Planning for Success.

DRAFT
ENVIRONMENTAL IMPACT REPORT

PARAISO SPRINGS RESORT

State Clearinghouse # 2005061016

PREPARED FOR

County of Monterey

July 11, 2013

EMC PLANNING GROUP INC.
A LAND USE PLANNING & DESIGN FIRM

301 Lighthouse Avenue Suite C Monterey California 93940 Tel 831·649·1799 Fax 831·649·8399
www.emcplanning.com

PARAISO SPRINGS RESORT

Draft
Environmental Impact Report

State Clearinghouse # 2005061016

PREPARED FOR
County of Monterey
Mike Novo, Planning Director
168 West Alisal, 2nd Floor
Salinas, CA93901
Tel 831.755.5025

PREPARED BY
EMC Planning Group Inc.
301 Lighthouse Avenue, Suite C
Monterey, CA 93940
Tel 831.649.1799
Fax 831.649.8399
kinisonbrown@emcplanning.com
www.emcplanning.com

July 11, 2013

Table of Contents

Appendices (included as a CD)

List of Figures

List of Tables

This page intentionally left blank.

EXECUTIVE SUMMARY

INTRODUCTION

This summary provides a brief description of the proposed project, areas of controversy known to the lead agency (County of Monterey) including issues raised by agencies and the public, project alternatives, and all potentially significant impacts identified during the course of this environmental analysis. This summary is intended as an overview and should be used in conjunction with a thorough reading of this environmental impact report. The text of this report, including figures, tables and appendices, serves as the basis for this summary.

PROJECT LOCATION

Paraiso Hot Springs (hereinafter "project site") is located approximately 130 miles south of San Francisco in unincorporated southern Monterey County in the western foothills of the Central Salinas Valley, approximately seven miles west of the City of Greenfield at the western terminus of Paraiso Springs Road. The project site is located at 34358 Paraiso Springs Road and is comprised of Assessor's Parcel Numbers 418-381-021-000, 418-361-004-000, and 418-381-022-000.

The project site consists of about 235 acres nestled in the mouths of the Paraiso Springs Valley and Indian Valley and extending westward into the foothills between the crest of the Sierra De Salinas Foothills and the Salinas Valley The site and is bordered to the east by grazing and farm land, and to the north, south and west by the Santa Lucia Mountains. Happy Valley is located on the other side of the ridge to the south of the site.

BACKGROUND

This draft environmental impact report provides a description of existing land use and planning policies that apply to the project site, and an analysis of potential impacts regarding land use compatibility and environmental effects associated with the proposed project.

The current Monterey County General Plan for the non-coastal, unincorporated area of the County was adopted in October 2010. However, the proposed project application was accepted as complete in August 28, 2005; therefore the proposed project is subject to the policies contained in the 1982 General Plan. As such, land use policy descriptions and analysis within this environmental impact report are based primarily on the *Monterey County General Plan* (1982 with Amendments through November 5, 1996) and the *Central Salinas Valley Area Plan* (1987*),* a component of the 1982 General Plan.

This environmental impact report evaluates changes in the existing physical conditions resulting from the proposed resort in the affected area as they existed at the time the notice of preparation was published (California Environmental Quality Act Guidelines section 15125). The notice of preparation for this project was filed with the State Clearinghouse in May 2008. As part of the whole of the action this EIR also evaluates impacts associated with the un-permitted removal of nine historic Victorian cottages, in

November 2003. In order to accurately evaluate the impacts of the loss of these structures the analysis must assume their presence. Therefore the historic analysis looks at the site as it existed prior to 2003 when the structures were present. All other potential environmental impacts are considered in terms of the physical conditions in the affected area as they existed in 2008, at the time of the notice of preparation publication.

PROJECT DESCRIPTION

The proposed project involves the demolition the existing structures within the project site and construction of a new hotel, day-use area (Hamlet), a spa and fitness center, 60 timeshare condominiums, and 17 timeshare villas centered on the European theme of wellness treatment and education associated with the existing mineral hot springs.

The proposed project includes the following three components.

1. An "after the fact" environmental review and permit to demolish nine historic cottages that were removed without approval in November 2003.

2. A Combined Development Permit consisting of:

   a. General Development Plan for phased development of a resort;
   b. Use Permit for the creation of 77 Timeshare units (60 condominiums and 17 villas);
   c. Vesting Tentative Map for the creation of 60 airspace timeshare condominium units;
   d. Standard Subdivision (Vesting Tentative Map) to allow the merger and re-subdivision of three parcels of 157.88 acres;
   e. Use Permit for removal of 185 protected oak trees; and
   f. Use Permit for development on slopes in excess of 30 percent.

3. Off-site road improvements on Paraiso Springs Road.

PROJECT OBJECTIVES

In accordance with the California Environmental Quality Act, a statement of objectives sought by the proposed project should be clearly stated to aid the lead agency in developing a reasonable range of alternatives to evaluate in the environmental impact report. These objectives are also utilized to aid decision makers in preparation of findings or statement of overriding considerations (Title 14 CCR § 15124 (b). The following objectives outline the underlying purpose of the proposed project:

- Redevelop the existing vacant Paraiso Springs Resort into a world-class destination spa/resort hotel;
- Build a project that is consistent with the objectives and policies of the *Central Salinas Valley Area Plan* and the 1982 *Monterey County General Plan*;

- Develop a mission style resort that provides visitor-serving support for the Monterey County wine corridor honoring the historic connection to the Soledad Mission's use of the property as a vineyard and retreat;
- Proactively engage the services of local businesses in the construction and on-going operation of the resort;
- Work with Monterey County, local wineries, and other related businesses to promote the Monterey wine corridor as a destination for tourism;
- Provide a therapeutic environment for wellness treatment and education;
- Utilize the existing mineral hot springs and sweeping views of the Central Salinas Valley as key amenity features;
- Provide services and amenities for both overnight and day guests;
- Provide an economically sustainable combination of hotel units and timeshare units of varying sizes;
- Create long-term employment and economic (tax revenue) opportunities for Monterey County;
- Provide an onsite interpretive display of the history and events associated with the Paraiso Springs Resort;
- Develop and provide opportunities to reduce green house gas emissions through the provision of a shuttle service for employees and guests, and on-site programs such as the use of electric service vehicles, energy efficient building design, use of Energy Star appliances and fixtures, etc. to the extent feasible; and
- Retain a minimum of 150 acres of the project site as natural open space that would accommodate hiking trails and landscaping, and preserve the existing habitat and natural landforms.

PROJECT ALTERNATIVES

California Environmental Quality Act Guidelines require that an environmental impact report describe and evaluate alternatives to the project that could eliminate significant adverse project impacts or reduce them to a less than significant level. The following alternatives are evaluated in this EIR in Chapter 5 - Alternatives.

Alternative #1 - No Project Alternative

Alternative #2 - Valley Floor Alternative

SUMMARY OF PROJECT ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

All impacts identified in the environmental analysis are summarized in this section. The summary includes all impacts analyzed in this environmental impact report. This summary groups impacts according to subject matter (e.g. aesthetics, air quality, etc.).

Table ES.1 Executive Summary of Project Impacts

Project Impacts	Level of Significance Without Mitigation	Mitigation Measure(s)	Resulting Level of Significance
Section 3.1: Aesthetics and Visual Resources			
Impact 3.1-1: Implementation of the proposed project would substantially degrade the existing visual character or quality of the site and its surroundings.	Potentially Significant	**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." **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.	Less than Significant
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 (Less than significant with application of standard condition of approval PD014 (B)	Implementation of this standard condition of approval PD014 (B) 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.	Less than Significant

Project Impacts	Level of Significance Without Mitigation	Mitigation Measure(s)	Resulting Level of Significance
Section 3.2: Air Quality			
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.	Significant	**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;	Less than Significant

Project Impacts	Level of Significance Without Mitigation	Mitigation Measure(s)	Resulting Level of Significance
		▪ 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).	
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.	Potentially Significant	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).	Less than Significant
Impact 3.2-3: The proposed project would result in long-term stationary and vehicular emissions, which would not exceed the MBUAPCD thresholds.	Less than Significant	No significant impact has been identified; therefore no mitigation is proposed.	Less than Significant
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 air district 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.	Less than Significant	No significant impact has been identified; therefore no mitigation is proposed.	Less than Significant

Project Impacts	Level of Significance Without Mitigation	Mitigation Measure(s)	Resulting Level of Significance
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 air district 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 toxic air contaminants.	Less than Significant	No significant impact has been identified; therefore no mitigation is proposed.	Less than Significant
Section 3.3: Biological Resources			
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.	Potentially Significant	**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.	Less than Significant

Project Impacts	Level of Significance Without Mitigation	Mitigation Measure(s)	Resulting Level of Significance
		▪ 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 California Department of Fish and Wildlife, 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 California Department of Fish and Wildlife 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 California Department of Fish and Wildlife 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.	

Project Impacts	Level of Significance Without Mitigation	Mitigation Measure(s)	Resulting Level of Significance
		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 California Department of Fish and Wildlife 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 California Department of Fish and Wildlife 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 California Department of Fish and Wildlife). Woodrats shall not be handled without prior agency authorization from the California Department of Fish and Wildlife. If project activities cannot avoid any existing, underground, or unidentified woodrat nest structure in the work area, notify and coordinate with the California Department of Fish and Wildlife to develop appropriate avoidance and/or alternative habitat creation and recovery strategies. **MM 3.3-1c** The 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 (California Department of Fish and Wildlife 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 California Department of	

Project Impacts	Level of Significance Without Mitigation	Mitigation Measure(s)	Resulting Level of Significance
		Fish and Wildlife would be required to interpret survey results and develop project-specific avoidance and minimization approaches. **MM 3.3-1d** The project applicant shall have a qualified biologist conduct construction monitoring during initial 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.	
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 jurisdictional waters, along with associated riparian habitat under jurisdiction of the California Department of Fish and Wildlife. 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 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 jurisdictional stream channel and associated riparian habitat.	Significant	**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 US Army Corps of Engineers, California Department of Fish and Wildlife, and Regional Water Quality Control Board prior to issuance of any County permits.	Less than Significant

Project Impacts	Level of Significance Without Mitigation	Mitigation Measure(s)	Resulting Level of Significance
		For all impacts to "Waters of the U.S." and other wetland features on the site under the jurisdiction of the US Army Corp of Engineers, California Department of Fish and Wildlife, and/or Regional Water Quality Control Board, 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 US Army Corp of Engineers Clean Water Act Section 404 Nationwide Permit application, a Regional Water Quality Control Board Section 401 Water Quality Certification application, and a California Department of Fish and Wildlife 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.	
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.	Potentially Significant	**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 US Fish and Wildlife Service and/or California Department of Fish and Wildlife (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	Less than Significant

Project Impacts	Level of Significance Without Mitigation	Mitigation Measure(s)	Resulting Level of Significance
		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.	
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**.**	Significant	**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 (*Quercus agrifolia*) 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	Less than Significant

Project Impacts	Level of Significance Without Mitigation	Mitigation Measure(s)	Resulting Level of Significance
		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.	

Project Impacts	Level of Significance Without Mitigation	Mitigation Measure(s)	Resulting Level of Significance
		▪ 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.	
Section 3.4: Climate Change			
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	**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;	Cumulatively Significant and Unavoidable

Project Impacts	Level of Significance Without Mitigation	Mitigation Measure(s)	Resulting Level of Significance
		▪ 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.	
Section 3.5: Cultural Resources			
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 was a significant impact	Significant and Unavoidable	**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.	Significant and Unavoidable

Project Impacts	Level of Significance Without Mitigation	Mitigation Measure(s)	Resulting Level of Significance
		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 Parks Department, Cultural Affairs Manager. **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.	

Project Impacts	Level of Significance Without Mitigation	Mitigation Measure(s)	Resulting Level of Significance
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.	Potentially Significant	**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.	Less than Significant

Project Impacts	Level of Significance Without Mitigation	Mitigation Measure(s)	Resulting Level of Significance
		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.	

Project Impacts	Level of Significance Without Mitigation	Mitigation Measure(s)	Resulting Level of Significance
		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.".	
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.	Significant	**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; and 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:	Less than Significant

Project Impacts	Level of Significance Without Mitigation	Mitigation Measure(s)	Resulting Level of Significance
		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:	

Project Impacts	Level of Significance Without Mitigation	Mitigation Measure(s)	Resulting Level of Significance
		"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."	
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.	Potentially Significant	**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:	Less than Significant

Project Impacts	Level of Significance Without Mitigation	Mitigation Measure(s)	Resulting Level of Significance
		○ 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.	
Section 3.6: Geology and Soils			
Impact 3.6-1: Seismic ground shaking at the site may occur during the next major earthquake on a regional fault system. Such shaking can cause severe damage to or collapse of buildings or other project facilities and may expose people to injury or death. Seismic shaking at the site presents a potentially significant impact	Potentially Significant	**MM 3.6-1a** Prior to building permit approval, the project structural engineer shall provide a seismic design report for the project consistent with the most current version of the California Building Code, at a minimum. If other, more conservative design guidelines are determined to be applicable to the project, those design guidelines shall be followed. Recommendations contained within the Geologic and Soil Engineering Feasibility Report, prepared by Landset Engineers (2004), shall also be referenced and incorporated as they provide specific recommendations regarding site preparation and construction of foundations, retaining walls, utilities, sidewalks, roadways, subsurface drainage, and landscaping features based on the lot characteristics and proximity to the fault at the project site. The seismic design report shall be submitted for plan check with any improvement plans including earthwork or foundation construction. During the course of construction, the project applicant shall contract with a qualified engineering geologist to be on site during all grading operations to make onsite remediation and recommendations as needed, and perform required tests, observations, and consultation as specified in the seismic design. Prior to final inspection, the project applicant shall provide certification from the project structural engineer that all development has been constructed in accordance with all applicable geologic and geotechnical reports.	Less than Significant

Project Impacts	Level of Significance Without Mitigation	Mitigation Measure(s)	Resulting Level of Significance
		MM 3.6-1b Prior to occupancy of the proposed project, large appliances (i.e. refrigerators, freezers, pianos, wall units, water heaters, etc.), book shelves, storage shelves, and other large free-standing objects incorporated as part of the building design shall be firmly attached to the floor or to structural members of walls.	
Impact 3.6-2: Implementation of the proposed project may result in potential permanent structural damage and associated human safety hazards resulting from dynamic compaction.	Potentially Significant	Implementation of MM 3.6-1a above.	Less than Significant
Impact 3.6-3: Implementation of the proposed project may result in potential permanent structural damage and associated human safety hazards resulting from direct and indirect slope-failure related to hazards such as liquefaction and/or lateral spreading.	Potentially Significant	**MM3.6-3a** Prior to issuance of a grading permit, the project applicant shall contract with a certified engineer to prepare a site-specific Supplemental Liquefaction Investigation prepared in accordance with the California Department of Mines & Geology Special Publication 117. The Supplemental Liquefaction Investigation shall include in its analysis the approved drainage plan. Engineering measures to protect development in this area could include structural strengthening of buildings to resist predicted ground settlement, utilization of post tension or mat slab foundations or a combination of such measures as recommended in the Geologic and Soil Engineering Feasibility Report prepared by Landset Engineering (2004). These improvements shall be included in the final improvement plans for the proposed project and installed concurrent with site preparation and grading activities associated with future development. **MM 3.6-3b** Prior to issuance of a grading permit, the project applicant shall contract with a certified engineer to ensure that final grading plans include a slope stability analysis, particularly for the parking area near the hamlet and the adjacent roadway, to verify that the proposed cut and fill slopes are considered stable under both static and pseudo-static conditions.	Less than Significant

Project Impacts	Level of Significance Without Mitigation	Mitigation Measure(s)	Resulting Level of Significance
		MM 3.6-3c The Final Geologic and Soil Engineering Feasibility Report shall use the most-recent Building Code, which addresses new seismic design requirements for structures and the site soil profile as SE should be reviewed again to confirm this designation is still appropriate for the project site.	
Impact 3.6-4: Implementation of the proposed project may result in potential permanent structural damage and associated human safety hazards resulting from slope-failure hazards such as landslides.	Potentially Significant	**MM 3.6.4a** Prior to issuance of a grading permit, the Project Geologist of Record (PGOR) shall work with the Geotechnical Engineer of Record and the Civil Engineer of Record to prepare a Final Geologic and Soil Engineering Feasibility Report. As part of this report, the PGOR shall: 1. Further characterize the debris flow and debris torrent hazards and attendant risks to the proposed developments. The PGOR shall perform a detailed mapping and subsurface program that will characterize the mode of past transport for angular boulders and cobbles of schist bedrock within the sandy alluvial matrix on the valley floors. Further geological mapping shall include detailed mapping of individual debris flow scars, as well as run-out areas for the debris flow deposits. Subsurface work shall adequately characterize the depth and extent of individual debris flow/torrent events. Mode of transport characterization shall include volumes and velocities per debris flow/torrent event, substantiated by a detailed geological recordation of past events in and adjacent to the proposed development areas; 2. Prepare debris flow/torrent design volumes, velocities and runup heights where warranted, based upon the above-listed field work and analysis; 3. Plot their geological information upon the most current sub-division and grading maps and analyze the potential impacts to the proposed developments; and 4. Work with PGOR and Civil Engineer Of Record to jointly assess the impact that debris flows and debris torrents may have upon the performance of the proposed drainage improvements. The proposed drainage improvements should be protected from design debris flow and torrent events dictated by the PGOR, or the drainage	Less than Significant

Project Impacts	Level of Significance Without Mitigation	Mitigation Measure(s)	Resulting Level of Significance
		improvements shall be designed to handle said debris flow or debris torrent events without triggering flooding of the proposed developments. The PGOR shall coordinate their field work with the peer-reviewing Engineering Geologist, so as to allow them the opportunity to view the subsurface work while it is being performed and form an opinion as to the adequacy of the work at that time. The peer-reviewing Engineering Geologist shall also review the Final Geologic and Soil Engineering Feasibility Report. If the report is deemed inadequate by the peer-reviewing Engineering Geologist, they shall summarize the inadequate work and request that a supplemental investigation or analysis be performed. Any supplemental work performed by the PGOR as a result of review recommendations by the peer-reviewing Engineering Geologist shall also be subject to the conditions outlined above. The Final Geologic and Soil Engineering Feasibility Report shall fully characterize the new design debris flow events to include site design-specific recommendations to ensure that the structures at risk would not collapse if said design debris flow occurs. **MM 3.6.4b** At the time of construction of the project, all excavations shall be observed by the PGOR prior to backfilling of the excavation. A post-construction geologic map portraying the distribution of rock and soil should be constructed by the PGOR and submitted to the County of Monterey with a Final Geological Report. If previously unidentified debris flow deposits are mapped in the excavations during construction, additional mitigation measures shall be recommended at the time of construction by the PGOR.	
Impact 3.6-5: Implementation of the proposed project would result in temporary and long-term disturbance of soils with high erosion potential, which could increase the risk of accelerated erosion and adversely affect water quality.	Significant	**MM 3.6-5** Prior to grading permit issuance, the project applicant shall contract with a qualified consultant to prepare an erosion control plan and a Storm Water Pollution Prevention Plan (SWPPP) that documents best management practices (filters, traps, bio-filtration swales, etc.) to ensure that urban runoff contaminants and sediment are minimized during site preparation, construction, and post-construction periods. The erosion control plan and SWPPP shall incorporate best management	Less than Significant

Project Impacts	Level of Significance Without Mitigation	Mitigation Measure(s)	Resulting Level of Significance
		practices consistent with the requirements of the National Pollutant Discharge Elimination System and Monterey County Ordinance 16.12.80, Land Clearing. The erosion and sediment control plan and the SWPPP shall be consistent with the standards set forth in the Construction General Permit.	
Impact 3.6-6: The project site is not located in an expansive soil. Portions of the project site have high shrink swell/ expansion potential	Less than Significant	No significant impact has been identified; therefore no mitigation is proposed.	Less than Significant
Impact 3.6-7: The project site contains several existing septic tank leach fields that served prior development of the project site, as well as existing limited use of the site. However, the proposed project includes construction of an enhanced on-site wastewater treatment system to serve the proposed project that would serve the increase in wastewater associated with the proposed project	Less than Significant	No significant impact has been identified; therefore no mitigation is proposed.	Less than Significant
Section 3.7: Hazards and Hazardous Materials			
Impact 3.7-1: Development of the proposed project would involve the use of hazardous materials including cleaning solvents, fertilizers, pesticides, and other hazardous materials typical of a hotel/resort spa, and timeshare facility.	Less than Significant	No significant impact has been identified; therefore no mitigation is proposed.	Less than Significant
Impact 3.7-2: During construction of the proposed project, there is the potential for the transport, use, or disposal of hazardous materials, which could create a significant hazard to the public or the environment.	Less than Significant	No significant impact has been identified; therefore no mitigation is proposed.	Less than Significant

Project Impacts	Level of Significance Without Mitigation	Mitigation Measure(s)	Resulting Level of Significance
Impact 3.7-3: The proposed project would result in the demolition and removal of all structures within the project site, which may contain asbestos, lead, and/or PCBs from the fluorescent lighting ballasts within the existing structures	Potentially Significant	**MM 3.7-3a** Pursuant to Cal OSHA regulations, the project applicant shall have each structure proposed for demolition within the project site inspected by a qualified environmental specialist for the presence of asbestos containing material and lead based paints prior to obtaining a demolition permit from the County. If asbestos containing material and/or lead based paints are found during the investigations, the project applicant shall develop a remediation program 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 Monterey Bay Unified Air Pollution Control District and the County of Monterey Environmental Health Department, as applicable. Any hazardous materials that are removed from the structures shall be disposed of at an approved landfill facility in accordance with federal, state and local laws and regulations. **MM 3.7-3b** The project applicant shall ensure that the removal of all fluorescent lighting ballasts within each structure are removed under the purview of the Monterey County Environmental Health Department in order to identify proper handling procedures prior to demolition of the structures within the project site. All removed fluorescent lighting ballasts shall be removed prior to demolition and disposed of at an approved landfill facility in accordance with federal, state and local laws and regulations.	Less than Significant
Impact 3.7-4: Implementation of the proposed project may expose people or the property to hazardous materials associated with the abandonment of septic systems at the project site.	Potentially Significant	**MM 3.7-4** Subject to review by the County of Monterey Environmental Health Department, the project applicant shall map the specific location of all septic tanks located within the project site. Once located, the septic tanks shall be removed and properly disposed of at an approved landfill facility or properly abandoned onsite under permit with Monterey County Environmental Health. The applicant shall provide to Monterey County Environmental Health a schedule of all septic tanks on the property and identify those tanks to be physically removed from the property and those tanks to be abandoned onsite under permit with Monterey County Environmental Health.	Less than Significant

Project Impacts	Level of Significance Without Mitigation	Mitigation Measure(s)	Resulting Level of Significance
Impact 3.7-5: The project site contains an existing propane tank, above ground fuel storage tank, boiler, and evidence of a debris pile at the project site.	Potentially Significant	**MM 3.7-5** Once the above ground fuel storage tank(s) are removed, a visual inspection of the areas beneath and around the removed tanks shall be performed. Any stained soils observed underneath the storage tanks shall be sampled. Results of the sampling (if necessary) shall indicate the level or remediation efforts that may be required. In the event that subsequent testing indicates the presence of any hazardous materials beyond acceptable thresholds, a work plan shall be prepared subject to review and approval by the County of Monterey Environmental Health Department in order to remediate the soil in accordance with all applicable federal, state, and local regulations prior to issuance of a grading permit.	Less than Significant
Impact 3.7-6: The project site is located in a very high fire severity zone. However, the proposed project includes a fire protection provides adequate protection in the case of fire.	Less than Significant	No significant impact has been identified; therefore no mitigation is proposed.	Less than Significant
Section 3.8: Hydrology and Water Hydrology			
Impact 3.8-1: During grading and construction activities, erosion of exposed soils may occur and pollutants generated by site development activities may result in water quality impacts if erosion control measures are not implemented	Potentially Significant	MM 3.5-5a (see above)	Less than Significant
Impact 3.8-2: Implementation of the proposed project would alter the existing drainage pattern and increase the amount of impervious surfaces on the project site due to construction of the hotel, residences, roadways, driveways, and other amenities	Significant	**MM 3.8-2** Prior to recording the Final Subdivision Map or approval of any construction permit, Monterey County Public Works Department and Monterey County Water Resources Agency shall require that the project applicant contract with a registered Civil Engineer to prepare a final drainage plan. The drainage control plan shall design storm water detention facilities to limit the 100-year post-development runoff rate to the 10-year pre-development rate in accordance with Section 16.16.040.B.5 of the Monterey County Code and Monterey County Water Resource Agency (MCWRA). This shall be accomplished	Less than Significant

Project Impacts	Level of Significance Without Mitigation	Mitigation Measure(s)	Resulting Level of Significance
		through the use of low impact development (LID) features and best management practices (BMP). In the event that the detention objectives can not be accomplished through LID methodologies, a detention basin may be used. In addition, the drainage plan shall incorporate relevant storm water recommendations as described in the Geologic and Soil Engineering Feasibility Report (Landset Engineers 2004). The final drainage plan shall be submitted for review and approval by the Public Works Department and Monterey County Water Resources Agency prior to the recording the Final Subdivision Map or approval of any construction plans.	
Impact 3.8-3: The proposed project would result in an increase in long-term surface runoff that may contain urban contaminates that would have an adverse impact on surface water quality.	Potentially Significant	**MM 3.8-3** To prevent the potential contamination of downstream waters from urban pollutants, Monterey County Planning Department, Public Works Department and Water Resources Agency shall require that the storm drainage system design, required under mitigation measure MM 3.8-2, includes, but is not limited to the following components: grease/oil separators; sediment separation; vegetative filtering to open drainage conveyances and detention basins; and on-site percolation of as much run-off as feasible, including diversion of roof gutters to French drains or dispersion trenches, dispersion of road and driveway runoff to vegetative margins, or other similar methods. Storm water shall not be collected and conveyed directly to a natural drainage without passing through some type of active or passive treatment. Said provisions shall be incorporated into the storm drain system plans submitted to the County for plan check.	Less than Significant
Section 3.9: Land Use and Planning			
Impact 3.9-1: The proposed project would not conflict with any land use plan, policy, or regulation of any agency with jurisdiction over the project including but not limited to the Monterey County General Plan, Central Salinas Valley Area Plan or the Monterey County Zoning Ordinance.	Less than Significant	No significant impact has been identified; therefore no mitigation is proposed.	Less than Significant

Project Impacts	Level of Significance Without Mitigation	Mitigation Measure(s)	Resulting Level of Significance
Section 3.10: Noise			
Impact 3.10-1 Construction activities associated with the proposed project will result in elevated noise levels in the vicinity of construction activities. Activities involved in construction will typically generate maximum noise levels ranging from 85 to 90 dB at a distance of 50 feet. Construction activities will be temporary. .	Potentially Significant	**MM 3.10-1** During the course of construction, the project developer/applicant shall adhere to Monterey County's requirements for construction activities with respect to hours of operation, muffling of internal combustion engines, and other factors which affect construction noise generation and its effects on noise sensitive land uses. This would include implementing the following measures: ▪ Limit noise-generating construction operations to between the least noise-sensitive periods of the day (e.g., 7:00 A.M. to 7:00 P.M.) Monday through Saturday; no construction operations on Sundays or holidays; ▪ Locate construction equipment and equipment staging areas at the furthest distance possible from nearby noise-sensitive land uses; ▪ Ensure that construction equipment is properly maintained and equipped with noise reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturers' recommendations. Equipment engine shrouds shall be closed during equipment operation, and ▪ When not in use, motorized construction equipment shall not be left idling.	Less than Significant
Impact 3.10-2 The proposed project would expose existing residents living along Paraiso Springs Road to additional transportation noise. However, resulting noise levels would be within County noise standards for single-family residential uses.	Less than Significant	No significant impact has been identified; therefore no mitigation is proposed.	Less than Significant
Impact 3.10-3 Operation of the proposed project would result in an increase in noise levels at the project site. However, nearby single-family residential uses are located greater than 1,500 feet from the	Less than Significant	No significant impact has been identified; therefore no mitigation is proposed.	Less than Significant

Project Impacts	Level of Significance Without Mitigation	Mitigation Measure(s)	Resulting Level of Significance
project site. Adherence to County noise standards for low density residential and transient lodging uses would ensure that potential increase in noise levels at the project site would be less than significant.			
Section 3.11: Public Services and Utilities			
Impact 3.11-1: Implementation of the proposed project would result in increased wastewater flows and includes construction of new wastewater treatment, distribution, and disposal facilities**.**	Less than Significant	No significant impact has been identified; therefore no mitigation is proposed.	Less than Significant
Impact 3.11-2 The proposed project would have sufficient water supplies available to serve the proposed project from existing resources, and new or expanded entitlements are not needed. However, the water supply for the proposed project currently exceeds the public health standard of 1.0 mg/L for fluoride.	Significant	MM 3.11-2 The project applicant shall contract with a qualified engineer to finalize an activated alumina water treatment plant consistent with recommendations outlined in the AdEdge Technologies Pilot Test Report (2012) identifying water system improvements to meet the standards as found in Chapter 15.04 and 15.08 of the Monterey County Code, and Titles 17 and 22 of the California Code of Regulations. Final water system improvement plans shall identify any necessary rehabilitation of Well No. 1 and Well No. 2 to increase longevity and efficiency, the specific water treatment facilities, and how the water treatment facilities will remove all constituents that exceed California Primary and Secondary maximum contaminant levels (e.g. fluoride, coliform, TDS, iron, etc.) from drinking water. The project applicant shall contract with a qualified engineer to design and install wastewater system improvements and procedures that will adequately treat the neutralized waste from the proposed activated alumina filtration process. Final wastewater improvement plans shall identify the specific wastewater treatment improvements, operating parameters, wastewater volumes, waste constituents of the proposed full-scale system, and how the wastewater treatment process will produce effluent fluoride concentrations that are equal or less than the concentrations in the existing source water.	Less than Significant

Project Impacts	Level of Significance Without Mitigation	Mitigation Measure(s)	Resulting Level of Significance
		Monitoring Actions Prior to recording the final map or issuance of any construction permits, the applicant shall submit the final water treatment plant design for review and approval by the Monterey County Health Department, Environmental Health Bureau.	
Impact 3.11-3: The proposed project would be required to detain the difference between the 100-year post-development runoff rate and the 10-year pre-development runoff rate. This may require the construction of new or expanded storm water detention facilities.	Potentially Significant	Implementation of mitigation measure 3.8-2 (Section 3.8 Hydrology and Water Quality).	Less than Significant
Impact 3.11-4 The proposed project would result in an increase in solid waste generation. Solid waste would be disposed of at the Johnson Canyon Landfill, which has sufficient permitted capacity to accommodate waste generated by the proposed project.	Less than Significant	No significant impact has been identified; therefore no mitigation is proposed.	Less than Significant
Section 3.12: Transportation and Traffic			
Impact 3.12-1: The Paraiso Springs Road/Clark Road intersection and the ten study roadway segments would operate at LOS A with the exception of Arroyo Seco Road between Fort Romie Road and Highway 101, which would operate at LOS B. In accordance with the County of Monterey significance criteria, this is considered an acceptable level of service.	Less than Significant	No significant impact has been identified; therefore no mitigation is proposed.	Less than Significant

Project Impacts	Level of Significance Without Mitigation	Mitigation Measure(s)	Resulting Level of Significance
Impact 3.12-2: Paraiso Springs Road is a rural road that will experience an increase in traffic with implementation of the project. The proposed project includes safety improvements on Paraiso Springs Road.	Less than Significant	No significant impact has been identified; therefore no mitigation is proposed.	Less than Significant
Impact 3.12-3: The proposed project will provide adequate site access and adequate internal circulation for emergency responders.	Less than Significant	No significant impact has been identified; therefore no mitigation is proposed.	Less than Significant

This page intentionally left blank.

1. INTRODUCTION

1.1 AUTHORIZATION AND PURPOSE

This document is a Draft Environmental Impact Report (Draft EIR) for the proposed Paraiso Springs Resort Development (hereinafter "proposed project"), prepared in accordance with the requirements of the California Environmental Quality Act (CEQA). This Draft EIR (or DEIR) has been prepared by RBF Consulting and EMC Planning Group for Monterey County (County of Monterey) as the "Lead Agency," in consultation with the appropriate local, regional, and state agencies. The purpose of the EIR is to inform the public and various government agencies of the environmental effects/impacts of the project, identify possible ways to minimize the significant effects, and describe reasonable alternatives that support the objectives of the project. As defined by CEQA Guidelines Section 15383, "significant effect on the environment" means:

> ...a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether a physical change is significant.

1.2 EIR PROCESS

On June 30, 2005, the County of Monterey prepared a proposed Mitigated Negative Declaration (MND) for a Demolition Permit to clear Code Violations resulting from the un-permitted demolition of nine Victorian cottages on the project site (the MND is included in Appendix A). The initial study attached to the MND identified that the project applicant had been in contact with the County about a resort development on the subject site. Among the public comments received during the 30-day review period (concluding July 5, 2005) was a letter from the State Historic Preservation Office (SHPO) stating that the loss of the nine Victorians was a significant impact under CEQA and that the whole of the action needed to include the removal of the Victorian Structures and the proposed resort. County staff determined that the removal of the nine Victorian cottages was a potentially significant adverse environmental effect, as defined by the California Environmental Quality Act (CEQA) Guidelines section 15064. CEQA Guidelines require preparation of an EIR when a Lead Agency determines that there is evidence that a project may have a significant effect on the environment. The applicant then submitted an application for the resort project that is being evaluated in this EIR. Therefore the "project" includes both the "after-the-fact" demolition permit and the resort.

This EIR was prepared to inform the public of the potentially significant environmental effects of the proposed project, identify possible ways to minimize the significant effects, and describe a reasonable range of project alternatives. The County of Monterey notified all responsible and trustee agencies, interested groups, and individuals that an EIR was required for the proposed project. The County of Monterey used the following methods to solicit input during the preparation of the DEIR:

- A Notice of Preparation (NOP) was filed with the State Clearinghouse on May 29, 2008 for a 30-day review period, which concluded on June 27, 2008. The California State Clearinghouse assigned a State Clearinghouse Number of 2005061016.
- In addition to state agency distribution through the Clearinghouse and in accordance with the requirements of CEQA, Monterey County, acting through the Monterey County Planning Department, circulated the NOP from May 29, 2008 to June 27, 2008 for the required 30-day review period to responsible and trustee agencies, as well as interested groups, organizations, and individuals.
- The County of Monterey also conducted a public scoping meeting on December 13, 2007 to solicit input on the EIR. All comments received were considered during the preparation of this DEIR. The NOP and comments received in response to the NOP are presented in Appendix A.

This DEIR will be circulated for agency and public review during at least a 50-day public review period (see public comment instructions, below). Comments received by the County on the DEIR will be reviewed and responses to comments will be provided in the Final EIR (FEIR). Written responses to comments will be sent to those public agencies that provided timely comments on the DEIR at least 10 days prior to the certification hearing, when the Lead Agency will consider whether or not to certify the FEIR and approve the proposed project.

The County, as Lead Agency, will review and consider the EIR. If the County finds that the EIR reflects the County's independent judgment and has been prepared in accordance with CEQA and the CEQA Guidelines, the County will certify the adequacy and completeness of the EIR. Although the EIR does not control the Lead Agency's ultimate decision on the project, the County must consider the information in the EIR and respond to each significant effect identified in the EIR. A decision to approve the project would be accompanied by written findings prepared in accordance with CEQA Guidelines Section 15091, and if applicable, Section 15093[1]. For each significant effect identified in the EIR, the findings will describe whether it can be reduced to a less than significant level through feasible mitigation measures, or if not, why there are no feasible mitigation measures or alternatives to reduce the effect to a less than significant level. No aspect of the proposed project will be approved until after the EIR is certified as adequate.

State law requires that a public agency adopt a monitoring program for mitigation measures that have been incorporated into the approved project to reduce or avoid significant effects on the environment. The Mitigation Monitoring and Reporting

[1] If significant adverse environmental effects identified in the EIR, approval of the project must be accompanied by written findings, as follows:
A. Changes or alterations have been required in, or incorporated into, such project that mitigate or avoid the significant environmental effects thereof as identified in the completed EIR.
B. Such changes or alterations are within the responsibility and jurisdictions of another public agency and such changes have been adopted by such other agency, or can and should be adopted by such other agency.
C. Specific economic, social or other considerations make infeasible the mitigation measures or project alternatives identified in the EIR.

Program (MMRP), as required by Section 15097 of the CEQA Guidelines, describes how each of the mitigation measures will be implemented and provides a mechanism for monitoring and/or reporting on their implementation. The purpose of the MMRP is to ensure compliance with environmental mitigation during project implementation and operation. A monitoring program will be included in the FEIR.

If the lead agency approves the project with associated significant effects on the environment that cannot be feasibly avoided or reduced to less than significant levels, the County must adopt a Statement of Overriding Considerations that explain how the benefits of the project outweigh the significant unavoidable environmental effects, in accordance with Section 15093 of the CEQA Guidelines.

1.3 PUBLIC COMMENT INSTRUCTIONS

This DEIR has been distributed to the State Clearinghouse, appropriate federal agencies, responsible and trustee agencies, other affected agencies, nearby cities, and interested parties, as well as all parties requesting a copy of the DEIR in accordance with Public Resources Code 21092(b). The Notice of Completion of the DEIR has also been distributed as required by CEQA. During the 50-day public review period, the DEIR, including the technical appendices, is available for review at the County of Monterey Resource Management Agency – Planning Department.

All written comments on the Draft EIR should be addressed to:

> County of Monterey Resource Management Agency - Planning Department
> Attn: Mike Novo, Planning Director
> 168 West Alisal, 2nd Floor
> Salinas, CA 93901

The County of Monterey welcomes your comments during the 50-day public review period. Comments may be submitted in hard copy to the name and address above. The County also accepts comments via e-mail or facsimile but requests that you follow these instructions to ensure that the Planning Department has received your comments.

To submit your comments by e-mail, please send a complete document including all attachments to: ceqacomments@co.monterey.ca.us. An e-mailed document should contain the name of the person or entity submitting the comments and contact information such as phone number, mailing address and/or e-mail address and include any and all attachments referenced in the e-mail. To ensure a complete and accurate record, we request that you also provide a follow-up hard copy to the name and address listed above. If you do not wish to send a follow-up hard copy, then please send a second e-mail requesting confirmation of receipt of comments with enough information to confirm that the entire document was received. If you do not receive e-mail confirmation of receipt of comments, then please submit a hard copy of your comments to ensure inclusion in the environmental record or contact the Planning Department to ensure your comments were received.

Facsimile (fax) copies will be accepted with a cover page describing the extent (e.g. number of pages) being transmitted. A faxed document must contain a signature and all

attachments referenced therein. Faxed documents should be sent to the contact noted above at (831) 757-9516. To ensure a complete and accurate record, we request that you also provide a follow-up hard copy to the name and address listed above. If you do not wish to send a follow-up hard copy, then please contact the Planning Department to confirm that the entire document was received.

1.4 ORGANIZATION OF THE DRAFT EIR

This EIR consists of eight sections: Executive Summary, Introduction, Project Description, Environmental Setting Impacts and Mitigation Measures, CEQA Considerations, and References, plus a set of appendices.

- The **Executive Summary** provides a brief overview of key components of the EIR, which include a description of project location, summary of project description, and project objectives, summary of alternatives, and impacts and mitigation measures identified in the EIR.
- **Section 1.0 Introduction** provides an overview of the organization of the EIR and processes involved in preparation and review of the DEIR. Background information regarding the project planning process and coordinated planning process is included as well.
- **Section 2.0 Project Description** provides a detailed description of all aspects of the proposed project including construction, infrastructure improvements, offsite improvements, and required entitlements and project-related actions by agencies other than the lead agency. The Project Description also describes relevant background information related to the project location and project and regional setting.
- **Section 3.0 Environmental Setting, Impacts, and Mitigation Measures** section contains in depth analysis of the project's environmental impacts. Analysis is provided for all environmental factors listed in CEQA Appendix G environmental checklist. A detailed description of this section's organization and contents is included in the introduction to Section 3.0: Environmental Setting, Impacts, and Mitigation Measures.
- **Section 4.0 CEQA Considerations** section contains a discussion of significant unavoidable effects; significant and irreversible environmental changes; growth inducing impacts; cumulative impacts; and unavoidable significant adverse environmental impacts.
- **Section 5.0 Alternatives** section contains a discussion of alternatives to the proposed project.
- **Section 6.0 References** section is the final section of the DEIR and includes a list of all of the documents referenced in the various sections of the DEIR, as well as preparers, lists names and titles of all individuals from public agencies and consulting firms involved in the preparation of the DEIR.
- **Appendices** include the Notice of Preparation, Mitigated Negative Declaration and responses to the notice, along with the technical reports prepared for the EIR. See the table of contents for a complete list of appendices. The appendices are included as a CD in a page insert to this EIR.

2 PROJECT DESCRIPTION

2.1 PROJECT LOCATION

The proposed Paraiso Springs Resort Development (hereinafter "proposed project") is located approximately 130 miles south of San Francisco in unincorporated southern Monterey County in the western foothills of the Central Salinas Valley, approximately seven miles west of the City of Greenfield at the western terminus of Paraiso Springs Road (Figure 2.1, Regional Location, and Figure 2.2, Project Vicinity).

2.2 ENVIRONMENTAL SETTING

Site Characteristics

The project site consists of about 235 acres nestled in the mouths of the Paraiso Springs Valley and Indian Valley and extending westward into the foothills between the crest of the Sierra De Salinas Foothills and the Salinas Valley. The site and is bordered to the east by grazing and farm land, and to the north, south and west by the Santa Lucia Mountains. Happy Valley is located on the other side of the ridge to the south of the site. The surrounding land is designated by the *Monterey County General Plan* for farmland and rural grazing uses, and is currently used for agriculture and vineyards, and grazing in the steeper areas.

The project site itself is designated as "Commercial" in the 1982 *Monterey County General Plan* and is zoned for "Visitor Serving/Professional Office." Several single-family residential uses are located below and to the east of the project site on Paraiso Springs Road. The project site is located at 34358 Pariaso Springs Road and is comprised of Assessor's Parcel Numbers 418-381-021-000, 418-361-004-000, and 418-381-022-000. Surrounding land use and parcel boundaries are illustrated in Figure 2.3, Aerial Photograph, and Figure 2.4, Parcel Boundary and Site Characteristics.

The project site is visible on the approach from Paraiso Springs Road and is identifiable by several tall palm trees. The buildings currently located on the project site consist of 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[1], and several small outbuildings. Photographs of the project site are presented as Figure 2.5a and Figure 2.5b, Project Site Photographs.

Vegetation and Wildlife

The project site is comprised of areas that contain non-native landscape plantings, eucalyptus, palm trees, live oak woodland, Diablan sage scrub, baccharis scrub, riparian, wetlands, and annual grasslands. The project site contains approximately 11,000 trees, the majority of which are coast live oaks (Forest City Consulting 2005). The site supports a variety of wildlife including invertebrates, amphibians, reptiles, birds, and mammals.

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

Climate

The project site is located in the Mediterranean climate zone typical of California, with moderate temperatures throughout the year, including mild rainy seasons. The average annual precipitation at the project site is approximately 23 inches per year (CH2MHill 2008).

Geology

Geologic mapping of the project site and its vicinity identified a number of distinct geologic units. Situated on the east flank of the Sierra De Salinas Foothills on the west side of the Salinas Valley, the project site is underlain by Pre-Cretaceous Sierra De Salinas Schist and Cretaceous age Salinian Block granitic rocks. Overlying the granitic rocks of the Salinian Block is a series of folded and faulted Tertiary age (Oligocene to middle Miocene) sandstones, conglomerates, and volcanics. In general, soil conditions of the upland areas of the project site are composed of bedrock and landslide deposits, while the valley areas are underlain by unconsolidated to semi-consolidated alluvium (LandSet Engineers 2004).

Cultural Resources

Prior to contact with Europeans, Native Americans made use of the hot springs located throughout the site. Evidence of Native American occupation in the area dates back several thousand years (ARM 2005). Archival research revealed that there are two recorded prehistoric sites within the project site, which consist of bedrock outcroppings containing bedrock mortars (ARM 2008), and one identified, but not yet recorded site in the area of the off-site road improvements (ARM 2012).

In 1791 several acres of land, including the project site were granted to the Spanish Padres by the King of Spain for the purpose of establishing a mission. The project site, located approximately seven miles from the Soledad mission, became known as the Vineyard of Mission Soledad (ARM 2005).

In 1866, the Church sold the project site and it was developed and operated as a recreational hot springs resort. Multiple structures were constructed on the project site; toward the end of the nineteenth and beginning of the twentieth century. Some of these structures were destroyed in a fire in 1954. In 1971 the site was designated as having historical significance by a study conducted by the County. The project site was closed to the public in 2003. In November of 2003, nine Victorian cottages and nine cabins were demolished on the property. For the purposes of CEQA, these nine Victorian cottages are considered to have been historic resources (Painter Preservation & Planning 2008).

Source: RBF Consulting 2010

Figure 2.1

Regional Location

Paraiso Springs Resort EIR

E M C

This page intentionally left blank.

0 5 miles

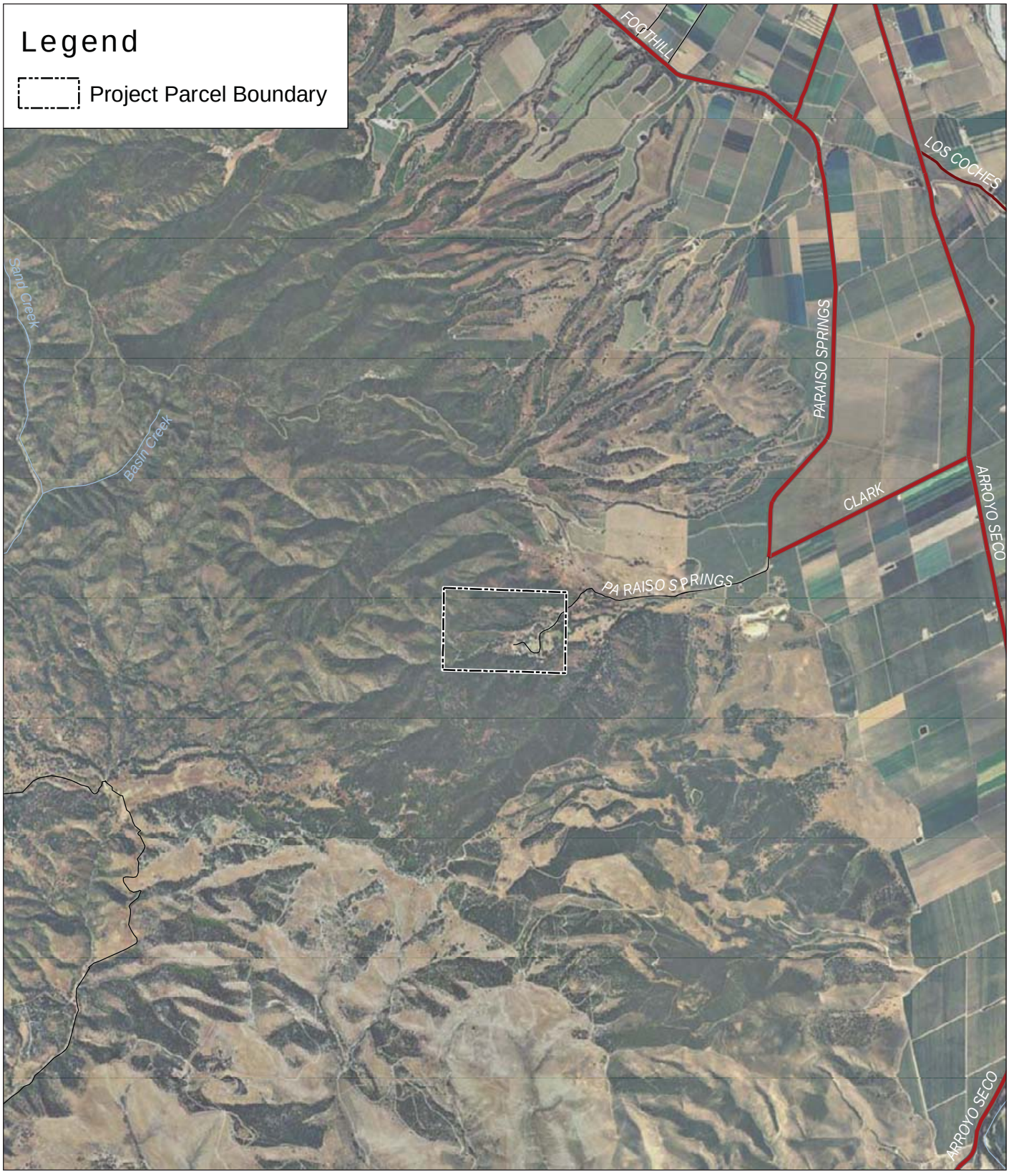
Source: RBF Consulting 2010

Figure 2.2

Project Vicinity

Paraiso Springs Resort EIR

This page intentionally left blank.



Source: RBF Consulting 2010

Figure 2.3

Aerial Photograph

Paraiso Springs Resort EIR

E M C

This page intentionally left blank.

Source: RBF Consulting 2010

Figure 2.4

Parcel Boundary and Site Characteristics

Paraiso Springs Resort EIR

This page intentionally left blank.

Photo: Internal road looking north heading toward the exit of the Project Site.

Photo: Looking northwest from Paraiso Springs Road, view of the main lawn with the recreation room building in the background.

Source: RBF Consulting 2007

Figure 2.5a

Project Site Photographs

Paraiso Springs Resort EIR

E M C

This page intentionally left blank.

Photo: View of one of the existing mobile homes located in the southern portion of the Project Site.

Photo: View of the existing pool room located on the Project Site.

Source: RBF Consulting 2007

Figure 2.5b

Project Site Photographs

Paraiso Springs Resort EIR

E M C

This page intentionally left blank.

