadvertent damage occurs to the identified cultural resource or to other yet undiscovered cultural resources associated with off site road improvements, the project developer shall contract with a qualified archeologist, acceptable to the Monterey County RMA Director of Planning, to prepare a mitigation monitoring plan consistent with the provisions of this mitigation measure and with the professional ethics of the archaeologist. The plan shall be approved by the Director of Planning prior to issuance of a grading permit.

The qualified archeologist shall implement the monitoring plan during grading and/or construction-related activities within the road improvement area:

The archaeological monitoring shall include the following provisions:

- The timing and frequency of this monitoring shall be at the discretion of the qualified archaeologist. Monitoring in any area may be discontinued by the project archaeologist when it becomes evident that no additional monitoring is necessary.
- Any artifacts or other cultural materials noted by the monitor will be collected and stored for subsequent analysis. It may be necessary to temporarily halt earth moving activities while such materials are collected.
- If a significant cultural feature or deposit is discovered, earth moving activities may be halted for the purpose of identifying the deposit. If deemed necessary, the feature or deposit shall be sampled or salvaged according to a mitigation and data recovery plan developed with the concurrence with the RMA Director of Planning.
- Any collected materials will be subjected to appropriate analyses, and then be curated in the public domain at an appropriate archaeological curation facility.

- At the end of the project a final report shall be produced documenting and synthesizing all data collected. This report will include recording and analysis of materials recovered, conclusions and interpretations, identification of the curation facility where the materials are stored, and additional recommendations as necessary.

  The archaeological monitor shall have the authority to stop all work if potentially significant cultural features or materials are uncovered. The RMA Director of Planning shall be notified immediately of the discovery. Earth-moving activities will not commence until appropriate mitigation measures are formulated and implemented, with the approval of the RMA Director of Planning.

MM 3.5-3c The following language shall be included within any permits or authorizations pertaining to the Paraiso Springs Road Improvement area:

"If, at any time, potentially significant cultural features or materials are discovered, work shall be halted in the immediate vicinity until the find can be evaluated by the project archaeologist and, if determined significant, until appropriate mitigation measures are formulated, with the approval of the lead agency, and implemented."

Implementation of mitigation measures MM 3.5-3a-c would ensure that the proposed project does not result in advertent damage to known archaeological resources or undiscovered archaeological resources within the road improvement area, which would ensure that the proposed project results in a less than significant impact to these resources. The impact is less than significant with mitigation.

Undiscovered Archaeological Resources – Human Remains

Impact 3.5-4: While only two known recorded sites are within the project site, the possibility cannot be precluded that as of yet undiscovered archaeological resources or human remains are present and could be damaged during land alteration activities. This potential impact would be considered significant. (Less than Significant Impact after Mitigation)

It is possible that as of yet undiscovered cultural resources or human remains could be discovered during grading, road building, utility trenching, and development. Unless inspected by an archaeologist to determine their significance, any damage to as of yet undiscovered resources during construction or long-term operation and maintenance of site development could constitute a potentially significant archaeological impact. Therefore, it is important to have a procedure for alternate tasks, which can be implemented quickly if remains are discovered. This would allow construction work to continue while the remains are investigated.

Mitigation Measure

MM 3.5-4 If archaeological resources or human remains are discovered during grading or construction, the following step shall be taken immediately upon discovery:

a. There shall be no further excavation or disturbance of the project site or any nearby area reasonably suspected to overlie adjacent human remains until;

b. The Coroner of the County of Monterey in which the remains are discovered must be contacted to determine that no investigation of the cause of death is required, and

c. If the Coroner determines the remains to be Native American:

- The Coroner shall contact the Native American Heritage Commission and the Monterey County Resource Management Agency – Planning Department within 24 hours.
- The Native American Heritage Commission shall identify the person or persons from a recognized local tribe of the Esselen, Salinian, Costonoans/Ohlone and Chumash tribal groups, as appropriate, to be the most likely descendent.
- The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.9 and 5097.993, or where the following conditions occur, the landowner or his authorized representatives shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance:
  - The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation with 24 hours after being notified by the commission.
  - The descendent identified fails to make a recommendation; or
  - The landowner or his authorized representative rejects the recommendation of the descendent, and the mediation by the Native American Heritage Commission fails to provide measure acceptable to the landowner.

Implementation of the above mitigation measures would reduce the potential impact to undiscovered cultural, archaeological, historical, and/or paleontological resources to a less than significant impact by halting operations in the event of a discovery and assessing the find in accordance with Section 7050.5 of the California Health and Safety Code. Therefore, this impact is less than significant with mitigation.

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