Hazards

According to the *Central Salinas Valley Area Plan* (County of Monterey 1987), the project site is located in an area subject to fire hazards. The Mission Soledad Rural Fire Protection District provides primary fire protection for the project site. The closest station is located approximately eight miles from the project site. Current on-site fire protection consists of fire hydrants, three on-site wells and storage tanks, hoses, alarms, fire pump, and extinguishers.

There are several buildings located within the project site with the potential to contain asbestos and lead due to the age of the structures. On-site chemicals and materials include regular maintenance and cleaning supplies, paint, and minor amounts of lubricant for equipment. One unused, above-ground fuel storage tank and numerous propane tanks exist within the project site.

Hydrology

The project site has a long history of groundwater use, including wells and hot springs. Three wells are located on the project site. During their site investigation, LandSet Engineers encountered groundwater at depths ranging from 11 to 55 feet below the ground surface. In the proximity of the hot springs, the depth to groundwater ranges from 11 to 18.5 feet below the ground surface. West of the hot springs, but still within the bottom of the canyon, the depth to groundwater ranges from 18.5 to 55 feet (LandSet Engineers 2004).

Floodplains and Wetlands

The Flood Insurance Rate Map (FIRM) for Monterey County indicates that the project site is in Zone X, which includes areas of minimal flooding (FEMA 2009). The main drainage feature on the project site is a defined channel that traverses the middle of the project site from west to east. The drainage channel has an approximate width of 50 feet and the current bank capacity is approximately 4,000 cubic feet per second (cfs). It is estimated that approximately 316 cfs of runoff would be generated from the watershed above the west boundary of the project site during a one percent (100 year) storm event. There are also several smaller, steeper drainage swales that enter the site from the north. *Paraiso Spring Resort (PLN040183) – Stream Setback Plan* (CH2MHill 2012b).

Transportation

Access to the project site is provided by Paraiso Springs Road, via Clark Road or River Road, which have direct access from U.S Highway 101 and State Route 68, respectively. Paraiso Springs Road is a two-lane county road that terminates at the project site. Circulation on-site is provided by private, single-lane rural dirt roads.

2.3 PROJECT OBJECTIVES

In accordance with CEQA, a statement of objectives sought by the proposed project should be clearly stated to aid the Lead Agency in developing a reasonable range of alternatives to evaluate in the EIR. These objectives are also utilized to aid decision makers in preparation of findings or statement of overriding considerations (Title 14 CCR § 15124 (b)). The following objectives outline the objectives of the project:

- Redevelop the existing vacant Paraiso Springs Resort into a world-class destination spa/resort hotel;
- Build a project that is consistent with the objectives and policies of the C*entral Salinas Valley Area Plan* and the 1982 *Monterey County General Plan*;
- Develop a mission style resort that provides visitor-serving support for the Monterey County wine corridor honoring the historic connection to the Soledad Mission's use of the property as a vineyard and retreat;
- Proactively engage the services of local businesses in the construction and on-going operation of the resort;
- Work with Monterey County, local wineries, and other related businesses to promote the Monterey wine corridor as a destination for tourism;
- Provide a therapeutic environment for wellness treatment and education;
- Utilize the existing mineral hot springs and sweeping views of the Central Salinas Valley as key amenity features;
- Provide services and amenities for both overnight and day guests;
- Provide an economically sustainable combination of hotel units and timeshare units of varying sizes;
- Create long-term employment and economic (tax revenue) opportunities for Monterey County;
- Provide an onsite interpretive display of the history and historic events associated with the Paraiso Springs Resort;
- Develop and provide opportunities to reduce greenhouse gas emissions through the provision of a shuttle service for employees and guests, and on-site programs such as the use of electric service vehicles, energy efficient building design, use of Energy Star appliances and fixtures, etc. to the extent feasible; and
- Retain a minimum of 150 acres of the project site as natural open space that would accommodate hiking trails and landscaping, and preserve the existing habitat and natural landforms.

2.4 PROJECT DESCRIPTION

Overview

Thompson Holdings, LLC (hereinafter "project applicant") currently owns the three lots of record that comprise the 235-acre site. The proposed project is a request consisting of the following elements:

A. An "After The Fact" Demolition Permit, with prior review by the Historic Resources Review Board of the County of Monterey, to authorize demolition of the nine historic cottages at the Paraiso Hot Springs Resort, November 2003 (to clear Code Violation Case CE030404/PLN040488);

B. A Combined Development Permit consisting of:

1. A General Development Plan to allow the phased redevelopment of the Paraiso Springs Spa Resort with the following amenities:

   - Hotel consisting of 103 one- and two-story clustered visitor-serving hotel units, three restaurants, nine meeting and conference rooms, activity terrace with croquet and bocce ball courts and associated support facilities;
   - Ornamental streams;
   - Amphitheater stage and pavilion, amphitheater lawn;
   - 34 two-bedroom and 26-three bedroom timeshare units;
   - 17 timeshare villas;
   - Hamlet consisting of a day spa, a general retail store, artist studios and, wine tasting, garden center and real estate office;
   - Spa and Fitness Center consisting of courtyard gardens, teahouse, spa water gardens, labyrinth, activity center, lap pool, vitality pavilions, indoor golf school, putting greens, basketball pavilion, racquetball pavilion, tennis courts and ornamental therapy stream and pool;
   - Wine pavilion and associated vineyard;
   - Visitor center;
   - Pariaso Institute for day training and other special events;
   - Wastewater treatment plant;
   - Garden Center;
   - Hiking trails, trailside outlooks, and natural solarium area;
   - Pedestrian and vehicular bridges;
   - Laundry and maintenance facilities;
   - Landscaping of the grounds;
   - Grading of 162,073 cubic yards (cut and fill of 123,489 cubic yards); and
   - 500,000 gallon underground water storage tank.

2. A Use Permit for the creation of 77 Timeshare units (60 condominiums and 17 villas).

3. A Vesting Tentative Map for the creation of 60 airspace condominium units (included in the 77 Timeshare units).

4. Standard Subdivision (Vesting Tentative Map) to allow the merger and resubdivision of three parcels of 157.88 acres (Assessor's Parcel Number 418-361-004), 77.27 acres (Assessor's Parcel Number 418-381-021) and 0.49 of an acre (Assessor's Parcel Number 418-381-022) into 23 lots, as presented in Table 2.1, Project Features by Lot.

Table 2.1 Project Features by Lot

Lot No.	Use	Acreage
1	Hotel, Hamlet, Spa, Fitness Center	214.44
2	Wine Pavilion, Vineyard	6.69
3-19	17 Timeshare Villas	4.38
20	20 Condominium Units	3.79
21	12 Condominium Units	1.97
22	14 Condominium Units	2.24
23	14 Condominium Units	2.42
	Total	**235.93**
Source: Preliminary Vesting Tentative Map, HG Architects, 7/15/05, revised 5/18/12.		

5. Use Permit for removal of 185 protected oak trees; and,

6. Use Permit for development on slopes in excess of 30 percent.

C. Off-site road improvements on Paraiso Springs Road as delineated on the December 9, 2011 "Exhibit of Proposed Improvements" prepared by Atlas Land Surveys, Inc. Road improvements will be constructed in four phases as follows:

Phase 1 Installation of traffic signs warning of curves and narrow road.

Phase 2 Widen 625' of Paraiso Springs Road from project site to new intersection to 18' width as shown on conceptual plans prepared by Atlas land Surveys dated December 9, 2011. Install new "T" intersection with stop control.

Phase 3 Widen Paraiso Springs Road from new "T" intersection west for 1,400' to 20' width and install centerline stripe as shown on conceptual plans prepared by Atlas land Surveys dated December 9, 2011 .

Phase 4 Repave and widen 1,400' of Paraiso Springs Road to 20' width and install centerline stripe as shown on conceptual plans prepared by Atlas land Surveys dated December 9, 2011.

Project Features and Development Plan

The proposed project is envisioned to be a premier spa resort providing both overnight and day guests with a unique "wellness" treatment program typically found at European spas. In combination with the wellness treatments, the proposed project will provide an extensive educational component, fitness program, and culinary experience.

The proposed project will include a series of single and two-story clustered buildings consisting of a hotel, a day-use "hamlet," a spa and fitness center, and timeshare residences. The architectural treatments, materials, colors and landscaped grounds will be designed to emulate the Paraiso Spring's former affiliation with Mission Soledad. This Mission Revival Style, which was popular in the late 19th century, drew inspiration from the early Spanish missions in California. Typical design characteristics may include stucco walls with broad, unadorned surfaces and limited fenestration; wide, projecting eaves; and low-pitched clay tile roofs. Other features included long, arcaded corridors; piered arches; and curved gables.

Graphic renderings of the proposed project are shown in Figure 2.6, Project Site Plan, and Figure 2.7, Conceptual Rendering of Proposed Project. Project Components are identified in Figure 2.8, Preliminary Vesting Tentative Map. Each component of the proposed project is described in more detail below.

Hotel

A proposed 146,878 square foot hotel will consist of 103 guest rooms, three restaurants (totaling 7,570 square feet), meeting and conference facilities (14,016 square feet), lobby, administration and "back of house" facilities (including on-site laundry service) and 110 parking spaces. The hotel would be located near the center of the project site. The hotel units are designed so that they may be clustered in groups of two/four units, or as a detached single unit. The three restaurants will provide dining facilities for all guests. A garden and greenhouse will be located near the restaurant (s), offering herbs and produce grown on the resort property. The restaurant would also incorporate a culinary training facility.

Adjacent to the hotel will be an 18,550 square foot "hamlet" which will accommodate day users and include a 2,500 square foot day spa, 3,500 square feet of retail, seven artist studio and stores (6,300 square feet), wine and garden center (6,200 square feet), and 86 parking spaces.

Spa and Fitness Center

The spa and fitness center, located just northeast of the hotel, will offer massage, beauty, therapeutic services, and lectures by wellness professionals. Conference facilities will offer seminar and meeting spaces. An outdoor/indoor fitness center will integrate outdoor activities with indoor physical wellness and training facilities. Facilities will include two tennis courts, a basketball court, a racquetball pavilion, and a golf school.

Residential

Seventeen single-family timeshare villa lots will be created and 60 two-and-three bedroom timeshare condominiums will be constructed as part of the residential portion of the project. Associated with these residential areas will be construction of 114 surface parking spaces. The timeshare villas will be larger units overlooking the project site that provide family-style living for the guests. The timeshare condominium units, located to the north of the hotel, will include small kitchens, a small dining area, a living room and two/three bedroom suites.

Other Amenities

The proposed project also includes a wine pavilion/vineyard, an outdoor amphitheater, new landscaping, pedestrian pathways, gardens and pergolas, and walking trails with scenic lookouts. Other amenities on the site include:

- Large amphitheater lawn with pavilion and stage;
- Day Spa Pool and Pavilions;
- Ornamental streams;
- Hiking Center, trailheads and hiking trails through natural area;
- Nursery Center;
- Ornamental Therapy stream and swimming pool;
- Solarium Sundecks and Spas; and
- Activity Terrace with Croquet and Bocce Courts.

A breakdown of the main components of the proposed project is summarized in Table 2.2, Project Components.

Elevations of the main resort complex, the one and two story casitas, the wine pavilion and the institute expansion are shown in Figure 2.9a through Figure 2.9h. The proposed project also includes approximately 188 acres of open space, streams, hiking trails, and, trailside overlooks.

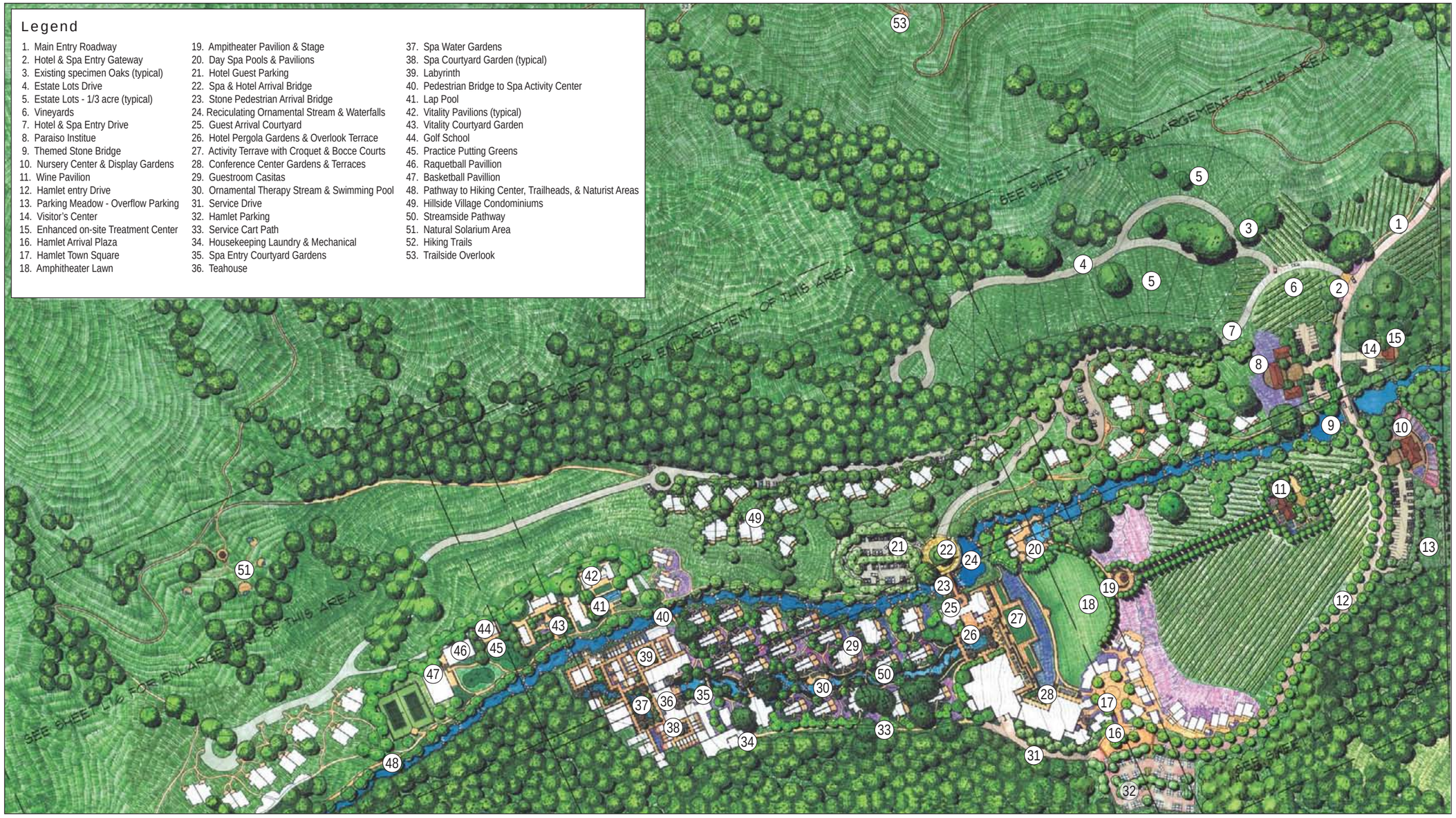
Circulation and Infrastructure Improvements

Site Access

Access to the project site will be from Paraiso Springs Road, a two-lane rural road with pavement widths that vary from less than 16 feet immediately east of the project to between 20 and 22 feet in the vicinity of Clark Road. Currently, very little traffic (about 85 vehicles per day) utilize this roadway, which serves the existing Paraiso Hot Springs, agricultural fields, several residences, and a small winery. About 2,000 feet east of the entrance to the existing Paraiso Hot Springs, is a tight curve and existing fencing surrounding a residential property, resulting in limited sight distance.

Legend

1. Main Entry Roadway
2. Hotel & Spa Entry Gateway
3. Existing specimen Oaks (typical)
4. Estate Lots Drive
5. Estate Lots - 1/3 acre (typical)
6. Vineyards
7. Hotel & Spa Entry Drive
8. Paraiso Institue
9. Themed Stone Bridge
10. Nursery Center & Display Gardens
11. Wine Pavilion
12. Hamlet entry Drive
13. Parking Meadow - Overflow Parking
14. Visitor's Center
15. Enhanced on-site Treatment Center
16. Hamlet Arrival Plaza
17. Hamlet Town Square
18. Amphitheater Lawn
19. Ampitheater Pavilion & Stage
20. Day Spa Pools & Pavilions
21. Hotel Guest Parking
22. Spa & Hotel Arrival Bridge
23. Stone Pedestrian Arrival Bridge
24. Reciculating Ornamental Stream & Waterfalls
25. Guest Arrival Courtyard
26. Hotel Pergola Gardens & Overlook Terrace
27. Activity Terrave with Croquet & Bocce Courts
28. Conference Center Gardens & Terraces
29. Guestroom Casitas
30. Ornamental Therapy Stream & Swimming Pool
31. Service Drive
32. Hamlet Parking
33. Service Cart Path
34. Housekeeping Laundry & Mechanical
35. Spa Entry Courtyard Gardens
36. Teahouse
37. Spa Water Gardens
38. Spa Courtyard Garden (typical)
39. Labyrinth
40. Pedestrian Bridge to Spa Activity Center
41. Lap Pool
42. Vitality Pavilions (typical)
43. Vitality Courtyard Garden
44. Golf School
45. Practice Putting Greens
46. Raquetball Pavillion
47. Basketball Pavillion
48. Pathway to Hiking Center, Trailheads, & Naturist Areas
49. Hillside Village Condominiums
50. Streamside Pathway
51. Natural Solarium Area
52. Hiking Trails
53. Trailside Overlook



0 200 feet

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

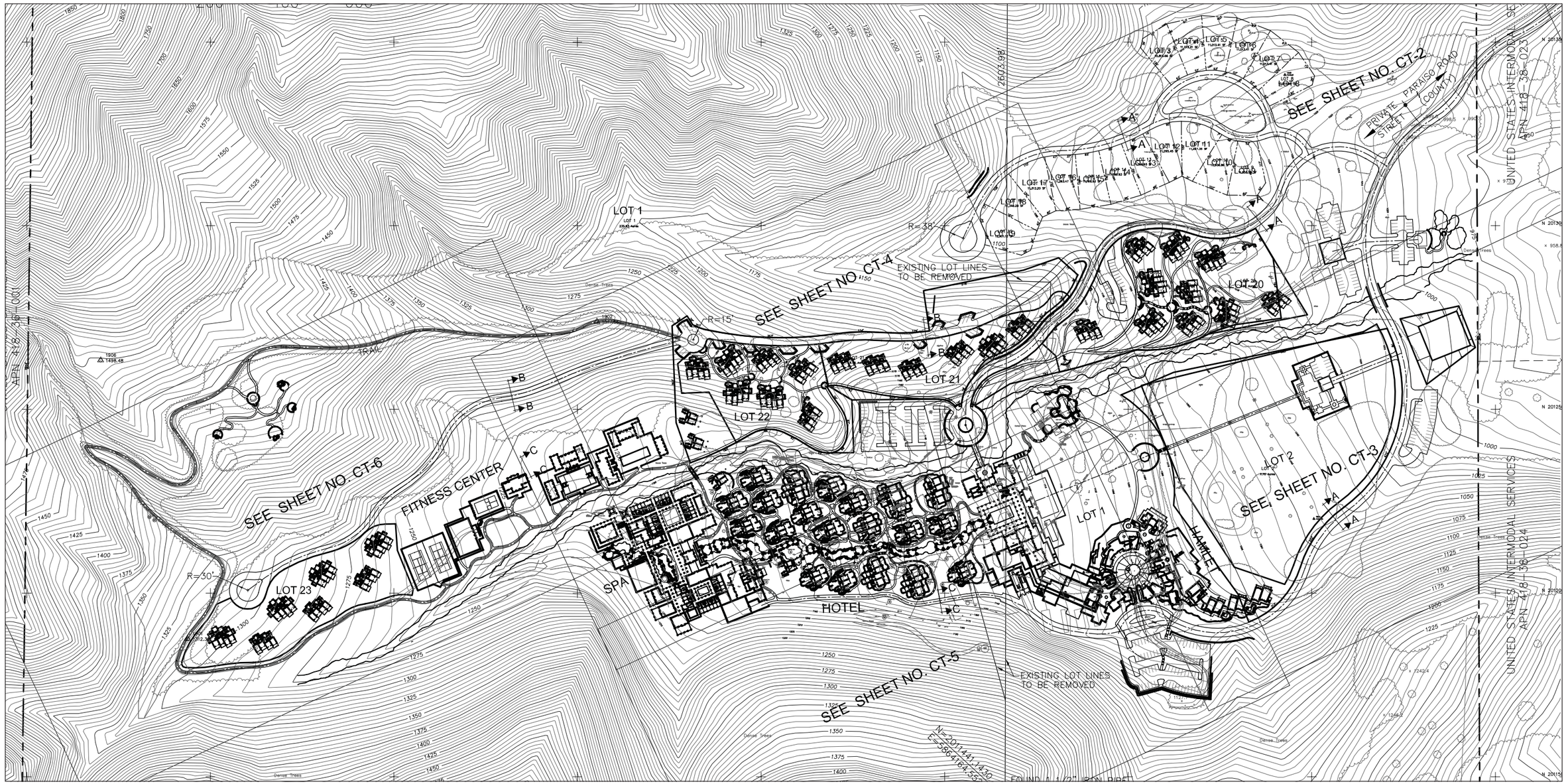
Figure 2.6
Project Site Plan
Paraiso Springs Resort EIR

This page intentionally left blank.

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

Figure 2-7
Conceptual Rendering of the Proposed Project

This page intentionally left blank.



0 300 feet

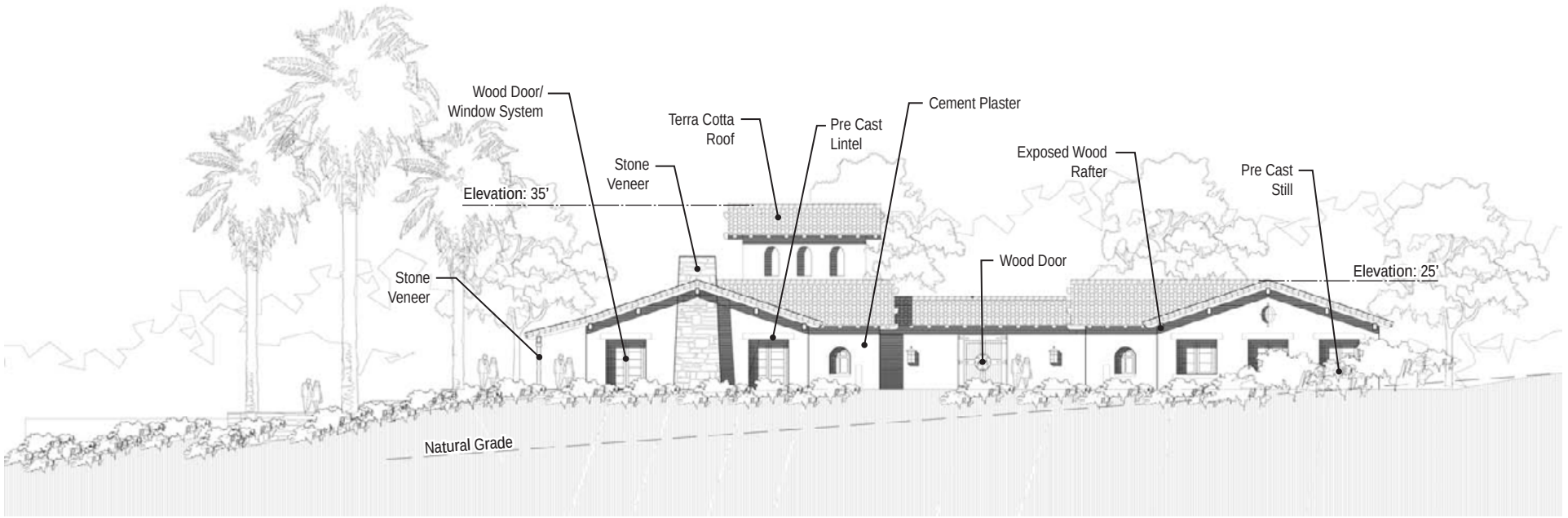
Source: RBF Consulting 2010, Hill Glazier Architects, CH2MHill 2005 (Revised 2009 and 2012)

Figure 2.8

Preliminary Vesting Tentative Map

Paraiso Springs Resort EIR

This page intentionally left blank.



ELEVATION 1

Source: RBF Consulting 2010, Hill Glazier Architects 2005

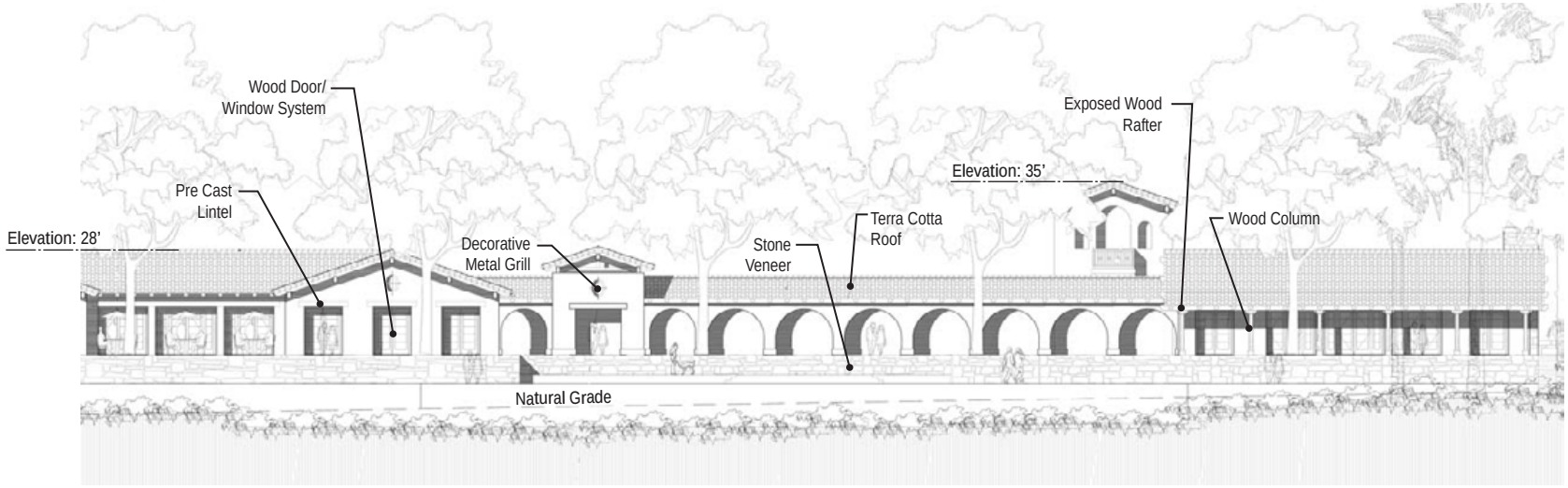
Figure 2-9a

Elevation - Main Resort Elevation 1

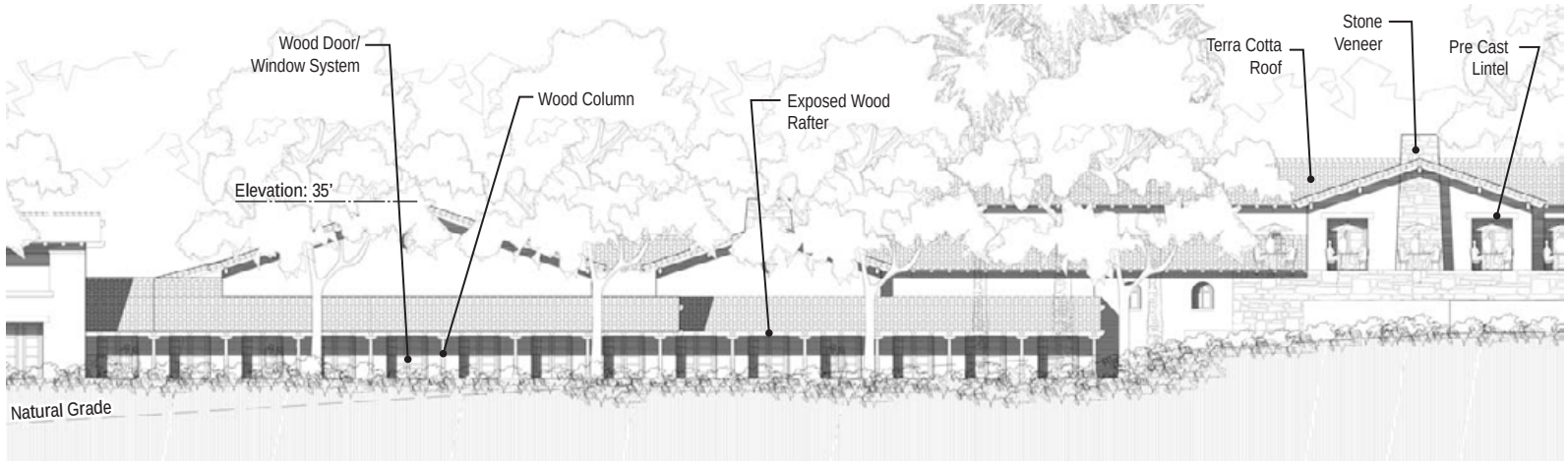
Paraiso Springs Resort EIR

E M C

This page intentionally left blank.



ELEVATION 2a



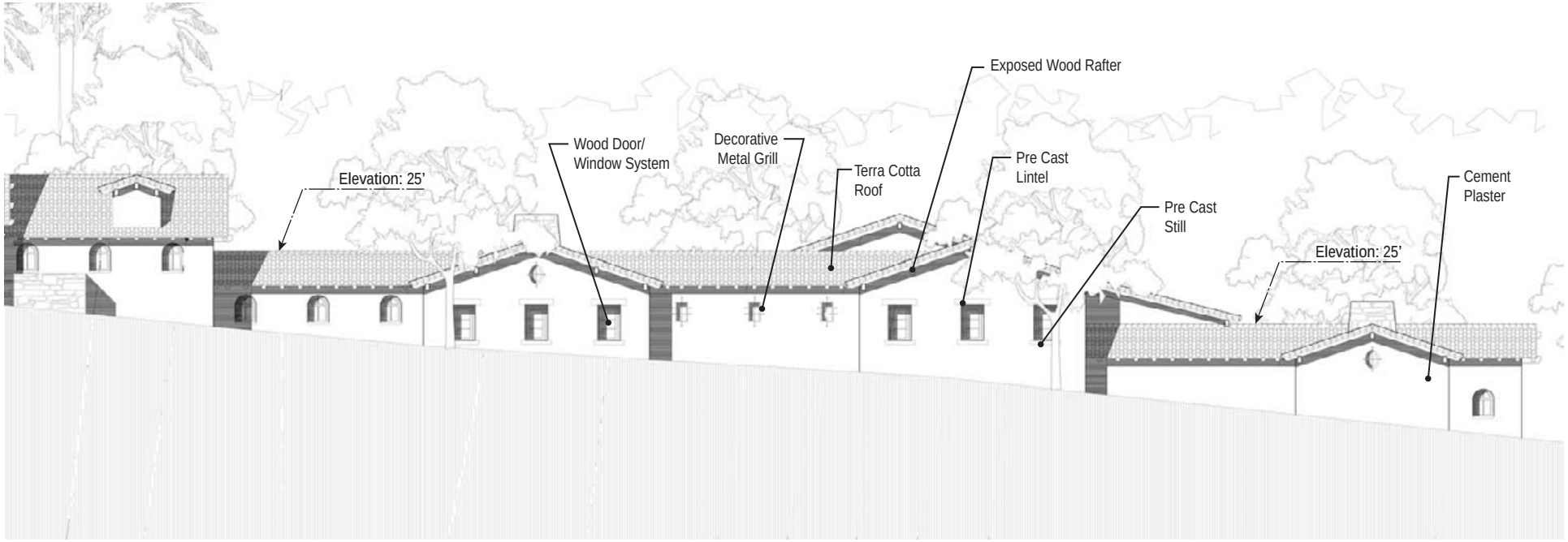
ELEVATION 2b

Source: RBF Consulting 2010, Hill Glazier Architects 2005

Figure 2-9b
Elevation - Main Resort Elevations 2a and 2b

Paraiso Springs Resort EIR

This page intentionally left blank.



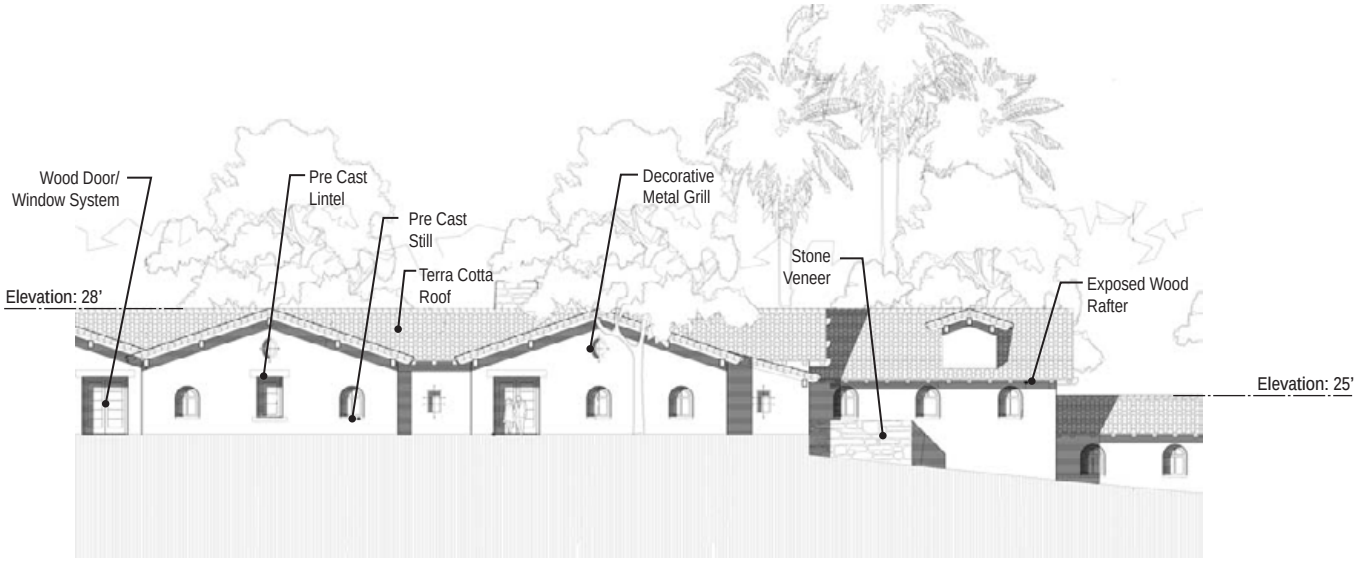
ELEVATION 3

Source: RBF Consulting 2010, Hill Glazier Architects 2005

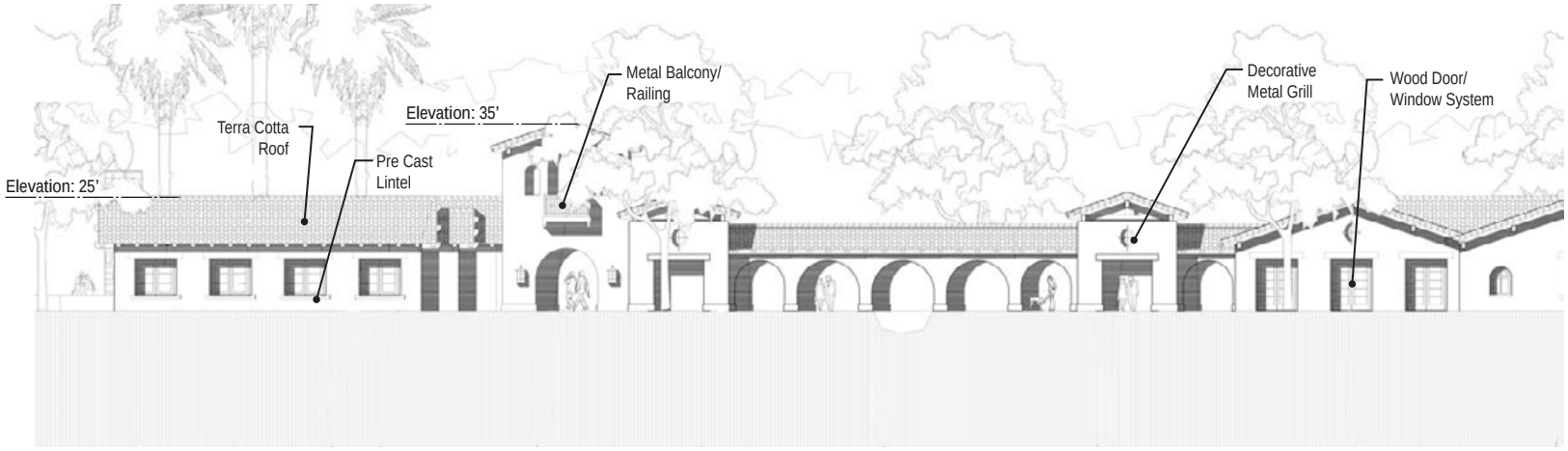
Figure 2-9c
Elevation - Main Resort Elevations 3

Paraiso Springs Resort EIR

This page intentionally left blank.



ELEVATION 4a

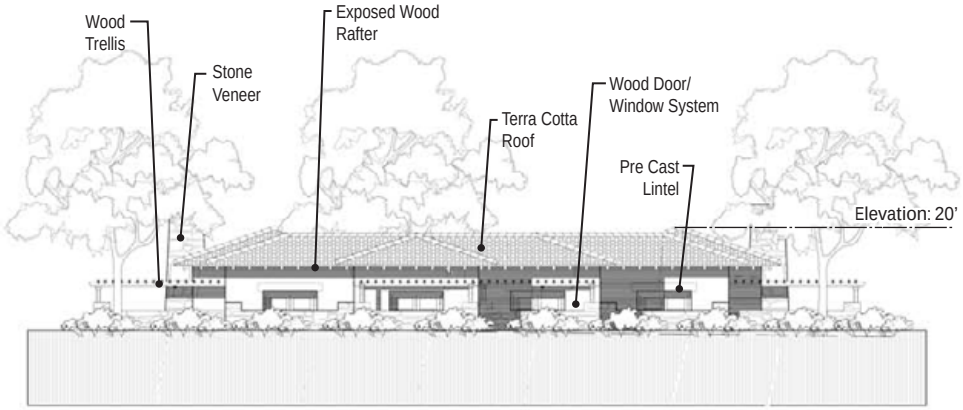


ELEVATION 4b

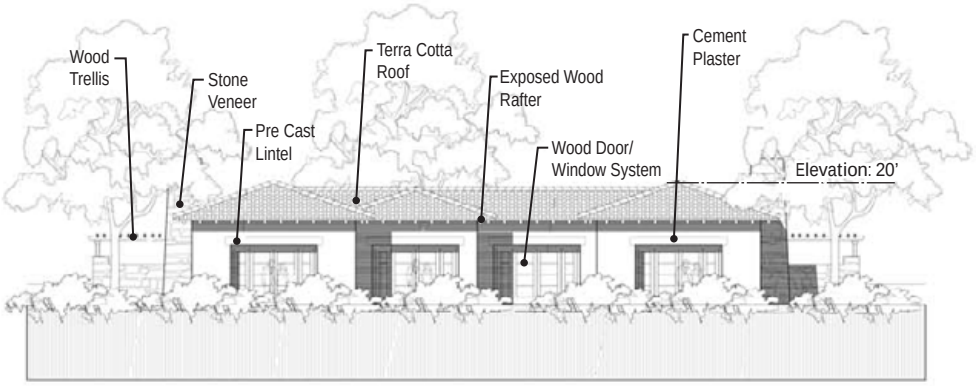
Source: RBF Consulting 2010, Hill Glazier Architects 2005

Figure 2-9d
Elevation - Main Resort Elevations 4a and 4b

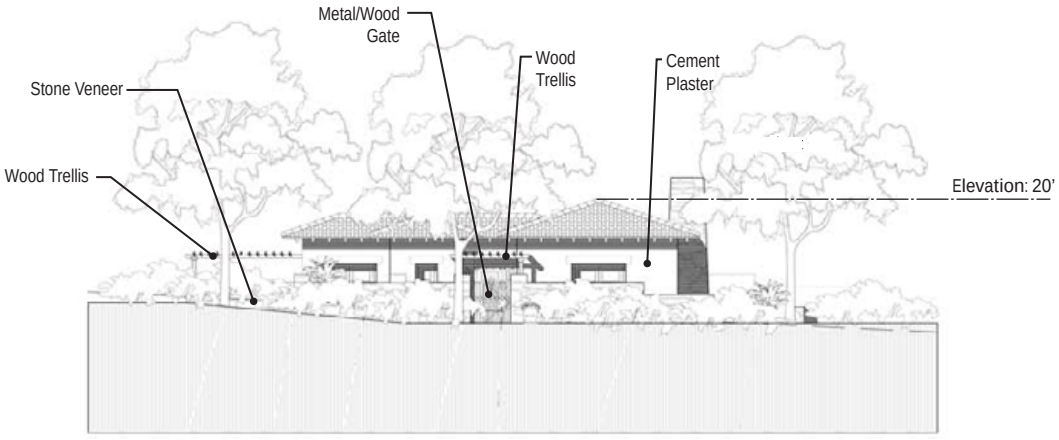
This page intentionally left blank.



ELEVATION 1
Typical 1 Story Casitas



ELEVATION 2
Typical 1 Story Casitas



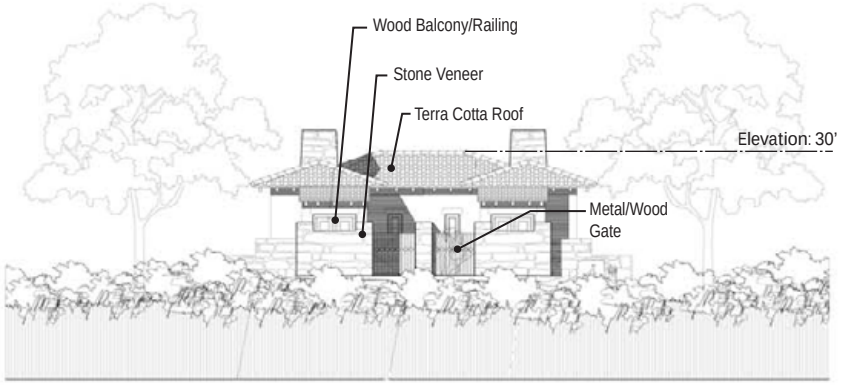
ELEVATIONS 3 & 4
Typical 1 Story Casitas

Source: RBF Consulting 2010, Hill Glazier Architects 2005

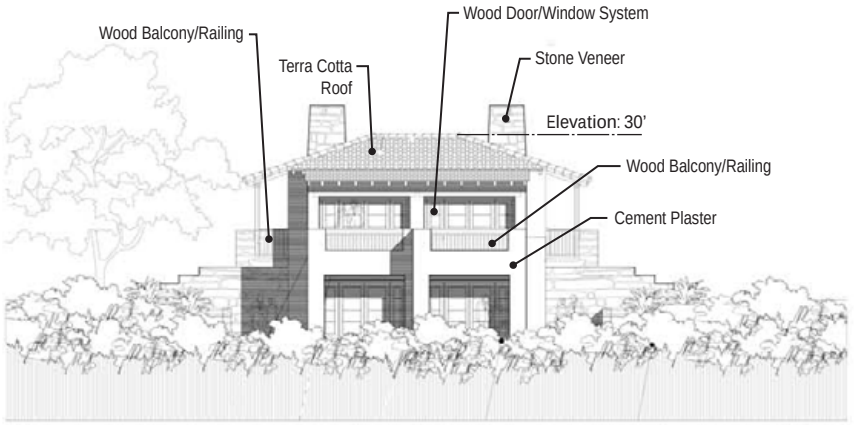
Figure 2.9e
Elevation - Typical One Story Casitas
Paraiso Springs Resort EIR

E M C

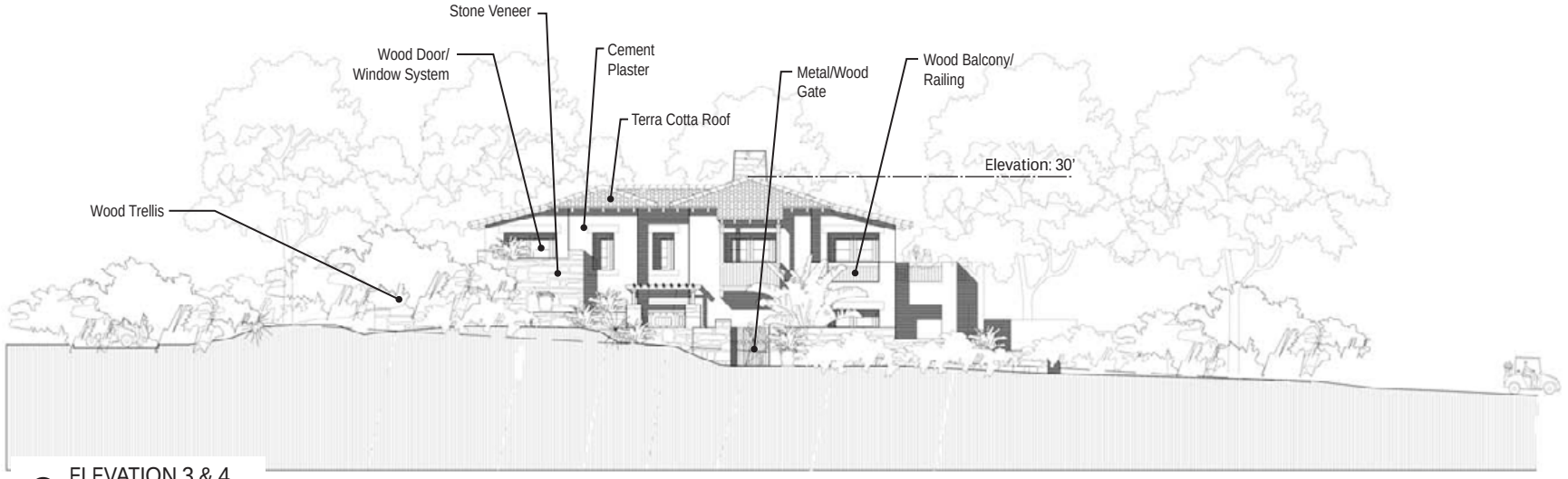
This page intentionally left blank.



ELEVATION 1
Typical 2 Story Casitas



ELEVATION 2
Typical 2 Story Casitas



ELEVATION 3 & 4
Typical 2 Story Casitas

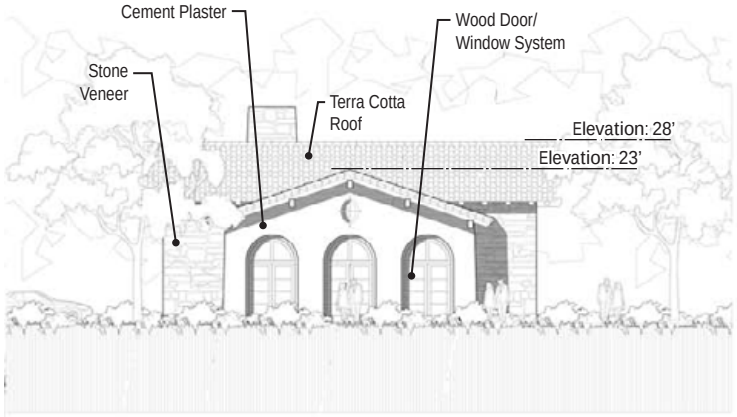
Source: RBF Consulting 2010, Hill Glazier Architects 2005

Figure 2.9f
Elevation - Typical Two Story Casitas

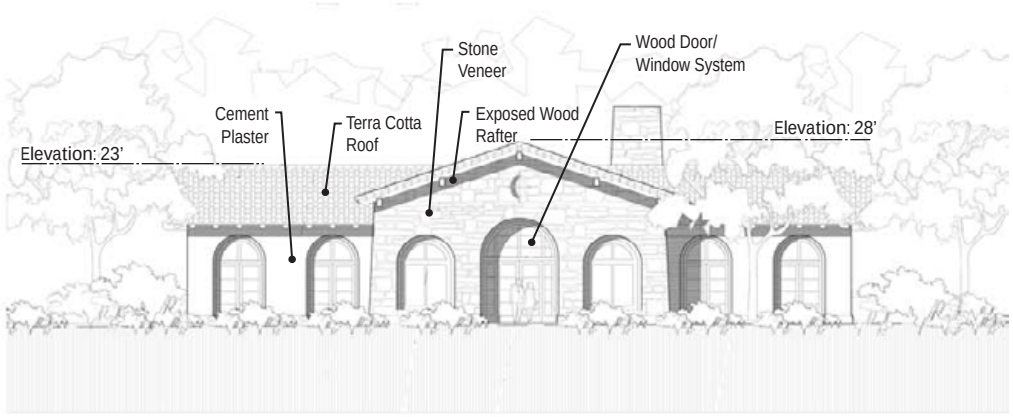
Paraiso Springs Resort EIR

E M C

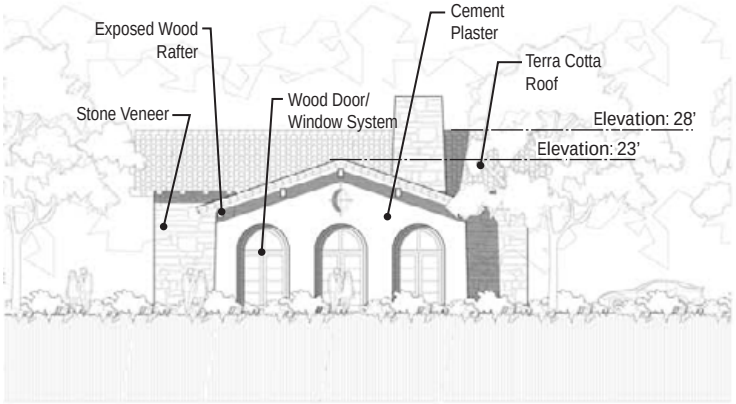
This page intentionally left blank.



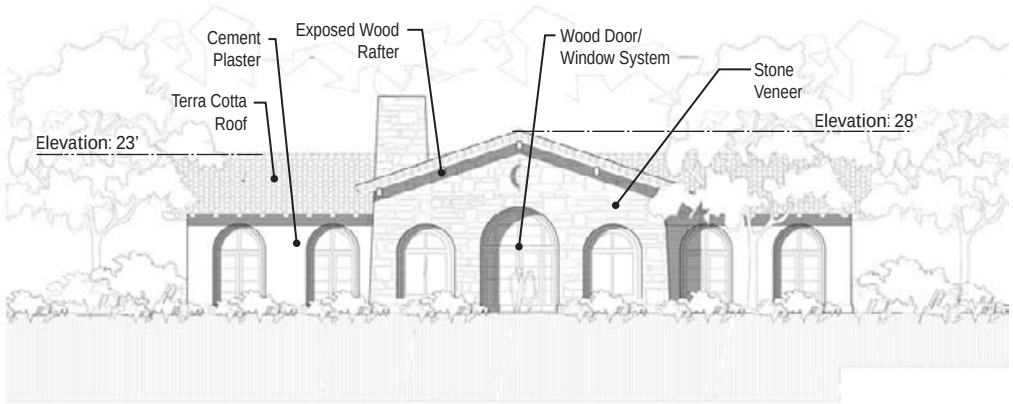
ELEVATION 1
Wine Pavilion



ELEVATION 2
Wine Pavilion



ELEVATION 3
Wine Pavilion



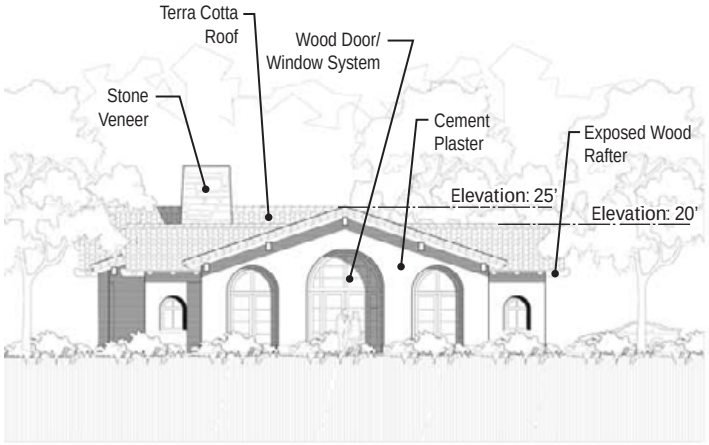
ELEVATION 4
Wine Pavilion

Source: RBF Consulting 2010, Hill Glazier Architects 2005

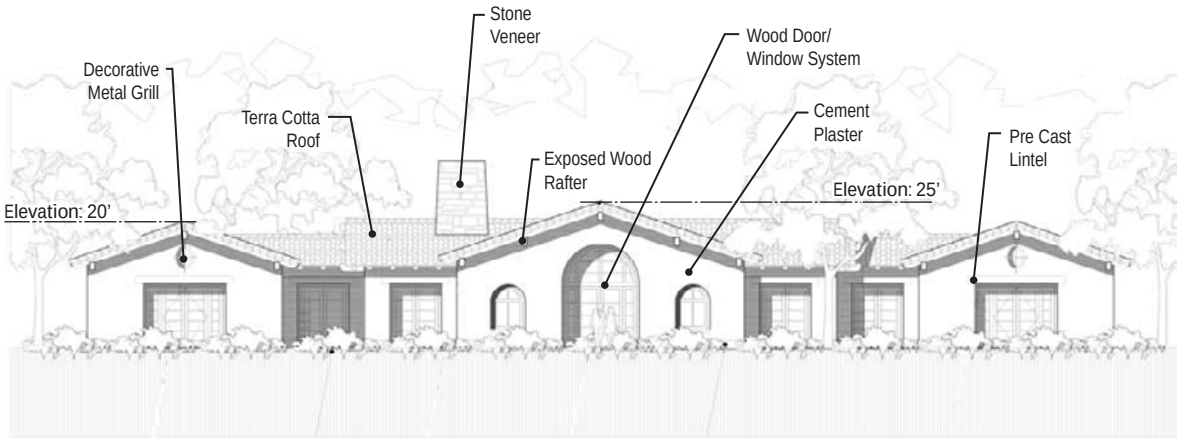
Figure 2.9g
Elevation - Wine Pavilion

Paraiso Springs Resort EIR

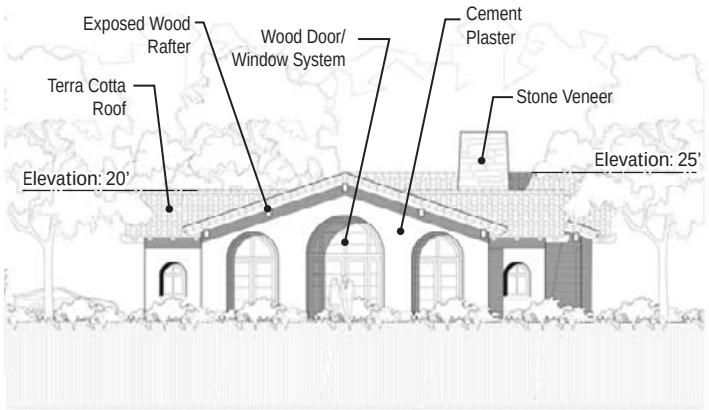
This page intentionally left blank.



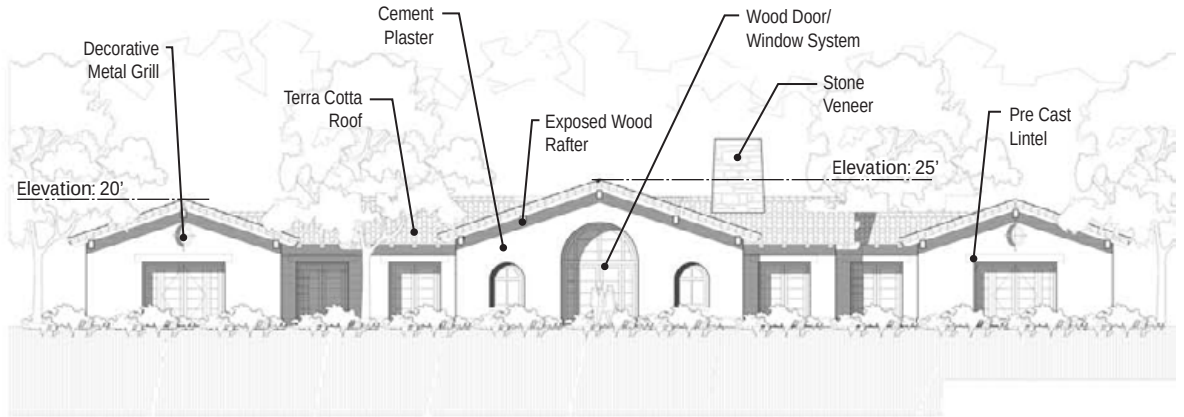
ELEVATION 1
Institute Expansion



ELEVATION 2
Institute Expansion



ELEVATION 3
Institute Expansion



ELEVATION 4
Institute Expansion

Source: RBF Consulting 2010, Hill Glazier Architects 2005

Figure 2.9h

Elevation - Institute Expansion

This page intentionally left blank.

Table 2.2 Project Components

Developed Areas					
Facility Type & Description	**Total Area (sf)**	**Building Footprint (sf)**	**Patios, Paths, Driveways (sf)**	**Parking & Roadways (sf)**	**Total Footprint (sf)**
Hotel (includes: guestrooms, restaurants, meeting and conference rooms, administration, support and back of house, lobby, other hotel support)	146,878+	115,575	104,300	110 parking spaces 4,700 ft of road 198,200	418,075
Hamlet (includes: day spa, general retail stores, artist studio and stores, Real Estate office, wine & garden centers)	18,950	18,550	25,500	86 parking spaces 3,700 ft of road 126,300	170,350
Spa and Fitness Center (includes: Teahouse, hammams [steam baths] and kneipp [hydrotherapy], aqua course, massage, villas, pavilions, retail, creative center, golf school, basketball, and racquetball)	51,090	51,090	62,000	No parking 2,800 ft of road 33,600	146,690
For Sale Time Share Units (includes: 2-bedroom units, 3-bedroom units, single-family timeshare villas, support facilities)	210,610	124,240	65,000	114 parking spaces 1,500 ft of road 65,600	254,840
Future Phase (includes: institute expansion, visitor center, and pet spa)	5,150	5,150	4,000	32 parking spaces 11,200	20,350
SUBTOTAL	**432,678**	**314,605**	**260,800**	**434,900**	**1,010,305**
FOOTPRINT (acres)	**NA**	**7.22**	**5.99**	**9.98**	**23.19**
Landscaping (includes a mixture of wine grapes, grass, trees and shrubs)					23.80
TOTAL FOOTPRINT (acres)					**46.99**
Source: General Development Plan, Preliminary Vesting Tentative Map, HG Architects, 7/15/05 rev. **5/18/12**.					

A Roadway Improvement Plan (Hatch Mott MacDonald, 2008) was prepared to address needed improvements on Paraiso Springs Road. These include widening the roadway where feasible and installing safety signage, delineators and centerline striping. Off-site road improvements will be constructed on Paraiso Springs Road as delineated on the December 9, 2011 “Exhibit of Proposed Improvements” prepared by Atlas Land Surveys,

Inc. Road improvements will be constructed in four phases prior to occupancy of each phase of the proposed project. See Figure 2.10, Paraiso Springs Road Improvement Area.

Internal Circulation and Parking

Internal circulation will be via a series of private paved roadways varying in width between 20 and 24 feet. A secondary shuttle and service roadway 12 feet in width will also serve a portion of the project site.

Six surface parking lots will be constructed in various locations providing a total of 310 parking spaces. Of these, an 86-space parking lot will be constructed south of the Hamlet for day-users only. Overnight visitors using the hotel and 2- and 3-bedroom condominium timeshare units will use the remaining 224 spaces. The single-family villas will include their own individual parking spaces.

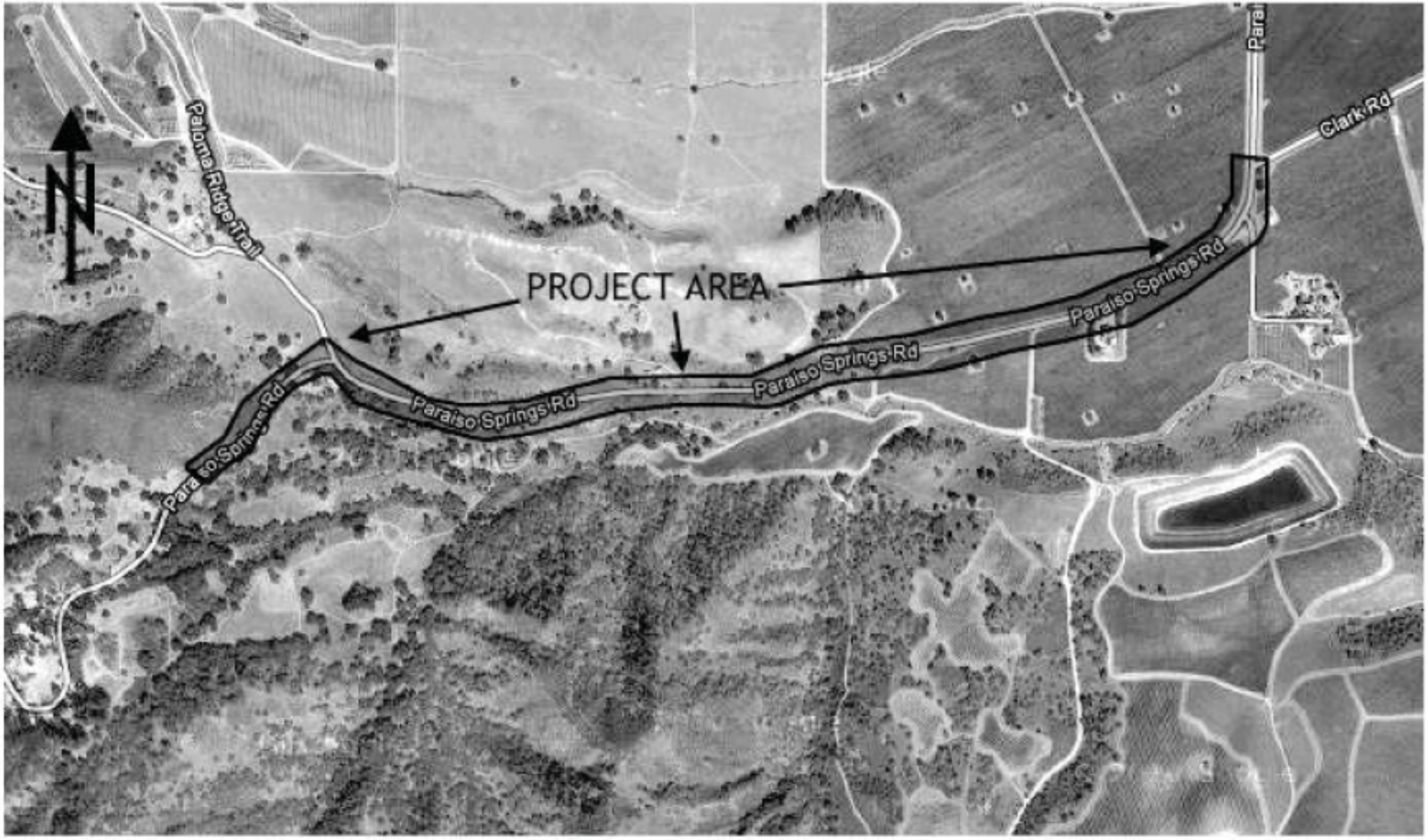
The project applicant proposes a shuttle service for non-management employees that would transport the employees to the resort from an existing park-and-ride lot located on Front Street in downtown Soledad. In addition, a shuttle service will also be available for guests arriving at the Monterey Peninsula Airport and for day trips, such as wine tours, and trips to the Monterey Peninsula and Pinnacles National Park.

Infrastructure Improvements

Grading and Demolition

The proposed project includes approximately 47 acres of development on the approximate 235-acre project site. The existing ground gradients vary on the project site from approximately eight percent at the relatively flat eastern edge of the project site, to approximately 12 percent at the western edge of the project site. The existing ground in the north-central timeshare development areas of the project site consists of slopes exceeding 30 percent. The slopes increase substantially surrounding the proposed project.

Site grading and excavation would be required to accommodate the proposed project. Excavation of approximately 162,073 cubic yards of soil are estimated to be cut from the project site (CH2MHill 2005c). Of this cut, approximately 38,584 cubic yards would be topsoil strippings containing organic materials such as grass, weeds, shrubs, etc. This topsoil would be removed from the project site and stockpiled for use in landscape areas, the vineyard, and/or on-site disposal. The remaining 123,489 cubic yards of cut would be used as fill material on the project site.



Source: Archaeological Consulting 2012

Figure 2-10
Paraiso Springs Road Improvement Area

This page intentionally left blank.

The fill heights range up to a maximum of approximately 14 feet, with the highest fills needed to construct the main hotel complex and adjacent hamlet, and the roadway leading to the westernmost cluster of condominiums.

The depths of cut are generally less than ten feet throughout the project site, however deep cuts of up to 25 feet are required for the parking areas south of the hamlet and the adjacent roadway. Retaining walls or upper slope benching will be required in these areas. Input from the geotechnical engineer will be required for supplemental grading design of these cut and fill areas.

All of the existing structures on the project site will be removed (Figure 2.11, Demolition Plan). These include the main lodge, the 15 vernacular cabins (built in 1972), a changing room, a recreation room, six mobile homes, a workshop and several small buildings. The existing swimming pool, a "conversational" pool, and an indoor pool will be removed and replaced with new pools. The six mobile homes are in fair condition would be sold and removed from the project site. The remaining structures will be demolished on site and transferred to the Johnson Canyon Landfill, north of the City of Gonzales.

The project site contains approximately 11,000 trees. As part of the demolition plan, up to 191 trees are proposed for removal, including 185 protected oak trees (Forest City Consulting 2005). Of these 185 protected trees, 10 trees have been documented as either dead or diseased.

The *Forest Management Plan for Commercial/Visitor Serving Parcels APN's 418-361-004, 418-381-002, 418-381-021 Paraiso Springs 34358 Paraiso Springs Road Monterey County, California* (Forest City Consulting 2005) calls for the encouragement of native regeneration in areas where tree cover is desired by not removing the young trees in clearing activities and controlling invasive vegetation (Figure 2.12, Planting Plan).

Potable and Recycled Water Supply

The proposed project would increase the peak day potable water demand to 42,380 gallons per day at buildout and would be served by two wells on the project site (CH2MHill 2010c, page 8). Well No. 1 would serve as the main water supply and Well No. 2 would serve as the back-up water supply. Irrigation for landscaping and the vineyard will be provided by recycled wastewater (as described below) and is not included in the potable water demand. The water demand also does not include water for the proposed pools and spas as water for these facilities will be supplied from the existing hot springs rather than the potable water supply.

Wastewater Management

The proposed project would generate approximately 36,495 gallons per day of wastewater (CH2MHill 2010b) with 85 percent occupancy of the hotel and 100 percent occupancy of other facilities. The project site is currently served by an existing septic tank and leach field system. However, the existing septic tank/leach field system would

be removed and the proposed project would construct a new wastewater treatment and distribution system at the eastern end of the project site, near the entrance of the project site, downhill from the main resort area.

The wastewater treatment facility would consist of a membrane bioreactor (MBR) combined with ultraviolet light (UV) disinfection wastewater treatment plant, which would include fine screening at the head of the treatment plant. The screening would be comprised of both organic and inorganic material that would be macerated and washed, which would return most of the organic matter to the waste stream. The residual waste would be compacted and disposed of at the landfill. Waste would then flow through the screens to the biological treatment tank. Excess biomass would be hauled to a municipal septage receiving facility. The biological process would be designed to achieve nitrate-nitrogen levels of less than 10 mg/L, which is the drinking water standard. Recycled water would then be used for irrigation within the project site.

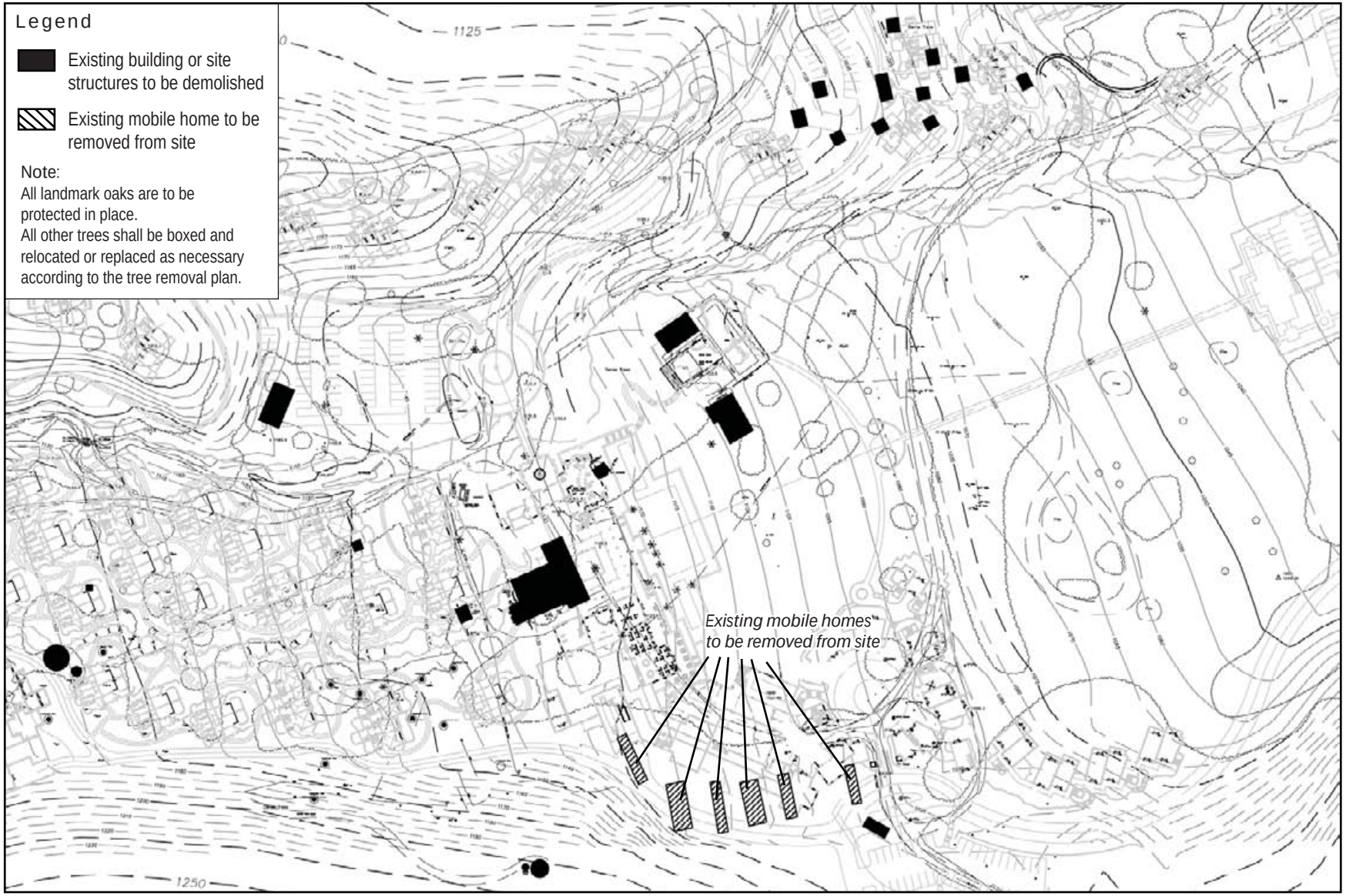
Storm Water Management

The Paraiso Springs Valley is drained by an unnamed channel in the floor of the valley, which flows through the project site. This unnamed channel begins on the eastern slopes of the Sierra de Salinas Foothills and in the westerly portion of the Arroyo Seco Watershed, travels northeasterly to the Arroyo Seco Valley floor, where flows are collected and enter the Arroyo Seco River. The Arroyo Seco River is a major tributary to the Salinas River.

The primary drainage basin extends from the southwest, at elevation 2,400 feet to the northeast project boundary at elevation 1,000 feet. The basin is approximately 1,160 acres in size and is surrounded by mostly undeveloped and rural agricultural land uses. Based on the tentative map for the proposed project, approximately 23 acres of the project site (two percent of the total basin) would contain impermeable surfaces post construction if traditional design methods were utilized. These include: building footprints (7.22 acres), patios, paths and driveways (5.99 acres), and parking and roadways (9.98 acres) (CH2MHill 2008).

The surrounding hillsides above the proposed project are steep in many areas and are susceptible to landslides and debris flow. 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 will be constructed as grass-lined swales to the extent possible, to encourage water percolation and blend in with the surrounding landscape. Ditches with longitudinal slopes greater than four percent will require harder surfacing such as rock, cobblestone and/or concrete.

To help manage the amount and type of debris flow from surrounding areas, up to five debris basins are proposed at locations adjacent to proposed development sites and within the site grading footprint. These debris basins will include a series of two-to-four small soil and rock check dams, approximately three-feet tall, constructed at the low flow line



0 200 feet

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

Figure 2.11

Demolition Plan

Paraiso Springs Resort EIR

E M C

This page intentionally left blank.

Legend

Existing Tree

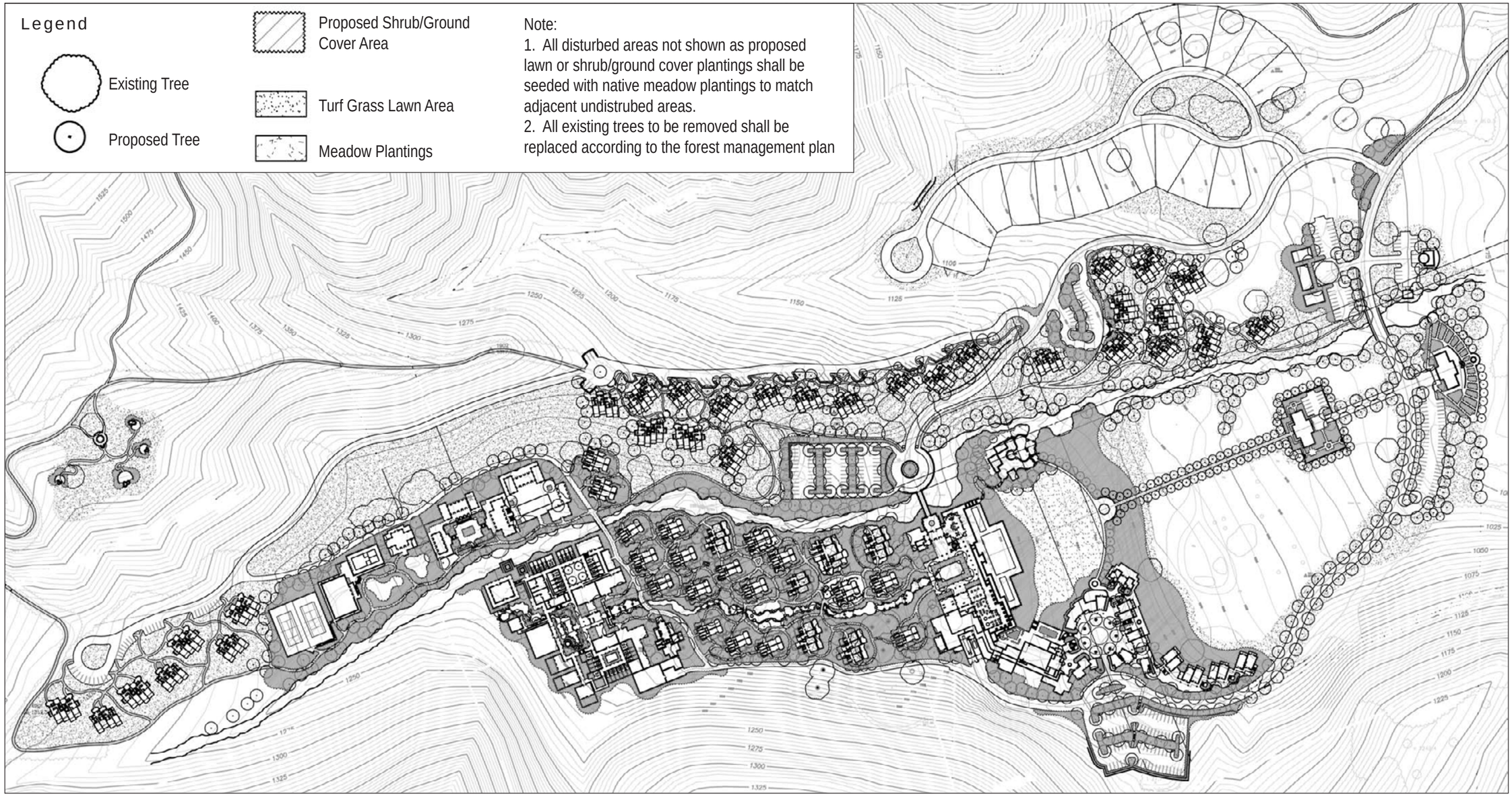
Proposed Tree

Proposed Shrub/Ground Cover Area

Turf Grass Lawn Area

Meadow Plantings

Note:
1. All disturbed areas not shown as proposed lawn or shrub/ground cover plantings shall be seeded with native meadow plantings to match adjacent undistrubed areas.
2. All existing trees to be removed shall be replaced according to the forest management plan



0 200 feet

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

Figure 2.12
Planting Plan
Paraiso Springs Resort EIR

E M C

This page intentionally left blank.

of the natural drainage feature. Minimal excavation behind the check dam is proposed. The debris basins would be constructed adjacent to proposed roadways, parking lots or maintenance paths to facilitate inspection and maintenance.

The primary drainage channel extending east to west through the project site is a "blue line" stream which is relatively well defined and relatively clear of debris. There is 3,983 linear feet of this drainage within the project site that may be considered "Waters of the U.S." (WRA 2009).

There are four existing culverts located along the drainage channel which will be removed as part of the proposed project. In these areas, the drainage channel will be restored to a more natural shape and capacity. However, within a 300-foot section of the channel (the fourth proposed culvert removal), a new in-stream pond will be created that will be filled using the overflow from the spring (WRA February 14, 2013).

Bridges will be installed to allow vehicular and pedestrian access across the drainage channel. The bridges will be single-span structures with abutments on each bank of the stream. Stream banks will be reconstructed and lined with rock riprap for scour protection immediately adjacent to the abutments. Small storm drain outfalls will be located within the bridge and rock riprap footprints.

To minimize the amount of post construction storm water run-off from the site, the project applicant has proposed using a detention basin located at the eastern end of the property to detain water and release it gradually.

Fire Protection

A preliminary fire protection plan was prepared (CH2MHill 2005b) in coordination with Mission Soledad Rural Fire Protection District and their consultant, Carmel Fire Protection Associates.

The fire protection plan consists of a wet hydrant network supplied by a dedicated firewater pipeline system that will be separate from the spa/resort's potable water system. Sixteen hydrants will be located throughout the project site, each with a minimum flow capacity of 1,000 gallons per minute (see Figure 2.13, Fire Protection Plan). In addition, all buildings on the project site will include a commercial sprinkler system supplied by the fire water pipeline system.

A steel water storage tank of up to 500,000 gallons support the hydrant and sprinkler systems will be constructed above the westernmost condominium timeshare units (see proposed location in Figure 2.13, Fire Protection Plan). Assuming a water pressure of 40 pounds per square inch will be required at the highest hydrant (elevation 1,305 ft.), this tank will need to be located above elevation 1,410 feet. The timeshare condominiums and timeshare family villas would be equipped with sprinkler systems.

Three fire department water hose connections will be provided adjacent to and near the hotel complex. Additional fire protection elements will include:

- Twelve foot-wide (minimum) access roads by the spa, fitness center, and condominiums;
- Adequate vehicle turn-around designed at the end of all roadways;
- Construction of all bridges across creeks/drainage ways will be designed to meet Highway Loading Standards (HS-44);
- All building to be constructed using fire-resistant materials; and
- The commercial and residential fire sprinkler systems, along with the hydrant system, will be designed by a licensed fire protection engineer.

"After the Fact" Demolition of Historic Structures

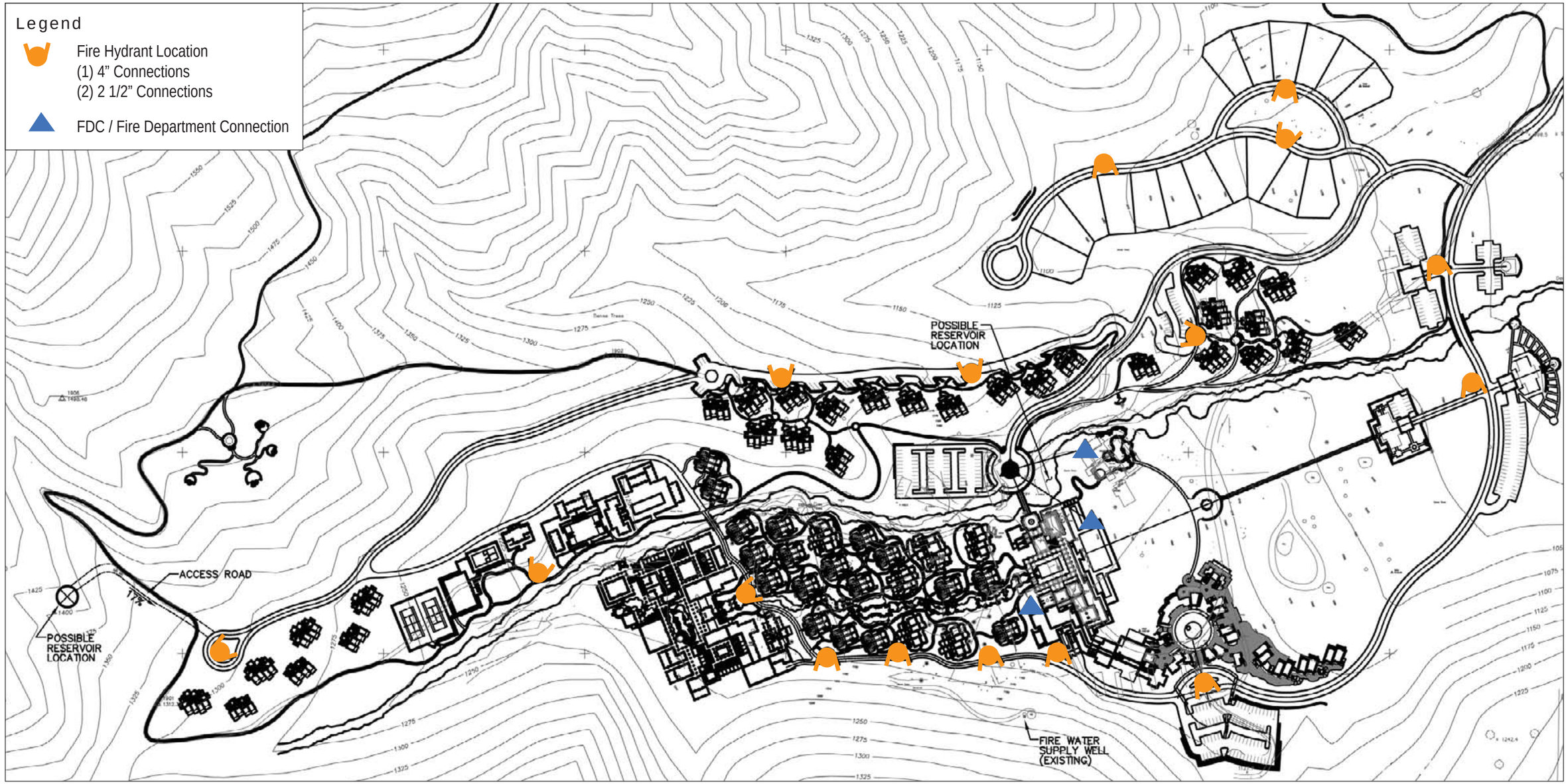
The proposed project also includes the "after the fact" environmental review and permission to demolish nine historic cottages. In November 2003, 18 of the 36 buildings on the project site were demolished (Figure 2.14, Structures Demolished in November 2003). Of these 18 structures, six were the Palm Court cabins that were likely transported to the project site in the late 1960s from their original location on the Fort Hunter-Liggett Military Reservation (ARM 2005). Twelve cottages were also demolished, nine of which were determined to meet the eligibility requirements for inclusion in the California Register of Historical Resources 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 (Painter Preservation & Planning 2008).

Project Phasing

The Vesting Tentative Map includes a development phasing schedule. Development of the hotel and timeshare units will be phased as shown below in Table 2.3. The project is proposed to be completed in 2023.

Table 2.3 Development Phasing Plan

Lot Numbers	Use	Phase 1 No. of Units	Phase 2 No. of Units	Phase 3 No. of Units	Phase 4 No. of Units	Total Units
1,2	Hotel Units	60	15	15	13	103
20-23	Timeshare Condos	18	14	14	14	60
3-19	Timeshare Villas	5	4	4	4	17
	Totals	**83**	**33**	**33**	**31**	**180**
Note: All of the non-living unit amenities will be constructed in Phase 1.						



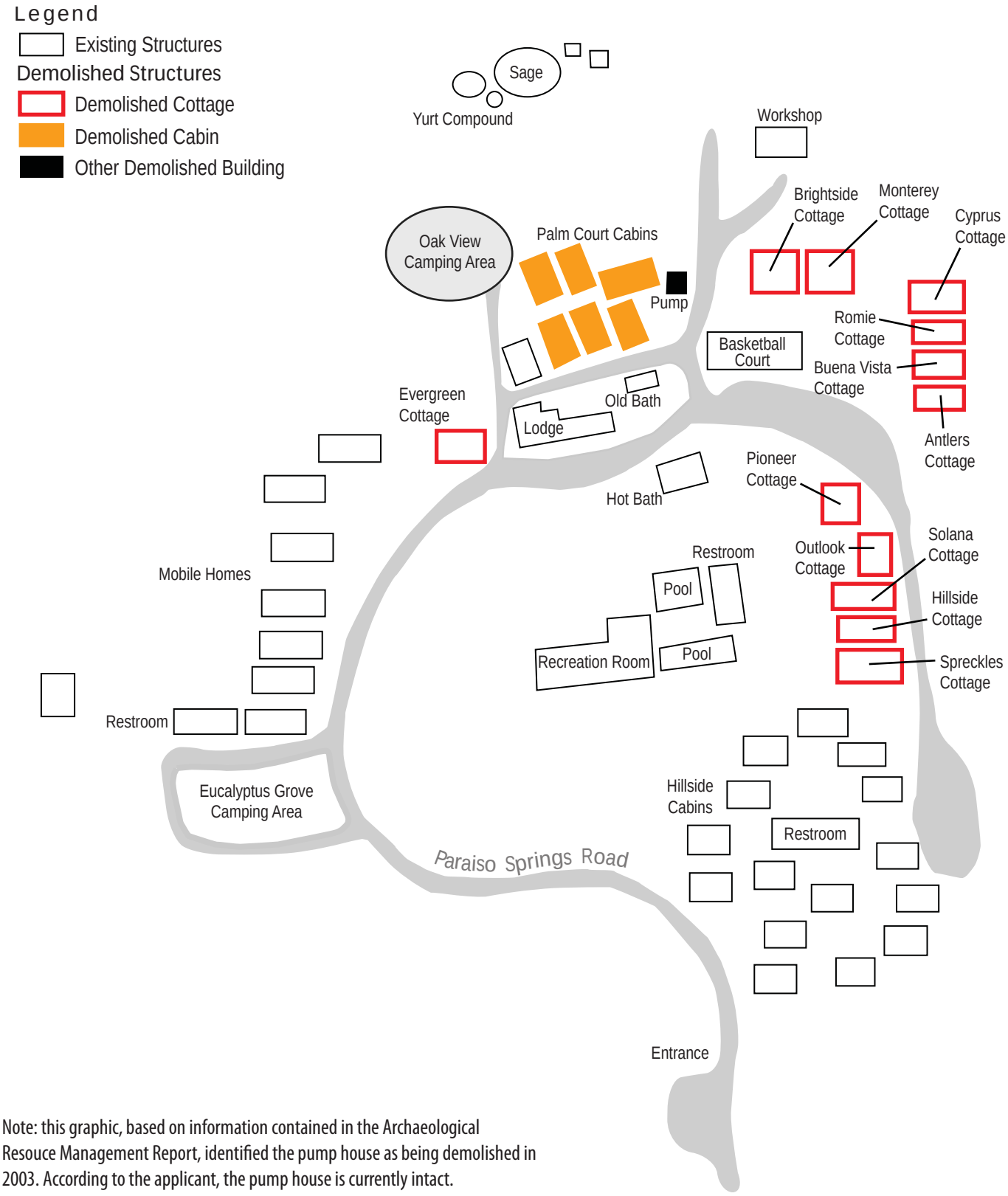
0 200 feet

Source: RBF Consulting 2010, Hill Glazier Architects, CH2MHill 2005

Figure 2-13
Fire Protection Plan
Paraiso Springs Resort EIR

E M C

This page intentionally left blank.



Note: this graphic, based on information contained in the Archaeological Resouce Management Report, identified the pump house as being demolished in 2003. According to the applicant, the pump house is currently intact.

Source: RBF Consulting 2010, Archaeological Resource Management 2003

Figure 2-14

Structures Demolished in November 2003

Paraiso Springs Resort EIR

This page intentionally left blank.

2.5 REQUIRED PERMITS AND APPROVALS

As indicated in Chapter 1 – Introduction, this EIR is an information document for decision makers and the general public. CEQA requires that decision makers review and consider the EIR in their consideration of this project. Table 2.4, Agency Actions and Approvals, provides a list of the actions and approvals that would be required to fully implement the proposed project.

Table 2.4 Agency Actions and Approvals

Lead/Responsible Agency	Actions/Approvals
Monterey County	▪ Certification of the EIR and Adoption of Mitigation Monitoring Program; ▪ Approval of a Combined Development Permit consisting of the following: • General Development Permit; • Use permit for the creation of 77 timeshare units; • Vesting Tentative Subdivision Map; • Use Permit for removal of 185 native oak trees; and, • Use Permit for development on slopes greater than 30 percent; and ▪ Approval of after the fact demolition permits for removal of Historic Structures; ▪ Approval of Final Maps and Improvement Plans; • Review and approval of all required permits that include, but are not limited to, building, grading, encroachment, and occupancy permits
Regional Water Quality Control Board	▪ National Pollutant Discharge Elimination System (NPDES) Construction Activity Stormwater Permit ▪ Wastewater Discharge Permit ▪ Section 401 Water Quality Certification (for work in the stream channel)
Monterey Bay Unified Air Pollution Control District	▪ Air Quality Permits for construction of the Wastewater Treatment Facility
U.S. Army Corps of Engineers	▪ Nationwide Permit ▪ Clean Water Act Section 404 permit (for work in the stream channel)
California Department of Fish and Wildlife	▪ Section 1602 Streambed Alteration Agreement (for work in the stream channel)

This page intentionally left blank.

3 ENVIROMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

Each topic section in this DEIR presents information in the following subsections:

- **Environmental Setting** - The Environmental Setting section provides a general overview of the conditions on and adjacent to the planning area.
- **Regulatory Setting** - The Regulatory Background presents local, state and federal regulations which are relevant to the proposed project.
- **Analytical Methodology and Significance Threshold Criteria** section provides a brief description of standards that were used to evaluate whether an impact is considered significant based on standards identified in CEQA, the State CEQA Guidelines, and agency policy or regulations. Impacts are identified and analyzed. Mitigation measures that would reduce potentially significant or significant impacts are identified, as well as the significance of the impact after implementation of mitigation measures. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant unavoidable impact.

This page intentionally left blank.

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

E M C

This page intentionally left blank.

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.

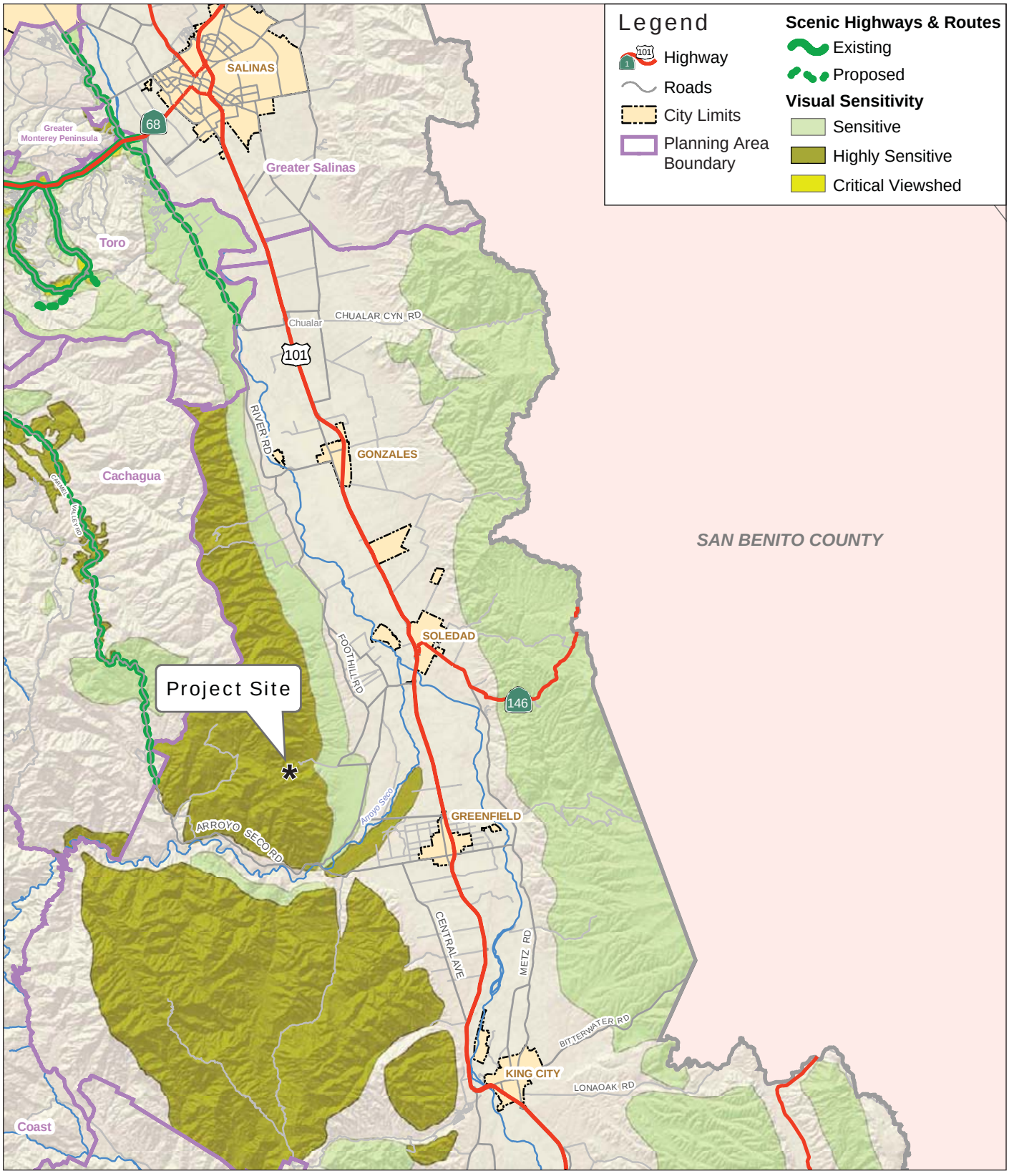
As shown in Figures 2-9a through 2-9h, presented earlier, the proposed elevations of the buildings at the project site would range from approximately 25 feet to 35 feet at the main resort. The elevation at the one-story casitas would be approximately 20 feet and the elevation of the two-story casitas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

This page intentionally left blank.

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

Paraiso Springs Resort EIR

This page intentionally left blank.

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.

This page intentionally left blank.

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

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

This page intentionally left blank.

(*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

This page intentionally left blank

.

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.

This page intentionally left blank.

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.

This page intentionally left blank.

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.

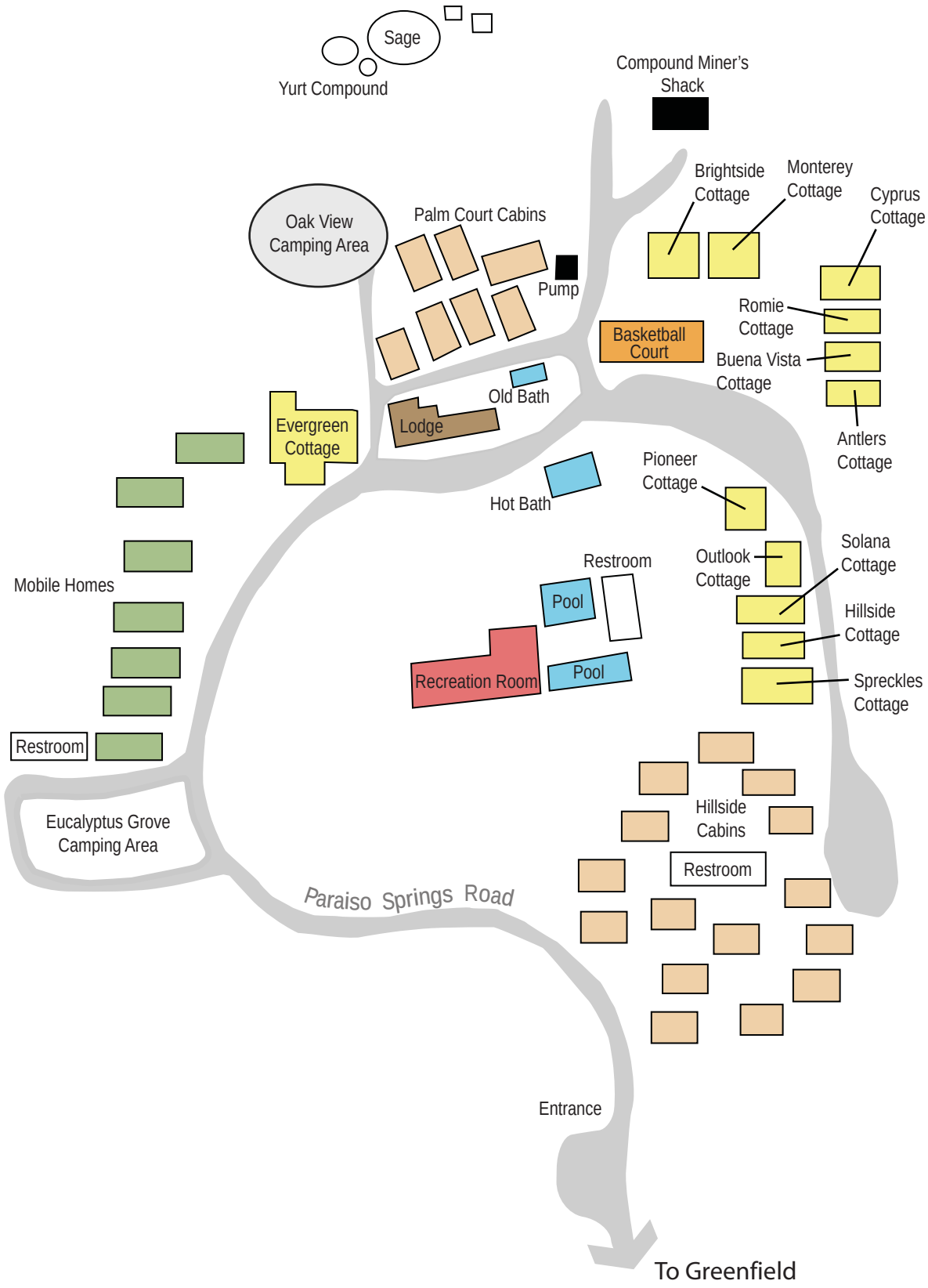
Despite these improvements and notoriety, Paraiso Springs began to decline with the broader fall in interest in the spa phenomenon that had peaked in the late 1800s. In 1891 a fire burned the handsome Italianta house on the hill to the north of the main resort areas, one of the more substantial buildings 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

E M C

This page intentionally left blank.

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."

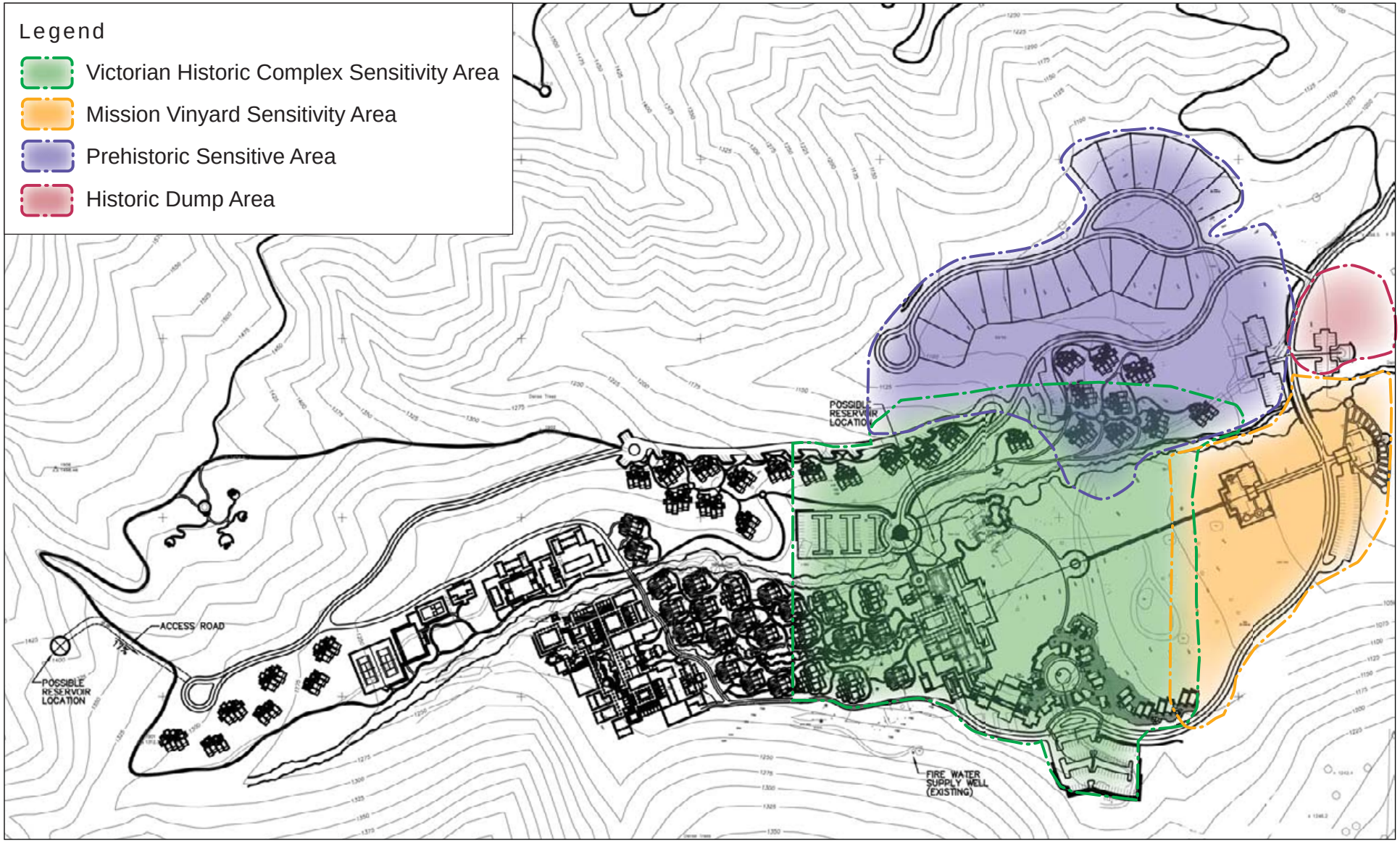
The dump site on the property, located along a small drainage south of the entrance to Paraiso Springs, has been identified as having potential to yield information important to understanding the historic usage of the site as a commercial resort from the late 19th century to the mid-20th century (ARM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

E M C

This page intentionally left blank.

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.

This page intentionally left blank.

3.6 GEOLOGY AND SOILS

3.6.1 Introduction

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

The setting information and analysis contained in this section is based on a site-specific geotechnical report prepared by LandSet Engineers, Inc. for the proposed project (*Geologic and Soil Engineering Feasibility Report for Paraiso Hot Springs SPA Resort, Monterey County, Californi*a, December 2004), and CEQA-level peer review of the LandSet report by Pacific Crest Engineering and Zinn Geology (2008). The LandSet report is included in Appendix D of this Draft EIR.

3.6.2 Environmental Setting

Geology

The regional geology consists of Pre Cretaceous Sierra De Salinas Schist and Cretaceous age Salinian Block granitic rocks with older Paleozoic Era Sur Series metamorphic rocks that occur as roof pendants. These roof pendants predominantly consist of marble and dolomite. Overlying the granitic rocks of the Salinian Block is a series of folded and faulted Tertiary age (Oligocene to middle Miocene) sandstones, conglomerates, and volcanics.

During very late Tertiary to mid Quaternary times, extensive alluvial and fluvial sediments were shed off of Tertiary uplands and deposited as extensive alluvial fans and the Paso Robles Formation. These sediments unconformably overlie all older formations with which they are in contact. Holocene activity has consisted of continued tectonic uplift and down cutting and deposition of the local area streams, mass wasting of upland areas by landslides and erosion, and fault creep along the San Andreas and related fault systems. The regional geology is shown on Figure 3.6-1, Regional Geology.

The project site is situated on the east flank of the Sierra De Salinas Foothills on the west side of the Salinas Valley and is part of the Coast Ranges Geomorphic Province of California. Geologic mapping of the project site and its vicinity during the exploratory borings identified 11 different geologic units, all with varying subsurface conditions a number of distinct geologic soil units, which are illustrated on Figure 3.6-2, Site Geology.

In general, the soil conditions at the project site of the upland areas are composed of bedrock and landslide deposits, while the valley areas are underlain by unconsolidated to semiconsolidated alluvium. The proposed development area is predominantly underlain by alluvium composed of unconsolidated to semiconsolidated sand, silt and clay with minor gravels and cobbles.

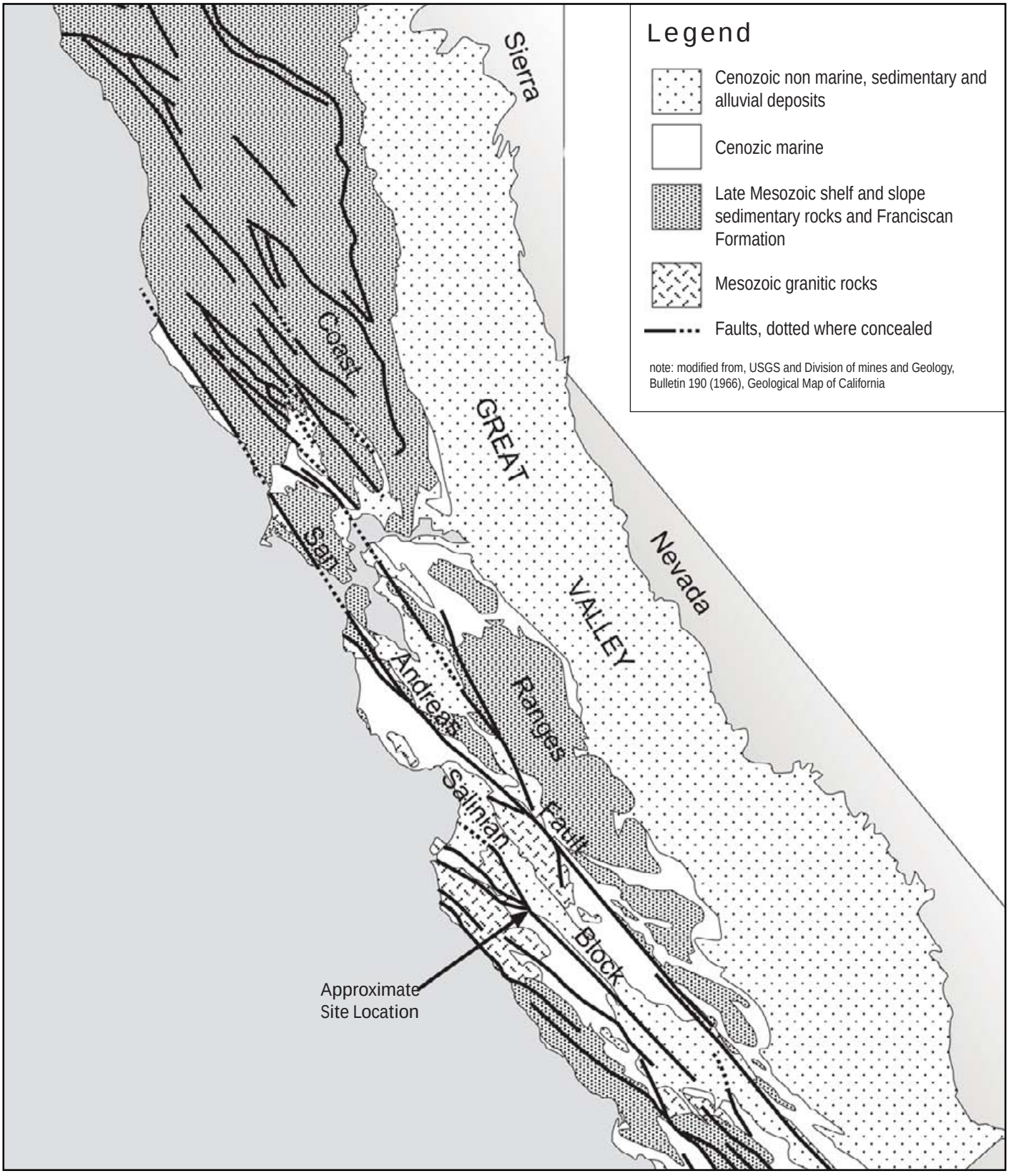
Because of the variability of geologic materials found on the project site, multiple soil classifications could be applied. The ridges and slopes underlain by Tierra Redonda

Formation (Tt) could be classified as soil type SC (very dense soil and soft rock). Alluvium in Indian Valley could be classified as SC / SD (very dense soil and soft rock/stiff soil profile). In the alluvium high groundwater conditions and low blow counts were encountered. These soils are given soil type SE (soft soil profile). A majority of the development of the project site is proposed to occur in soil type SE. For this reason, the soil type for the project site appears to be SE as defined by the guidelines in the California Building Code (CBC). As per Chapter 16, Section 1636.2, the SE is classified as having an average shear wave velocity of less than 180 m/sec.

The upland sloped areas of the project site are mapped as Tertiary Tierra Redonda Formation (Tt). The upper elevations of the northwest corner of the project site are mapped as Mesozoic or older Schist (ms). Also mapped in the northwest corner of the project site is an unnamed fault juxtaposing schist and Unnamed Red Beds. The fault is buried by Quaternary Older Fan Gravels (Qog) at the northern central border of the project site. South of the unnamed fault a large Quaternary landslide (Qls) is mapped. The low lying valley portions of the Site, Paraiso Springs Valley and Indian Valley are mapped as Quaternary Older Alluvium (Qoa). In the center of the project site, a small outcrop of Mesozoic basement rock (gdx) is mapped.

A description of the project site rock layers and layering is included below.

- **Fill (Hf):** Man made fill deposits consisting of unconsolidated to semi-consolidated sand, silt, clay, and gravel. Fill deposits are found in many areas of the project site where previous grading has occurred;
- **Landslide Deposits (Qyls)**: Recent landslide deposits, mostly occurring in the steeper slopes of the Tierra Redonda Formation (Tt). Deposits consist of unconsolidated sand silt and clay. These deposits are found flanking the project site drainages where steep slopes are present;
- **Debris Flow (Qydf)**: Recent debris flow deposits, mostly occurring in the Tierra Redonda Formation (Tt). Deposits consist of unconsolidated sand silt and clay. These deposits are found flanking the project site drainages where steep slopes are present;
- **Older Debris Flow (Qodf)**: Older debris flow deposits, mostly occurring in the Tierra Redonda Formation (Tt). Deposits consist of unconsolidated sand, silt, and clay. These deposits are found flanking the project site drainages where steep slopes are present;
- **Alluvium (Qal 1)**: Unconsolidated to semi-consolidated sand, silt, gravel, and cobbles. Qal 1 is found in the upper reaches of Paraiso Springs and Indian Valleys and is coarser grained and younger than alluvial deposits to the east (Qal 2);
- **Alluvium (Qal 2)**: Unconsolidated sand, silt, and trace gravel. Qal 2 is found in the eastern portions of Paraiso Springs and Indian Valleys. Qal 2 is finer grained and older than alluvial deposits to the west;



Source: RBF Consulting 2010, , LandSet Engineers 2004

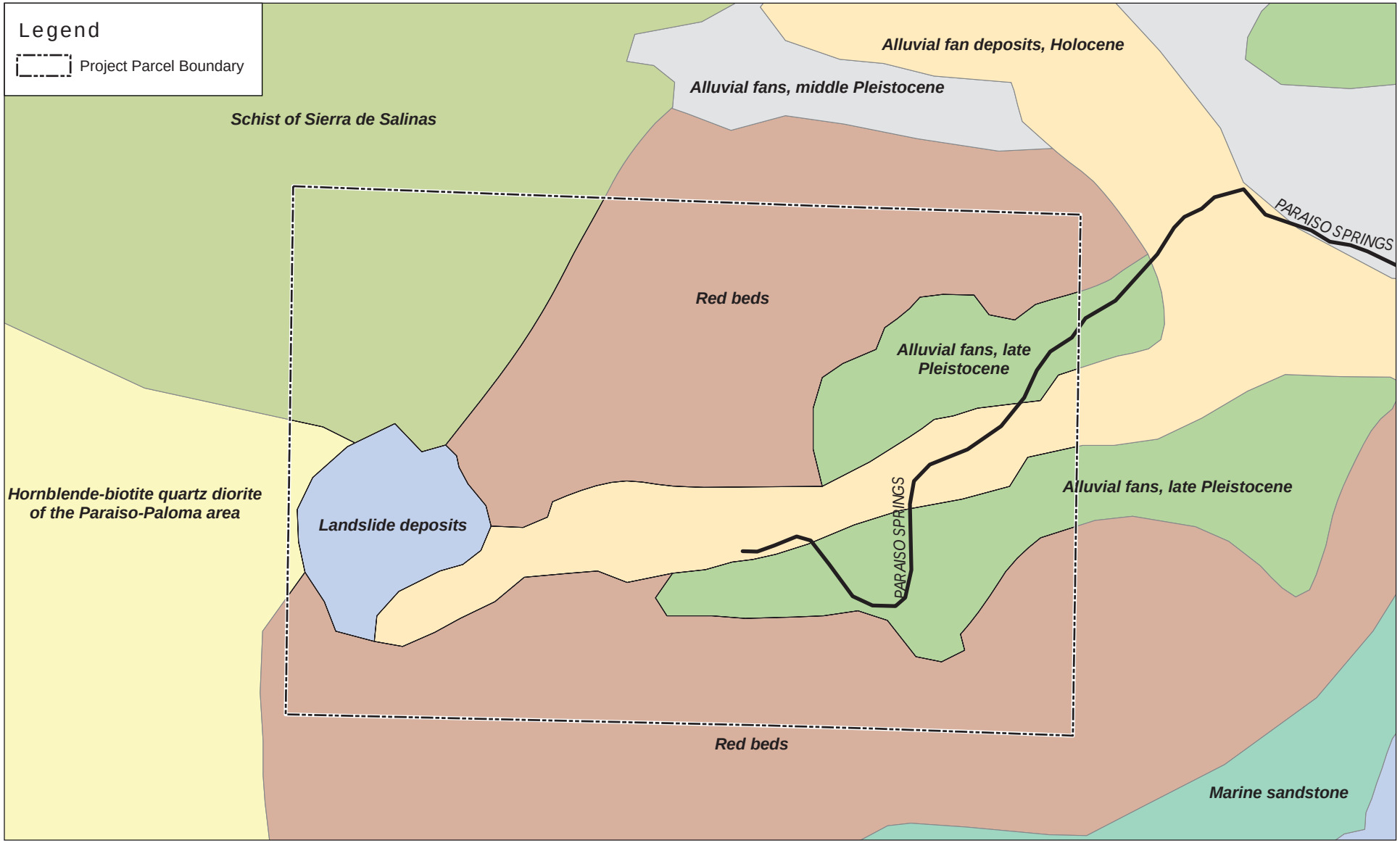
Figure 3.6-1

Regional Geology

Paraiso Springs Resort EIR

E M C

This page intentionally left blank.



Source: RBF Consulting 2010, Monterey County, ESRI Data and Maps/StreetMap USA 2002

Figure 3.6.2

Site Geology

Paraiso Springs Resort EIR

E M C

This page intentionally left blank.

- **Older Landslide (Qols)**: Older landslide deposits consisting of unconsolidated to semi-consolidated boulders and cobbles supported by a sand and clay matrix. Clasts[10] are of Sierra De Salinas Schist (ms) and granitic (Kgd) provenance. Located in the southwest corner of the project site the slide buries Tierra Redonda deposits on the existing road;
- **Older Alluvium (Qoa)**: Older alluvial deposits consisting of unconsolidated to semi-consolidated cobbles and boulders. Older alluvial deposits are located in upper elevations of the northwest quarter of the project site;
- **Tierra Redonda Formation (Tt)**: Marine sandstone, conglomerate and some mudstone. Deposits consist of slightly cemented fine to coarse grained, subangular to subrounded sand with subrounded to subangular fine to coarse gravels up to six inches in diameter. Sands and gravel clasts are composed of reworked granitic basement rock and Sierra De Salinas Schist. Deposits of Tierra Redonda are found flanking the project site on the north and south sides;
- **Granitic Basement Rock (Kgd)**: Hornblende granodiorite with phenocrysts of feldspar. Kgd crops out in the central portion of the site; and
- **Sierra De Salinas Schist (ms)**: Biotite schist of the Salinian Block. This unit is found in the upper elevations of the northwest corner of the project site, west of the unnamed fault.

Faults and Seismic Hazards

The project site is located in the seismically-active Monterey Bay region of the Coast Ranges Geomorphic Province. The closest faults that would most likely affect the project site are the San Andreas, Rinconada, San Gregorio-Palo Colorado, and Monterey Bay Tularcitos faults (Figure 3.6-3, Regional Faults).

San Andreas Fault

The San Andreas Fault is located approximately 30 kilometers (km) northeast of the project site and is a major seismic hazard in northern California. This fault is a major right-lateral strike-slip fault that generally delineates the transform plate boundary between the North American and Pacific Plates. Trending to the northwest southeast, the San Andreas Fault is nearly vertical as evidenced by the relatively straight outcrop pattern across topography of noticeable relief. Historic earthquakes on the San Andreas Fault have caused extensive damage and very strong ground shaking in Monterey County. The 1906 (approximate magnitude 8.0) “San Francisco earthquake” ruptured a portion of the active San Andreas Fault from approximately San Juan Bautista to Cape Mendocino, causing severe damage in parts of the Monterey-San Francisco Bay area. The earthquake occurred on April 18, 1906 and caused severe ground shaking and structural damage to buildings in Monterey and San Benito Counties. The 1989 (approximate magnitude 7.1) Loma Prieta earthquake also caused significant damage in the Monterey Bay area.

[10] Clastic sedimentary rocks are rocks composed predominantly of broken pieces or clasts of older weathered and eroded rocks (Wikapedia 2008).

Rinconada Fault

The Rinconada Fault is located approximately 1.5 km east of the project site and is a major structural feature along which granitic rocks of the Sierra de Salinas Foothills were uplifted to form the western border of the Salinas Valley. Located within what is now called the Salinian Block, movement along this fault originally began during early Cenozoic time (Paleocene) and remained active to late Pleistocene time. The Rinconada Fault is primarily a right lateral strike slip fault. The slip rate for the Rinconada Fault is estimated at 1.0 mm/yr. Maximum magnitude is expected to be 7.5 with a recurrence interval of 1,764 years.

San Gregorio – Palo Colorado Fault

The San Gregorio (Sur Region) is the closest segment, located offshore about 24-km southwest of the project site. The San Gregorio Fault is part of the San Andreas Fault system and is expressed as a complex series of en echelon right lateral strike slip faults (i.e., San Gregorio, Palo Colorado, San Simeon, and Hosgri faults) in the offshore and nearshore environments. The San Gregorio and related faults are several hundred kilometers long extending from the Santa Barbara Channel in the south, to its juncture with the San Andreas Fault near Bolinas Bay in the north. The slip rate for the San Gregorio fault (Sur region) is estimated at 3.0mm/yr. Maximum magnitude is expected to be (M7.0) with a recurrence interval of 411 years.

Monterey Bay-Tularcitos Fault

The Monterey Bay-Tularcitos Fault is located approximately 12.6 km northwest of the project site and is a complex series of northwest trending faults that include the Chupines and Navy faults and is bounded on the west by the San Gregorio Fault and on the east by the San Andreas Fault.The Monterey Bay-Tularcitos Fault zone is 84 km long and extends from the upper Carmel Valley to the offshore environment within the Monterey Bay. The Monterey Bay Fault is the offshore extension of the Tularcitos Fault and comprises a discontinuous series of en echelon faults in the inner Monterey Bay between Monterey and Santa Cruz. While the Tularcitos Fault is considered to be active, the Monterey Bay Fault only has a few known locations that appear to displace Holocene sediments. The estimated slip rate, maximum magnitude, and recurrence interval for Monterey Bay-Tularcitos Fault is 0.5mm/yr, M7.1, and 2,841 years, respectively

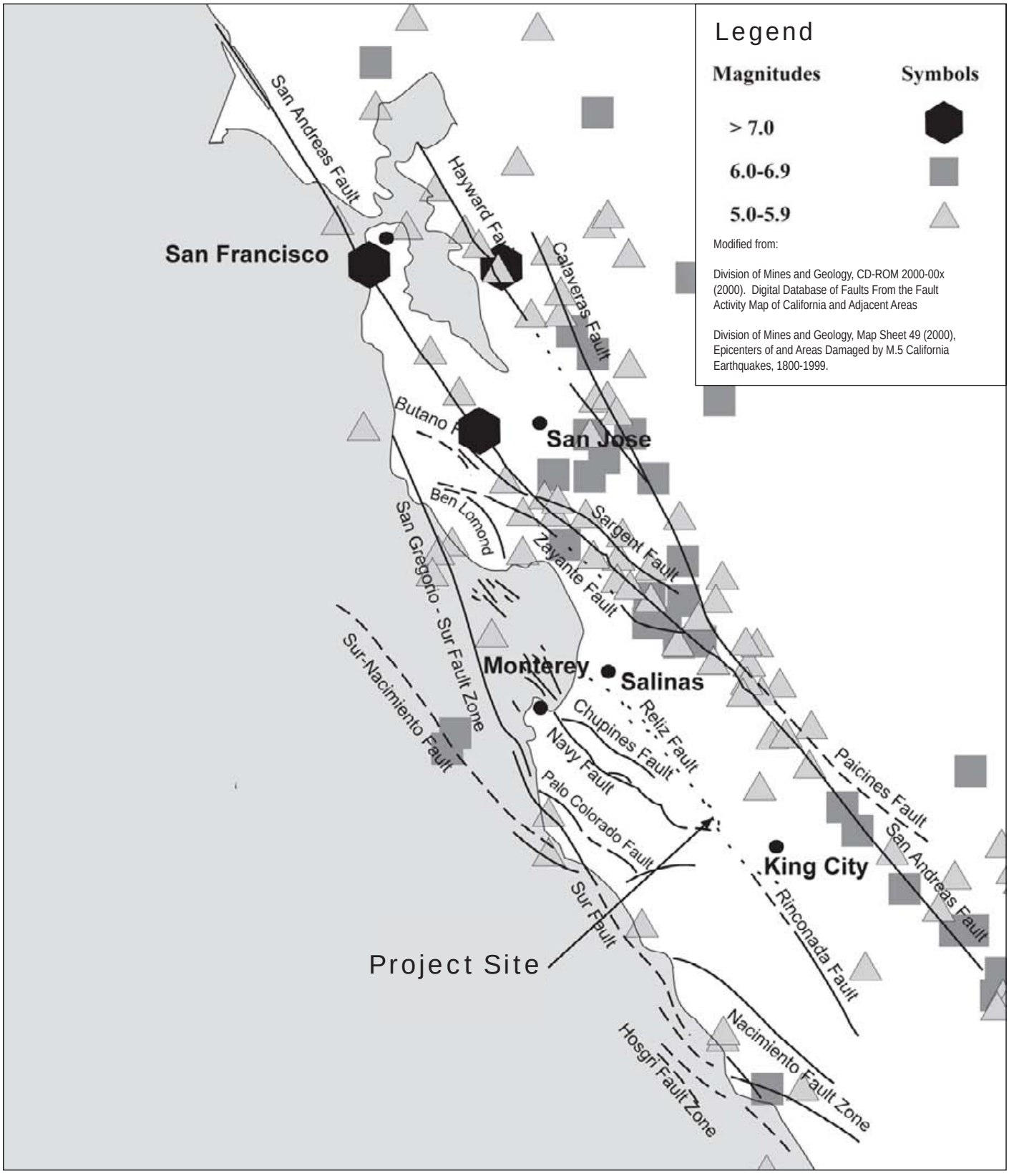
Groundfailure

Seismically induced ground failure is a result of strong ground motions generated by earthquakes. These types of failures include liquefaction, lateral spreading, dynamic compaction, and seismically induced landslides.

Figure 3.6-4, Relative Geologic Hazards, illustrates those areas with low to high geologic hazard potential and the corresponding type of hazard.

Liquefaction, Lateral Spreading and Dynamic Compaction

Soil liquefaction occurs where saturated, cohesionless or granular soils undergo a substantial loss in strength due to excess build-up of water pressure within the pores during cyclic loading such as earthquakes. Due to the loss of strength, soils gain mobility



Source: RBF Consulting 2010, LandSet Engineers 2004

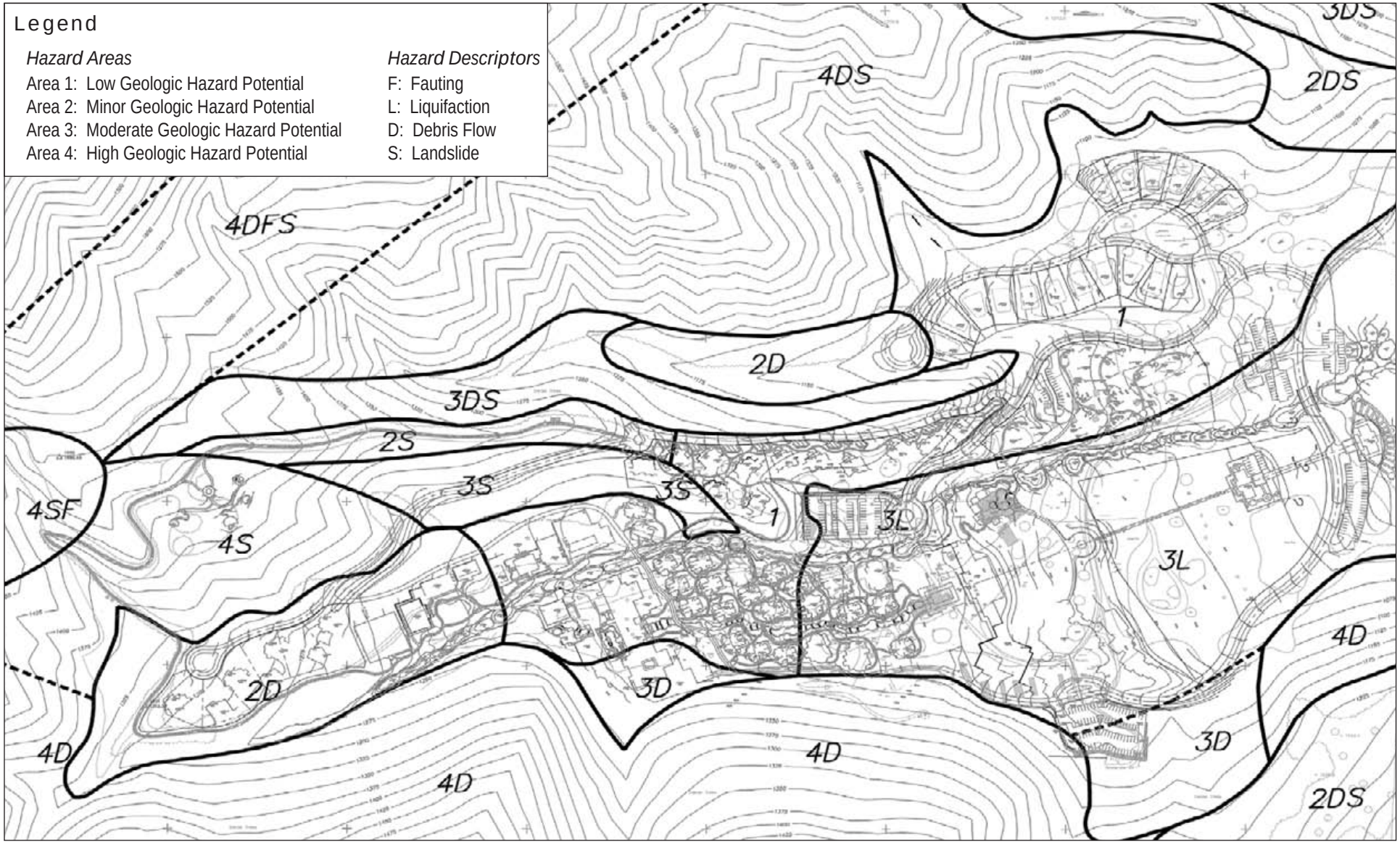
Figure 3.6-3

Regional Faults

Paraiso Springs Resort EIR

E M C

This page intentionally left blank.



Source: RBF Consulting 2010, LandSet Engineers 2004

Figure 3.6-4
Relative Geologic Hazards
Paraiso Springs Resort EIR

This page intentionally left blank.

that can result in significant deformation, including both horizontal and vertical movement where the liquefied soil is not confined. Intensity and duration of seismic shaking, soil characteristics, overburden pressure and depth to water are all primary factors affecting the occurrence of liquefaction. Soils most susceptible to liquefaction are saturated, loose, clean, uniformly graded, Holocene age, and fine grained sand deposits. Silts and silty sands have also been proven to be susceptible to liquefaction or partial liquefaction. The occurrence of liquefaction is generally limited to soils within 50 feet of the ground surface.

As part of the Landset Engineers soil engineering analysis (Landset 2004), 29 exploratory borings were drilled on the project site. The exploratory borings were drilled to depths ranging from 5.5 to 60.0 feet below the ground surface.

Data collected from exploratory borings were used to evaluate the liquefaction potential of the project site using the "Liquefy 2"computer program developed by Thomas F. Blake. Each boring which encountered ground water, namely borings 1, 3, 5, 7, 9, 11, 13, 17, 23, was evaluated using a peak ground acceleration of 0.47g, and a maximum magnitude earthquake of 7.5. Of the nine borings evaluated, only boring B-23 had a factor of safety greater than 1.0 for the entire depth of the boring, indicating a high potential for liquefaction. Accordingly, Zone 3L, as identified on Figure 3.6-4, Relative Geologic Hazards, was identified as having a high potential for liquefaction and dynamic compaction (Landset 2004).

Landsliding and Slope Stability

The primary concern of slope stability is the susceptibility of a slope to slides, (i.e., a mass movement process in which slope failure occurs along one or more slip surfaces and in which the unit generally disintegrates into a jumbled mass en route to its depositional site). Examples of this are often found in hillsides where debris flows may occur if enough water precipitates during a storm event, soaks into the ground surface, and causes one soil layer to slip across another underneath it. However, slopes of any kind may be susceptible to failure. While the slopes within the project site along the valley bottom are fairly gentle, existing terrain surrounding this area range from moderately to very steep, and are likely susceptible to failure.

Past landsliding on the project site consists of debris avalanche and small rock slump type failures and are mainly located in the Tierra Redonda Formation (Tt). In general, these slope failures are found on the steep northern slopes of Indian Valley, the steep southern slopes of Paraiso Springs Valley, and the northwestern slope of the western extent of Paraiso Springs Valley.

Slope failures along the north slope of Indian Valley are of the debris avalanche (Qydf and Qodf) and small rock slump (Qyls) type. The debris avalanche failures (Qydf) are relatively young in age and are expressed as elongate, shallow failures that expose unvegetated bedrock. Older debris flow avalanche failures (Qodf) are also expressed as elongated, shallow failures, but show vegetative regrowth and softening of geomorphic features. The rock slump failures (Qyls) in this area are expressed as lobate, shallow failures with rotated, intact blocks. Since these failures lack regrowth in their scarp area, they are considered to be recent.

Landsliding on the southern slopes of Paraiso Springs Valley consist entirely of the debris avalanche (Qydf and Qodf) type. Slope failures in this area are more extensive than those of Indian Valley in width and depth. Debris avalanches have occurred as recently as March 1995. Located on steep vegetated slopes, these events followed heavy rains for multiple days and deposited approximately 0.5 to 1.0 foot of mud and sand on the valley floor.

A large, old debris slide (Qols) is mapped in the southwestern portion of the Site. This slide is approximately 800 feet wide and a minimum of 100 feet thick. Made up of broken up rocks from the Sierra De Salinas Schist (ms) and granitic basement (Kdg), this slide buries Tierra Redonda Formation (Tt) rock and an unnamed fault that crosses the northwestern corner of the project site.

Figure 3.6-4, Relative Geologic Hazards, identifies areas with high geologic hazard potential associated with landslides and debris flow as Zone 4DS and 4DFS.

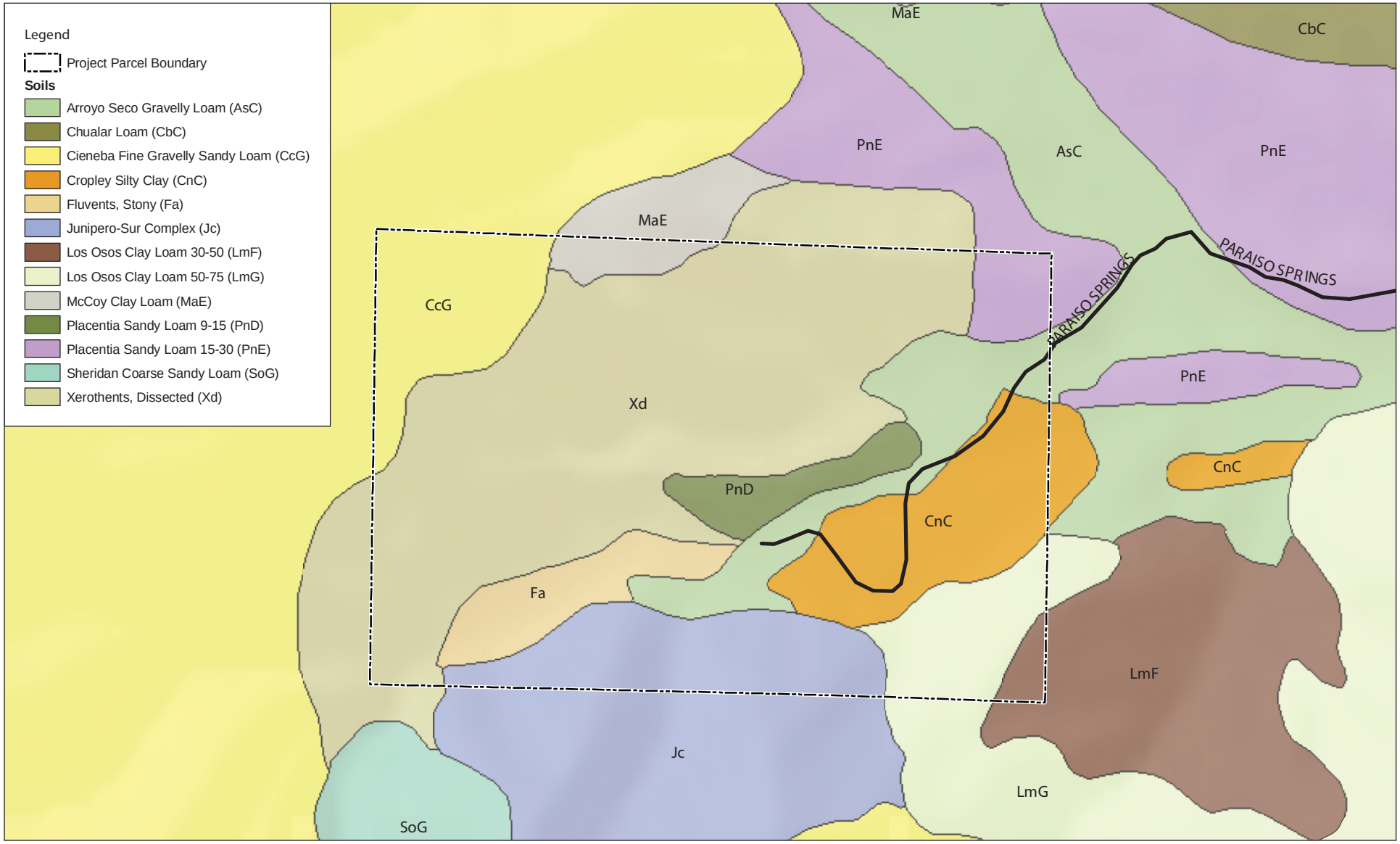
Soils

According to the *Soil Survey of Monterey County* (USDA NRCS 1978), the project site contains 11 different soil types. These soil types are shown in Figure 3.6-5, Site Soils.

- Arroyo Seco gravelly sandy loam, 5 to 9 percent slopes (AsC)
- Cieneba fine gravelly sandy loam, 30 to 79 percent slopes (CcG)
- Cropley silty clay, 2 to 9 percent slopes (CnC)
- Fluvents, stony (Fa)
- Junipero-Sur Complex (Jc)
- Los Osos clay loam, 30 to 50 percent slopes (LmF)
- Los Osos clay loam, 50 to 75 percent slopes (LmG)
- McCoy clay loam, 15 to 30 percent slopes (MaE)
- Placentia sandy loam, 9 to 15 percent slopes (PnD)
- Placentia sandy loam, 15 to 30 percent slopes (PnE)
- Xerorthents, dissected (Xb)

These soil types are described below:

Arroyo Seco gravelly sandy loam, 5 to 9 percent slopes (AsC). The Arroyo Seco gravelly sandy loam series consists of deep well-drained alluvium derived from igneous rock. These soils lie on alluvial fans and have 5 to 9 percent slopes. Typical profile for this soil is grayish brown gravelly sandy loam from 0 to 29 inches, brown gravelly sandy loam from 29 to 42 inches, and yellowish brown very gravelly coarse sandy loam from 42 to 60 inches. This soil typically harbors annual grasses and forbes with scattered oaks when uncultivated. This soil is typically used mainly for irrigated row and field crops. Some areas are used for orchards and vineyards. Runoff is slow and the erosion hazard is slight.



Source: RBF Consulting 2010, Natural Resource Conservation Service 2002

Figure 3.6-5
Soils at the Project Site

Paraiso Springs Resort EIR

This page intentionally left blank.

Cieneba fine gravelly sandy loam, 30 to 79 percent slopes (CcG). The Cieneba fine gravelly sandy loam series is a somewhat excessively drained sandy and gravelly residuum derived from igneous and metamorphic rock. A representative profile for this series consists of pale brown gravelly loam from 0 to 10 inches and a reddish yellow and brown weathered granitic material from 10 to 30 inches. This soil is typically used for wildlife, recreation, and incidental grazing. Runoff of this soil is very rapid and the erosion hazard is very high.

Cropley silty clay, 2 to 9 percent slopes (CnC). The Cropley silty clay soil is deep, well drained soil on alluvial fans and terraces formed in alluvium derived from sedimentary rock. A representative profile for the series consists of very dark grey and black clay from 0 to 36 inches and dark grayish brown clay 36 to 60 inches. This soil is typically used for irrigated row crops, apricots, prunes and dry pastures. Erosion is slow and the erosion hazard is minimal.

Fluvents, stony (Fa). The Fluvents soil consists of deep somewhat excessively drained soil. These soils lie in floodplains and consist of stratified cobbly sand to sandy loam. Runoff ranges from medium to very slow and the erosion hazard is moderate in some areas because of channeling and deposition.

Junipero-Sur Complex (Jc). The Junipero-Sur Complex is a well drained coarse-loamy residuum derived from metamorphic and igneous rock. A representative soil profile for this soil consists of a dark grayish brown sandy loam from 0 to 15 inches, a layer of brown gravelly sandy loam from 15 to 30 inches, and yellowish brown quartzmica schist from 30 to 40 inches. This soil is used for recreation and as wildlife habitat. Runoff is very rapid and the erosion hazard is very high.

Los Osos clay loam, 30 to 50 percent slopes (LmF). The Los Osos clay loam soil is a well drained fine loamy residuum weathered from metamorphic and sedimentary rock. A typical soil profile for this series consists of brown loam from 0 to 14 inches, yellowish brown clay from 14 to 24 inches, light yellowish brown clay loam from 24 to 32 inches, pale yellow sandy loam from 32 to 39 inches and yellowish brown sandstone from 39 to 43 inches. This soil is used mostly for range. Runoff is rapid and the erosion hazard is high.

Los Osos clay loam, 50 to 75 percent slopes (LmG). This soil is similar to the Los Osos clay loam with 30 to 50 percent slopes. Slopes on this soil are mostly 60 percent. Runoff is rapid and the erosion hazard is high.

McCoy clay loam, 15 to 30 percent slopes (MaE). McCoy clay loam is a well drained, fine loamy residuum weathered from metamorphic and igneous rock. The typical McCoy series profile consists of dark brown loam from 0 to 2 inches underlain by dark brown clay loam from 2 to 4 inches, a dark brown clay loam layer from 4 to 22 inches, dark yellowish brown clay loam from 22 to 27 inches and weathered granodiorite from 27 to 37 inches. This soil is used mostly for range. Runoff is medium and the erosion hazard is moderate.

Placentia sandy loam, 9 to 15 percent slopes (PnD). The Placentia sandy loam series are deep well drained soils on stream terraces formed in alluvium derived from igneous and metamorphic rock. A representative profile for the series consists of brown sandy loam from 0 to 13 inches, dark reddish brown clay from 13 to 29 inches, reddish brown heavy clay loam from 29 to 36 inches, a strong brown sandy clay loam from 36 to 58 inches and a strong brown gravelly sandy loam from 58 to 60 inches. This soil is used for citrus, truck crops, small grain, hay, and forage. Runoff is slow and the erosion hazard is slight.

Placentia sandy loam, 15 to 30 percent slopes (PnE). This series description and profile is the same as Placentia sandy loam, 9 to 15 percent slopes, but is located on steeper slopes. Runoff is rapid and the erosion hazard is high.

Xerorthents, dissected (Xb). The Xerorthents series are well drained mixed unconsolidated alluvium on alluvial fans and terraces. The soil is typically clay loam throughout the profile. Runoff is rapid or very rapid and the erosion hazard is high or very high.

Erosion

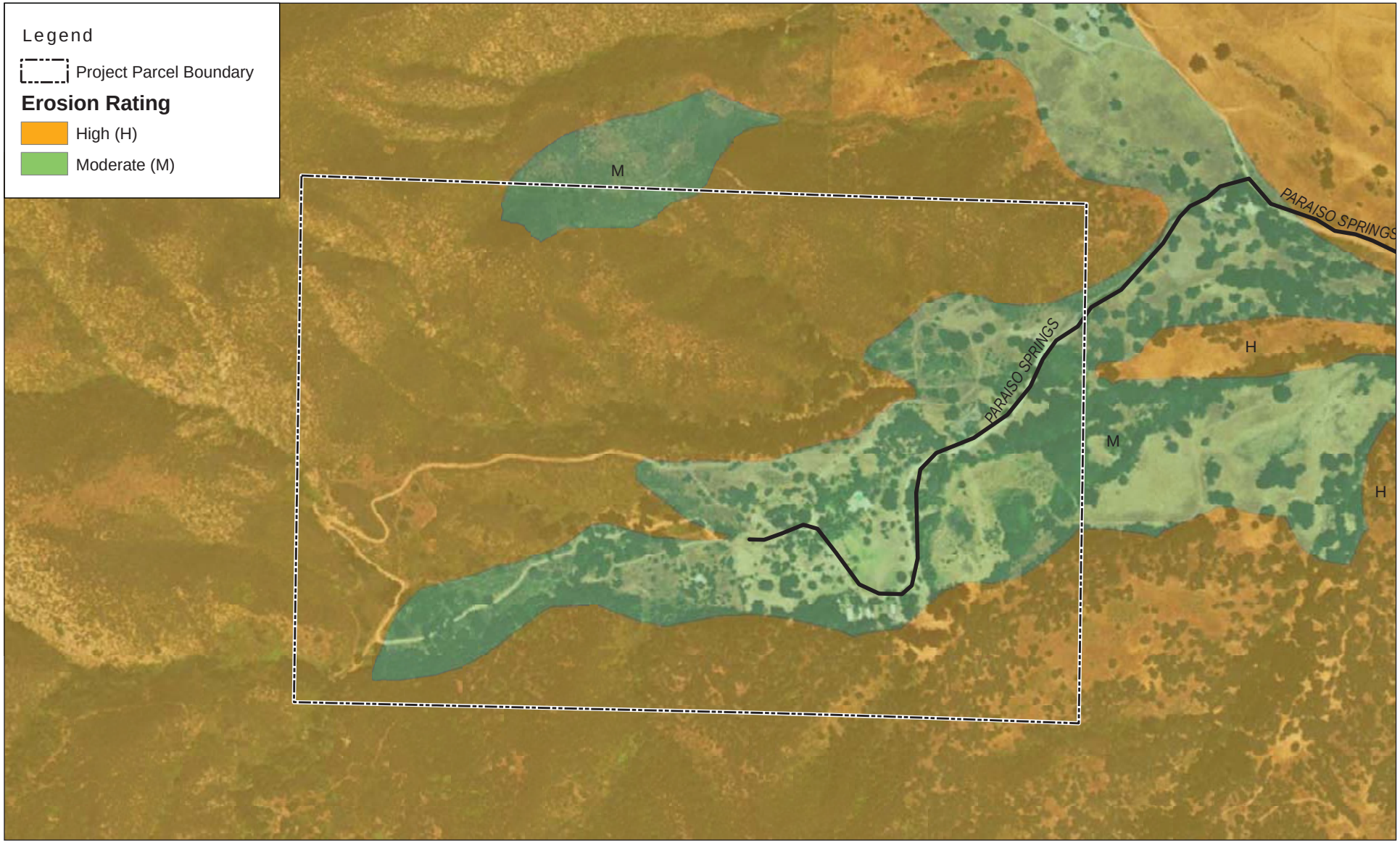
According to the *Monterey County Soil Survey* (U.S. Department of Agriculture, 1978), the following soils are rated as having rapid or very rapid runoff and erosion hazards: Cieneba fine gravelly sandy loam, 30 to 79 percent slopes (CcG); Junipero-Sur Complex (Jc); Los Osos clay loam, 30 to 50 percent slopes (LmF) and 50 to 75 percent slopes (LmG); Placentia sandy loam, 15 to 30 percent slopes (PnE); and Xerorthents, dissected (Xb). These soil map units with high erosion hazards are shown in Figure 3.6-6, Soil Erosion Hazards at the Project Site.

Expansive Soils

Expansive soils shrink and swell with moisture content. This shrink swell feature of expansive soils can cause distress and damage to structures. According to the *Monterey County Soil Survey* (U.S. Department of Agriculture, 1978), the Cropley silty clay, 2 to 9 percent slopes (CnC); Los Osos clay loam, 30 to 50 percent slopes (LmF); Los Osos clay loam, 50 to 75 percent slopes (LmG) have a high shrink swell potential. The McCoy clay loam soil has a moderate shrink swell in the first 18 inches and high in the remaining. The Placentia sandy loam soils have low shrink swell potentials in the first 13 inches and high in the remainder.

Flood Hazards

According to the National Flood Insurance Program Map (Federal Emergency Management Agency (FEMA 2009), the project site is not located within a special flood hazard area. However, flooding of the project site did occur in March of 1995 as a result of channeling the drainage into a culvert of insufficient diameter. Debris in the form of brush, rocks, and sediment clogged the culvert and caused the drainage to overflow, resulting in significant damage to the road and pools at lower elevations.



Source: RBF Consulting 2010, Monterey County 2006

Figure 3.6-6
Soil Erosion Hazards at the Project Site
Paraiso Springs Resort EIR

This page intentionally left blank.

3.6.3 Regulatory Background

State

Alquist Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. This State law was a direct result of the 1971 San Fernando earthquake, which was associated with extensive surface fault ruptures that damaged numerous homes, commercial buildings, and other structures. The Act's main purpose is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The Act addresses only the hazard of surface fault rupture, and is not directed toward other earthquake hazards.

Seismic Hazards Mapping Act

Prompted by damaging earthquakes in northern and southern California, in 1990 the State Legislature passed the Seismic Hazards Mapping Act. The purpose of the Act is to protect public safety from the effects of strong ground shaking, liquefaction, landslides, or other ground failure, and other hazards caused by earthquakes. The program and actions mandated by the Seismic Hazards Mapping Act closely resemble those of the Alquist-Priolo Earthquake Fault Zoning Act (which addresses only surface fault-rupture hazards) and are outlined below:

The State Geologist is required to delineate the various "seismic hazard zones."

Cities and counties, or other local permitting authority, must regulate certain development "projects" within the zones. They must withhold the development permits for a site within a zone until the geologic and soil conditions of the site are investigated and appropriate mitigation measures, if any, are incorporated into development plans.

The State Mining and Geology Board provide additional regulations, policies, and criteria, to guide cities and counties in their implementation of the law. The Board also provides guidelines for preparation of the Seismic Hazard Zone Maps (refer to Special Publication 118, Recommended Criteria for Delineating Seismic Zones in California, CGS) and for evaluating and mitigating seismic hazards (refer to Special Publication 117, Guidelines for Evaluation and Mitigating Seismic Hazards in California, CGS).

Sellers (and their agents) of real property within a mapped hazard zone must disclose that the property lies within such a zone at the time of sale.

Uniform Building Code

The regulatory environment for the design and construction industries consists of building codes and standards covering local, state, federal, land use and environmental regulations. Building codes and standards are developed specifically for the purpose of regulating the life-safety, health and welfare of the public with respect to building construction and maintenance. Once adopted, building codes become law.

The Uniform Building Code (UBC) was first enacted by the International Conference of Building Officials (ICBO) on October 18-21, 1927. The Uniform Building Code was the

model code used within the adopted California Building Code (CBC). In 1994 the International Code Council (ICC) was established which folded all three national code organizations under one group, including the International Conference of Building Officials (ICBO). This organization (ICC) merged and standardized all three national model building codes into one single code titled the "International Building Code" often referred to as the IBC. California first adopted by reference the 2006 IBC into the 2007 California Building Code (CBC) which was first in effect in January of 2008. The IBC is revised and published every three years as was the old Uniform Building Code. The IBC is currently adopted and used by all 50 states and the Federal Government as the governing codes for construction. The CBC is also published every three years and incorporates by reference the IBC with additional specific State amendments which are determined by the California Building Standards Commission. California, including Monterey County currently uses the 2010 California Building Code, which includes the 2009 International Building Code, as the governing code for all construction. This code will expire at the end of this year, and will be replaced by the 2013 CBC, which we will be formally adopting later this year. The 2013 CBC will include by reference the 2012 IBC with further amendments developed by the Building standards Commission. Mark Setterland, Deputy Building Official, County of Monterey, March 2013.

California Building Code

California Code of Regulations Title 24, also known as the California Building Standards Code, is a compilation of three types of building standards from three different origins:

- Building standards that have been adopted by state agencies without change from building standards contained in national model codes;
- Building standards that have been adopted and adapted from the national model code standards to meet California conditions; and
- Building standards, authorized by the California legislature, that constitute extensive additions not covered by the model codes that have been adopted to address particular California concerns.

Title 24 applies to all applications for building permits. It consists of 12 parts that contain administrative regulations for the California Building Standards Commission and for all state agencies that implement or enforce building standards. Local agencies must ensure the development complies with the guidelines contained in the CBC, which is one of the parts of Title 24. Cities and counties have the ability to adopt additional building standards beyond the State CBC.

Local

Monterey County General Plan

Goals, Objectives and Policies regarding Environmental Constraints to development, including seismic and other geologic hazards, are found in Chapter II of the Monterey County General Plan (1982). Goal 15 aims to "Minimize loss of life, injury, damage to property, and economic and social dislocations resulting from seismic and other geologic hazards." Listed below are policies that achieve this goal:

Policy 3.1.1 Erosion control procedures shall be established and enforced for all private and public construction and grading projects.

Policy 3.2.2 Land having a prevailing slope above 30 percent shall require adequate special erosion control and construction techniques.

Policy 15.1.2 Faults classified as "potentially active" shall be treated the same as "active faults" until geotechnical information demonstrating that a fault is not "active" is accepted by the County.

Policy 15.1.3 The lands within one eighth mile of active or potentially active faults shall be treated as a fault zone until accepted geotechnical investigations indicate otherwise.

Policy 15.1.4 All new development and land divisions in designated high hazard zones shall provide a preliminary seismic and geologic hazard report which addresses the potential for surface ruptures, ground shaking, liquefaction and landslides before the application is considered complete. This report shall be completed by a registered geologist and conform to the standards of a preliminary report adopted by the County.

Policy 15.1.5 A detailed geological report shall be required for all standard subdivisions. In high hazard areas, this report shall be completed by a registered geologist, unless a waiver is granted, and conform to the standards of a detailed report adopted by the County.

Policy 15.1.8 The County should require a soils report on all building permits and grading permits within areas of known slope instability or where significant potential hazard has been identified.

Policy 15.1.11 For high hazard areas, the County should condition development permits based on the recommendations of a detailed geological investigation and soils report.

Central Salinas Valley Area Plan

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

15.1.1.1 (CSV) The Central Salinas Valley Seismic Hazard Map shall be used to delineate high seismic hazard areas addressed by the Countywide General Plan. Areas shown as moderately high, high, and very high hazards shall be considered as “high hazard” areas for the purpose of applying General Plan policies. The map may be revised when accepted geotechnical information becomes available.

Monterey County Ordinance

The County of Monterey grading ordinance generally regulates grading involving more than 100 cubic yards of excavation and filling. Minor fills and excavations (cuts) of less

than 100 yards that are not intended to provide foundation for structures, or that are very shallow and nearly flat, are typically exempt from the ordinance, as are shallow footings for small structures. Submittal requirements for a County grading permit include site plans, existing and proposed contour changes, an estimate of the volume of earth to be moved, and geotechnical (soils) reports. Projects involving grading activities over 5,000 cubic yards must include detailed plans signed by a State-licensed civil engineer.

Grading is not allowed to obstruct storm drainage or cause siltation of a waterway. All grading requires that temporary and permanent erosion control measures be implemented. Grading within 50 feet of a watercourse, or within 200 feet of a river, is regulated in the Zoning Code Floodplain regulations. Work in the Salinas River and Arroyo Seco River channels is exempted if it is covered by a U.S. Army Corps of Engineers five-year regional 404 permit, approved by the California Department of Fish and Wildlife, and approved by the Monterey County Water Resources Agency.

3.6.4 Analytical Methodology and Significance Threshold Criteria

Methodology

The geotechnical report was based on previous studies, review of existing literature, field surveys, and data analysis. The literature review focused on existing topographical maps, reports of subsurface explorations, and ongoing available research performed on or adjacent to the project site.

The project site was mapped in the field on August 10, 11, and 12, 2004 on the aerial topographic map. Subsurface explorations were made using 29 exploratory borings drilled in August 2004. The exploratory borings were drilled to depths ranging from 5.5 to 60.0 feet below the ground surface. Soils encountered in each test boring were visually classified in the field and a continuous log was recorded. Visual classifications were made in general accordance with the Unified Soil Classification System and ASTM D2487.

Laboratory tests were performed to determine some of the physical and engineering characteristics of selected soil samples considered pertinent to the design of the proposed project. The tests performed were selected on the basis of the probable design requirements as correlated to the subsurface profile of the project site. The laboratory tests aided in determining soil characteristics, such as compaction, expansive potential and grain size distribution.

Significance Threshold Criteria

As stated in Appendix G of the *CEQA Guidelines* a project would be considered to have a significant impact related to geology, soils, seismicity, and landforms and topography if it would:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
  - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the state Geologist for the area or based on other substantial evidence of a known fault.

  - Strong seismic ground shaking.
  - Seismic-related ground failure, including liquefaction.
  - Landslides.
- Result in substantial soil erosion or the loss of topsoil.
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the proposed project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.
- Be located on expansive soil, as defined the Uniform Building Code, creating substantial risks to life or property.
- Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

Impact Analysis

Fault Rupture

Rupture along faults can cause offset of the ground surface along the surface trace of the fault. The offset can damage roads and buildings and can break pipes or other underground utilities.

The closest earthquake fault zone to the project site is the San Andreas Fault, located 30-km to the northeast. The California Division of Mines and Geology has classified the San Andreas Fault (Creeping segment) as a Type A Fault. The San Andreas Fault Creeping segment can expect magnitude 6.2 earthquakes with an approximate 61 year recurrence interval. Stronger earthquakes could be experienced at the site similar to the 1906 event with a maximum magnitude of magnitude 7.9 with a recurrence interval of 210 years (Landset 2004).

However, according to the Geologic and Soil Engineering Feasibility Report prepared by Landset Engineering, a review of regional studies found inconclusive evidence regarding the likelihood of seismic activity from these faults. Based on the distance of the nearest faults to the project site, the proposed project would not expose people or property to ground rupture and no impact is expected. Therefore, the potential for ground surface rupture due to faulting is considered to be low and no mitigation is required

Surface Fault Rupture

Impact 3.6-1:	Seismic groundshaking at the site may occur during the next major earthquake on a regional fault system. Such shaking can cause severe damage to or collapse of buildings or other project facilities and may expose people to injury or death. Seismic shaking at the site presents a potentially significant impact. (Less than Significant Impact with Mitigation)

The proposed project would be constructed in a region of high seismic risk, but the site is not located within a California Earthquake Fault Zone. The incorporation of project elements that properly implement mitigation measures (i.e., compliance with the most stringent applicable seismic codes and implementation of the recommendations of the geological and geotechnical report for seismic safety) would further ensure that seismic groundshaking impacts are reduced.

The seismic shaking hazard is ubiquitous for this region, and typically presents a significant impact that can be mitigated to a less than significant level. Without mitigation, strong seismic shaking in the project vicinity could produce serious damaging effects to the proposed project. The effects of groundshaking on future planned structures and other improvements can be reduced by earthquake-resistant design in accordance with the latest adopted editions of the California Building Code. Even with adequate design and construction, some damage to structures may occur during a great earthquake. However, the damage due to high intensity shaking may be reduced by careful placement and construction of the structure. Past experience has shown that the quality of design and construction is far more important than the precise evaluation of ground motion parameters.

Many of the risks associated with earthquakes are not due to structural failure. Many injuries result from falling debris, overturned furniture, the disruption of utilities, and fires that occur as a result of broken utility lines, overturned gas stoves, and other hazards.

As a result, the proposed project may be exposed to some structural damage and associated human safety hazards due to stronger shaking. This would be considered a potentially significant impact. All structures within Monterey County, including the proposed project, are required to be designed in accordance with the latest edition of the California Building Code criteria for Seismic Zone IV. In addition, the following mitigation measure would reduce this impact to a less than significant level.

Mitigation Measures

MM 3.6-1a Prior to building permit approval, the project structural engineer shall provide a seismic design report for the project consistent with the most current version of the California Building Code, at a minimum. If other, more conservative design guidelines are determined to be applicable to the project, those design guidelines shall be followed.

Recommendations contained within the Geologic and Soil Engineering Feasibility Report, prepared by Landset Engineers (2004), shall also be referenced and incorporated as they provide specific recommendations regarding site preparation and construction of foundations, retaining walls, utilities, sidewalks, roadways, subsurface drainage, and landscaping features based on the lot characteristics and proximity to the fault at the project site. The seismic design report shall be submitted for plan check with any improvement plans including earthwork or foundation construction.

During the course of construction, the project applicant shall contract with a qualified engineering geologist to be on site during all grading operations to make onsite remediation and recommendations as needed, and perform required tests, observations, and consultation as specified in the seismic design. Prior to final inspection, the project applicant shall provide certification from the project structural engineer that all development has been constructed in accordance with all applicable geologic and geotechnical reports.

MM 3.6-1b Prior to occupancy of the proposed project, large appliances (i.e. refrigerators, freezers, pianos, wall units, water heaters, etc.), book shelves, storage shelves, and other large free-standing objects incorporated as part of the building design shall be firmly attached to the floor or to structural members of walls.

Implementation of mitigation measures MM 3.5-1a and -1b would ensure that potential, significant surface fault rupture impacts associated with the proposed project would be reduced to a less than significant level.

Dynamic Compaction

Impact 3.6-2:	Implementation of the proposed project may result in potential permanent structural damage and associated human safety hazards resulting from dynamic compaction. This is considered a potentially significant impact. (Less than Significant Impact with Mitigation)

Dynamic compaction occurs in unsaturated loose granular soil material or uncompacted fill soils, which results in ground settlement. The loose to medium density colluvial soils on the project site have a low to moderate potential to undergo ground settlement. Implementation of mitigation measure MM 3.6-1a would ensure that structures are developed on suitable soils. Therefore, this significant impact would be reduced to a less than significant level.

Liquefaction and/or Lateral Spreading

Impact 3.6-3:	Implementation of the proposed project may result in potential permanent structural damage and associated human safety hazards resulting from direct and indirect slope-failure related to hazards such as liquefaction and/or lateral spreading. This is considered a potentially significant impact. (Less than Significant Impact with Mitigation)

Liquefaction is the transformation of soil from a solid to a liquid state as a consequence of increased pore-water pressures, usually in response to strong ground shaking, such as those generated during an earthquake. Liquefaction most often occurs in Holocene age loose saturated silts, and saturated poorly graded fine-grained sands. However, some cohesive clay soils can be subject to strength loss even under relatively minor strains.

Based on borings conducted on the project site, Zone 3L as identified on Figure 3.6-4, Relative Geologic Hazards, was identified as having a moderate potential for liquefaction. This area includes proposed development of the Wastewater Treatment Facility, Nursery, Winery, Day Spa, Hamlet, Hotel, Conference Facilities and eastern portion of the Casitas.

Grading (cut and fill) can lead to unstable soils if not properly engineered. The proposed project includes grading of approximately two million square feet with cuts and fills essentially in balance. The fill heights range up to a maximum of approximately 14 feet, with the highest fills needed to construct the main hotel complex and adjacent Hamlet, and the roadway leading to the western-most cluster of condominiums. The dept of cuts generally are less than 10 feet throughout the site. However, deep cuts of up to 25 feet are required for the parking area south of the hamlet and the adjacent roadway. Significant retaining walls or upper slope benching will be required in this area. (CH2MHill 2005c, pages 1-2).

Lateral spreading is a potential hazard commonly associated with liquefaction. Lateral spreading causes ground cracking and settlement in response to lateral movement of the liquefied subsurface caused by liquefaction. Since the potential for liquefaction to occur on the project site is moderate, the potential for lateral spreading is also moderate.

Mitigation Measures

MM 3.6-3a Prior to issuance of a grading permit, the project applicant shall contract with a certified engineer to prepare a site-specific Supplemental Liquefaction Investigation prepared in accordance with the California Department of Mines & Geology Special Publication 117. The Supplemental Liquefaction Investigation shall include in its analysis the approved drainage plan. Engineering measures to protect development in this area could include structural strengthening of buildings to resist predicted ground settlement, utilization of post tension or mat slab foundations or a combination of such measures as recommended in the Geologic and Soil Engineering Feasibility Report prepared by Landset Engineering (2004). These improvements shall be included in the final improvement plans for the proposed project and installed concurrent with site preparation and grading activities associated with future development.

MM 3.6-3b Prior to issuance of a grading permit, the project applicant shall contract with a certified engineer to ensure that final grading plans include a slope stability analysis, particularly for the parking area near the hamlet and the adjacent roadway, to verify that the proposed cut and fill slopes are considered stable under both static and pseudo-static conditions.

MM 3.6-3c The Final Geologic and Soil Engineering Feasibility Report shall use the most-recent Building Code, which addresses new seismic design requirements for structures and the site soil profile as S_E should be reviewed again to confirm this designation is still appropriate for the project site.

Implementation of mitigation measures 3.6-1a and 3.6-3a, b and c would aid in reducing the potential for liquefaction and lateral spreading to occur by requiring compliance with California Department of Mines & Geology Special Publication 117 engineering measures, and the most recent Building Code requirements. Therefore, the impact would be reduced to a less than significant level.

Landslides and Slope Stability

Impact 3.6-4: Implementation of the proposed project may result in potential permanent structural damage and associated human safety hazards resulting from slope-failure hazards such as landslides. This is considered a potentially significant impact. (Less than Significant Impact with Mitigation)

The steep slopes underlain by the Tierra Redonda Formation that flank Paraiso Springs Valley and Indian Valley are very prone to slope failure and have a high geologic hazard risk potential for landside and debris flow and are shown as Zone 4SF, 4D, 4DS, and 4DFS in Figure 3.6-4, Geologic Hazard. Numerous debris avalanches and debris slides of varying ages are present on these slopes.

Proposed development in or proximate to these zones includes the following: western portion of the Fitness Facility southwestern, northwestern, and north-central portion of the Hillside Village Condominiums; and southern portion of the Casitas and Teahouse.

As part of the proposed project, the project engineer has identified a number of potential locations for the construction of debris basins to reduce landside and debris flow impacts to the proposed project (see Figure 3.6-7: Potential Debris Basin Locations). Although subbasin V-1 was identified as a potential site for debris flows, it is not anticipated that a debris basin would be needed at the point of concentration for this basin. The drainage channel was found to be well defined and relatively clear of debris.

As noted by the project engineer (CH2MHill 2010a), given the topography of the areas surrounding the project site, debris basins are intended to be a general term as it is not likely that large basins can be constructed on the hillsides. These debris basins would intercept debris flows/slides from the identified subbasins, above the developed areas of the project. They would be incorporated into the site grading footprint for the overall project. The debris basins are expected to include a series of two-to-four small soil and rock checkdams, approximately three-feet tall, constructed at the low flow line of the natural drainage feature. Minimal excavation behind the checkdams is planned and no additional trees would be removed for construction. The debris basins would be constructed adjacent to project roadways, parking lots and/or maintenance paths to facilitate inspection and maintenance (CH2MHill 2010a).

Furthermore, the proposed project would remove the culverts within the existing main drainage stream running through the middle of the project site and construct new stream crossings as bridges to better allow for the passage of debris without inducing flooding.

The location and design specifications for these “debris basin” facilities would be included as part of the final grading plans (CH2MHill 2010a).

A site investigation was conducted by Zinn Geology in December of 2007 as part of their CEQA-level peer review of the Soil Engineering Feasibility Report by Landset (2004). Zinn Geology observed the presence of angular schist boulders (very large rocks) and cobbles in the sandy matrix which is indicative of long transport distance from the bedrock outcrops upstream, as well as rapid deposition in a high velocity hydraulic environment (i.e. debris flows or debris torrents). It is likely that the schist boulders and cobbles traveled as far as 2,200 feet, via a hydraulic (water) flow regime that would be capable of moving boulders as part of a debris flow torrent.

Zinn Geology noted that more detail geological subsurface analysis is required to fully ascertain if the debris flow hazards on the valley floors, particularly in the Indian Valley area, to determine if proposed structures will be potentially subjected to a greater than ordinary risk from landslides and debris flows (Zinn Geology 2008a and b). The need for more geological subsurface analysis as part of detailed engineering design was confirmed by the project engineer (CH2MHill 2008).

Mitigation Measures

MM 3.6.4a Prior to issuance of a grading permit, the Project Geologist of Record (PGOR) shall work with the Geotechnical Engineer of Record and the Civil Engineer of Record to prepare a Final Geologic and Soil Engineering Feasibility Report. As part of this report, the PGOR shall:

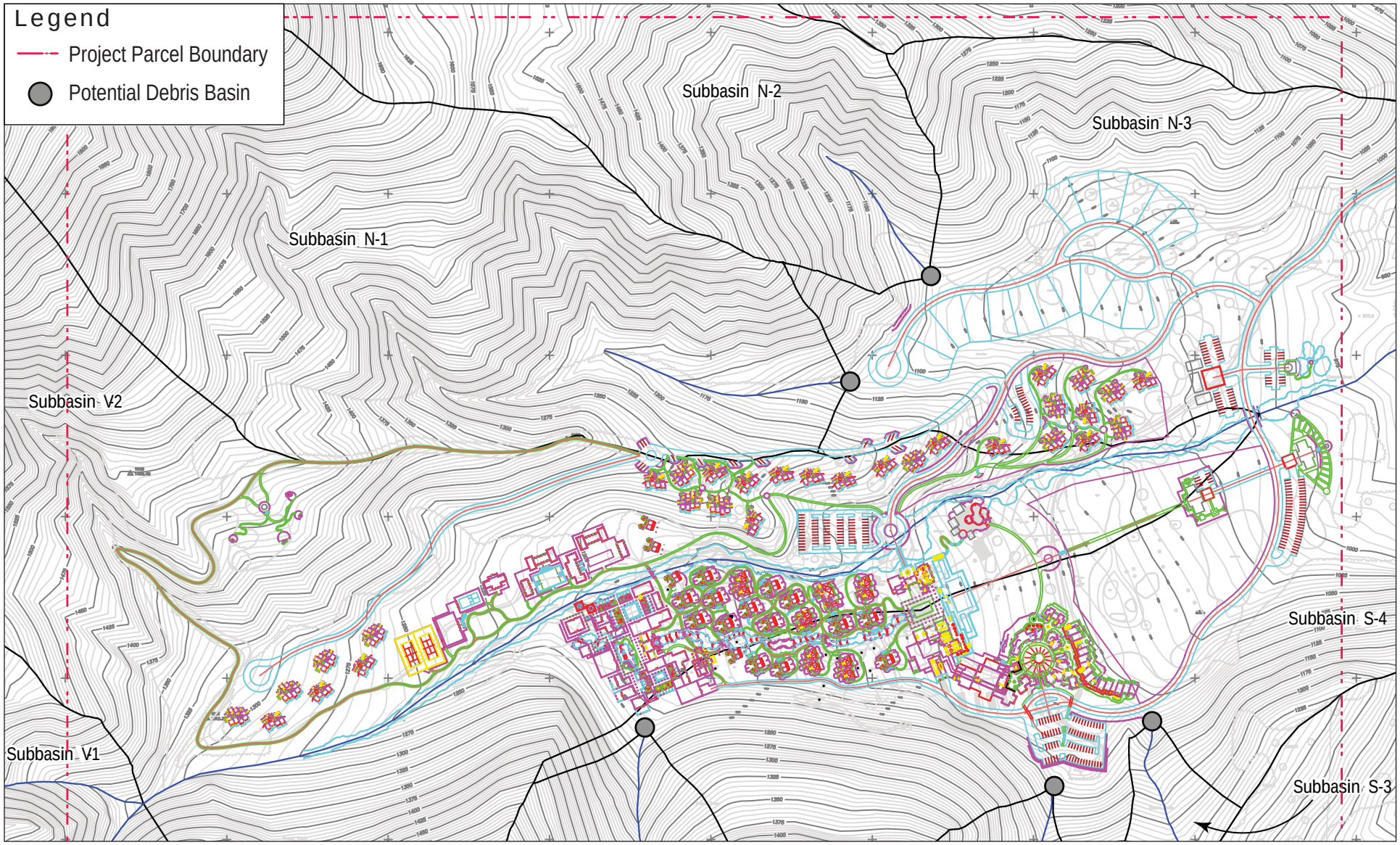
1. Further characterize the debris flow and debris torrent hazards and attendant risks to the proposed developments. The PGOR shall perform a detailed mapping and subsurface program that will characterize the mode of past transport for angular boulders and cobbles of schist bedrock within the sandy alluvial matrix on the valley floors. Further geological mapping shall include detailed mapping of individual debris flow scars, as well as run-out areas for the debris flow deposits. Subsurface work shall adequately characterize the depth and extent of individual debris flow/torrent events. Mode of transport characterization shall include volumes and velocities per debris flow/torrent event, substantiated by a detailed geological recordation of past events in and adjacent to the proposed development areas;

2. Prepare debris flow/torrent design volumes, velocities and runup heights where warranted, based upon the above-listed field work and analysis;

3. Plot their geological information upon the most current sub-division and grading maps and analyze the potential impacts to the proposed developments; and

4. Work with PGOR and Civil Engineer Of Record to jointly assess the impact that debris flows and debris torrents may have upon the performance of the proposed drainage improvements. The proposed drainage improvements should be protected from design debris flow and torrent events dictated by the PGOR, or the drainage improvements shall be designed to handle said debris flow or debris torrent events without triggering flooding of the proposed developments.

The PGOR shall coordinate their field work with the peer-reviewing Engineering Geologist, so as to allow them the opportunity to view the subsurface work while it is being performed and form an opinion as to the adequacy of the work at that time. The peer-reviewing Engineering Geologist shall also review the Final Geologic and Soil Engineering Feasibility Report. If the report is deemed inadequate by the peer-reviewing Engineering Geologist, they shall summarize the inadequate work and request that a supplemental investigation or analysis be performed. Any supplemental work performed by the PGOR as a result of review recommendations by the peer-reviewing Engineering Geologist shall also be subject to the conditions outlined above.



not to scale

Source: RBF Consulting 2010, CH2MHill 2005

Figure 3.6-7

Potential Debris Basin Locations

Paraiso Springs Resort EIR

This page intentionally left blank.

The Final Geologic and Soil Engineering Feasibility Report shall fully characterize the new design debris flow events to include site design-specific recommendations to ensure that the structures at risk would not collapse if said design debris flow occurs.

MM 3.6.4b At the time of construction of the project, all excavations shall be observed by the PGOR prior to backfilling of the excavation. A post-construction geologic map portraying the distribution of rock and soil should be constructed by the PGOR and submitted to the County of Monterey with a Final Geological Report. If previously unidentified debris flow deposits are mapped in the excavations during construction, additional mitigation measures shall be recommended at the time of construction by the PGOR.

Implementation of mitigation measures MM 3.6-4a and MM 3.6-4b would ensure that the potential for landslide is reduced to a less than significant level.

Short-Term and Long-Term Erosion

Impact 3.6-5: Implementation of the proposed project would result in temporary and long-term disturbance of soils with high erosion potential, which could increase the risk of accelerated erosion and adversely affect water quality. This is considered a potentially significant impact. (Less than Significant Impact with Mitigation)

Construction activities associated with the proposed project would occur on approximately 50 acres of the overall project site. Within the construction zone, existing gradients range from approximately 8 percent to an excess of 30 percent along the hillsides for the timeshare units and the hamlet parking area. The proposed project involves removal of vegetation and grading activities associated with the construction of roads, driveways, building pads, and associated infrastructure. The disturbance of soil during construction activities makes it susceptible to erosion by rainfall and wind.

The proposed project would also increase the amount of impervious surfaces, which may affect the natural drainage pattern within the project site. During unusually high rainfall over a short duration, excessive erosion may occur. Soil particles may be carried by storm water to receiving water bodies, including Arroyo Seco River which may result in sedimentation. According to the *Monterey County Soil Survey* (U.S. Department of Agriculture, 1978), the following soils within the project site are rated as having rapid or very rapid runoff and erosion hazards: Cieneba fine gravelly sandy loam, 30 to 79 percent slopes (CcG); Junipero-Sur Complex (Jc); Los Osos clay loam, 30 to 50 percent slopes (LmF) and 50 to 75 percent slopes (LmG); Placentia sandy loam, 15 to 30 percent slopes (PnE); and Xerorthents, dissected (Xb). Figure 3.6-6, Site Erosion, shows the portions of the project site that have a high erosion potential.

According to the project applicant's General Development Plan (2005), the proposed project includes the following erosion control measures during construction activities: construction vehicle access pads at the entrance to the project site along Paraiso Springs Road and at all access points off any constructed roadway; material hauling; construction material storage; dust control; construction vehicle maintenance and fueling; hazardous

materials storage; use of hay bales, straw mats, and waddles at new cut and fill slopes; hydroseeding of cut and fill slopes prior to rainy season; contractor employee training; settling basins for dewatering areas; and concrete truck wash out basins.

The removal and disturbance of soil during grading activities will directly affect the rate of erosion. Therefore, short- and long-term erosion potential at the project site would be considered a significant impact. Grading at the project site shall be in accordance with the Monterey County Ordinance 16.12.80, Land Clearing. All grading plans shall be subject to review by Monterey County Public Works Department and Monterey County Water Resources Agency. In addition, the following mitigation measure would reduce impacts from soil erosion within the project site:

Mitigation Measure

MM 3.6-5 Prior to grading permit issuance, the project applicant shall contract with a qualified consultant to prepare an erosion control plan and a Storm Water Pollution Prevention Plan (SWPPP) that documents best management practices (filters, traps, bio-filtration swales, etc.) to ensure that urban runoff contaminants and sediment are minimized during site preparation, construction, and post-construction periods. The erosion control plan and SWPPP shall incorporate best management practices consistent with the requirements of the National Pollutant Discharge Elimination System and Monterey County Ordinance 16.12.80, Land Clearing. The erosion and sediment control plan and the SWPPP shall be consistent with the standards set forth in the Construction General Permit.

Implementation of the above mitigation measure would reduce impacts from accelerated erosion to a less than significant level by requiring the project applicant prepare a SWPPP and implement an erosion control plan for the proposed project.

Soil Stability and Expansive Soils

Impact 3.6-6: The project site is not located in an expansive soil. Portions of the project site have high shrink swell/ expansion potential. This is considered a less than significant impact.

Expansive soils experience volumetric changes with changes in moisture content, swelling with increases in moisture content and shrinking with decreasing moisture content. These volumetric changes that the soil undergoes in this cyclic pattern can cause distress resulting in damage to concrete slabs and foundations. According to the *Monterey County Soil Survey* (U.S. Department of Agriculture, 1978), the following soils have high shrink swell potential: Cropley silty clay, 2 to 9 percent slopes (CnC); Los Osos clay loam, 30 to 50 percent slopes (LmF); and Los Osos clay loam, 50 to 75 percent slopes (LmG). In addition, the McCoy clay loam soil has a moderate shrink swell in the first 18 inches and high in the remaining and the Placentia sandy loam soils have low shrink swell potentials in the first 13 inches and high in the remainder.

However, Landset Engineers conducted Atterberg limits tests on near-surface soil samples within the development envelope of the proposed project, which resulted in plasticity indexes of 9 to 23. These values indicate that the near surface soil (upper five feet) typically have a low expansion potential. Because the soils encountered at the project site have a low expansion potential, it is unlikely that the proposed improvements

would experience impacts associated with expansive soils, creating substantial risks to life or property. In addition, mitigation measure MM 3.5-1a would require that the project applicant provide a seismic design report for the proposed project consistent with the California Building Code, which would ensure that expansive soils do not result in risks to life or property at the project site. Therefore, this impact would be less than significant.

Alternative Waste Disposal System

Impact 3.6-7:	The project site contains several existing septic tank leach fields that served prior development of the project site, as well as existing limited use of the site. However, the proposed project includes construction of an enhanced on-site wastewater treatment system to serve the proposed project that would serve the increase in wastewater associated with the proposed project. This would be considered a less than significant impact.

The project site contains several existing septic tank leach fields that served the existing development within the project site. Mitigation measure 3.6-4 in Section 3.6: Hazards and Hazardous Materials would ensure that the proposed project properly remove and dispose of all septic tanks located at the project site at an approved landfill facility.

The proposed project includes construction of an on-site wastewater treatment system to serve the project site. The wastewater treatment and distribution system would be designed to produce recycled water that meets the unrestricted use requirements established in Section 60301.230 of Title 22 of the CCR. The specific effluent quality standards of the proposed project would be established by the Central Coast RWQCB during the permitting process. In addition, the proposed wastewater treatment system would be required to comply with Section 15.23 (Sewage Treatment and Reclamation Facilities – Prohibiting the Discharge of Sewage in a Manner Which May Cause Contamination of Groundwater Supplies in Monterey County) of the Monterey County Code. This code section requires that in obtaining a permit the applicant demonstrate that the sewage treatment or reclamation is not allowing sewage effluent containing greater than six mg/1 nitrate-nitrogen to percolate into the groundwater and a nitrate monitoring program must be approved by the Director of Environmental Health. The reader is referred to Section 3.10 of this EIR for a full discussion of the proposed wastewater treatment system.

The proposed project would be served by a wastewater treatment system and therefore would not result in the disposal of wastewater in an area incapable of supporting the increased wastewater at the project site. The impact is considered to be less than significant.

This page intentionally left blank.

3.7 HAZARDS AND HAZARDOUS MATERIALS

3.7.1 Introduction

This section of the DEIR discusses the potential presence of hazards and hazardous materials at or within the vicinity of the project site and analyzes the potential risk of these conditions within the context of existing and proposed development and future human activities. This section is based on a *Phase I Environmental Assessment* prepared by Lee & Pierce, Inc. prepared for the project applicant in October 2007. This report is included as Appendix E of this DEIR. The Phase I ESA was peer reviewed by RBF Consulting in January 2008.

3.7.2 Environmental Setting

This section describes the presence of hazardous sites and hazardous material use within the project site and in the project vicinity. Because hazardous materials can cause substantial hazards to human health or the environment when improperly handled, disposed, or otherwise managed, this section includes consideration of sensitive receptors in the vicinity of any hazardous sites, including schools and residences.

Hazardous Materials

Hazardous materials, as defined by the California Code of Regulations, are substances with certain physical properties that could pose a substantial present or future hazard to human health or the environment when improperly handled, disposed of, or otherwise managed. Hazardous materials are grouped into the following four categories, based on their properties:

- Toxic - causes human health effects;
- Ignitable - has the ability to burn;
- Corrosive - causes severed burns or damage to materials; and
- Reactive - causes explosions or generates toxic gases.

A hazardous waste is any hazardous material that is discarded, abandoned, or slated to be recycled. The criteria that render a material hazardous also make a waste hazardous. If improperly handled, hazardous materials and hazardous waste can result in public health hazards if released into the soil or groundwater; or through airborne releases in vapors, fumes, or dust. Soil and groundwater, having concentrations of hazardous constituents higher than specific regulatory levels, must be handled and disposed of as hazardous waste when excavated or pumped from an aquifer.

Region

The Environmental Protection Agency's (EPA) Resource Conservation and Recovery Act (RCRA) Information database indicates that, as of May 4, 2006, there were 453 transporters, treaters, storers, and disposers of hazardous waste in Monterey County. The most common users are commercial and industrial users such as agricultural producers, automotive repair, dry cleaners, gas stations, pest control, energy providers, and retailers. Institutional users of hazardous materials include schools, colleges, correctional facilities, utilities, hospitals, military installations, landfills, and other public agencies.

The California Department of Toxic Substances Control EnviroStor Database indicates that, as of May 4, 2006, there were 11 contaminated sites in Monterey County that are listed on Federal or State databases. None of these sites are located near the project site.

Project Site

Lee & Pierce Inc. conducted a site visit on September 19, 2007 as part of the Phase I ESA which consisted of a visual examination of the project site for visual evidence of potential environmental concerns.

The project site has been occupied since the early 1900s and the adjacent area was used by the Soledad Mission for vineyards. The project site contains multiple structures that were constructed in or prior to 1978, including approximately 15 single-room wooden vacation units that were constructed around 1972; pool complexes, which are fed by spring water; residential trailers; a maintenance shed; several well/pump houses and water storage tanks, and a main office reception and dining structure. The project site also includes on-site wells, springs, and sewage disposal is provided by on-site septic tanks and leach fields. A caretaker is present on the project site for security purposes, however the project site has not been operated for approximately ten years since the 2003 Phase I was conducted.

Due to the age of the structures on the project site there may be asbestos containing materials (ACM) present in roofing materials, floor coverings and insulation materials including the old boiler. Also present may be lead based paint in deteriorating condition. This is especially visible at the shop/maintenance building. There also may be fluorescent lights on the project site that contain Polychlorinated biphenyls (PCB).

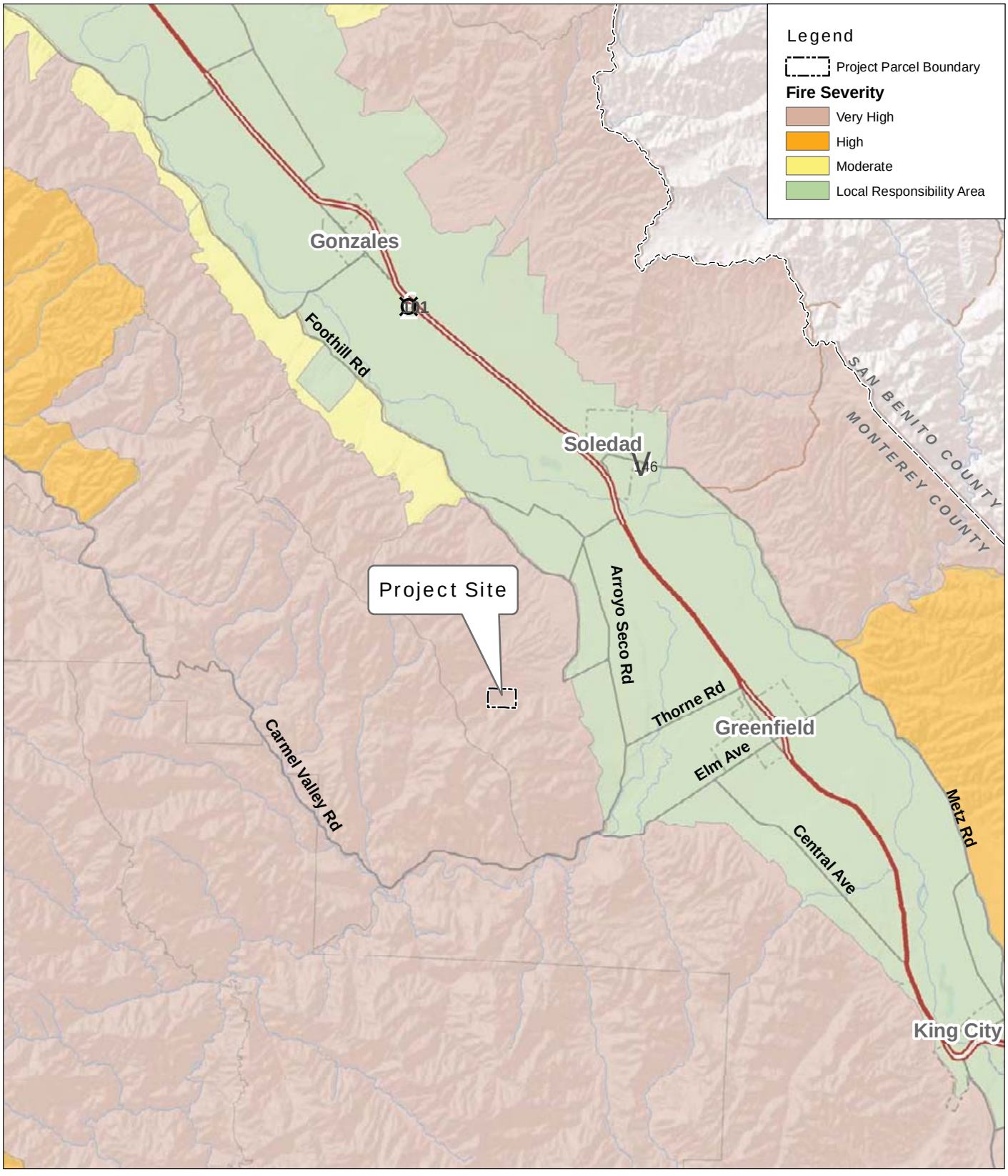
Historical and Regulatory Search

Based on Environmental Data Resources, Inc. (EDR), the database search, performed on September 20, 2007, no regulatory properties are located within the boundaries of the project site. Additionally, no regulatory properties were reported within a one-mile radius of the project site. Based on files obtained by Monterey County Health Department, Division of Environmental Health (MCDEH), an underground fuel tank (UFT) was removed from the project site in 1997 and a site closure letter was provided by MCDEH. Additionally, EDR LienSearch Report, dated September 26, 2007, reported that no environmental liens were identified.

There is evidence of a soil pile for use on road maintenance grading in the resort area. Due to the age of the project site, there may be areas where historic trash/garbage disposal occurred with other places excavated for outhouse disposal.

Fire Hazards

The project site is located in the Central Salinas Valley, where in many areas wildland fires are a major hazard (Monterey County 1987). According to the *Monterey County General Plan*, the project site is located in a very high fire severity zone as noted on Figure 3.7-1, Fire Severity Zones.



0 4 miles

Source: RBF Consulting 2010, Monterey County 2006

Figure 3.7-1

Fire Severity Zones

Paraiso Springs Resort EIR

E M C

This page intentionally left blank.

The principal elements of wildland fires are topography, climate and fuel loading. The elements are combined in the foothill and canyon areas and constitute a very high fire hazard. The project site is located in one of the foothill/canyon areas of the Central Salinas Valley that has been identified as a very high fire hazard area (Monterey County 1987). The project site was subject to a fire in 1954 that destroyed a number of structures including the main lodge.

3.7.3 Regulatory Background

Federal

Comprehensive Environmental Response, Compensation, and Liability Act

Discovery of environmental health damage from disposal sites prompted the U.S. Congress to pass the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund). The purpose of CERCLA is to identify and clean up chemically contaminated sites that pose a significant environmental health threat. The Hazard Ranking System is used to determine whether a site should be placed on the National Priorities List for cleanup activities.

Superfund Amendments and Reauthorization Act

The Superfund Amendments and Reauthorization Act (SARA) pertain primarily to emergency management of accidental releases. It requires formation of state and local emergency planning committees, which are responsible for collecting material handling and transportation data for use as a basis for planning. Chemical inventory data is made available to the community at large under the "right-to-know" provision of the law. In addition, SARA also requires annual reporting of continuous emissions and accidental releases of specified compounds. These annual submissions are compiled into a nationwide Toxics Release Inventory.

Hazardous Materials Transportation Act

The Hazardous Materials Transportation Act is the statutory basis for the extensive body of regulations aimed at ensuring the safe transport of hazardous materials on water, rail, highways, through air, or in pipelines. It includes provisions for material classification, packaging, marking, labeling, placecarding, and shipping documentation.

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) Subtitle C addresses hazardous waste generation, handling, transportation, storage, treatment, and disposal. It includes requirements for a system that uses hazardous waste manifests to track the movement of waste from its site of generation to its ultimate disposition. The 1984 amendments to RCRA created a national priority for waste minimization. Subtitle D establishes national minimum requirements for solid waste disposal sites and practices. It requires states to develop plans for the management of wastes within their jurisdictions. Subtitle I requires monitoring and containment systems for underground storage tanks that hold hazardous materials. Owners of tanks must demonstrate financial assurance for the cleanup of a potential leaking tank.

State

California Hazardous Waste Control Law

The Hazardous Waste Control Law (HWCL) is the primary hazardous waste statute in the State of California. The HWCL implements RCRA as a "cradle-to-grave" waste management system in the state. HWCL specifies that generators have the primary duty to determine whether their wastes are hazardous and to ensure their proper management. The HWCL also establishes criteria for the reuse and recycling of hazardous wastes used or reused as raw materials. The HWCL exceeds federal requirements by mandating source reduction planning, and a much broader requirement for permitting facilities that treat hazardous waste. It also regulates a number of types of wastes and waste management activities that are not covered by federal law with RCRA.

Local

Monterey County Hazardous Materials Program

The Monterey County Health Department Environmental Health Division manages and regulates the storage, use, and disposal of hazardous wastes through the Hazardous Materials Program. The program provides measures for hazardous waste on-site treatment, spill prevention control and countermeasures for aboveground and underground storage tanks, site mitigation and risk management and prevention.

Monterey County General Plan

The *Monterey County General Plan* was adopted by the Board of Supervisers in 1982. Goal 18 in the *Monterey County General Plan* aims to "minimize the risks from chemical usage." Policy 18.1.1 supports this goal by requiring that the County of Monterey establish land use controls to reduce undesirable effects of hazardous chemicals.

Goal 17 in the *Monterey County General Plan* and its corresponding policies support minimizing the risks of fire hazards. Policies support the continued maintenance and access of fire roads, the use of fire safety programs to educate the residents of the County of Monterey on preventive measures, and the continued updating of fire hazards information. In addition, minimum requirements for new developments are supported along with the use of fire resistant plantings where appropriate. New developments are required to comply with minimum standards in relation to the building of structures that will also minimize fire hazards.

The following policies support this goal:

Policy 17.3.3 The County shall encourage all new development to be located within the response time of 15 minutes from the fire station responsible for serving the parcel. If this is not possible, on-site fire protection systems (such as fire breaks, fire-retardant building materials, and/or water storage tanks) approved by the fire jurisdiction must be installed or development may only take place at the lowest density allowed for the parcel by the General Plan.

Policy 17.3.4 The County shall require all new development to have adequate water available for fire suppression. Water availability can be provided from a conventional water system; from an approved alternative water system if within 300 feet of a habitable structure; by the fire fighting equipment of the fire district within which the property is located; or by an individual water storage facility (e.g. water tank, swimming pool, etc.) on the property itself. The fire and planning departments shall determine the adequacy and location of individual water storage to be provided.

Policy 17.4.1 All residential, commercial, and industrial structural development (not including accessory uses) in high and very high fire hazard areas shall incorporate recommendations by the local fire district before a building permit can be issued.

Policy 17.4.7 The County shall require all subdivisions, multi- unit residential complexes, and commercial and industrial complexes to obtain, prior to permit approval, a statement from the fire department that adequate structural fire protection is available within minimum response time established by this Plan.

Central Salinas Valley Area Plan

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

Policy 17.4.13 (CSV) The Central Valley Fire Hazards Map shall be used to identify areas of high and very high fire hazards for the purpose of applying General Plan policies regarding fire.

3.7.4 Analytical Methodology and Significance Threshold Criteria

Methodology

This section based primarily on a *Phase I Environmental Assessment* prepared by Lee & Pierce, Inc. prepared for the project applicant in October 2007. The Phase I ESA was peer reviewed by RBF Consulting in January 2008 and determined that no additional analysis was necessary.

The Phase I Environmental Assessment was based on review of existing literature, field surveys, and data analysis. As a component of the assessment, Environmental Data Resources, Inc. (EDR) performed a database search on September 20, 2007, to identify federal, state, and local records of hazardous materials activities within a mile of the project site that have the potential to affect conditions on-site. The files of the MCDEH were reviewed for records of hazardous materials or incidents at and within a mile of the project site.

A field survey was conducted on September 19, 2007 to search for signs of use or disposal of hazardous materials. The field survey also included interviews with the property owner (project applicant) and current caretaker of the project site.

Data collected during the literature review and field survey was analyzed to determine the potential for hazards within the project site and project vicinity and to identify potential hazardous constraints at the project site.

The *County of Monterey General Plan* was reviewed to address the potential for wildfire hazards at the project site.

Significance Threshold Criteria

According to Appendix G of the *CEQA Guidelines*, a project may create a significant environmental impact if it would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working on the project site;
- For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working on the project site;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; and
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

Impact Analysis

Transport, Use, Disposal, and Release of Hazardous Materials During Operation

Impact 3.7-1:	Development of the proposed project would involve the use of hazardous materials including cleaning solvents, fertilizers, pesticides, and other hazardous materials typical of a hotel/resort spa, and timeshare facility. This would be considered a less than significant impact.

The proposed project is not anticipated to result in significant hazards to the public or the environment. The Monterey County Department of Environmental Health (MCDEH) regulates the storage, handling, and use of hazardous materials. Hazardous materials associated with proposed uses would include cleaning and degreasing solvents, fertilizers, pesticides, and other materials used in the regular maintenance of the uses. Operation of the enhanced wastewater treatment facility would also likely involve the routine use, storage, and transport of cleaning chemicals, mechanical maintenance chemicals, and

other industrial materials. The proposed wastewater treatment and distribution system would be designed to produce disinfected tertiary recycled water that meets the criteria established in CA Code of Regulations, Title 22, Division 4, Chapter 3, Article 1, Section 60301.230 for uses of recycled water for irrigation established in CA Code of Regulations, Title 22, Division 4, Chapter 3, Article 3, Section 60304." The specific effluent quality standards of the proposed project would be established by the Central Coast RWQCB and the California Department of Public Health during the permitting process. In addition, the proposed wastewater treatment system would be required to comply with Section 15.23 (Sewage Treatment and Reclamation Facilities – Prohibiting the Discharge of Sewage in a Manner Which May Cause Contamination of Groundwater Supplies in Monterey County) of the Monterey County Code, provides that a permit be granted for discharge of treated sewage if the sewage treatment or reclamation does not allow sewage effluent that contains greater than six mg/1 nitrate-nitrogen to percolate into the groundwater and that a nitrate monitoring program has been approved by the Director of Environmental Health.

As discussed in the Public Services section of this EIR, the project proposes to treat the well water to remove fluoride. This will be accomplished through the use of activated alumina. The treatment process involves water passed through a tank containing activated aluminum supported by a bed of gravel. The activated aluminum would require regeneration approximately weekly using an acid solution. The waste regeneration solution would then be neutralized using caustic soda. Acid and caustic soda would be delivered to the site in 275-gallon totes: the totes would be stored on site and provided with secondary containment. This will involve the use of the following substances:

NaOH Sodium Hydroxide 7,765 gallons per year

H2SO4 Sulfuric Acid 2,160 gallons per year

HCl Hydrochloric Acid 2,148 gallons per year

Caustic for pH adjustment 792 gallons per year

The amount of materials stored on site will require the project to be permitted as a hazardous material handler and submit an inventory and business response plan. The requirements for reporting and the applicant's proposal that the storage area have secondary containment will result in the impact associated with the storage and use of hazardous materials being a less than significant impact.

The activated alumina process would result in generation of a waste stream equal to about 5% of the water usage that is high in fluoride and aluminum. The preferred approach to disposal of this effluent would be to mix it with the reclaimed water that will be produced by the Wastewater Treatment Plant and used for landscaping irrigation. The goal is to dilute the waste stream to a point that the concentrations are safe for landscaping purposes. This will require permitting from the Regional Water Quality Control Board. If the RWQCB will not allow dilution and use onsite for irrigation, then the waste stream will be stored and taken to the Monterey Regional Water Pollution Control Agency treatment plant. This will result in one tanker trip per day taking effluent to the regional

plant. The permit issued by the RWQCB will ensure that the disposal of the effluent from the water treatment process will be disposed of in a safe manner. The potential for an adverse environmental impact associated with the disposal of the water treatment was stream is considered to be less than significant.

With proper use and disposal according to MCDEH standards, these chemicals are not expected to result in hazardous or unhealthful conditions for employees and patrons of the proposed project. Additionally, all proposed uses located within the project site would be required by the MCDEH to be in compliance with applicable standards and regulations regarding the storage, handling, and use of hazardous materials. Therefore, long-term operational impacts would be considered less than significant.

Transport, Use, Disposal, and Release of Hazardous Materials During Construction

Impact 3.7-2:	During construction of the proposed project, there is the potential for the transport, use, or disposal of hazardous materials, which could create a significant hazard to the public or the environment. This [potentially significant impact is considered to be less than significant with compliance with required Monterey County handling procedures and permits. (Less than Significant)

Implementation of the proposed project may result in the routine transport of hazardous materials during construction. Handling procedures of the County of Monterey (Water Resources and Environmental Health Department) are required during all phases of the proposed project. These measures include standards and regulations regarding the storage, handling, and use of these materials. In addition, in order to comply with the National Pollutant Discharge Elimination System (NPDES) requirements for construction of site storm water discharges, projects involving construction on sites more than one acre are required to prepare and implement a Stormwater Pollution Prevention Plan (SWPP) that specifies how the discharger will protect water quality during construction activities. Compliance with the appropriate hazardous materials handling measures and acquisition of the NPDES General Permit for construction activities would ensure that potential hazardous materials impacts during short-term construction activates associated with the proposed project would be less than significant.

Result in the Release of Hazardous Materials from the Demolition of Structures

Impact 3.7-3:	The proposed project would result in the demolition and removal of all structures within the project site, which may contain asbestos, lead, and/or PCBs from the fluorescent lighting ballasts within the existing structures. The release of these substances into the environment is considered a significant impact. (Less than Significant with Mitigation).

All of the existing structures on the project site will be removed as shown in Figure 2-8, Demolition Plan. 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 will be sold and removed.

It is not known whether or not any of the buildings contain ACM or lead paint as surveys have not been conducted, but it is likely that the buildings, which were constructed prior to approximately 1980 contain ACM and lead based paint, which have been identified as hazardous contaminants. The potential release of ACMs and/or LBPs during demolition activities is considered a potentially significant impact. In addition, the presence of PCBs

within the fluorescent lighting ballasts located within the interior of some of the structures is likely. Implementation of the following mitigation measures would ensure that this impact is reduced to a less than significant level.

Mitigation Measure

MM 3.7-3a Pursuant to Cal OSHA regulations, the project applicant shall have each structure proposed for demolition within the project site inspected by a qualified environmental specialist for the presence of asbestos containing material and lead based paints prior to obtaining a demolition permit from the County. If asbestos containing material and/or lead based paints are found during the investigations, the project applicant shall develop a remediation program 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 Monterey Bay Unified Air Pollution Control District and the County of Monterey Environmental Health Department, as applicable. Any hazardous materials that are removed from the structures shall be disposed of at an approved landfill facility in accordance with federal, state and local laws and regulations.

MM 3.7-3b The project applicant shall ensure that the removal of all fluorescent lighting ballasts within each structure are removed under the purview of the Monterey County Environmental Health Department in order to identify proper handling procedures prior to demolition of the structures within the project site. All removed fluorescent lighting ballasts shall be removed prior to demolition and disposed of at an approved landfill facility in accordance with federal, state and local laws and regulations.

Implementation of these mitigation measures would ensure that each structure is inspected by a qualified environmental specialist to determine the presence of ACMs, LBPs, and fluorescent lighting ballasts prior to demolition. Should any hazardous materials be encountered with any on-site structures, the materials shall be tested and properly disposed of in accordance with State and Federal regulatory requirements. Implementation of these measures would reduce this impact to a less than significant level.

Removal of Abandoned Septic Systems

Impact 3.7-4:	Implementation of the proposed project may expose people or the property to hazardous materials associated with the abandonment of septic systems at the project site. This would be considered a potentially significant impact. (Less than Significant with Mitigation).

Septic tank systems are located at the project site and would be removed or properly abandoned under permit with Monterey County Environmental Health with implementation of the proposed project. If septic tanks are not removed prior to development of the project site, they could leach contaminants into the soil, which may result in a potentially significant impact to safety and public health. Implementation of the following mitigation measure would reduce this impact to a less than significant level.

Mitigation Measure

MM 3.7-4 Subject to review by the County of Monterey Environmental Health Department, the project applicant shall map the specific location of all septic tanks located within the project site. Once located, the septic tanks shall be removed and properly disposed of at an approved landfill facility or properly abandoned onsite under permit with Monterey County Environmental Health. The applicant shall provide to Monterey County Environmental Health a schedule of all septic tanks on the property and identify those tanks to be physically removed from the property and those tanks to be abandoned onsite under permit with Monterey County Environmental Health.

Implementation of the above mitigation measure would ensure that prior to ground disturbance activities, the specific location of the septic tanks are located, removed, and property disposed of at an approved landfill facility.

Result in the Disturbance of Contaminated Soil

Impact 3.7-5: The project site contains an existing propane tank, above ground fuel storage tank, boiler, and evidence of a debris pile at the project site. The release of hazardous materials during construction activities would be a significant impact. (Less than Significant with Mitigation Incorporated).

The project site is not located on any hazardous materials sites compiled pursuant to Government Code Section 65962.5. No regulatory sites have been reported within the boundaries of the project site and no corrective actions, or restoration has been planned, is currently taking place, or has been completed within the project site. However, the project site contains an existing propane tank, above ground fuel storage tank, boiler, and includes evidence of a debris pile for use on road maintenance grading within the project site. In addition, there may be other areas where historic trash/garbage disposal occurred within the project site. If during removal of the tanks and existing debris piles, hazardous materials have been released into the soil (e.g. staining), this 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 3.7-5 Once the above ground fuel storage tank(s) are removed, a visual inspection of the areas beneath and around the removed tanks shall be performed. Any stained soils observed underneath the storage tanks shall be sampled. Results of the sampling (if necessary) shall indicate the level or remediation efforts that may be required. In the event that subsequent testing indicates the presence of any hazardous materials beyond acceptable thresholds, a work plan shall be prepared subject to review and approval by the County of Monterey Environmental Health Department in order to remediate the soil in accordance with all applicable federal, state, and local regulations prior to issuance of a grading permit.

Emit Hazardous Materials in the Vicinity of a School

No schools are located within a quarter mile of the project site. Therefore, the proposed project would not emit or handle hazardous materials within a quarter mile of an existing or proposed school.

Interference With An Emergency Response Plan/Emergency Evacuation Plan

According to the *Monterey County General Plan*, the project site is not located along an emergency evacuation route and is not anticipated to physically interfere with an adopted emergency response plan or emergency evacuation route.

Potential for Wildfire Hazards at the Project Site

Impact 3.7-6:	The project site is located in a very high fire severity zone. However, the proposed project includes a fire protection plan that would ensure that the proposed project would be protected in the case of fire. With implementation of the fire protection plan, the potential impacts associated with wildfire hazards would be less than significant.

According to the *Monterey County General Plan*, the project site is located in a very high fire severity zone. The proposed project includes a fire protection plan (CHM2Hill 2005b) for the project site (Figure 2-13, Fire Protection Plan, presented earlier). The fire protection plan would consist of hydrant network, pipeline and sprinkler system, and a water reservoir. The hydrant network would be supplied by dedicated firewater pipeline, separate from the proposed project's potable water system. A total of 16 hydrants would be provided within the project site. The flow capacity for each hydrant would be 1,000 gallons per minute.

In addition, all buildings within the project site would include a sprinkling system designed by a licensed Fire Protection Engineer. A commercial sprinkler system supplied by the fire water pipeline system would be provided for the Hotel/Spa Resort complex, the Hamlet, and the condominiums. The commercial sprinkler system would be supported by a 500,000 gallon water reservoir located on the project site[11]. The sprinklers for the single family homes and condominiums would be connected to the potable water system. Other fire protection measures implemented within the project site would include 12-foot wide access roads by the Spa, Fitness Center, and condominiums, adequate turn-arounds, and access road bridge designed for highway loading standards.

Implementation of the Fire Protection Plan would ensure that the proposed project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires, which would be considered a less than significant impact.

[11] The precise storage volume and type of storage will be established through a detailed engineering study performed during the design development phase of the proposed project.

This page intentionally left blank.

3.8 HYDROLOGY AND WATER QUALITY

3.8.1 Introduction

This section addresses water resource issues associated with implementation of the proposed project. Specifically, this section presents information related to potential changes to the water quality of post-development storm water runoff associated with the proposed project. This section also contains an evaluation of the hydrologic impacts associated with the proposed project's use of groundwater.

Previous reports used to prepare this section include the following:

- *Draft Environmental Impact Report/Environmental Impact Statement for the Salinas Valley Water Project* (United States Army Corps of Engineers and Monterey County Water Resources Agency 2001)
- *State California's Groundwater Bulletin 118* (California Department of Water Resources 2004)
- *Geologic and Soil Engineering Feasibility Report* (Landset Engineers 2004)
- *Existing Hydrologic and Hydraulic Site Conditions* (CH2MHill 2005)
- *Monterey County Groundwater Management Plan* (Monterey County Water Resources Agency 2006)
- *Paraiso Springs Resort: Response to Hydrology and Hydraulic Analysis and Erosion Control Measures Review Comments* (CH2M Hill 2008)
- *Response to Preliminary Engineering Reports for Paraiso Springs Hot Springs Prepared by CH2MHill dated August 2010* (Monterey County Water Resources Agency 2010)
- *Paraiso Springs Resort – Drainage Analysis and Drainage Plan Comments, May 2, 2012* (CH2MHill 2012)
- *Stream Setback Plan* (CH2MHill 2012)
- *Letter re. Paraiso Springs Resort PLN040183 Stream Channel Modification Response to Comments from Monterey County* (CH2M Hill 2013)
- *Stream Setback Plan* (CH2MHill 2013)

3.8.2 Environmental Setting

Climate

Warm dry summers and cool moist winters characterize the climate of Monterey County. The average temperature is approximately 56°F. Mean annual precipitation across the county is approximately 15 inches per year, though rainfall in excess of 30 inches has been recorded in some years. Given the fact that the elevation across the entire watershed ranges from 1,000 to 2,400 feet, the mean annual precipitation was conservatively estimated to be 23.5 inches (CH2MHill 2008). Approximately 90 percent of this rainfall occurs between November and April. Measurable precipitation averages 51 days per year (Monterey County Water Resources Agency 2008).

Topography and Drainage

The proposed project site is located west of the City of Greenfield. The Paraiso Springs drainage, which flows through the project site, begins on the eastern slopes of the Sierra de Salinas Foothills and in the westerly portion of the Arroyo Seco Watershed, travels northeasterly to the Arroyo Seco Valley floor, where flows are collected and enter the Arroyo Seco River. The Arroyo Seco River is a major tributary to the Salinas River.

The primary drainage basin, tributary to the Paraiso Springs channel, extends from the southwest, at elevation 2,400 feet (NGVD), to the northeast project boundary, at elevation 1,000 feet. The basin is approximately 1,160 acres in size, and is surrounded by mostly undeveloped and rural agricultural land uses. The mountains and hillsides that are the primary sources of flows to the creek are covered by a mixture of native oak savannas, sycamore river valleys, grasslands, and scrub chaparral. The average slope of the hills southwest of the project site is 40 percent. The average slope of the hills to the west of the project site is 36 percent. Topographic contour patterns show that there are four points within the basin that collect and transfer flows from the higher areas of the basin to the existing stream. The main drainage channel through the project site has an approximate width of 50 feet.

The adjacent lands southerly of this channel are relatively flat and extend several hundred feet beyond the top of bank. As described in Section 3.6: Geology and Soils, there is the potential for landslides and debris production within the project area. This is the result of sediment and debris produced in the steeper portions of the drainage basin that migrate into the channel and require on-going maintenance. The location of these subbasins surrounding the project site are shown in Figure 3.6-7, Potential Debris Basin Locations, presented earlier in Section 3.6 of this EIR.

The channel slope upstream of the project site (approximately 50 percent of its total length) is 25 percent. The channel slope in the valley section of the channel (the length of the project site) is approximately 11.2 percent. The expected average channel velocity, within the project site, is in the order of 27 feet per second, at a full bank flow condition. This velocity, in combination with existing soil conditions, illustrates a potential for channel erosion during infrequent storm events (CH2MHill 2005a).

Upon leaving the project site, storm water travels through a natural ravine and then through a series of open agricultural drainage ditches and culverts under road crossings. These ditches are highly channelized, and are either located along natural drainage paths or adjacent to a roadway. The banks have been stabilized in some locations by the installation of sandbags. These drainage ditches are largely man-made, most likely by local property owners, and are characterized by steep, unvegetated side slopes. Storm water continues to travel northeasterly to the Arroyo Seco Valley floor where flows are collected and enter the Arroyo Seco River, which eventually flows into the Salinas River.

Flood Zone

The project site is located within Zone X as shown on the effective FEMA Flood Insurance Rate Map (FIRM) for the area. As defined on the FIRM, Zone X areas are outside of the 0.2 percent annual chance floodplain.

Surface Water Quality

Within the Central Salinas Valley Area Plan planning area, surface water quality is an issue only for the Salinas River. During dry months of summer and fall, the flow of the Salinas River is minimal. With a reduced flow, pollutants remain concentrated and water quality deteriorates. Pollutants from agricultural lands and from sewage treatment facilities have severely degraded the Salinas River, particularly in the segment from State Route 68 northward.

Regional Hydrogeology

The project is located within the Central Coast Hydrologic Region defined in California's Groundwater Bulletin 118. The region covers approximately 7.22 million acres (11,300 square miles) in central California. The Central Coast Hydrologic Region has 50 delineated groundwater basins, and it includes all of Monterey County (California Department of Water Resources 2004).

Salinas Valley Groundwater Basin, Forebay Aquifer Subbasin

The project is located partially within the Salinas Valley Groundwater Basin (SVGB) Forebay Aquifer Subbasin defined in California's Groundwater Bulletin 118. The SVGB is divided into eight subbasins including the Forebay Aquifer Subbasin. The Forebay Aquifer Subbasin occupies the central portion of the Salinas Valley, extends from the City of Gonzales in the north to approximately three miles south of Greenfield, and it is bounded to the west by the contact of Quaternary terrace deposits of the subbasin with Mesozoic metamorphic rocks (Sur Series) or middle Miocene marine sedimentary rocks (Monterey Shale) of the Sierra de Salinas. To the east, the boundary is the contact of Quaternary terrace deposits or alluvium with granitic rocks of the Gabilan Range. The northern subbasin boundary is shared with the Salinas Valley –180/400-Foot Aquifer and –Eastside Aquifer and represents the southern limit of confining conditions in the 180/400-Foot Aquifer Subbasin. The southern boundary is shared with the Salinas Valley – Upper Valley Aquifer Subbasin and generally represents the southern limit of confining conditions above the 400-Foot Aquifer (MW 1994). This boundary also represents a constriction of the Valley floor caused by encroachment from the west by the composite alluvial fan of Arroyo Seco and Monroe Creek (California Department of Water Resources 2004). See Figure 3.8-1, Regional Hydrology.

Average annual precipitation is approximately 11 inches at the Valley floor to 17 inches at the western margin of the subbasin

MCWRA Zone 2C and Forebay Hydrologic Subarea

The project is located completely within Monterey County Water Resources Agency (MCWRA) Zone 2C and the Forebay Hydrologic Subarea defined in the Salinas Valley Water Project (SVWP) Engineer's Report, prepared by RMC, dated January 2003. The SVWP is Monterey County's plan to stop seawater intrusion, and recharge the Salinas River Basin. The Zone 2C boundary was defined based on geological conditions and hydrologic factors, which define and limit the benefits, derived from the changes to operations, storage, and release of water from Nacimiento and San Antonio reservoirs.

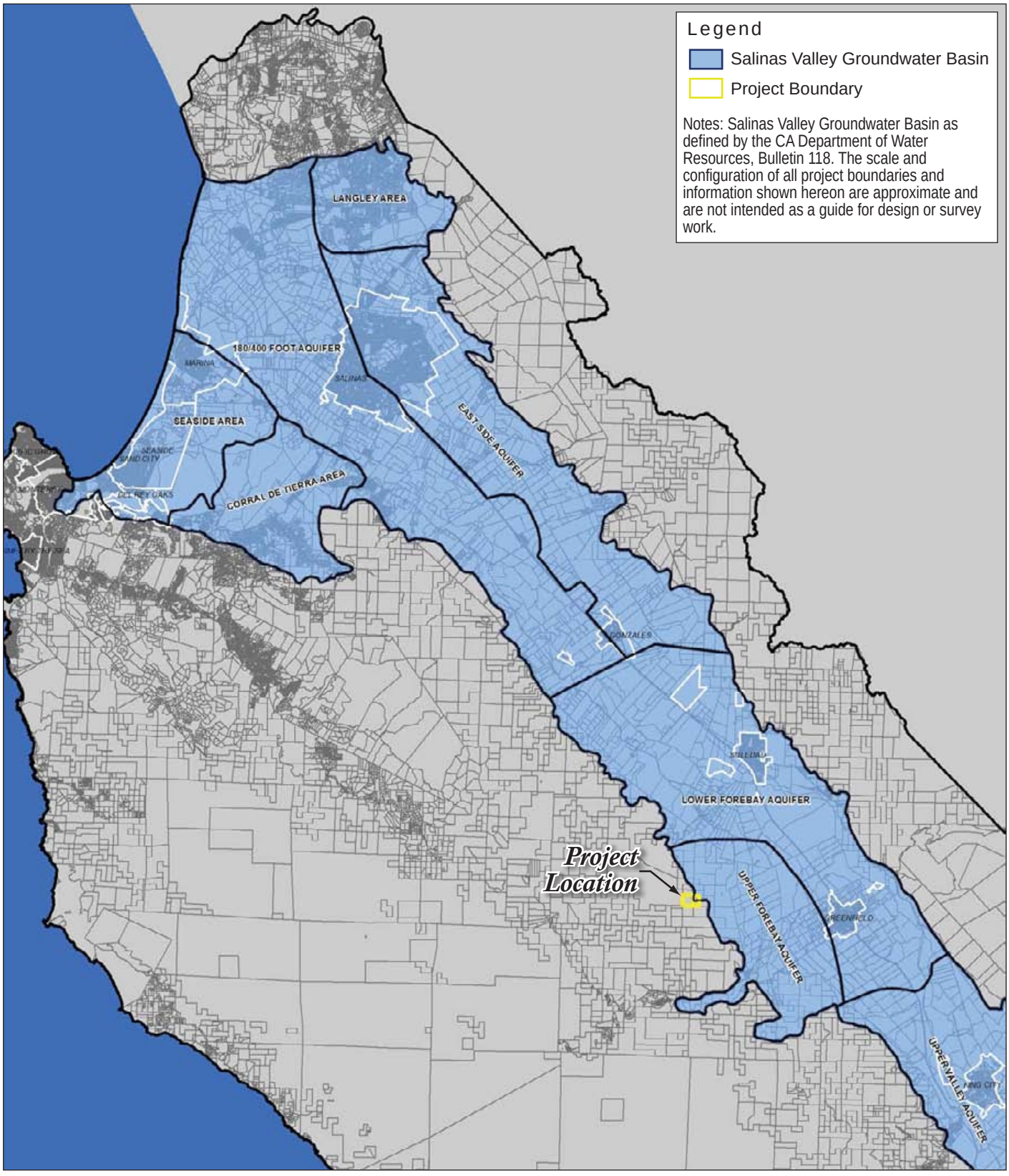
The zone is separated into seven major hydrologic subareas that receive various levels of benefits. The basis for inclusion of lands within Zone 2C was:

1. There must be a hydrogeologic or flood protection basis for establishing benefit;
2. The zone of hydrologic benefits is defined as land overlaying water bearing alluvium that has hydraulic continuity with the Salinas River;
3. The zone of benefits excludes narrow, likely shallow, channels off the main basin where pumping can not induce an up-gradient recharge;
4. Existing annexations, such as the Chalone Valley that are non-hydraulically connected have been included since they are receiving benefits through physically installed pumping and piping equipment.
5. The southern boundary of the zone of benefit is defined by the Monterey/San Obispo County line;
6. Lands immediately adjacent to San Antonio reservoir receive hydrologic benefits due to recharge of the underlying aquifer and receive recreational benefits afforded by their proximity to San Antonio reservoir;
7. The boundary in the Fort Ord area is defined by the existing Zone 2A boundary. Work completed for the Army by Harding Lawson Associates clearly demonstrates the boundary of the hydraulically connected alluvium is approximated by the existing Zone 2A delineation;
8. Any contiguous parcel that overlies a portion of the alluvial material that is in hydrologic continuity with the Salinas River has been included in Zone 2C since the overlying portion of the parcel provides access to all hydrologic benefits (RMC 2003).

Groundwater

The primary water bearing units of the Forebay Aquifer Subbasin are the same units that produce water in the adjacent 180/400-Foot Aquifer Subbasin – namely, the 180-foot Aquifer and the 400-foot Aquifer. However, the near-surface confining unit (Salinas Aquitard) of the 180/400-Foot Aquifer Subbasin does not extend into the Forebay or other subbasins. Groundwater in the Forebay Aquifer is unconfined and occurs in lenses of sand and gravel that are interbedded with massive units of finer grained material (California Department of Water Resources 2004).

The thickness of the 180-foot aquifer varies from 50 to 150 feet in the Salinas Valley, with an average of 100 feet. The 180-Foot Aquifer may be in part correlative to older portions of Quaternary terrace deposits or the upper Aromas Red Sands. More recent studies suggest the 400-Foot Aquifer exists not only in the 180/400-Foot Aquifer Subbasin, but also in the lower Forebay Aquifer Subbasin. The 400-Foot Aquifer has an average thickness of 200 feet and consists of sands, gravels, and clay lenses. The upper portion of this aquifer may be correlative with the Aromas Red Sands and the lower portion with the upper part of the Paso Robles Formation. The 180-Foot Aquifer is separated from the 400-Foot Aquifer by a zone of discontinuous sands and blue clays called the 180/400-Foot Aquiclude which ranges in thickness from 10 to 70 feet (California Department of Water Resources 2004).



Source: Monterey County Water Resources Agency 2013

Figure 3.8-1

Regional Hydrology

Paraiso Springs Resort EIR

E M C

This page intentionally left blank.

An additional deeper aquifer (also referred to as the 900-Foot Aquifer or the Deep Aquifer) is present in the lower and central Salinas Valley, including beneath the Forebay Aquifer Subbasin. This deeper aquifer consists of alternating layers of sand-gravel mixtures and clays (up to 900 feet thick), rather than a distinct aquifer and aquitard (California Department of Water Resources 2004).

As of 1994, there was an estimate of 4,530,000 acre-feet of stored groundwater in the Forebay Aquifer Subbasin. From 1964 to 1974, the amount of groundwater in storage increased 23,300 acre-feet. This increasing trend continued from 1974 to 1984, with an increase of 60,100 acre-feet. Between 1984 and 1994, the amount of groundwater in storage declined 99,700 acre-feet (California Department of Water Resources 2004).

Seawater Intrusion

An imbalance between the rate of groundwater withdrawal and recharge has resulted in overdraft conditions in the Salinas Valley Groundwater Basin, which has allowed seawater from Monterey Bay to intrude inland approximately six miles in the Pressure 180-Foot Aquifer and approximately two miles in the Pressure 400-Foot Aquifer. Since 1949, an average of 10,000 acre-feet of seawater per year has intruded into basin aquifer. The Castroville Seawater Intrusion Project (CSIP) and the Salinas Valley Water Project (SVWP) were designed and constructed to attain a hydrologically balanced groundwater basin and halt the long-term trends of seawater intrusion (Cardno ENTRIX 2013).

The Salinas Valley Water Project was approved in 2003 and construction was completed in January 2010 (Monterey County Water Resources Agency 2010). The two major components of the Salinas Valley Water Project are the modification of the Nacimiento Dam spillway and construction of an inflatable diversion dam on the lower Salinas River. Coupled with the Castroville Recycled Water project that was implemented in 1998, the Salinas Valley Water Project is intended to increase recharge and reduce coast-side pumping to bring the Salinas Valley groundwater basin into balance, and halt seawater intrusion of the coastal areas.

The Salinas Valley Water Project will increase summer flows and recharge along the Salinas River, and the diverted water will be blended with the recycled water for the Castroville project. The present 8,900 acre-foot seawater intrusion is projected to be reversed to an outflow of 900 acre-feet of fresh water (Monterey County Water Resources Agency 2003, page 3-6). The modeling developed for the Salinas Valley Water Project predicts a rise in lower Salinas Valley Groundwater Basin levels for at least 35 years following Salinas Valley Water Project implementation (United States Army Corps of Engineers and Monterey County Water Resources Agency 2001, Figures 5.3-13 through 5.3-17).

3.8.3 Regulatory Background

As authorized by the Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. Point sources are discrete conveyances such as pipes or man-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an

NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters. In most cases, the NPDES permit program is administered by authorized states. Since its introduction in 1972, the NPDES permit program is responsible for significant improvements to our nation's water quality.

In 1969, the State Legislature enacted the Porter-Cologne Water Quality Control Act, one of the nation's strongest pieces of anti-pollution legislation. This state law was so influential that portions were used as the basis of the Federal Water Pollution Control Act Amendments of 1972 (commonly known as the Clean Water Act).

The Clean Water Act requires the states or the U.S. Environmental Protection Agency to set standards for surface water quality, mandate sewage treatment and regulate wastewater discharges into the nation's surface waters. Within California the State assumes responsibility for implementing the Clean Water Act. This involves combining state and federal guidelines to develop water quality standards, issue discharge permits and operate the grants program.

Dickey Water Pollution Act

The Dickey Act acknowledged that California's water pollution problems are primarily regional and depend on precipitation, topography, and population, as well as recreational, agricultural, and industrial development, all of which vary greatly from region to region, thus creating a need for a "State Water Pollution Control Board."

The Dickey Act established nine regional water pollution control boards located in each of the major California watersheds. Their primary responsibility is overseeing and enforcing the state's pollution abatement program. Gubernatorial appointees, representing water supply, irrigated agriculture, industry, and municipal and county government in that region, serve on each Regional Water Board.

Nine Regional Water Quality Control Boards (RWQCB) represent the major watersheds of the state. These regional boards serve as the frontline for state and federal water pollution control efforts. The Central Coast Region spans from Santa Clara County south to northern Ventura County. This region has 378 miles of coastline, including Santa Cruz and the Monterey Peninsula, the agricultural valleys of Salinas and Santa Maria, and the Santa Barbara coastal plain.

County of Monterey

Monterey County General Plan

The Monterey County General Plan (1982) contains the following goals and policies applicable to the proposed project:

Goal 5 To conserve and enhance the water supplies in the County and adequately plan for the development and protection of these resources and their related resources for future generations.

Policy 5.1.1 Vegetation and soil shall be managed to protect critical watershed areas.

Policy 5.1.2 Land use and development shall be accomplished in a manner to minimize runoff and maintain groundwater recharge in vital water resource areas.

Policy 5.2.2 The County shall establish special procedures for land use, building locations, grading operations, and vegetation removal adjacent to all waterways and significant water features.

Goal 6 Promote adequate, replenishable water supplies of suitable quality to meet the County's various needs.

Policy 6.1.1 Increased uses of groundwater shall be carefully managed, especially in areas known to have ground water overdrafting.

Policy 6.1.2 Water conservation measures for all types of land uses shall be encouraged.

Goal 21 To ensure that the County's water quality is protected and enhanced to meet all beneficial uses, including domestic, agricultural, industrial, recreational and ecological.

Policy 21.2.1 The County shall require all new and existing development to meet federal, state, and county water quality regulations.

Policy 21.2.3 Residential, commercial, and industrial developments which require 20 or more parking spaces shall include oil, grease, and silt traps, or other suit able means, as approved by the Monterey County Surveyor, to protect water quality; a condition of maintenance and operation shall be placed upon the development.

Policy 21.3.1 The County should support sewage treatment projects that reduce contamination of surface and groundwater to acceptable levels.

Policy 21.3.2 The County shall encourage the investigation, under supervision of County health officials, of the cost-effectiveness, reliability and health acceptability of alternative wastewater disposal methods. The County should approve alternate wastewater disposal methods when they are safe and acceptable to the Environmental Health Department.

Policy 21.3.3 No division of land or use permit for residential, commercial, or industrial uses shall be approved without proof that an adequate waste disposal system can be developed.

Central Salinas Valley Area Plan

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

Policy 16.2.1.1 (CSV) Site plans for new development shall indicate all floodplains, flood hazards, perennial or intermittent streams, creeks, and other natural drainages. Development shall not be allowed to occur within these

drainage courses nor shall development be allowed to disturb the natural banks and vegetation along these drainage courses, unless such disturbances are approved by the Flood Control and Water Conservation District. Development shall adhere to all regulations and ordinances related to development in flood plains.

Policy 16.2.1.2 (CSV) Increased storm water runoff from urban development shall be controlled to mitigate impacts on agricultural lands located downstream.

Chapter 19.10, Monterey County Code - Drainage Control Ordinance

Drainage, and the preparation of design improvement plans to control runoff and prevent erosion, is regulated under Chapter 19.10, regarding subdivision improvements. Improvement plans for drainage and runoff control are subject to the approval of the MCWRA in accordance with the MCWRA design criteria. Chapter 19.10.050 of the Monterey County Code, requires that storm water runoff from subdivisions be collected and conveyed by an approved storm drainage system. Detention ponds, drainage swales and/or check dams may be required to reduce offsite peak storm flow generated by projects during a 100-year storm event. The maintenance of the on-site drainage facilities, including detention ponds, shall be the responsibility of a homeowners association or other similar entity, where applicable, and provisions for annual inspection and maintenance shall be included in the conditions, covenants and restrictions. Improvements shall be designed to meet Monterey County Water Resources Agency Design Criteria and improvement plans shall be submitted to the Monterey County Water Resources Agency for review and approval. Drainage improvements for runoff from impervious surfaces shall be engineered to minimize erosion through the use of rocked culvert inlets and outfalls, energy reducers and location of culverts. Design features shall include reseeding exposed slopes as well as minimizing the use of artificial slopes. Improvements shall be constructed in accordance with the approved plans.

Chapter 16.12 Monterey County Code - Erosion Control Ordinance

Chapter 16.12.070 of the Monterey County Code requires that development activities control runoff to prevent erosion during a 10-year storm. All runoff must be detained or dispersed so that the runoff rate does not exceed the pre-development level. Any concentrated runoff, which cannot be effectively detained or dispersed without causing erosion, shall be carried in non-erodible channels or conduits to the nearest drainage course designated for such purpose or to onsite percolation devices with appropriate energy dissipaters to prevent erosion at the point of discharge. Runoff from disturbed areas shall be detained or filtered by berms, vegetated filter strips, catch basins, or other means as necessary to prevent the escape of sediment from the disturbed area (Ordinance 2806 1981). In addition, Chapter 16.12.090 of the Monterey County Code prohibits grading activities of more than one acre per year per site between October 15th and April 15th, in water supply watersheds, and high erosion hazard areas, unless authorized by the Director of Building Inspection.

Chapter 19 Monterey County Subdivision Ordinance

Section 19.10.070 - Water Supply provides:

A. Provision shall be made for such domestic water supply as may be necessary to protect public health, safety, or welfare. Such water supply may be:

   1. By connection to a public utility, in which case a letter from the public utility shall be submitted showing its ability to serve the proposed subdivision and evidence indicating that a satisfactory agreement has been entered into for such services.
   2. By the establishment of a two or more connection approved water system or by connection to an existing approved water system with the provision of service to each lot.
   3. From a single connection water source on each parcel.

B. In the event the subdivider proposes establishment of a water system, the subdivider shall submit evidence to the Director of Environmental Health that the source of supply is adequate and potable. In order to demonstrate adequacy, the supply must comply with Title 15.04 of the Monterey County Codes or Title 22 of the California Administrative Code. Unless waived, the subdivider shall submit a design plan of the system for review by the Director of Environmental Health. The design plan shall meet Residential Subdivision Water Supply Standards. Any proposal to share a water source with five or more connections requires compliance with the State Domestic Water Act set forth in Health and Safety Code Section 4010 et seq. A water source with two to four connections must comply with Title 15 of the Monterey County Code.

Chapter 15.04 Monterey County Code – Domestic Water Supply

Section 15.04.140 - Quantity of water supply.

A. Every domestic water system shall provide sufficient water from the water sources and storage facilities to adequately, reliably and safely meet the maximum water demand at all times.
B. Water sources shall demonstrate reliability and capability of a long term sustained yield in accordance with the requirements of Chapter 16 of Title 22 of the California Code of Regulations.

3.8.4 Analytical Methodology and Significance Threshold Criteria

Significance Threshold Criteria

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

- Violate any water quality standards or waste discharge requirements;
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted);

- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on- or off-site;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site;
- Create or contribute runoff water, which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff;
- Otherwise substantially degrade water quality;
- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map (FIRM) or other flood hazard delineation map;
- Place within 100-year flood hazard area structures, which would impede or redirect flood flows;
- Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam; and
- Inundation by seiche, tsunami, or mudflow?

Federal, state, and local drainage laws and regulations govern the evaluation of impacts on surface water drainage. For this evaluation, impacts on surface water drainage would be considered significant if the project would alter the drainage patterns of the site, with resultant in substantial erosion, siltation, or increased runoff that would increase flooding. Increase in the amount of runoff could be considered significant if local roads and downstream storm drain facilities are impacted.

Impact Analysis

Short-term Erosion and Water Quality

Impact 3.8-1:	During grading and construction activities, erosion of exposed soils may occur and pollutants generated by site development activities may result in water quality impacts if erosion control measures are not implemented. This is considered a potentially significant impact. (Less than Significant with Mitigation).

The proposed project would result in the disturbance of approximately 50 acres of the 276 acre project site and would involve the excavation of approximately 162,073 cubic yards of soil. Of this amount 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. Once vegetation is removed at the project site, the exposed and disturbed soil would be susceptible to high rates of erosion from wind and rain if grading were to occur between October 15 and April 15, resulting in sediment transport from the project site and potentially deep scarring of the landscape.

Delivery, handling and storage of construction materials and wastes, as well as use of construction equipment on-site during the construction phase of the project, will

introduce a risk for storm water contamination, which could impact water quality. Spills or leaks from heavy equipment and machinery can result in oil and grease contamination of storm water. Some hydrocarbon compound pollution associated with oil and grease can be toxic to aquatic organisms at low concentrations. Staging areas, or building sites can be the source of pollution due to paints, solvents, cleaning agents, and metals contained in the surface of equipment and materials. The impacts associated with metal pollution of storm water include toxicity to aquatic organisms, bioaccumulation of metals in aquatic animals, and potential contamination of drinking supplies. Pesticide use (including herbicides, fungicides, and rodenticides) associated with site preparation work is another potential source of storm water contamination. Pesticide impact to water quality includes toxicity to aquatic species and bioaccumulation in larger species through the food chain. Gross pollutants such as trash, debris, and organic matter are additional potential pollutants associated with the construction phase of the project. Potential impacts include health hazards and aquatic ecosystem damage associated with bacteria, viruses and vectors, which can be harbored by pollutants.

Implementation of mitigation measure MM 3.5-5a would require that the project applicant prepare a Storm Water Pollution Prevention Plan (SWPPP) in accordance with the NPDES Construction Activities general permit which would include an erosion control plan in accordance with Chapter 16.12 of Monterey County Code and construction-phase housekeeping measures for control of contaminants. The plan shall be prepared by a registered civil engineer, or approved erosion control specialist and submitted for approval prior to permit issuance for building, grading, or land clearing. The erosion and sediment control plan shall demonstrate how the proposed project would effectively minimize soil erosion and sedimentation from the project site and must also provide for the control of runoff from the site. The SWPPP will also set forth the best management practices monitoring and maintenance schedule and responsible entities during the construction and post-construction phases. Implementation of mitigation measure MM 3.5- 5a would reduce short-term erosion and impacts to surface water quality to a less than significant level.

Long Term Surface Water Runoff

Impact 3.8-2:	Implementation of the proposed project would alter the existing drainage pattern and increase the amount of impervious surfaces on the project site due to construction of the hotel, residences, roadways, driveways, and other amenities. This would be considered a potentially significant impact. (Less than Significant with Mitigation)

Implementation of the proposed project would affect approximately 50 acres of land representing a very small portion (four percent) of the total basin (1,160 acres). Approximately 23 acres of the project site (two percent of the total basin) is expected to contain impermeable surfaces (e.g. buildings and roadways). Because this is such a small percentage of the overall drainage basins, no significant increase in outflow from the basin is anticipated. However, because the project is to be built in the flatter lands that are tributary to the drainage channel, an impact to the current drainage patterns can be expected. Flows that are now delivered to the main channel via existing drainages and overland sheet flow will require collection and routing via culverts, piped storm drainage systems, or open ditches with erosion protection (CH2MHill 2005c).

The main drainage channel through the project site has an approximate width of 50 feet. The adjacent lands southerly of this channel are relatively flat and extend several hundred feet beyond the top of bank. The current bankfull capacity of the primary drainage channel is approximately 4,000 cfs excluding any existing culverts. The channel has been replaced by culverts on in several sections. These culverts will be removed and the channel will be restored to its natural capacity in those areas.

Two new stream crossings are proposed, and a third will be placed in the location of an existing culvert. These stream crossings will need to be designed and engineered to convey the 100 year storm event to preclude flooding on the project site.

As shown in Table 3.8-1, Pre- and Post Project 10-Year and 100-Year Storm Events, storm water volumes for the entire watershed were found to increase from 117.5 acre-feet (123.5 cfs) to 124.0 acre-feet(124.2 cfs) for the 10-year event and from 261.1 acre-feet (310.9 cfs) to 269.6 acre-feet (315.8 cfs) for the 100-year event. This increase in storm water runoff for 6.5 acre-feet (0.7 cfs) for the 10-year storm and 8.5 acre-feet (4.9 cfs) for the 100-year storm translates to 5.5 percent and 3.3 percent, respectively, of the total runoff volume and 0.6 percent and 1.6 percent, respectively, of the peak discharge (CH2MHill 2008).

Table 3.8-1 Pre- and Post Project 10-Year and 100-Year Storm Events

Parameter	10-year Storm Event		100-year Storm Event	
	Pre-Project	Post Project	Pre-Project	Post Project
Volume (acre-feet)	117.5	124.0	261.1	269.6
Peak Discharge (cfs)	123.5	124.2	310.9	315.8
Source: CH2MHill, 2008				

Based upon these numbers the existing channel has capacity to convey upstream flows provided that all roadway crossings of the creek provide a waterway opening that is comparable to the existing channel section.

The Monterey County Water Resources Agency (WRA) has a standard design policy that requires storm water detention facilities be provided to limit the 100-year post-development runoff rate to the 10-year pre-development rate. The applicant as part of their initial project indicated that the proposed project, storm water in excess of pre-project conditions will be retained on site through the use of low impact development (LID) methods, often referred to as storm water best management practices (BMPs). Techniques will include roof runoff controls, site design and landscape planting, pervious paving, vegetated swales and buffer strips, and bioretention. The applicant calculated the 10 year storm and 100 year storm run off for the project site and that is included in Table 3.8-2, Required Onsite Detention.

These numbers are based upon a two hour storm event and show that the project would need to detain at least 2.9 acre feet of what to maintain the flow rate of a 10-year storm during a 100 year storm event. The project applicant, on their tentative map dated May 18, 2012, has designed a detention basin to accomplish this purpose. The detention basin

Table 3.8-2 Required Onsite Detention

	2-Hour Volume (CF)	2 Hour Volume (MG)	2 Hour Volume (ac-ft)
100 Year Post Development	197,740	1.5	4.4
10 Year Pre-Development	64,820	0.5	1.5
Difference	**127,920**	**1.0**	**2.9**

CF=Cubic Feet
MG = million gallons
Ac-ft = acre feet
Source: CH2MHill – Drainage Analysis and Drainage Plan Comments (May 2, 2012)

is shown on the eastern end of the project site, just south of the stream channel. The use of LID methodologies and techniques would disperse the detention on the site and minimize the disturbance cased by a detention basin and is thus the preferred option. This would have favorable results for protection of water quality and minimize infrastructure requirements. The mitigation measure below is written to require detention through either LID methodologies or the use of a centralized detention basin to meet the specified design standards.

Mitigation Measure

MM 3.8-2 Prior to recording the Final Subdivision Map or approval of any construction permit, Monterey County Public Works Department and Monterey County Water Resources Agency shall require that the project applicant contract with a registered Civil Engineer to prepare a final drainage plan. The drainage control plan shall design storm water detention facilities to limit the 100-year post-development runoff rate to the 10-year pre-development rate in accordance with Section 16.16.040.B.5 of the Monterey County Code and Monterey County Water Resource Agency (MCWRA). This shall be accomplished through the use of low impact development (LID) features and best management practices (BMP). In the event that the detention objectives can not be accomplished through LID methodologies, a detention basin may be used. In addition, the drainage plan shall incorporate relevant storm water recommendations as described in the Geologic and Soil Engineering Feasibility Report (Landset Engineers 2004). The final drainage plan shall be submitted for review and approval by the Public Works Department and Monterey County Water Resources Agency prior to the recording the Final Subdivision Map or approval of any construction plans.

Implementation of mitigation measure MM 3.8-2 would require preparation of a final drainage plan to detain the difference between the 100-year post-development runoff rate and the 10-year pre-development runoff rate. Therefore, the impact associated with long-term surface water runoff will be reduced to a less than significant level.

Long-Term Surface Water Quality

Impact 3.8-3: The proposed project would result in an increase in long-term surface runoff that may contain urban contaminates that would have an adverse impact on surface water quality. This is considered a potentially significant impact. (Less than Significant with Mitigation)

Implementation of the proposed project would increase the amount of impervious surface. Surface runoff from impervious surfaces may contain urban contaminates. Typical residential runoff contaminants would include: petroleum products and sediments from vehicles on the project site; hazardous materials dumped in the storm water drainage system; and pesticides and fertilizers used on landscaping. During storm events, these pollutants would be flushed by storm water runoff into the storm water drainage system and ultimately to the Arroyo Seco River and the Salinas River and eventually to Monterey Bay where they would contribute to cumulative non-point contaminant loads and result in incremental deterioration of water quality. Excess nutrients from fertilizers can affect water quality by promoting excessive and/or rapid growth of aquatic vegetation reducing water clarity, and causing oxygen depletion. Pesticides also may enter into storm water after application on landscaping areas of the project. Pesticides affect water quality because they are toxic to aquatic organisms and can bio-accumulate in larger species such as birds and fish. This is considered a potentially significant impact to long-term surface water quality.

As discussed in Section 3.5, Geology and Soils, the project site is highly susceptible to erosion. Most of the sediment that travels from the steeper areas of the watershed to the valley of the watershed during annual rainfall events is naturally deposited on the flatter areas of the watershed within the project site. Sediment that currently feeds the channel downstream during more frequent or annual rainfall events is contributed by the adjacent floodplain below the project site through sheet flow. On-site debris basins, as described in Impact 3.5-4, will be designed to retain large-particle sediment and other debris, but not suspended sediment. Passage of suspended sediment will also be aided by the removal of existing culverts and the restoration of natural drainage channel conditions as part of the project. As such, it is expected that nutrients necessary for the health of the channel, downstream of the project site, will continue to be replenished.

Implementation of mitigation measure MM 3.5-5 and MM 3.8-2 would require that the project applicant contract with a registered engineer to prepare an erosion control plan, and a Storm Water Pollution Prevention Plan (SWPPP), and a final drainage plan. The SWPPP shall document best management practices (filters, traps, bio-filtration swales, etc.) to ensure that urban runoff contaminants and sediment are minimized during site preparation, construction, and post construction periods. The final drainage plan shall include mitigation measures that shall reduce the volume and runoff rate of storm water flow. The following mitigation measure would incorporate water quality control measure in the drainage design reducing this impact to a less than significant level.

Mitigation Measure

MM 3.8-3 To prevent the potential contamination of downstream waters from urban pollutants, Monterey County Planning Department, Public Works Department and Water Resources Agency shall require that the storm drainage system design, required under mitigation measure MM 3.8-2,

includes, but is not limited to the following components: grease/oil separators; sediment separation; vegetative filtering to open drainage conveyances and detention basins; and on-site percolation of as much run-off as feasible, including diversion of roof gutters to French drains or dispersion trenches, dispersion of road and driveway runoff to vegetative margins, or other similar methods. Storm water shall not be collected and conveyed directly to a natural drainage without passing through some type of active or passive treatment. Said provisions shall be incorporated into the storm drain system plans submitted to the County for plan check.

Implementation of the above mitigation measures would reduce impacts to surface water quality to a less than significant level.

Flooding

The project is located approximately 1,000 feet above sea level and well away from the coastline. The project is not located downslope from any lakes, water storage facilities or creeks. Development of the proposed project will not place housing or structures within a 100-year floodplain, beneath a dam or behind a levee. Inundation due to seiche or tsunamis is not possible. Therefore, the proposed project will result in no impact in regards to flooding or inundation.

Long-term Water Supply

Impact 3.8-4:	Implementation of the proposed project would commit groundwater use to the proposed uses, at a rate of approximately 63.5 acre-feet per year. Groundwater in the Forebay subarea and the Salinas Valley Groundwater Basin would not be substantially affected by the required water withdrawals. Therefore, this is considered a less than significant impact.

Assuming year-round full occupancy, the proposed project is conservatively projected to use 42,380 gallons of potable water per day (CH2MHill 2010c, page 8), which equates to about 47.5 acre-feet of water per year. This water will be reclaimed producing 36,495 gallons per day of reclaimed water which will be used for irrigation. An additional 14,280 gallons per day (16 acre-feet per year) would be used for irrigation. Due to less reclaimed water being available during the initial phases of the project, additional water will be needed for the irrigation. The supplemental irrigation water will be highest in Phase 1 requiring 32,329 gallons per day with reductions being achieved in each phase until build out is accomplished. The projected water use would initially be 84.7 acre-feet per year and would be reduced as the site builds out to 63.5 acre-feet per year (47.5 acre-feet per year potable plus 16 acre-feet per year for irrigation).

The determination of an adequate water supply related to the 1982 General Plan comes from Title 19 of the Monterey County Code (Subdivisions) which requires that a project involving a Tentative Subdivision Map demonstrate a Long Term Water Supply (safe yield.) The definition of safe yield is the amount of water than can be extracted continuously from the basin or hydrologic sub-area without degrading water quality, or damaging the economical extraction of water, or producing unmitigable adverse environmental impacts.

As noted above the Salinas Valley Groundwater Basin has been subject to seawater intrusion, and overdraft of groundwater supplies. New development in this basin without mitigation would have the affect of adding to the degradation of water quality (sea water intrusion) and expanding the overdraft concern unless mitigation is provided. The SVWP was initiated to address seawater intrusion and overdraft within the Salinas Valley Basin.

The certified FEIR for adoption of the 2010 Monterey County General Plan (October 26, 2010, Resolution Nos 10-290 and 10-291) found that "current water supply planning, with mitigation, is adequate to address overdraft and saltwater intrusion in the Salinas Valley up to the 2030 planning horizon (page 4.3-2)." This is supported by the statement:

> *In the Salinas Valley, the SVWP will provide sufficient additional supplies from the system's reservoirs to meet 2030 projected demands and halt further seawater intrusion. The impacts of the 2007 General Plan would be less than significant within the Salinas Valley for water supply during the 2030 planning horizon. The SVWP will substantially reduce summer demand on groundwater resources in the Salinas Valley. This is expected to reduce or halt the seawater intrusion at its current line in the Castroville area. The SVWP, in conjunction with the Monterey County Water Recycling Project (CSIP), is expected to meet both urban and agricultural water needs in the Salinas Valley to 2030.* (Monterey County Water Resources Agency 2001, p 4.3-148)

The FEIR certified for the General Plan contemplated the effects of new development during the 2030 planning horizon and found that the water projects put into place adequately address groundwater overdraft and seawater intrusion. Paraiso Springs is a property identified in the General Plan as being considered for development (See CSV-1.1). While a net deficit may currently exist, the additional water use will not substantially add to the current deficit, and will not interfere with the anticipated balancing effect of the SVWP and CSIP by 2030. The result is that there is a safe yield for the use of water associated with this development in that the project will not adversely affect groundwater quality, will not adversely affect the economic extraction of water, and will not produce unmitigable adverse environmental impacts. The use of between 84.7 and 63.5 acre feet per year is considered a less than significant impact.

The potable water would be produced from two on-site wells capable of a combined production rate of about 196 gallons per minute (the average pumping rate to achieve 42,380 gallons per day would be about 39 gallons per minute). The wells are located at the eastern side of the project site. Following use, the potable water would be treated at an on-site treatment plant and disposed of as surface discharge (including irrigation) within the project site. The pools and spa facilities would utilize hot spring flows, and supplemental irrigation water would be recycled from the potable supply wastewater and pool and spa outflows. Water discharged to the surface would flow off as surface run-off, evaporate, transpire, or percolate into the soil. Most water landing on the surface within coastal groundwater basin valley bottoms will not percolate to groundwater (United States Geological Survey 1995), although, the Forebay subarea has highly permeable soils, and significant recharge in this area is attributed to applied water (Monterey County Water Resources Agency 2006).

When water is pumped from a well, a depression in the groundwater table or potentiometric surface that has the shape of an inverted cone develops around the well. This depression is referred to as the cone of depression and defines the area of the well's radius of influence. The depth and horizontal extent of the cone of depression is a product of the aquifer's characteristics and the pumping rate. When two wells are drilled sufficiently close to one another, the cones of depression can overlap, and drawing water from one well can potentially have an adverse effect on the other well.

The project site is in a very lightly populated area, with few other wells. The nearest irrigated agriculture is located about one mile east of the project site, and nearly two miles from the project well sites; therefore, it assumed that the nearest neighboring well would be no closer than about 7,500 feet. The potential for interference between two adjacent wells can be calculated using the Modified Theis Nonequilibrium equation, with regional values of the aquifer parameters. In the Forebay subarea, a 1,000 gallon per minute well would require a setback of up to 28,000 feet to ensure zero draw-down on a neighboring well, or a setback of 1,150 feet to ensure a drawdown of less than five feet (Bierman Hydro-Geo-Logic 2012). The proposed 196 gallon per minute wells would require about one-fifth the setback, or a maximum of 5,600 feet (for zero drawdown) or 230 feet (for a five-foot drawdown). The wells are located in excess of 5,600 feet from neighboring wells within the Forebay subarea, so no adverse effect would be observed at neighboring wells.

This page intentionally left blank.

3.9 LAND USE AND PLANNING

3.9.1 Introduction

This section of the DEIR provides a description of existing land use and planning policies that apply to the project site, and an analysis of impacts regarding land use compatibility and community impacts associated with the proposed project. The current Monterey County General Plan was adopted in October 2010. However, the date that the proposed project was accepted as complete (August 28, 2005) makes the project subject to the policies contained in the 1982 General Plan. As such, the description and analysis within this section is based primarily on the *Monterey County General Plan* (1982 with Amendments through November 5, 1996) and the *Central Salinas Valley Area Plan* (1987*)*, a component of the 1982 General Plan.

3.9.2 Environmental Setting

Region

The project site is located in the unincorporated portion of southern Monterey County. Monterey County contains a broad array of land use types. The largest land group in the county is agricultural land, followed by public and quasi-public lands. Urban development is primarily located along Monterey Bay and in the Salinas Valley. Rural and semi-rural development is scattered throughout the county. The development footprint of the unincorporated area represents less than three percent of the total area of the County. The City of Soledad is located approximately eight miles to the northeast of the project site and the City of Greenfield is located approximately seven miles to the east of the project site.

The project site is bordered to the north, west and south by the Santa Lucia Mountains, and to the east by rural residences and agricultural land. The surrounding land is designated by the *Monterey County General Plan* for farmland and rural grazing uses, and is currently used for agriculture and vineyards (where slope allows), and grazing in the steeper areas.

Project Site

The project site is approximately 235 acres in size and is located between the crest of the Sierra De Salinas and the Salinas Valley. Paraiso Springs Road is a two-lane county road that terminates at the site. There are numerous rural dirt roads that transverse the site.

The project site is visible on the approach from Paraiso Springs Road and is identifiable by several tall palm trees. Several residences are located below and to the east of the site on Paraiso Springs Road. The buildings currently on the 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, a miner's shack, and several small outbuildings. Several springs and pools are located throughout the site. Refer to Figure 2-3, Site Characteristics, presented earlier.

The *Monterey County General Plan* land use designation for the site is Commercial." The Monterey County Zoning Ordinance (Title 21) designations for the three parcels that make up the project site are as follows:

418-381-021-000: Visitor Serving/Farmland with a Minimum 40-acre Lot Size (VO/F/40)

418-361-004-000: Permanent Grazing/ Visitor Serving/Farmland (PG/40/VO/F/40)

418-381-022-000: Visitor Serving (VO)

3.9.3 Regulatory Background

Monterey County General Plan

The Monterey County General Plan is the broad, comprehensive planning document for the unincorporated areas of the County. The *Monterey County General Plan* contains goals, objectives, and policies to maintain and enhance the County's rural character, natural resources, and economic base. Policies contained within the Monterey County General Plan are intended to allow for adequate residential and industrial growth in areas best suited for development, while restricting urban sprawl and indiscriminate development. At the countywide level, the *Monterey County General Plan* designates all proposed major land uses by one of seven basic designations: Residential, Commercial, Industrial, Agricultural, Resource Conservation, Public/Quasi-Public, and Transportation.

Central Salinas Valley Area Plan

The *Central Salinas Valley Area Plan*, a component of the *Monterey County General Plan*, was prepared under the guidance of the Central Salinas Valley Citizens Advisory Committee, appointed by the Board of Supervisors. The ideal foundation of the Central Salinas Valley Area Plan is preservation of the areas agricultural vitality and rural character. The *Central Salinas Valley Area Plan* attempts to accommodate the valley's land uses by directing growth to areas where development will have the least impact on agricultural activities. Specific areas are designated on the land use plan, which is reserved for future expansion and growth of the cities throughout the annexation process. In the unincorporated areas, the plan directs growth away from remote areas and toward areas where some development has already occurred and where public services and facilities are available. The plan also provides areas for the expansion of industries currently experiencing growth and providing jobs.

Monterey County Zoning Ordinance

The Monterey County Zoning Ordinance (Title 21) was adopted by the Monterey County Board of Supervisors in 1991 and amended several times. The Zoning Ordinance applies to the unincorporated areas outside of the coastal zone. The Zoning Ordinance implements land use designations established in the General and Area Plans, and it has created various zoning districts, in addition to regulations and permit processes that set standards for land uses, including the allowed types, intensity of development, and setbacks.

The project site is designated within the Commercial-Visitor Serving (VO) zoning district. The purpose of the VO zoning district is to service the needs of visitors and professional services to Monterey County.

3.9.4 Analytical Methodology and Significance Threshold Criteria

Methodology

This Land Use and Planning section provides a description of existing land use and planning policies and their relation to the proposed project. This analysis is based primarily on the 1982 General Plan and zoning ordinance. Each of these documents provides goals, policies, and standards intended to guide development in accordance with local objectives. Each of these documents was reviewed for relevant information, and a determination of Project consistency is provided below.

As identified in the introduction to this section, the current Monterey County General Plan was adopted in October 2010. However, the date that the proposed project was accepted as complete (August 2005) makes the projects subject to the policies contained in the 1982 General Plan. As such, the description and analysis within this section is based primarily on the *Monterey County General Plan* (1982 with Amendments through November 5, 1996) and the *Central Salinas Valley Area Plan* (1987*),* a component of the 1982 General Plan.

Significance Threshold Criteria

As described in Appendix G of the CEQA Guidelines, a project may create a significant environmental impact if it would:

- Physically divide an established community.
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan; specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect; or
- Conflict with any applicable habitat conservation plan or natural community conservation plan.

The general plan for a jurisdiction includes goals and policies associated with land use and planning, as described above. Accordingly, a project may create a significant environmental impact if it would conflict with any of these policies. A consistency analysis of the proposed project with the *General Plan* and the *Central Salinas Valley Area Plan* (a component of the *General Plan)* is described below.

Impacts and Mitigation Measures

Divide an Established Community

The project site is located west of and approximately midway between the cities of Soledad and Greenfield in unincorporated Monterey County. Surrounding development consists of existing agricultural uses and rural residential uses located along Paraiso Springs Road. There is no established community in the project vicinity. Therefore the proposed project would not divide an established community. There is no impact.

Conflict with a Habitat Conservation Plan

The project site is not located within a habitat conservation plan or natural community conservation plan area. Therefore, there would not be a potential conflict with such a conservation plan; therefore, there would be no impact.

Conflict with a Land Use Plan or Policy

Impact 3.9-1:	The proposed project would not conflict with any land use plan, policy, or regulation of any agency with jurisdiction over the project including but not limited to the Monterey County General Plan, Central Salinas Valley Area Plan or the Monterey County Zoning Ordinance. This is considered a less than significant impact.

This consistency analysis provides a discussion of whether the proposed project meets the goals and policies of any relevant land use plan, policy, or regulation of any agency with jurisdiction over the project. Relevant documents include the *Monterey County General Plan*, the *Central Salinas Valley Area Plan*, and the Monterey County Zoning Ordinance.

Table 3.9-1, Project Consistency Analysis, below, identifies consistency findings with each relevant policy of the General Plan and Central Salinas Valley Area Plan. A summary and conclusion of consistency with the General Plan, the Central Salinas Valley Area Plan, and the Monterey County Zoning Ordinance follows presentation of the table.

Monterey County General Plan

Overall, the proposed project is consistent with the intent of the Monterey County General Plan policies as outline in Table 3.9-1 and evaluated throughout this EIR. The proposed project will:

- Preserve open space areas to protect scenic vistas and biological resources;
- Incorporate design and construction practices to conserve soil resources, water quality, and environmentally sensitive areas;
- Conserve energy through building and site design;
- Protect human life and structures from seismic and fire hazards;
- Ensure compatible land uses;
- Provide for adequate, safe, and effective transportation facilities; and
- Allow for the adequate provision of public services.

Central Salinas Valley Area Plan

The Area Plans provide supplemental policies that provide further guidance for specific geographic areas to ensure that future development is consistent with the surrounding land uses in these areas. The supplemental policies provide specific guidelines for the types and locations of new development and how this development must be compatible with the existing land uses. Protection of natural resources and the continued economic viability of the agricultural industry are supported through the implementation of these supplemental policies. The Central Salinas Valley Area Plan identifies Paraiso Hot Springs as a Special Treatment Area and notes that "The Paraiso Hot Springs properties shall be designated a STA for recreation and visitor serving land uses." The policies discussed in Table 3.9-1 include standards to guide development in this area.

Table 3.9-1 Consistency Analysis with the Monterey County General Plan and Central Salinas Valley Area Plan

Policy Number	Policy	Consistency Determination
Aesthetics		
Policy 26.1	The County in coordination with the cities shall manage the type, location, timing, and intensity of growth in the unincorporated area	**Consistent.** The project site is designated as "Commercial" in the General Plan. This category applies to areas which are suitable for the development of retail and service commercial uses, including visitor accommodation uses. The project site was an operating resort until approximately 2003. The proposed project is consistent with the historic use and the general plan designated use. Therefore, the proposed project is consistent with this policy.
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.	**Consistent.** The proposed project would retain approximately 188 acres as open space to accommodate streams, hiking trails, and trailside overlooks, which is approximately 80% of the project site. The project is also in a location not readily visible from significant public viewing areas. Therefore, the proposed project is consistent with this policy.
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 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.	**Consistent with Mitigation.** Implementation of mitigation measure MM 3.1-2, presented in Section 3.1, Aesthetics and Visual Resources of this EIR, 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**.**

Policy Number	Policy	Consistency Determination
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.	**Consistent with Mitigation.** Implementation of mitigation measure MM 3.1-3, presented in Section 3.1, Aesthetics and Visual Resources of this EIR, would ensure that the proposed project would have a less than significant light and glare impact by complying with Policy 26.1.20 in the Monterey County General Plan. Therefore, with mitigation the proposed project is consistent with this policy.
Policy 26.1.6.1 (CSV)	Development shall have appropriate review where it is permitted in sensitive or highly sensitive areas as shown on the Scenic Highways and Visual Sensitivity Map.	**Consistent.** Paraiso Springs is identified as a "highly sensitive area" on the Scenic Highways and Visual Sensitivity Map. Section 3.1, Aesthetics and Visual Resources of this EIR, along with review by County staff, the Planning Commission, and the Board of Supervisors, provides the appropriate review. Therefore, the proposed project is consistent with this policy.
Policy 40.1.2 (CSV)	The County shall pursue measures to obtain scenic road designation for Highways 146 and 25, Arroyo Seco Road, Bitterwater Road, and Elm Avenue.	**Not applicable.** 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. Therefore, this policy is not applicable to the proposed project.
Air Quality and Climate Change		
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.	**Consistent.** The project applicant proposes a shuttle service for non-management employees that would transport the employees to the resort from an existing park-and-ride lot located on Front Street in downtown Soledad. In addition, a shuttle service will also be available for guests arriving at the Monterey Peninsula Airport and for day trips, such as wine tours, and trips to the Monterey Peninsula and the Pinnacles National Monument. Therefore, the proposed project is consistent with this policy.

Policy Number	Policy	Consistency Determination
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.	**Consistent with Mitigation.** 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 significantly to an existing or projected air quality violation. Implementation of mitigation measure 3.2-1, presented in Section 3.1, Air Quality of this EIR, 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. Therefore, with mitigation, the proposed project is consistent with this policy.
Policy 14.3.1 (CSV)	The County should encourage energy-efficient business and agricultural practices.	**Consistent with Mitigation.** The applicant-proposed measures address several energy reduction opportunities that appear to be applicable to and feasible for the proposed project. Mitigation Measure 3.4-1 requires additional measures that would contribute to an even greater energy savings. With the implementation of these measures, applicable and feasible reduction opportunities available to the project have been applied. Therefore, with mitigation, the proposed project is consistent with this policy.
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.	**Consistent.** The applicant proposes utilization of renewable energy sources including incorporation of solar energy generation and orientation of buildings to maximum solar exposure (refer to Section 2.3, Project Objectives). Therefore, the proposed project is consistent with this policy.
Biological Resources		
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.	**Consistent.** 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.
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.	**Consistent with Mitigation.** Implementation of mitigation measure 3.1-2, presented in Section 3.1, Aesthetics and Visual Resources of this EIR, would 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 and vegetation**.**

Policy Number	Policy	Consistency Determination
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.	**Consistent with Mitigation.** Implementation of mitigation measures 3.3-1a would require replacement habitat for any losses to bat habitat on site. Mitigation measures 3.3-1b through d would require presence/absence pre-construction surveys and construction monitoring to ensure protection/avoidance and if necessary, replacement of habitat. In addition mitigation measures 3.3-2a and b require that the 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. Finally mitigation measure 3.3-3 requires that measures are taken to ensure wildlife corridors and migratory bird corridors, including nests are not disturbed.
Policy 9.1.2	Development shall be carefully planned in areas having high value for fish and wildlife reproduction.	**Consistent with Mitigation.** Mitigation measure 3.3-3 requires that measures are taken toe ensure wildlife corridors and migratory bird corridors, including nests are not disturbed. See also mitigation measure to protect habitat as discussed under Policy 9.1.1 above.
Cultural and Historic Resources		
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.	**Consistent.** 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. The identified cultural significance of the site has been taken into consideration in environmental evaluation of the site (refer to Section 3.5 Cultural Resources). Therefore, the proposed project is consistent with this policy.
Policy 12.1.3	All proposed development, including land divisions, within high sensitivity zones shall require an archaeological field inspection prior to project approval.	**Consistent.** Several archaeological field inspections have been conducted for the site and the road improvement area. These evaluations have been taken into consideration in environmental evaluation of the site (refer to Section 3.5 Cultural Resources of this EIR). Therefore, the proposed project is consistent with this policy.
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.	**Consistent.** See discussion regarding consistency determination with Policy 12.1.3 above. The proposed project is consistent with this policy.

Policy Number	Policy	Consistency Determination
Policy 12.1.6	Where development could adversely affect archaeological resources, reasonable mitigation procedures shall be required prior to project approval.	**Consistent with Mitigation.** Mitigation measures 3.5-2 a-c and 3.5-3a-c, presented in Section 3.5 Cultural Resources of this EIR, are required to ensure that the project does not result in advertent damage to known or yet undiscovered archaeological resources in known archaeological sensitivity areas. Therefore, the proposed project is consistent with this policy.
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.	**Consistent with Mitigation.** See discussion regarding consistency determination with Policy 12.1.6 above.
Policy 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.	**Consistent.** See discussion regarding consistency determination with Policy 12.1.1 above.
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.	**Consistent.** The proposed project is for development of a resort that includes a hotel, timeshare units, visitor center, restaurant, vineyard and recreational facilities is therefore, consistent with the uses outlined in Policy 28.1.1.1 (CSV). The proposal includes plans and provisions to address fire safety, access, sewage treatment, water quality, water quantity, drainage, and soil stability issues as evaluated in this EIR. Where impacts have been identified in these areas, appropriate mitigation is identified. Therefore, the proposed project is consistent with this policy.
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.	**Consistent.** See discussion regarding consistency determination with Policy 12.1.1 above.

Policy Number	Policy	Consistency Determination
Geology and Soils		
Policy 3.1.1	Erosion control procedures shall be established and enforced for all private and public construction and grading projects.	**Consistent with Mitigation.** Implementation of mitigation measure 3.5-5a would reduce impacts from accelerated erosion to a less than significant level by requiring the project applicant prepare a SWPPP and implement an erosion control plan for the proposed project. Therefore, with mitigation, the proposed project is consistent with this policy.
Policy 3.2.2	Land having a prevailing slope above 30 percent shall require adequate special erosion control and construction techniques.	**Consistent with Mitigation.** Implementation of mitigation measures 3.5-1a and 3.5-3a, -b and c in Section 3.5, Geology and Soils of this EIR, would require compliance with California Department of Mines & Geology Special Publication 117 engineering measures, and the most recent Building Code requirements to address indirect slope-failure. Mitigation measures 3.5-4a and b would ensure that the potential for landslide is reduced to a less than significant level by requiring preparation of a Final Geologic and Soil Engineering Feasibility Report prior to issuance of a grading permit.
Policy 15.1.2	Faults classified as "potentially active" shall be treated the same as "active faults" until geotechnical information demonstrating that a fault is not "active" is accepted by the County.	**Consistent.** The closest earthquake active fault zone to the project site is the San Andreas Fault, located 30-km to the northeast. Based on the distance of the nearest faults to the project site, the proposed project would not expose people or property to ground rupture and no impact is expected. Therefore, the potential for ground surface rupture due to faulting is considered to be low and no mitigation is required. Therefore, the proposed project is consistent with this policy.
Policy 15.1.3	The lands within one-eighth mile of active or potentially active faults shall be treated as a fault zone until accepted geotechnical investigations indicate otherwise.	**Consistent.** See discussion under Policy 15.1.2 above.
Policy 15.1.4	All new development and land divisions in designated high hazard zones shall provide a preliminary seismic and geologic hazard report which addresses the potential for surface ruptures, ground shaking, liquefaction and landslides before the application is considered complete. This report shall be completed by a registered geologist and conform to the standards of a preliminary report adopted by the County.	**Consistent.** The proposed project would be constructed in Monterey County, a region of high seismic risk, but the site is not located within a California Earthquake Fault Zone. A Geologic and Soil Engineering Feasibility Report was prepared in 2004 by a registered geologist (Brian Papurello with Landset Engineering) for the project (Landset 2004). Therefore, the proposed project would be consistent with this policy.

Policy Number	Policy	Consistency Determination
Policy 15.1.5	A detailed geological report shall be required for all standard subdivisions. In high hazard areas, this report shall be completed by a registered geologist, unless a waiver is granted, and conform to the standards of a detailed report adopted by the County.	**Consistent.** A Geologic and Soil Engineering Feasibility Report was prepared in 2004 by a registered geologist (Brian Papurello with Landset Engineering) for the project (Landset 2004). Therefore, the proposed project would be consistent with this policy.
Policy 15.1.8	The County should require a soils report on all building permits and grading permits within areas of known slope instability or where significant potential hazard has been identified.	**Consistent with Mitigation.** A Geologic and Soil Engineering Feasibility Report was prepared in 2004 by Landset Engineering for the project. In addition, mitigation measure 3.5-1a, presented in Section 3.5, Geology and Soils of this EIR, requires preparation of a seismic design report for the project consistent with the most current version of the California Building Code prior to building permit approval. Recommendations contained within the Geologic and Soil Engineering Feasibility Report, prepared by Landset Engineers (2004) must be referenced and incorporated into the seismic design report. Mitigation measure 3.5-3a requires preparation of a site-specific supplemental liquefaction investigation incorporating measures as recommended in the Geologic and Soil Engineering Feasibility Report prepared by Landset Engineering (2004) prior to issuance of a grading permit. Mitigation measure 3.5-4a requires preparation of a Final Geologic and Soil Engineering Feasibility Report prior to the issuance of a grading permit. Mitigation measure 3.5-5a requires preparation of an Erosion Control Plan and SWPPP prior to the issuance of a grading permit. Therefore, the proposed project would be consistent with this policy.
Policy 15.1.11	For high hazard areas, the County should condition development permits based on the recommendations of a detailed geological investigation and soils report.	**Consistent with Mitigation.** See discussion under Policy 15.1.8 above.

Policy Number	Policy	Consistency Determination
15.1.1.1 (CSV)	The Central Salinas Valley Seismic Hazards Map shall be used to delineate high seismic hazard areas addressed by the countywide General Plan. Areas shown as moderately high, high, and very high hazard shall be considered as "high hazard" areas for the purpose of applying General Plan policies. The map may be revised when new accepted geo-technical information becomes available.	**Consistent.** The site has not been mapped as an area of moderately high, high, and very high hazard, as indicated on the Central Salinas Valley Area Plan Seismic Hazards Map. However seismic shaking hazard is ubiquitous for this region. And all structures within Monterey County, including the proposed project, are required to be designed in accordance with the latest edition of the California Building Code criteria for Seismic Zone IV. Therefore, the proposed project would be consistent with this policy.
Hazards and Hazardous Materials		
Policy 17.3.3	The County shall encourage all new development to be located within the response time of 15 minutes from the fire station responsible for serving the parcel. If this is not possible, on-site fire protection systems (such as fire breaks, fire-retardant building materials, and/or water storage tanks) approved by the fire jurisdiction must be installed or development may only take place at the lowest density allowed for the parcel by the General Plan.	**Consistent.** The project site is located within the Mission Soledad Rural Fire Protection District (hereinafter "District"); with a station located at 525 Monterey Street in the City of Soledad. Backup fire protection services would be provided by the City of Soledad Fire Department. These stations are a little more than nine miles from the project site with an estimated drive time of more than 15 minutes. The proposed project would include a fire protection system, which would consist of hydrant network, pipeline and sprinkler system, and a water reservoir for the project site (see Figure 2-13: Fire Protection Plan presented as a component of the project description for this EIR). Therefore, the proposed project would be consistent with this policy.
Policy 17.3.4	The County shall require all new development to have adequate water available for fire suppression. Water availability can be provided from a conventional water system; from an approved alternative water system if within 300 feet of a habitable structure; by the fire fighting equipment of the fire district within which the property is located; or by an individual water storage facility—water tank, swimming pool, etc.--on the property itself. The fire and planning departments shall determine the adequacy and location of individual water storage to be provided.	**Consistent.** A water reservoir of up to 500,000 gallons will be provided on-site to support the hydrant and commercial building sprinkler systems. The water reservoir will consist of a steel tank, located at the west end of the development, above the western-most condominium units. Assuming a pressure of 40 psi will be required at the highest hydrant (elevation approximately 1305 ft), this tank will need to be located above elevation 1,410 ft. Note: The precise storage volume and type of storage will be established through a detailed engineering study performed during the design development phase of the project. Therefore, the proposed project would be consistent with this policy.

Policy Number	Policy	Consistency Determination
Policy 17.4.1	All residential, commercial, and industrial structural development (not including accessory uses) in high and very high fire hazard areas shall incorporate recommendations by the local fire district before a building permit can be issued.	**Consistent.** County staff will require the project to incorporate any recommendations that may be made by the fire district. Therefore, the proposed project is consistent with this policy.
Policy 17.4.7	The County shall require all subdivisions, multi-unit residential complexes, and commercial and industrial complexes to obtain, prior to permit approval, a statement from the fire department that adequate structural fire protection is available within minimum response time established by this Plan.	**Consistent.** County staff will require the applicant to obtain a statement from the fire department that adequate structural fire protection is available. Therefore, the proposed project is consistent with this policy.
Policy 17.4.13 (CSV)	The Central Valley Fire Hazards Map shall be used to identify areas of high and very high fire hazards for the purpose of applying General Plan policies regarding fire.	**Consistent.** The site is located in a very high fire hazard Area by the Central Salinas Valley Area Plan (1987) Fire Hazards Map. The Project includes fire protection plan for the site. Also, upon approval, the Project would be required by the Monterey County to be in compliance with the goals associated with fire hazards. Therefore, the proposed project is consistent with this policy.
Hydrology and Water Quality		
Policy 5.1.1	Vegetation and soil shall be managed to protect critical watershed areas.	**Consistent with Mitigation.** Implementation of mitigation measure MM 3.5-5 and MM 3.8-2 would require that the project applicant contract with a registered engineer to prepare an erosion control plan, and a Storm Water Pollution Prevention Plan (SWPPP), and a final drainage plan. The SWPPP shall document best management practices (filters, traps, bio-filtration swales, etc.) to ensure that urban runoff contaminants and sediment are minimized during site preparation, construction, and post construction periods. The final drainage plan shall include mitigation measures that shall reduce the volume and runoff rate of storm water flow. Mitigation measure 3.8-3 would incorporate water quality control measure in the drainage design to reduce impacts to surface water quality to a less than significant level.
Policy 5.1.2	Land use and development shall be accomplished in a manner to minimize runoff and maintain groundwater recharge in vital water resource areas	**Consistent with Mitigation.** The project calls for recharging of groundwater by taking secondary treated water and using drip irrigation throughout the development to promote reuse of water and water percolation. In addition, Implementation of mitigation measure MM 3.8-2 would require preparation of a final drainage plan to detain the difference between the 100-year post-development runoff rate and the 10-year pre-development runoff rate. In addition, mitigation measure 3.8-3 would incorporate water quality control measures in the drainage design.

Policy Number	Policy	Consistency Determination
Policy 5.2.2	The County shall establish special procedures for land use, building locations, grading operations, and vegetation removal adjacent to all waterways and significant water features.	**Consistent with Mitigation.** Mitigation measures 3.3-2 a - b require that the Applicant comply with all wetland/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. Implementation of this mitigation will provide consistency with the intent of Policy 5.2.2.
Policy 6.1.1	Increased uses of groundwater shall be carefully managed, especially in areas known to have ground water overdrafting.	**Consistent.** Implementation of the proposed project would commit groundwater use to sustain the proposed uses, at a rate of approximately 63.5 acre-feet per year. Some of this water would be reclaimed (approximately 15 acre-feet per year). The projected annual water use of 48.5 acre feet would amount to about one and one-quarter percent of the surplus in the Forebay Aquifer Subbasin water budget. Groundwater in the Forebay subarea and the greater Salinas Valley Groundwater Basin would not be substantially affected by the required water withdrawals. Therefore, the proposed project would be consistent with this policy. Refer to section 3.8 Hydrology and Water Quality of this EIR
Policy 6.1.2	Water conservation measures for all types of land uses shall be encouraged.	**Consistent.** The proposed project incorporates a system to utilize reclaimed water for irrigation. See response to Policy 6.1.1 above.
Policy 6.1.3	New development shall be phased to ensure that existing groundwater supplies are not committed beyond their safe long-term yields in areas where such yields can be determined by both the Director of Environmental Health and the Flood Control and Water Conservation District. Development levels which generate a water demand exceeding the safe long-term yields of local aquifers shall only be allowed when additional-satisfactory water supplies are secured.	**Consistent.** Implementation of the proposed project would commit groundwater use to sustain the proposed uses, at a rate of approximately 63.5 acre-feet per year. Groundwater in the Forebay subarea and the greater Salinas Valley Groundwater Basin would not be substantially affected by the required water withdrawals. Please refer to section 3.8 Hydrology and Water Quality of this EIR.
Policy 21.2.1	The County shall require all new and existing development to meet federal, state, and county water quality regulations.	**Consistent with Mitigation.** See response to Policy 5.1.1 above.

Policy Number	Policy	Consistency Determination
Policy 21.2.3	Residential, commercial, and industrial developments which require 20 or more parking spaces shall include oil, grease, and silt traps, or other suit able means, as approved by the Monterey County Surveyor, to protect water quality; a condition of maintenance and operation shall be placed upon the development.	**Consistent with Mitigation.** Mitigation measure 3.8-3 would incorporate water quality control measure in the drainage design reducing potential impact to surface water quality to a less than significant level. Also, see response to Policy 5.1.1 above.
Policy 21.3.1	The County should support sewage treatment projects that reduce contamination of surface and groundwater to acceptable levels.	**Consistent.** The proposed project includes construction of a new wastewater collection and treatment and reclaimed system as identified in the Estimated Wastewater Production and Proposed Treatment, Irrigation, and Storage report (CH2MHill 2010b). The wastewater treatment facility would consist of a membrane bioreactor (MBR) combined with ultraviolet light (UV) disinfection wastewater treatment plant, which would include fine screening at the head of the treatment plant The biological process would be designed to achieve nitrate-nitrogen levels of less than 10 mg/L, which is the drinking water standard. Therefore, the proposed project is consistent with this policy.
Policy 21.3.2	The County shall encourage the investigation, under supervision of County health officials, of the cost-effectiveness, reliability and health acceptability of alternative wastewater disposal methods. The County should approve alternate wastewater disposal methods when they are safe and acceptable to the Environmental Health Department.	**Consistent.** See discussion under Policy 21.3.1 above.
Policy 21.3.3	No division of land or use permit for residential, commercial, or industrial uses shall be approved without proof that an adequate waste disposal system can be developed.	**Consistent.** See discussion under Policy 21.3.1 above.

Policy Number	Policy	Consistency Determination
Policy 16.2.1.1 (CSV)	Site plans for new development shall indicate all floodplains, flood hazards, perennial or intermittent streams, creeks, and other natural drainages. Development shall not be allowed to occur within these drainage courses nor shall development be allowed to disturb the natural bans and vegetation along these drainage courses, unless such disturbances are approved by the Flood Control and Water Conservation District. Development shall adhere to all regulations and ordinances related to development in flood plains.	**Consistent with Mitigation.** Mitigation measures 3.3-2a and b in the Biological Resources section of this EIR requires that the applicant 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.
Policy 16.2.1.2 (CSV)	Increased stormwater runoff from urban development shall be controlled to mitigate impacts on agricultural lands located downstream.	**Consistent.** The land below the site is currently used for agriculture and vineyards (where slope allows), and grazing in the steeper areas. However, runoff from the project will be controlled as identified in Section 3.8 of this EIR (Hydrology and Water Quality). County policy requires that runoff from the design storm event not exceed a 10-year event. Therefore the project will be consistent with this policy.
Policy 21.1.2.1 (CVS)	Groundwater recharge areas must be protected from all sources of pollution. Groundwater recharge systems shall be designed to protect groundwater from contamination and shall be approved by both the Director of Environmental Health and the Flood Control and Water Conservation District.	**Consistent with Mitigation.** See response to Policy 5.1.2 in the Hydrology and Water Quality section above
Policy 21.3.1.4 (CVS)	Development shall meet both water quality and quantity standards expressed in Title 22 of the California Administrative Code and Title 15.04 of the Monterey County Code subject to the review of the Director of Environmental Health.	**Consistent.** The planned treated effluent disposal method is land application on the site. The wastewater treatment and distribution system would be designed to produce recycled water that meets the unrestricted use requirements established in Section 60301.230 of Title 22 of the CCR and Title 15.04.

Policy Number	Policy	Consistency Determination
Land Use and Planning		
Policy 26.1.4.3	A standard tentative subdivision map and/or vesting tentative map and/or Preliminary Project Review Subdivision map application for either a standard or minor subdivision shall not be approved until: (1) The applicant provides evidence of an assured long-term water supply in terms of yield and quality for all lots which are to be created through subdivision. A recommendation of the water supply shall be made to the decision making body by the County's Health Officer and the General Manager of the Water Resources Agency, or their respective designees. (2) The applicant provides proof that the water supply to serve the lots meets both the water quality and quantity standards as set forth in Title 22 of the California Code of Regulations, and Chapters 15.04 and 15.08 of the Monterey County Code subject to the review and recommendation by the County's Health Officer to the decision making body.	**Consistent with Mitigation.** The project includes Standard Subdivision (Vesting Tentative Map) to allow the merger and re-subdivision of three parcels into 23 lots. (1) The project has evidence of a long-term water supply as discussed in Section 3.8 of this EIR (Hydrology and Water Quality). (2) The proposed project would have sufficient water supplies available to serve the proposed project from existing resources, and new or expanded entitlements are not needed. However, the water supply for the proposed project currently exceeds the public health standard of 1.0 mg/L for fluoride. Mitigation Measure 3.11-2 will be required to ensure the proposed water systems improvements meet required standards Therefore, with mitigation, the proposed project is consistent with this policy.
Policy 27.3.2	The County shall encourage that open space be provided within and on the fringes of residential areas.	**Consistent.** The proposed project would retain approximately 188 acres as open space to accommodate streams, hiking trails, and trailside overlooks. Therefore, the proposed project is consistent with this policy.
Policy 28.1.1	The County shall designate land for commercial activities sufficient to support and serve the projected population while attempting to minimize conflicts between commercial and other uses.	**Consistent.** The project site has a "Commercial" land use designation and has been identified in the Salinas Valley Area Plan as a "Special Treatment Area: Paraiso Hot Springs." The proposed project is for development of a resort that includes a hotel, timeshare units, visitor center, restaurant, vineyard and recreational facilities is consistent with the Commercial land use designation as well as uses outlined in the provisions for the Special Treatment Area: Paraiso Hot Springs. The project site operated as a resort from approximately 1875 until 2003 and its continued operation as a resort would not introduce a conflict with surrounding land use. Therefore, the proposed project would be consistent with this policy.

Policy Number	Policy	Consistency Determination
Policy 28.1.4	A mix of residential and commercial uses shall be allowed in instances where good site design and utilization of the property can be demonstrated.	**Consistent.** The proposed project is for development of a resort that includes a mix of uses –including hotel, timeshare units, visitor center, restaurant, vineyard and recreational facilities is consistent with the Commercial land use designation as well as uses outlined in the provisions. The Monterey county Planning Commission and Board of Supervisors will determine if the project results in good site design and utilization of the property. Therefore, the proposed project is consistent with this policy.
Policy 34.1.1	The County shall encourage clustering of all types of development, where appropriate, in order to allow for a portion of each project site to be dedicated as permanent open space.	**Consistent.** The proposed project will include approximately 188 acres of open space with amenities such as hiking trails, trailheads, naturist areas, and trailside overlooks. The applicant is required to work with the county to obtain any easements associated with these recreation trails, as required. Therefore, the proposed project would be consistent with this policy.
Policy 28.1.1.2 (CSV)	Recreation and visitor-serving commercial uses shall only be allowed if it can be proven that: (1) areas identified by the Flood Control and Water Conservation District as prime groundwater recharge areas can be preserved and protected form sources of pollution as determined by the Director of Environmental Health and the Flood Control and Water Conservation District; (2) proposed development can be phased to ensure that existing groundwater supplies are not committed beyond their safe long-term yields where such yields can be determined by both the Director of Environmental Health and the Flood Control and Water Conservation District; (3) the main channels of either the Arroyo Seco River or the Salinas River will not be encroached on by development because of the necessity to protect and maintain these areas for groundwater recharge, preservation of riparian habitats, and flood flow capacity as determined by the Flood Control and Water Conservation District; (4) the proposed development meets both water quality and quantity standards expressed in Title 22 of the California Administrative Code and Title 15.04 of the Monterey County Code as determined by the Director of Environmental Health;	**Consistent with Mitigation** (1) See response to Policy 5.1.2 in the Hydrology and Water Quality section above (2) Groundwater in the Forebay subarea and the greater Salinas Valley Groundwater Basin would not be substantially affected by the proposed project's required water withdrawals. (3) The proposed project will not encroach on the main channels of either the Arroyo Seco River or the Salinas River. (4) Mitigation provided in section 3.8 Hydrology and Water Quality ensures that water quality standards are met. (5) The project does not include any septic tanks and instead proposes an on-site waste treatment system. Therefore, this portion of the policy is not applicable to the proposed project. (6) See response to Policy 5.1.1 in the Hydrology and Water Quality section above Therefore, the proposed project is consistent with this policy.

Policy Number	Policy	Consistency Determination
	(5) The proposed development meets the minimum standards of the Regional Water Quality Control Basin Plan when septic systems are proposed and also will not adversely affect groundwater quality, as determined buy the Director of Environmental Health; and (6) The proposed development will not generate levels of runoff which will either cause erosion or adversely affect surface water resources as determined by the Flood Control and Water Conservation District.	
Policy 28.1.1.3 (CVS)	All recreation and visitor-serving commercial land uses shall require a use permit on sites of 10 acres or less. On sites greater than 10 acres, visitor serving recreation and commercial uses may be permitted in accordance with both a use permit and a required comprehensive development plan. The comprehensive development plan shall address hydrology, water quantity and quality, sewage disposal, fire safety, access, drainage, soils, and geology.	**Consistent.** The project includes development on more than 10 acres. The proposed project includes a request for a Combined Development permit that includes a General Development Plan that addresses hydrology, water quantity and quality, sewage disposal, fire safety, access, drainage, soils, and geology. Therefore, the proposed project is consistent with this policy.
Noise		
Policy 22.2.1	The County shall require new development to conform to the noise parameters established by Table 6, Land Use Compatibility for Exterior Community Noise Environments.	**Consistent with Mitigation.** The proposed project was evaluated using noise standards adopted by the County of Monterey. Operational noise impacts were determined to be less than significant. Mitigation has been provided to ensure short-term construction noise impacts are reduced to a less than significant level (mitigation measure 3.9-1 in Section 3.9, Noise of this EIR). Therefore, with mitigation, the proposed project is consistent with this policy.
Policy 22.2.2	The County shall require the appropriate standards of soundproofing construction in all multiple-residential structures as specified in the Building Code.	**Consistent with Mitigation.** See discussion in response to Policy 22.2.1 above.
Policy 22.2.5	The County, in accordance with Table 6, should require ambient sound levels to be less at night (10 p.m. to 7 a.m.) than during the day.	**Consistent with Mitigation.** See discussion in response to Policy 22.2.1 above.

Policy Number	Policy	Consistency Determination
Public Services and Utilities (Water Resources)		
Policy 5.1.1	Vegetation and soil shall be managed to protect critical watershed areas.	**Consistent with Mitigation.** See response to Policy 5.1.1 in the Hydrology and Water Quality section above.
Policy 5.1.2	Land use and development shall be accomplished in a manner to minimize runoff and maintain groundwater recharge in vital water resource areas.	**Consistent with Mitigation.** See response to Policy 5.1.2 in the Hydrology and Water Quality section above.
Policy 6.1.1	Increased uses of groundwater shall be carefully managed, especially in areas known to have groundwater overdrafting.	**Consistent.** See discussion in response to Policy 6.1.1 under Hydrology and Water Quality above.
Policy 6.1.2	Water conservation measures for all types of land uses shall be encouraged.	**Consistent.** See discussion in response to Policy 6.1.2 under Hydrology and Water Quality above.
Public Services and Utilities (Fire Hazards)		
Policy 17.3.1	In no case shall a roadway be less than 12 feet wide. Determination of the width of an all weather surface shall be made at the time of subdivision approval. Further, the County shall revise its subdivision ordinance to address road standards, including minimum width, height clearance, gradient and materials; these standards shall pertain to all new development. Minimum road widths of all new driveways, roads, and streets shall be designed, constructed and maintained according to adopted County standards.	**Consistent.** Fire protection measures implemented within the project site would include 12-foot wide access roads by the Spa, Fitness Center, and condominiums, adequate turn-arounds, and access road bridge designed for highway loading standards. The proposed project includes a Roadway Improvement Plan (Atlas Land Surveys 2012) that was prepared by the project applicant to address the needed improvements on Paraiso Springs Road. Project access and circulation would be considered adequate to provide emergency access to the proposed project (refer to Section 3.12 transportation and traffic) therefore, the proposed project is consistent with this policy.

Policy Number	Policy	Consistency Determination
Policy 17.3.3	The County shall require all new development to be located within the response time of 15 minutes from the fire station responsible for serving this parcel. If this is not possible, on-site fire protection systems (such as fire breaks, fire retardant building materials, and/or water storage tanks) approved by the fire jurisdiction must be installed or development may only take place at the lowest density allowed for the parcel by the General Plan.	**Consistent.** See discussion in response to Policy 17.3.3 under Hazards and Hazardous materials above.
Policy 17.3.4	The County shall require all new development to have adequate water available for fire suppression. Water availability can be provided from a conventional water system; from an approved alternative water system if within 300 feet of a habitable structure; by the fire fighting equipment of the fire district within which the property is located; or by an individual water storage facility – water tank, swimming pool, etc – on the property itself. The fire and planning departments shall determine the adequacy and location of individual water storage to be provided.	**Consistent.** See discussion in response to Policy 17.3.4 under Hazards and Hazardous materials above.
Public Services and Utilities (Fire and Law Enforcement Services)		
Policy 17.3.3	The County shall encourage all new development to be located within the response time of 15 minutes from the fire station responsible for serving the parcel. If this is not possible, on-site fire protection systems (such as fire breaks, fire-retardant building materials, and/or water storage tanks) approved by the fire jurisdiction must be installed or development may only take place at the lowest density allowed for the parcel by the General Plan.	**Consistent.** See discussion in response to Policy 17.3.3 under Hazards and Hazardous materials above.

Policy Number	Policy	Consistency Determination
Policy 46.3	Consider adequate levels of police protection and crime investigations for the protection of life and property in reviewing new development proposals.	**Consistent.** The project site is located in Beat #1 of the County Sheriff's patrol, which covers a large area and has relatively long response times. An increased number of visitors may result in an increase of crime within the project site and the project vicinity. However, the proposed project would have on-site security, with the Sheriff's department acting as a second responder. In addition, all visitors would pass through a security gate at the main entrance, which would significantly reduce crime within the project site. Therefore, the proposed project would be consistent with this policy.
Transportation and Traffic		
Policy 37.2.1	Transportation demands of proposed development shall not exceed an acceptable level of service for existing transportation facilities, unless appropriate increases in capacities are provided for.	**Consistent.** The Paraiso Springs Road/Clark Road intersection and the ten study roadway segments would operate at LOS A with the exception of Arroyo Seco Road between Fort Romie Road and Highway 101, which would operate at LOS B. In accordance with the County of Monterey significance criteria, this is considered an acceptable level of service. Therefore, the proposed project is consistent with Policy 37.2.1.
Policy 37.5.1	The design and location of new development shall consider and incorporate provisions for appropriate transportation modes.	**Consistent**. The location of the proposed project is in a rural area. To reduce the amount of traffic to the project site, the proposed project would provide a private shuttle service for employees from the park and ride lot in Soledad and for guests from the Monterey Peninsula Airport, as well as to activities outside of the area.

Monterey County Zoning Ordinance

Title 21 of the Monterey County Municipal Code is the Zoning Ordinance for inland areas of the unincorporated County. Section 21.22 of Title 21 establishes regulations for development within VO (Visitor Serving) zoning district. The proposed project would implement the Zoning Ordinance regulations for the project site.

More specifically, the use of the proposed project is consistent with the applicable standards of the VO zoning district. The proposed project will include a General Development Plan for the construction of a hotel/resort spa, timeshare facility, and associated accessory uses, which will accommodate both overnight and day guests. These uses would require the proposed project obtain both administrative permits and use permits in accordance with Section 21.22.050 and Section 21.22.060. As shown in the building elevations for the proposed project in Figures 2-9a through Figure 2-9h, presented in the Project Description section of this EIR (Section 2.0), heights of the proposed project would not exceed the structure height regulations included in Section 21.22.070 of the *Monterey Zoning Ordinance*, which is 35 feet unless superseded by a structure height limit noted on the zoning map.

The proposed project would also include measures associated with reduction in vehicles trips, pursuant to Section 21.22.080, which requires compliance with Section 21.64.250. The proposed project would include a shuttle for non-management employees from the City of Soledad park and ride lot on Front Street in downtown Soledad, as well as shuttle for guests from the Monterey Peninsula Airport. In addition, the proposed project would intensify, but would not change the use of the project site per the VO zoning district. The proposed project would therefore be consistent with the *Monterey County Zoning Ordinance*.

This page intentionally left blank

3.10 NOISE

3.10.1 Introduction

This section of the DEIR focuses on the assessment of short-term noise associated with construction activities and the long-term operational noise associated with operation of the proposed project. Long-term operational noise associated with the proposed project would include mobile sources (e.g. increased vehicle trips to the project site) and stationary noise sources, such as mechanical equipment associated with operation of the proposed project. Information in this section is primarily based on short-term noise measurements taken at the project site and project vicinity in April 2008 by RBF Consulting, as well as the estimation of traffic volumes prepared for the proposal from the following sources:

- *Paraiso Springs Resort Traffic Analysis Report* (Hatch Mott MacDonald 2008)
- *Paraiso Springs Resort Traffic Analysis Report. Final Report* (Hatch Mott MacDonald 2011)

Impacts associated with the proposed project are evaluated relative to applicable noise level criteria and to the existing ambient noise environment.

Noise Scales and Definitions

Sound is technically described in terms of the loudness (amplitude) of the sounds and frequency (pitch) of the sound. Noise is typically described as any unwanted or objectionable sound. The standard unit of measurement of the loudness of sound is the decibel (dB). Because the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by determining sound frequencies in a manner approximating the sensitivity of the human ear.

The decibel scale is logarithmic. The logarithmic scale compresses the wide range in sound pressure levels to a more usable range similar to how the Richter scale measure earthquake magnitudes. In terms of human response to noise, a sound 10 dBA higher than another is perceived to be twice as loud; 20 dBA higher, four times as loud; and so forth. Everyday sounds normally range from 30 dBA (very quiet) to 100 dBA (very loud). Examples of various sound levels in different environments are shown in Figure 3.10-1, Sound Levels and Human Response.

Characteristics of Sound Propagation and Attenuation

A number of sources, including mobile sources such as automobiles, trucks and airplanes, and stationary sources such as construction sites, machinery, and industrial operations, can generate noise. Noise generated by mobile sources typically attenuates at a rate between 3.0 to 4.5 dBA per doubling of distance. The rate depends on the ground surface and the number or type of objects between the noise source and the receiver. Mobile transportation sources such as highways that are constructed with hard and flat surfaces, such as concrete or asphalt, register an attenuation rate of 3.0 dBA per doubling of distance. Soft surfaces, such as uneven or vegetated terrain, register an attenuation rate of about 4.5 dBA per doubling of distance from the source. Noise generated by stationary

sources typically attenuates at a rate of approximately 6.0 to 7.5 dBA per doubling of distance from the source.

Placing barriers between the noise source and the receiver can reduce sound levels. In general, barriers contribute to decreasing noise levels only when the structure breaks the line of sight between the source and the receiver. Buildings, concrete walls, and berms can act as effective noise barriers. Wooden fences or broad areas of dense foliage also can reduce noise but are less effective than solid barriers.

In most situations, a 3 dBA change in sound pressure level is considered a "just-detectable" difference. A 5 dBA change (either louder or quieter) is readily noticeable, and a 10 dBA change is doubling (if louder) or a halving (if quieter) of the subjective loudness. Sound from a small localized source (approximating a "point" source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level attenuates or drops-off at a rate of 6 dBA for each doubling of the distance. This decrease, due to the geometric spreading of the energy over an ever-increasing area, is referred to as the inverse square law. However, highway traffic noise is not a single, stationary point source of sound. The movement of the vehicles makes the source of the sound appear to emanate from a line source rather than a point when viewed over some time interval. Since the change in surface area of a cylinder only increases by two times for each doubling of the radius instead of the four times associated with spheres, the change in sound level is 3 dBA per doubling of distance.

Noise Descriptors

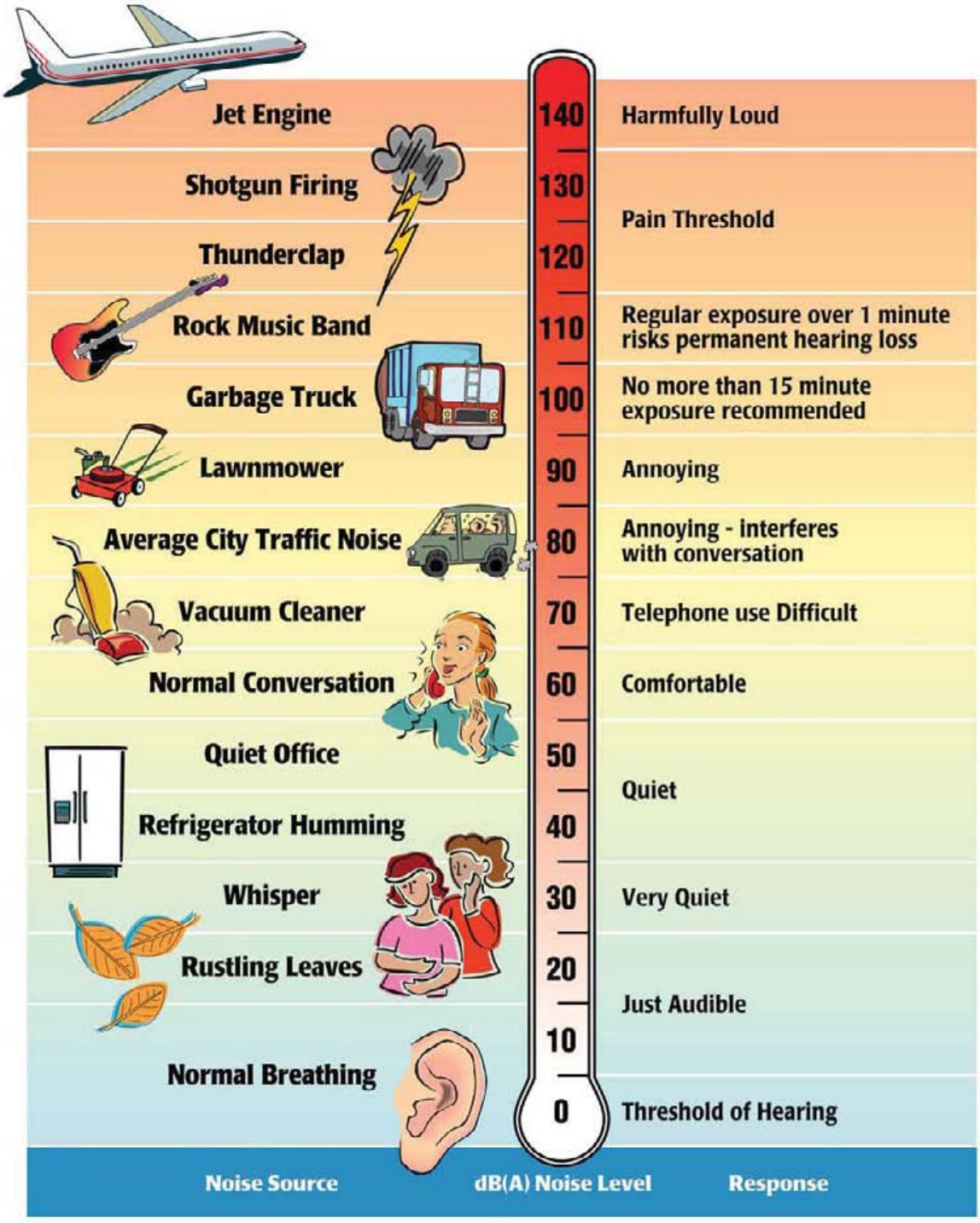
Numerous methods have been developed to measure sound over a period of time. These methods include: (1) the community noise equivalent level (CNEL); (2) the equivalent sound level (L_{eq}); and (3) the day/night average sound level (L_{dn}). These methods are described below.

Community Noise Equivalent Level (CNEL)

The predominant community noise rating scale use in California for land use compatibility assessments is the CNEL. The CNEL reading represents the average of 24 hourly readings of equivalent levels (L_{eq}) based on an A-weighted decibel and adjusted upward to account for increased noise sensitivity in the evening and at night. These adjustments are +5 dBA for the evening (7:00 PM to 10:00 PM) and +10 dBA for the night (10:00 PM to 7:00 AM). CNEL may be indicated by "dBA CNEL" or just "CNEL".

Energy Equivalent Noise Level (L_{eq})

The energy equivalent noise level (L_{eq}) is the sound level containing the same total energy over a given sampling time period. The L_{eq} is the steady sound level which, in a stated period of time, would contain the same acoustic energy as the time-varying sound level during the same period. L_{eq} is typically computed over sampling periods of one, eight, and 24 hours.



Source:

Melville C. Branch and R. Dale Beland, *Outdoor Noise in the Metropolitan Environment*, 1970.

Environmental Protection Agency, *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety (EPA/ONAC 550/9-74-004)*, March 1974.

Source: (see above)

Figure 3.10-1

Sound Levels and Human Response

Paraiso Springs Resort EIR

This page intentionally left blank.

Day/Night Average (L_{dn})

Another commonly used method is the day/night average level (L_{dn}). The L_{dn} measures the 24-hour average noise level at a given location. It was adopted by the U.S. Environmental Protection Agency (EPA) for developing criteria for the evaluation of community noise exposure. It is based on a measure of the L_{eq} (the average noise level over a given time period). The L_{dn} is calculated by averaging the L_{eq} for each hour of the day at a given location after penalizing the "sleeping hours" (defined as 10:00 PM to 7:00 AM), by adding 10 dBA to account for the increased sensitivity of people to noises that occur at night.

Vibration

Vibration is trembling, quivering, or oscillation motion of the earth. Like noise, vibration is transmitted in waves, but in this case through the earth or solid objects.

One of the challenges with developing suitable criteria for groundborne vibration is the limited research into human response to vibration and more importantly, human annoyance inside buildings. Railroad operations are potential sources of substantial ground vibration depending on distance, the type and the speed of trains, and the type of railroad track. People's response to ground vibration has been correlated best with the velocity of the ground. The velocity of the ground is expressed on the decibel scale. Although not a universally accepted annotation, the abbreviation "VdB" is used in this document for vibration decibels.

Typical background vibration levels in residential areas are usually 50 VdB or lower, well below the threshold of perception for most humans. Perceptible vibration levels inside residences are attributed to the operation of heating and air conditioning systems, doors slams and foot traffic. Construction activities, train operations, and street traffic are some of the most common external sources of vibration that can be perceptible inside residences.

3.10.2 Environmental Setting

Region

The principal sources of noise exceeding 60 dBA in the Central Salinas Valley Planning Area are highway traffic along the U.S. Highway 101 corridor, Southern Pacific Railroad operations, and flight operations at Mesa Del Rey Airport in King City. In general, these sources pose no "hazard" because noise levels outside their respective rights of way do not exceed 60 dBA. Other sources of noise include industrial plants, food processing and packing plants, the landfill sites on Johnson Canyon and Jolon roads, oil wildcatting activities, and agricultural equipment. Occasional military exercises at Fort Hunter Ligget also have significant noise impacts over a wide area.

Existing Noise Environment

Ambient Noise Levels

The project site has not been in operation since 2003; however a caretaker is currently present on-site for security purposes. Therefore, existing ambient noise levels at the project site are very low.

To quantify existing ambient noise levels at the project site, RBF Consulting conducted noise surveys on April 16, 2008 at several locations as shown in Figure 3.10-2, Noise Measurement Locations. The noise measurement sites were representative of existing noise exposure in a given time period (15 minutes) within the project site and project vicinity. According to these measurements (see Table 3.10-1, Project and Vicinity Ambient Noise Measurements), noise levels on the project site are approximately 42.0 L_{eq} dBA and range from 45 to 58.6 L_{eq} dBA in the AM between 9:55 and 10:50 AM off-site along Paraiso Springs Road and Arroyo Seco Road.

Table 3.10-1 Project and Vicinity Ambient Noise Measurements (Short-Term)

Site No.	Location	L_{eq} (dBA)	Time
1	Within the Project Site	42.0	9:30 AM
2	Paraiso Springs Road	45.0	9:55 AM
3	Paraiso Springs Road at Clark Road	44.6	10:15 AM
4	Arroyo Seco Road-South	53.2	10:30 AM
5	Arroyo Seco Road at Los Coaches	58.6	10:50 AM

Source: RBF Consulting 2008

Stationary Noise Sources

The primary sources of stationary noise in the vicinity of project site are from typical agricultural uses (e.g. tractors, etc.).

Mobile Noise Sources

The existing noise environment within the project site and vicinity is influenced primarily by agricultural uses surrounding the project site, as well as surface transportation noise emanating from vehicle traffic on area roadways and from local roadways. The project site is surrounded by agricultural and rural residential land uses. The closest roadway to the project site is Paraiso Springs Road, which is a two-lane road.

3.10.3 Regulatory Background

Regulatory requirements related to environmental noise are typically promulgated at the local level. However, federal and state agencies provide standards and guidelines to local jurisdictions.

State

California Department of Health, Office of Noise Control

The California Department of Health, Office of Noise Control, in Guidelines for the Preparation and Content of Noise Elements of the General Plan (February 1976), provided guidance for the acceptability of designated land uses within specific CNEL contours. Residential uses are normally unacceptable in areas whose CNEL exceeds 70 dBA, and conditionally acceptable within 60 to 70 dBA. Commercial/professional office buildings and businesses are normally acceptable in areas with CNEL up to 70 dBA and normally unacceptable in areas whose CNEL exceeds 75 dBA. Commercial uses are conditionally acceptable in areas with a CNEL between 67 and 77 dBA, depending on noise insulation features and noise reduction requirements.

Title 24

Title 24 of the California Code of Regulations (CCR) establishes standards governing interior noise levels that apply to all new multifamily residential units in California. These standards require that acoustical studies be performed prior to construction at building locations where the existing CNEL exceeds 60 dBA. Such acoustical studies are required to establish mitigation measures that will limit maximum CNEL levels to 45 dBA in any inhabitable room. Although there are no generally applicable interior noise standards pertinent to all uses, many communities in California have adopted a CNEL of 45 as an upper limit for interior noise in residential dwellings.

Local

Monterey County General Plan

The *Monterey County General Plan* was adopted by the Board of Supervisers in 1982. Goal 22 in the Monterey County General Plan aims to "maintain an overall health and quiet environment by trying to achieve living and working conditions free from annoying and harmful sounds." The following polices support this goal and are applicable to the proposed project:

Policy 22.2.1 The County shall require new development to conform to the noise parameters established by Table 6, Land Use Compatibility for Exterior Community Noise Environments.

Policy 22.2.2 The County shall require the appropriate standards of soundproofing construction in all multiple-residential structures as specified in the Building Code.

Policy 22.2.5 The County, in accordance with Table 6, should require ambient sound levels to be less at night (10 p.m. to 7 a.m.) than during the day.

Noise Standards

Monterey County's exterior noise-exposure standards are based on parameters established by the California Department of Health, Office of Noise Control and summarized in Table 3.10-2, County of Monterey Exterior Community Noise Land Use Compatibility. Based on these standards, noise levels of 60 dB CNEL or less at various noise-sensitive receptor locations, including single- and multi-family residences, schools, hospitals, churches, and nursing homes are considered "normally acceptable" and noise levels of 60 to 70 dBA CNEL are considered "conditionally acceptable" with the incorporation of noise insulation and mitigation features.

Although 70 dB CNEL may be considered compatible under these conditions, Monterey County policy as stated in the *Monterey County General Plan* is to mitigate exterior exposure in noise-sensitive land uses to 65 dB CNEL, where feasible. In addition, the Monterey County Noise Control Ordinance prohibits the operation of any device within 2,500 feet of any occupied residential dwelling that produces a noise level exceeding 85 dBA at a distance of 50 feet from the source (County Code, Chapter 10.60, County of Monterey 1988).

Table 3.10-2 County of Monterey Exterior Community Noise Land Use Compatibility

Land Use Category	Noise Ranges (L_{dn}) or CNEL dB			
	I	II	III	IV
Passively used open spaces	50	50-55	55-70	70+
Auditoriums, concert halls, amphitheatres	45-50	50-65	65-70	70+
Residential- low density single family, duplex, mobile home	50-55	55-70	70-75	75+
Residential – multi-family	50-60	60-70	70-75	75+
Transient lodging – motels, hotels	50-60	60-70	70-80	80+
Schools, libraries, churches, hospitals, nursing homes	50-60	60-70	70-80	80+
Actively used open spaces – playgrounds, neighborhood parks	50-67	-	67-73	73+
Golf courses, riding stables, water recreation, cemeteries	50-70	-	70-80	80+
Office buildings, business commercial and professional	50-67	67-75	75+	-
Industrial, manufacturing, utilities, agriculture	50-70	70-75	75+	-

Noise Range I - Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

Noise Range II - Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design.

Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

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

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

Source: Monterey County 1982

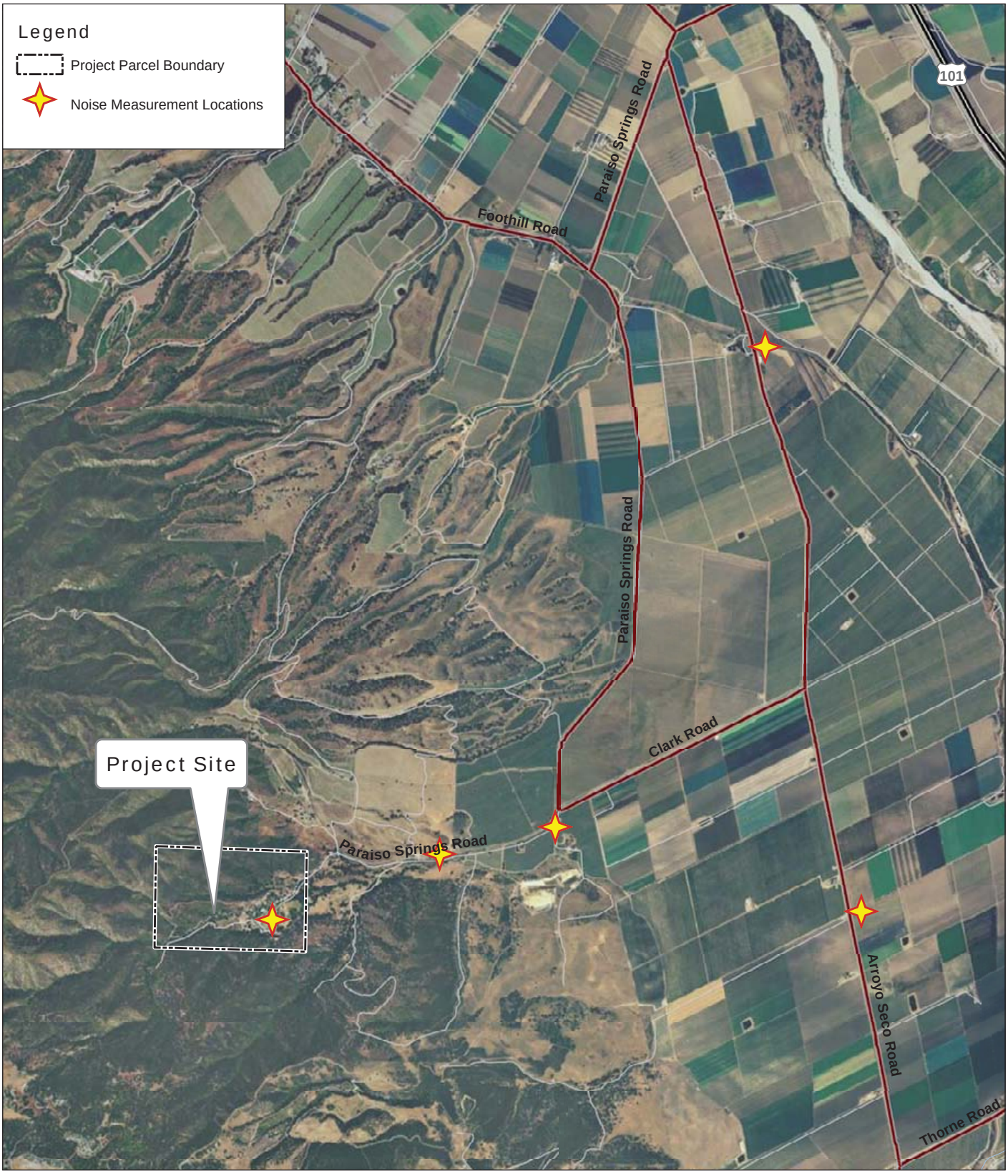
Monterey County Noise Control Ordinance

In addition to the noise standards and policies identified in the *Monterey County General Plan*, Monterey County has also adopted a noise control ordinance (Monterey County Code, Title 10, Chapter 10.60.). The noise ordinance applies to existing stationary noise sources, which are defined in the ordinance as "any machine, mechanism, device, or contrivance." Stationary noise sources are limited to a maximum noise level of 85 dBA at 50 feet. This standard does not apply to aircraft or stationary sources located in excess of 2,500 feet from any occupied dwelling unit.

3.10.4 Analytical Methodology and Significance Threshold Criteria

Methodology

Available information pertaining to noise within the project vicinity was reviewed for the noise analysis, including, but not limited to, the *Monterey County General Plan* (Monterey County 1982) and the *Central Salinas Valley Area Plan* (Monterey County



0 1.25 miles

Source: RBF Consulting 2010

Figure 3.10-2

Noise Measurement Locations

Paraiso Springs Resort EIR

This page intentionally left blank.

1987). Project-related noise components that were identified include both short-term construction noise and long-term operational impacts from increased traffic to the project site. Sensitive receptors (e.g. residential homes) along Paraiso Springs Road in the vicinity of the project site were identified.

Significance Threshold Criteria

In accordance with CEQA, the State CEQA Guidelines (including Appendix G) and agency and professional standards, a project impact would be considered significant if the Project would result in:

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

CEQA does not define what noise or vibration level increase would be considered significant. Typically, in high noise environments a project is considered to have a significant impact if the project would increase the L_{dn} by more than 3 dB (the minimum increase generally perceptible to most people), cause ambient noise levels to exceed the guidelines outlined in the General Plan, or would expose people to vibration levels exceeding the Federal Transit Administration guidelines. Where existing noise levels are well below the General Plan guidelines, a somewhat higher increase (i.e., 5 dB) may be tolerated before the impact is considered significant.

Short-term construction noise impacts would be considered significant if construction activities were to exceed standards adopted by the County of Monterey. The County Code restricts noise from mechanical equipment to 85 dB at 50 feet from the source if it operates within 2,500 feet of an occupied residence. These numerical thresholds will be used to define “Levels exceeding standards.” For projects within Monterey County, the duration and intensity of construction noise is regulated by time limits on grading and other heavy equipment operations. Compliance with these limits plus meeting the ordinance limit from the County Code presumably will create a less than significant impact.

According to the *Monterey County General Plan*, noise standards for residential uses (low density single family) are considered normally acceptable between 50 and 55 L_{dn} dBA and for transient uses (e.g. hotels and motels) between 50 and 60 L_{dn} dBA.

Long-term transportation noise impacts would be considered significant if the proposed project created a substantial increase in ambient noise levels that exceed the County's noise-control standards for transportation noise sources of 60 dBA CNEL/L_{dn}.

Implementation of the proposed project would be considered significant if the proposed project resulted in a substantial contribution to projected future cumulative noise levels at either existing or proposed noise-sensitive receptors that exceeded applicable County noise criteria for land use compatibility.

Impact Analysis

Short-term Construction Noise

Impact 3.10-1	Construction activities associated with the proposed project will result in elevated noise levels in the vicinity of construction activities. Activities involved in construction will typically generate maximum noise levels ranging from 85 to 90 dB at a distance of 50 feet. Construction activities will be temporary in nature and will likely occur during normal daytime working hours. This would be considered a potentially significant impact. (Less than Significant with Mitigation)

During the construction phases of the proposed project, noise would add to the ambient noise environment in the project vicinity. Noise would be generated during the construction phase by a short-term increase in truck traffic along area roadways. A significant project-generated noise source would be truck traffic associated with transport of heavy materials and equipment to and from the project site. According to the project applicant, the proposed project would require the following construction equipment: dozers, scrapers, track and tire-mounted excavators; vibratory, sheep foot 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. This noise increase would be of short duration, and would likely occur primarily during the daytime hours.

Typical noise levels for individual pieces of construction equipment are summarized in Table 3.10-3, Typical Construction Equipment Noise Levels, as shown below.

Table 3.10-3 Typical Construction Equipment Noise Levels

Type of Equipment	Maximum Level (dBA at 50 feet)
Scrapers	88
Bulldozers	87
Heavy Trucks	88
Backhoe	85
Pneumatic Tools	85
Scrapers	88

Notes: dBA = A-weighted decibel.
Source: Cyril M. Harris, Handbook of Noise Control, 1979.

Individual equipment noise levels typically range from approximately 75 to 91 dBA at 50 feet. Typical operating cycles may involve two minutes of full power, followed by three or four minutes at lower power settings. Depending on the activities performed and equipment usage requirements combined average-hourly noise levels at construction sites typically range from approximately 65 to 89 dBA Leq at 50 feet. Assuming a maximum construction noise level of 89 dBA Leq and an average attenuation rate of 6 dBA per doubling of distance from the source, construction activities located within approximately 1,500 feet of noise-sensitive receptors could reach levels of approximately 60 dBA Leq. Sensitive noise receptors are located in the vicinity of the project site, including several single-family homes located along Paraiso Springs Road. However, they are located greater than 1,500 feet from the project site.

If construction activities were to occur during the more noise-sensitive nighttime hours this may also result in increased levels of annoyance and potential sleep disruption due the ambient noise levels during these hours, which would be considered a potentially significant impact. Implementation of the following mitigation measure would reduce the effects to a less than significant level.

Mitigation Measure

MM 3.10-1 During the course of construction, the project developer/applicant shall adhere to Monterey County's requirements for construction activities with respect to hours of operation, muffling of internal combustion engines, and other factors which affect construction noise generation and its effects on noise sensitive land uses. This would include implementing the following measures:

- Limit noise-generating construction operations to between the least noise-sensitive periods of the day (e.g., 7:00 A.M. to 7:00 P.M.) Monday through Saturday; no construction operations on Sundays or holidays;
- Locate construction equipment and equipment staging areas at the furthest distance possible from nearby noise-sensitive land uses;
- Ensure that construction equipment is properly maintained and equipped with noise reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturers' recommendations. Equipment engine shrouds shall be closed during equipment operation, and
- When not in use, motorized construction equipment shall not be left idling.

Implementation of the above mitigation measure would prohibit noise-generating construction activities during the more noise-sensitive daytime hours to noise-sensitive receptors located within the project vicinity. In addition, noise generated by construction activities would be short-term in nature and would not occur during operation of the proposed project. Therefore, the significant construction-related noise impacts would be reduced to a less than significant level.

Expose Sensitive Receptors to Unacceptable Noise Levels from Increased Transporation-Related Noise

Impact 3.10-2	The proposed project would expose existing residents living along Paraiso Springs Road to additional transportation noise. However, resulting noise levels would be within County noise standards for single-family residential uses. Therefore, this is considered a less than significant impact.

The major source of noise with implementation of the proposed project is an increase in traffic to the project site along Paraiso Springs Road. Paraiso Springs Road between the project site and Clark Road will experience an increase in traffic from the existing 85 vehicles per day to approximately 417 vehicles per day under an average 70 percent occupancy. Under 100 percent occupancy, the proposed project would result in a total of 567 vehicles per day. On an average day, Paraiso Springs Road would continue to be a relatively low volume road.

There are several single-family homes located along Paraiso Springs Road that would be affected by an increase in traffic noise along the roadway. Doubling the existing traffic volume can cause a 3 dB increase in the average traffic noise. However, traffic noise levels decrease by 6 dB for each doubling of distance from the point noise source to the receptor and by 3dB to 5dB for each doubling of distance from a line source, like a roadway, depending on the ground cover between the source and the sensitive receptor.

The trips generated by the proposed project are expected to more than double over existing conditions, which would likely increase noise levels by approximately 3dB. However, based on noise measurements taken along Paraiso Springs Road, existing noise levels are between approximately 44.6 and 45.0 L_{eq} dBA. Noise standards for residential uses (low density single family) are considered normally acceptable between 50 and 55 L_{dn}. Even with an increase of 10 L_{eq} dBA, noise levels at the single family residential uses along Paraiso Springs Road in the vicinity of the proposed project would be within Monterey County standards for residential uses. Therefore, the impact associated with the proposed project's increase in traffic noise levels would be considered a less than significant impact.

Long-Term Exposure to Noise

Impact 3.10-3	Operation of the proposed project would result in an increase in noise levels at the project site. However, nearby single-family residential uses are located greater than 1,500 feet from the project site. Adherence to County noise standards for low density residential and transient lodging uses would ensure that potential increase in noise levels at the project site would be less than significant.

Implementation of the proposed project would create new noise sources typical of resort and residential uses. Noise typically associated with residential and hotel uses does not produce noise levels greater than 60 dBA. Noise from residential and hotel/resort uses primarily during the "daytime" hours of 7:00 AM to 10:00 PM. Furthermore residential and transient loading uses are required to comply with the noise standards set forth in the *Monterey County General Plan*. According to the *Monterey County General Plan*, noise standards for residential uses (low density single family) are considered normally acceptable between 50 and 55 L_{dn} dBA and for transient uses (e.g. hotels and motels)

between 50 and 60 L_{dn} dBA. Hotels must also meet structural intra-unit noise transmissions standards in addition to the mandated interior noise standard requirements in the Uniform Building Code (UBC). Therefore, increases in noise levels from future residential and hotel uses within the project site would be considered less than significant.

Exposure of the Proposed Project to Airport and Railroad Noise

The project site is located in the unincorporated portion of southern Monterey County approximately eight miles northeast of the City of Soledad and approximately seven miles east of the City of Greenfield. The closest airport to the project site is located in King City Municipal Airport located approximately 21 miles southeast of the project site. Therefore, the proposed project would not result in an exposure to excessive noise levels from the airport.

The Union Pacific Railroad rail line runs through the City of Soledad, approximately eight miles to the northeast of the project site. Due to the distance of the rail line to the project site, rail noise would not be considered an impact within the project site.

This page intentionally left blank.

3.11 PUBLIC SERVICES AND UTILITIES

3.11.1 Introduction

This section provides information regarding existing public services (fire protection, law enforcement, schools, library services, and parks and recreation) and existing utilities (potable water service, recycled water service, wastewater services, storm water, solid waste management, and gas, electric, and telephone services) in the vicinity of the proposed project and to identify the potential for additional demand for services with implementation of the proposed project. Public services information was obtained from the *Monterey County General Plan* and the *Central Salinas Valley Area Plan*, the Monterey County Sheriff's Office, the Monterey County Health Department, the Soledad Unified School District, and the CalRecycle website. Additional information was also provided by the project applicant. The analysis of utilities is based on the following technical reports, peer reviews and correspondence:

Wastewater

- *Paraiso Springs Resort - Estimated Wastewater Production and Proposed Treatment, Irrigation, and Storage* (CH2MHill 2010);
  - Memo to EMC Planning Group, subject: Paraiso Springs Resort – Review of Wastewater (Wallace Group 2012).
  - Memo to EMC Planning Group, subject: Paraiso Springs Resort – Review of Wastewater. Comments to Applicant's response to Comments –Wastewater (Wallace Group 2013).
- Dave Von Rueden, CH2MHill. Email message to applicant, March 2013.

Potable Water Source, Demand and Quality

- *Paraiso Springs Resort - Estimated Potable Water Demand* (CH2MHill 2009)
  - Memo to EMC Planning Group, subject: Paraiso Springs Resort – Review of Water System (Wallace Group 2012).
  - Memo to EMC Planning Group, subject: Paraiso Springs Resort – Review of Water System. Comments to Applicant's Response to Comments – Water (Wallace Group 2013).
- *Field Pilot Test Report Paraiso Hot Springs Potable Water Treatment Plant: Fluoride Treatment and AD74 Absorption* (AdEdge Technologies, 2012*)*
  - Memo to EMC Planning Group, subject: Paraiso Springs Resort – Review of Water System (Wallace Group 2012).
  - Memo to EMC Planning Group, subject: Paraiso Springs Resort – Review of Water System. Comments to Applicant's Response to Comments – Water (Wallace Group 2013).
- *Paraiso Springs Resort Fluoride Water Treatment Regeneration Effluent Analysis.* (Culligan MATRIX Solutions 2012).

Stormwater Drainage

- *Paraiso Springs Road: Existing Hydrologic and Hydrologic Site Conditions* (CH2MHill 2005).
- *Paraiso Springs Resort - Response to Hydrology and Hydraulic Analysis and Erosion Control Measures Review Comments* (CH2MHill 2008).
- *Paraiso Springs Resort – Drainage Analysis and Drainage Plan Comments* (CH2MHill 2012).

These technical reports are included as Appendix G.

3.11.2 Environmental Setting

Public Services

Fire Protection

Fire protection services in Monterey County are currently provided by more than 20 different organizations, including fire protection districts, volunteer fire departments, fire brigades, the California Department of Forestry and Fire Protection (CDFFP), the U.S. Forest Service, the National Parks Service and the U.S. military (see Figure 3.11-1, Regional Fire Protection Facilities) (Monterey County 2008).

The project site is located within the Mission Soledad Rural Fire Protection District (hereinafter "District"); with a station located at 525 Monterey Street in the City of Soledad. Their 97 square mile service area includes a population of more than 34,000 people. The District is a combination paid/volunteer fire department. The staff consists of one chief, one fire captain, two career fire engineers, two career fire fighters, and 15 volunteer fire fighters (Soledad 2013). The full-time firefighters are trained as emergency medical technicians and certified in the use of semi-automatic defibrillators and an advance airway device. The volunteer firefighters are fully trained as "First Responders." All personnel receive specific training on wildland fire control.

Backup fire protection services would be provided by the City of Soledad Fire Department. The City of Soledad Fire Department owns seven pieces of apparatus utilized for response to a variety of calls for service. This includes a 1,000 gallon, six-crew member closed cab engine, an 850 gallon, six-crew member type four engine, a utility truck, and a command center utility truck that serves as a Mobile Incident Command Post. (Soledad 2013). The City of Soledad Fire Department has a goal for emergency response time of five minutes or less for fire emergencies over 90 percent of the time.

Law Enforcement

The Monterey County Sheriff's Office provides law enforcement services to the unincorporated portions of Monterey County. These services include patrol, crime prevention and crime investigation provided out of stations in Monterey, Salinas, and King City. The project site is served by the South County-King City Sheriff's station.

Source: RBF Consulting 2010

Figure 3.11-1
Regional Fire Protection Facilities

Paraiso Springs Resort EIR

This page intentionally left blank.

As of March 2013, the Sheriff's Office has approximately 391 full-time equivalent staff positions. This included 280 sworn safety officer positions and 111 non-sworn positions. As of March 2013, the Sheriff's Office had 36 vacant positions (Monterey County Sheriffs Office 2013).

The project site is located in Beat #10 of the County Sheriff's patrol, which covers a large area of the Central Salinas Valley that is sparsely populated. This patrol has a relatively long response times (e.g. greater than 10 minutes).

The Soledad Police Department is located at 236 Main Street in the City of Soledad. This station is the nearest police/law enforcement station to the project site and provides general law enforcement duties including the enforcement of federal, state and local laws. In case of an emergency, the Soledad Police Department could provide police support services as part of a mutual aid agreement with Monterey County. The Soledad Police Department has 14 sworn positions and five non-sworn positions, which include one chief, two sergeants, 11 full-time officers, one full-time animal control officer and support staff (Soledad Police Department 2013).

Schools

The Soledad Unified School District is the school district serving the project site. The school district serves approximately 4,444 students in grades K-12 (see Table 3.11-1, Soledad Unified School District Enrollment).

Table 3.11-1 Soledad Unified School District Enrollment

School	Grades	Current Enrollment
Frank Ledesma Elementary School	K-6	631
Gabilan Elementary School	K-6	388
Jack Franscioni Elementary School	K-6	529
Rose Ferrero Elementary School	K-6	500
San Vicente Elementary School	K--6	502
Main Street Middle School	7-8	688
Soledad High School	9-12	1,206
Total		**4,444**
Source: Education.com (2013)		

There are five elementary schools, one middle school, one comprehensive high school and one community education center which provides a variety of alternative programs. These programs include adult education, regional occupational program, independent study, and a continuation high school. The school district also provides alternative and adult education through Pinnacles Continuation High School, Chalone Alternative School, Soledad Adult School, and Mission Trails Regional Occupation Program.

Library Services

The County of Monterey provides library services to residents of the unincorporated county and eight cities through the Monterey County Free Libraries system. Branch libraries are located in 17 communities throughout the County. Monterey County Free Libraries operates seventeen branch libraries, two bookmobiles (one based in Prunedale and the other based in King City), a books by mail program, deposit collections in local schools, and a number of special programs, including a literacy program which operates a literacy outreach vehicle focused on family literacy and kindergarten readiness. Free library services are provided to all residents of Monterey County (co.monterey.ca.us/library/about.html accessed 2/21/13). The closest branch library is located in the city of Soledad.

Parks and Recreation

The Monterey County Parks system consists of nine large regional parks encompassing over 12,155 acres of land and 10,000 acres of lakes. Royal Oaks Park and Manzanita Park serve the residents of North County. Jacks Peak and Toro Park are located adjacent to Monterey-Salinas Highway 68 and serve residents from the Monterey Peninsula and the Greater Salinas Area. San Lorenzo Park, just north of King City, serves residents of the Salinas Valley and visitors to the County. The Lakes San Antonio/Nacimiento Recreation Area and the Laguna Seca Recreation Area/Raceway serve visitors and County residents (Monterey County Parks 2007).

The State of California Parks Department owns and operates 20 park units in Monterey County, totaling 17,567 acres. Most of these units, however, are on or near the coast and not in the vicinity of the site. Pinnacles National Park is located approximately 13 miles northeast of the project site.

Utilities

Potable Water Service

A number of wells and hot springs located on the project site provide potable water to the existing improvements. The main well is 100 feet deep and currently in use for domestic water pumping at a rate of 20 to 30 gallons per minute (design capacity of 29.3 gallons per minute). The second well is 760 feet deep and pumps at a rate of 200 to 300 gallons per minute (with a design capacity of 167 gallons per minute) but is not used for domestic water. The Soda Springs well is currently being used for hot water for the existing spa and pool. This well is 37 feet deep and produces 30-40 gallons per minute at +/- 115 degrees F (CH2MHill 2010c).

As cited in the CH2Hill potable water study (CH2MHill 2010c), during LandSet Engineers' site investigation in late August 2004, groundwater was encountered at 10 of the 15 borings at depths of approximately 11 to 55 feet below the existing ground surface in the Paraiso Springs Valley. Specifically, groundwater in the area of the current hot springs was found to be 11 to 55 feet below the ground surface. To the west of this current hot springs, but still within the valley bottom, the depth to groundwater increased from 18.5 (at Boring [B]-11) to 55 feet (at B-19). A list of all borings that LandSet Engineers drilled and the groundwater depths and temperatures recorded at them are presented in Table 3.11-1, Groundwater Depth and Temperature.

Table 3.11-2 Groundwater Depth and Temperature

Boring Number	Depth to Groundwater (initially)	Depth to Groundwater (after 30 minutes)	Temperature °F
B-1	18.5’	6.5’	73.4
B-3	15.0’	19.0’	73.0
B-5	21.0’	11.5’	79.0
B-7	11.0’	8.0’	-
B-9	12.0’	7.0’	80.9
B-11	18.5’	18.2’	84.1
B-13	12.0’	9.7’	95.0
B-17	31.5’	41.3’	95.7
B-19	55.0’	58.3’	95.0
B-23	14.0’	5.5’	73.0

Source: Geologic and Soil Engineering Feasibility Report, LandSet Engineers, Inc., 2004.

Note: Local groundwater levels can fluctuate over time depending on but not limited to factors such as seasonal rainfall, site elevation, groundwater withdrawal, and construction activities at neighboring sites.

The borings outside of the Paraiso Springs Valley are not included in Table 3.11-1 because groundwater was not found in these borings. Groundwater was not encountered in any geologic unit other than Holocene Alluvium, Qal 2 (see Figure 3.6-2, Site Geology, presented in Section 3.6 of this EIR).

Recycled Water Service

Water is not currently being recycled at the project site.

Wastewater Services

Only a caretaker currently resides on the project site, and the property owners are only occasional visitors. Therefore, wastewater generation on site is currently minimal. Wastewater on the site is currently handled by a septic tank with a leach field that serves the existing buildings (Landset Engineers 2004).

Storm Water

The project site is located at an elevation of approximately 1,200 feet above mean sea level overlooking the Salinas Valley. A 50-foot wide defined drainage channel traverses the middle of the project site from west to east that has capacity of approximately 4,000 cubic feet per second (cfs). There are also several smaller, steeper drainage swales that enter the project site from the north. For a detailed discussion of surface drainage across the project site, see Section 3.8, Hydrology and Water Quality.

Solid Waste Management

The Salinas Valley Solid Waste Authority (SVSWA) serves the eastern inland areas portions of Monterey County. SVSWA’s service area includes the cities of Gonzales,

Greenfield, King City, Salinas, and Soledad, and the unincorporated communities of Bradley, Chualar, Jolon, Lockwood, Pine Canyon (King City), Prunedale, San Ardo, San Lucas, and Spreckels.

Solid waste is disposed of at the solid waste disposal sites at Johnson Canyon and Jolon Road. The Johnson Canyon Sanitary Landfill facility is owned by the SVSWA and encompasses about 122 acres. The Johnson Canyon Sanitary Landfill facility has a permitted capacity of 6,923,297 cubic yards (yd) and the estimated closing date is 2040 (CalRecycle 2013). Collection and disposal services to this facility are provided by the Tri-Cities Disposal and Recycling.

Gas, Electric, and Telephone Service

Electrical power and natural gas service in Monterey County is provided by the Pacific Gas and Electric Company (PG&E). PG&E is an investor owned utility company regulated by the Public Utilities Commission. Six electrical substations are located in Chualar, Gonzales, Soledad, King City, and on Camphora Road and Los Coches Road.

Telephone services are provided throughout the County by AT&T. The telephone lines in the project vicinity are generally above ground.

3.11.3 Regulatory Background

State

School Facilities Act of 1998

The School Facilities Act of 1998, also known as SB 50, provides state funding for new school construction projects that can satisfy specific criteria, including eligibility due to growth, Division of State Architect plan approval and California Department of Education site approval. However, the Act also dramatically limits the maximum amount of impact fees that can be charged by school districts as mitigation for new residential, commercial and industrial construction. Further, if the maximum amount is insufficient to meet their established polices, cities and counties are prohibited from imposing additional conditions to bring the development application into conformity with the established policies. The Act also prohibits local agencies from denying a development application on the basis of a person's refusal to provide school facilities mitigation that exceeds the fee amount and refusing to approve any legislative or adjudicative act on the basis that school facilities are inadequate.

Quimby Act

Since the passage of the 1975 Quimby Act (California Government Code §66477) cities and counties have been authorized to pass ordinances requiring that developers set aside land, donate conservation easements, or pay fees for park improvements. The goal of the Quimby Act was to require developers to help mitigate the impacts of property improvements. Originally, the Act was designed to ensure "adequate" open space acreage in jurisdictions adopting Quimby Act standards, which ranged from three to five acres per 1,000 residents.

The 1982 amendment to Quimby was designed to hold local governments accountable for imposing park development fees. AB 1600 requires agencies to clearly show a reasonable relationship between the public need for the recreation facility or parkland and the type of development project upon which the fee is imposed. Cities and counties were required to be more accountable and to show again, a strong direct relationship or nexus between the park fee exactions and the proposed project. Local ordinances must now include definite standards for determining the proportion of the subdivision to be dedicated and the amount of the fee to be paid.

California Integrated Waste Management Act

To minimize the amount of solid waste that must be disposed of by transformation and land disposal, the State Legislature passed the California Integrated Waste Management Act of 1989 (AB 939), effective January 1990. According to AB 939, all cities and counties were required to divert 25 percent of all solid waste from landfill facilities by January 1, 1995 and 50 percent by January 1, 2000.

The Act further requires every city and county to prepare two documents to demonstrate how the mandated rates of diversion would be achieved. The first document is the Source Reduction and Recycling (SRR) Element describing the chief source of the jurisdiction's waste, the existing diversion programs, and the current rates of waste diversion and new or expanded diversion programs intended to implement the Act's mandate. The second document is the Household Hazardous Waste (HHW) Element, which describes what each jurisdiction must do to ensure that household hazardous wastes are not mixed with regular non-hazardous solid waste and deposited at a landfill.

Title 22 California Code of Regulations

The California Department of Public Health (CDPH) promulgates and enforces state regulations for drinking water treatment facilities and distribution systems. These state regulations are at least as strict as federal drinking water regulations, although not all federal regulations are currently incorporated into corresponding state regulations. These state drinking water regulations are codified in California Code of Regulations (CCR) Title 22. The CDPH also regulates the distribution and use of recycled water through CCR Title 22.

California Health & Safety Code § 116525 et seq.

Under the California Health and Safety Code Section 116525 et seq., no person shall operate a public water system unless they first submit an application to the California Department of Public Health and receives a Water Systems Permit, which is required for the operation of a public water system. A change in ownership of a public water system shall require the submission of a new application.

Under the California Health and Safety Code Section 116330, the California Department of Public Health may delegate primary responsibility for the administration and enforcement of Chapter 4 of the California Safe Drinking Water Act within a county to the local health officer for public water systems (does not include community water systems serving 200 or more service connections) by means of a local primacy delegation agreement. The health officer for Monterey County has applied for and entered into a local primacy delegation agreement.

Title 24 California Code of Regulations

The proposed project would be subject Title 24, California's Energy Efficiency Standards for Residential and Nonresidential Buildings. Title 24 specifies the standards that new construction must meet to achieve the minimum energy efficiency standards of the state. Title 24 regulates energy consumed for heating, cooling, ventilation, water heating and lighting. Adherence to the standards is verified and enforced through the local building permit process.

Monterey County General Plan

The following are a list of Monterey County General Plan goals and policies that are relevant to the proposal.

Water Resources

Goal 5 To conserve and enhance the water supplies in the County and adequately plan for the development and protection of these resources and their related resources for future generations.

Policy 5.1.1 Vegetation and soil shall be managed to protect critical watershed areas.

Policy 5.1.2 Land use and development shall be accomplished in a manner to minimize runoff and maintain groundwater recharge in vital water resource areas.

Goal 6 To promote adequate, replenishable water supplies of suitable quality to meet the County's various needs.

Policy 6.1.1 Increased uses of groundwater shall be carefully managed, especially in areas known to have groundwater overdrafting.

Policy 6.1.2 Water conservation measures for all types of land uses shall be encouraged.

Fire Hazards

Goal 17 Minimize the risks from fire.

Policy 17.3.1 In no case shall a roadway be less than 12 feet wide. Determination of the width of an all weather surface shall be made at the time of subdivision approval. Further, the County shall revise its subdivision ordinance to address road standards, including minimum width, height clearance, gradient and materials; these standards shall pertain to all new development. Minimum road widths of all new driveways, roads, and streets shall be designed, constructed and maintained according to adopted County standards.

Policy 17.3.3 The County shall require all new development to be located within the response time of 15 minutes from the fire station responsible for serving this parcel. If this is not possible, on-site fire protection systems (such as fire breaks, fire retardant building materials, and/or water storage tanks)

approved by the fire jurisdiction must be installed or development may only take place at the lowest density allowed for the parcel by the General Plan.

Policy 17.3.4 The County shall require all new development to have adequate water available for fire suppression. Water availability can be provided from a conventional water system; from an approved alternative water system if within 300 feet of a habitable structure; by the fire fighting equipment of the fire district within which the property is located; or by an individual water storage facility – water tank, swimming pool, etc – on the property itself. The fire and planning departments shall determine the adequacy and location of individual water storage to be provided.

Fire and Law Enforcement Services

Goal 46 To encourage financial support mechanisms and organizational structures which would maintain emergency services at levels adequate for the protection of life and property.

Policy 46.3 Consider adequate levels of police protection and crime investigations for the protection of life and property in reviewing new development proposals.

Educational Facilities

Goal 47 To promote a broad range of educational opportunities within existing and future population centers.

Policy 47.1.1 The County Planning Department with the cooperation of other appropriate agencies shall provide, at the earliest possible occasion, its best estimate of increased enrollment generated by new housing development to the affected school district.

Policy 47.2.1 The County shall impose a housing impact fee on all new residential development in districts which demonstrate overcrowded classroom conditions for the purpose of funding interim school facilities.

Library Services

Goal 50 To increase educational, informational, and leisure opportunities in the county by providing adequate library services.

Policy 5 0.3.1 The County shall impose a housing impact fee on all new residential development in districts which demonstrate overcrowded classroom conditions for the purpose of funding interim school facilities.

Park and Recreational Facilities

Goal 51 To provide recreational opportunities, preserve natural scenic resources and significant wildlife habitats, and significant historic resources by establishing a comprehensive county regional parks and recreation system.

Policy 51.2.2 County parks should be developed and distributed equitably, where feasible in terms of population, geographic location, and recreational needs.

Central Salinas Valley Area Plan

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

Policy 51.1.6 (CSV) Recreational trail easements should be located within County-required easements of private roads.

Policy 51.1.7(CSV) A land owner shall not be held responsible for either trail maintenance or public liability when a public-recreational trail easement is appurtenant to private land. Public-recreational trail easements shall not be required to be opened to public use until either a public agency or private association agrees to accept liability and responsibility for maintenance of the trail easement. The County shall implement necessary measures for services that cannot be adequately provided by private organizations. The implementation of such measures shall be funded by user fees and tax revenues.

Monterey County Ordinances (Water Wells)

Title 15 of the Monterey County Code regulates the construction, repair, and reconstruction of all wells to prevent groundwater contamination and ensure that water obtained from wells will be suitable for its intended purpose and will not jeopardize the health, safety, or welfare of the people of the County. It also regulates the destruction of wells found to be public nuisances, or when otherwise appropriate, to ensure that the wells will not cause pollution or contaminate groundwater.

Wells are regulated by the Monterey County Health Department, Environmental Health Bureau. A permit must be obtained from the Environmental Health Bureau prior to construction, repair, reconstruction or destruction of any well, abandoned well, cathodic protection well, observation well, monitoring well, or test well. The applicants must meet the standards for these procedures set forth in the State Department of Water Resources Bulletin 74-81 and 74-90. The ordinance also modifies the state standards in several areas, including: a) the minimum allowable distance between wells and sewage leaching fields, septic tanks and seepage pits; b) requirements for sealing of the annular space surrounding the conductor casing of all wells; c) restrictions on the discharge of drilling fluids, and d) prevention of erosion caused by test pumping of wells. Well permits are subject to inspection.

All wells must be constructed and cased to prevent pollution, and all openings to the well must be sealed off to prevent pollution. A well is considered abandoned when it has not been used for a period of one year, unless the owner can meet various criteria demonstrating an intention to use the well again. Abandoned wells are destroyed by methods described in Bulletin 74-81 and 74-90, with modifications as specified in the code to prevent the migration of water from one aquifer to another.

Water Treatment Required

Section 15.04.146 (d) Monterey County Ordinances requires a treatment facility to be installed under the direct supervision of an experienced professional civil engineer at the source point or entry point prior to storage and be equipped with a waste disposal system that will properly contain and dispose generated waste in a manner approved by the director.

Monterey County Health Department, Environmental Health Bureau

The mission of the Environmental Health Bureau is to prevent environmental hazards from occurring and to protect the public and resources from environmental hazards when they occur. They are the agency responsible for water well permits for construction, destruction and modification as well as inspect placement of a sanitary seal. They also conduct inspections, issue permits and monitor chemical and bacteriological water quality for small public water systems with less than 200 connections.

3.11.4 Analytical Methodology and Significance Threshold Criteria

Methodology

Public Services

Available information pertaining to public services was reviewed during this analysis including, but not limited to the *Monterey County General Plan* (Monterey County 1982) and the *Central Salinas Area Plan* (Monterey County 1986). The Monterey County Sheriff's Office and the Mission Soledad Rural Fire Protection District were contacted to gather information on existing fire and police facilities, staffing for the planning area, and response times. In addition, Soledad Unified School District was contacted to obtain information on the educational facilities.

Utilities

The water supply and wastewater analyses were prepared using information derived from the site specific technical reports and subsequent peer reviews prepared for the project addressing water supply, water supply treatment, and wastewater generation for the proposed project. These technical reports and peer reviews are included in this EIR as Appendix I.

Significance Threshold Criteria

As stated in Appendix G of the CEQA Guidelines and standards used by the County of Monterey, a project may create a significant impact related to public services if it would:

1. Result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other objectives for:

    - Law Enforcement or Fire Protection
    - School Facilities; or
    - Parks.

2. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;

3. Result in the construction of new or expansion of existing water or wastewater treatment facilities;

4. Result in the construction of new or expansion of existing storm water drainage facilities;

5. Result in a determination that there is insufficient water supplies to available to serve the project through existing entitlements and resources;

6. Exceed wastewater treatment capacity; or,

7. Exceed landfill capacity or prohibit compliance with federal, state or local statutes and regulations for solid waste disposal.

Physical Impacts on Fire Protection and Law Enforcement Services

The proposed project would result in an increase in transient population within the project site, which would result in an increase in demand for fire protection and law enforcement services. However, the increase in transient population would not be considered substantial enough to warrant construction of new or expanded facilities in order to maintain service ratios, response times, or other objectives for the Mission Soledad Rural Fire Protection District and the County of Monterey Sheriff's Department to serve the proposed project. Therefore, the proposed project would result in no environmental impacts associated with fire protection and law enforcement services.

Fire Protection System

The proposed project would include a fire protection system (CHM2Hill 2005b), which would consist of hydrant network, pipeline and sprinkler system, and a water reservoir see Figure 2-13, Fire Protection Plan, presented earlier. The hydrant network would be supplied by dedicated firewater pipeline, separate from the project's potable water system. A total of 16 hydrants would be provided in on-site locations. The flow capacity for each hydrant would be 1,000 gallons per minute.

In addition, all buildings on the project site would include a sprinkling system designed by a licensed fire protection engineer. A commercial sprinkler system supplied by the fire water pipeline system would be provided for the Hotel/Spa Resort Complex, the Hamlet, and the condominiums. The commercial sprinkler system would be supported by a 500,000 gallon water reservoir located on the site[12]. The condominiums and single-family homes sprinklers would be connected to the potable water system, on the homeowners' side of the water meters.

[12] The precise storage volume and type of storage will be established through a detailed engineering study performed during the design development phase of the Project.

Other fire protection measures implemented on the project site would include 12-foot wide access roads by the Spa, Fitness Center, and condominiums, adequate turn-arounds, and access road bridge designed for highway loading standards.

The Mission Soledad Rural Fire Protection District, and/or the Soledad Fire Department, would not be required to construct a new facility or expand an existing facility in order to adequately serve the proposed project.

Law Enforcement

The project site is located in Beat #1 of the County Sheriffs patrol, which covers a large area and has relatively long response times. An increased number of visitors may result in an increase of crime within the project site and the project vicinity. However, the proposed project would have on-site security, with the Sheriff's department acting as a second responder. In addition, all visitors would pass through a security gate at the main entrance, which would significantly reduce crime within the project site.

The proposed project would result in an increase in transient population within the project site, which would result in an increase in demand for fire, law enforcement, and emergency medical response services. However, the increase in transient population would not be considered substantial enough to warrant construction of new or expanded facilities in order to maintain service ratios, response times, or other objectives for the Mission Soledad Rural Fire Protection District and the Monterey County Sheriff's Department to serve the proposed project (Monarque, Chuck, Monterey County Sheriff's Department, email correspondence, 2013).

Physical Impacts on Schools, Libraries and Parks

The proposed project would result in an increase in the transient population within the project site. However the proposed project would not require the expansion of existing or construction of new schools, libraries, or park facilities. Therefore, the proposed project would result in no environmental impact to schools, libraries, and parks.

Schools and Libraries

The proposed project is located within the boundaries of the Soledad Unified School District. Although the proposed project includes hotel and residential timeshare units, people using these units would be transient and would not require school and/or library services. Therefore, the proposed project would result in no environmental impacts associated with schools and libraries.

Parks

The proposed project includes open space and recreational facilities including but not limited to an amphitheatre lawn, hiking trails and center, and putting greens.

The proposed project is located in unincorporated portion of Monterey County approximately eight miles from the City of Soledad. Therefore, it is not likely that visitors to the proposed project would utilize any public parks in the general vicinity. Therefore, the proposed project would have no environmental impact on public parks in the general vicinity.

Wastewater Generation and Treatment

Impact 3.11-1:	Implementation of the proposed project would result in increased wastewater flows and includes construction of new wastewater treatment, distribution, and disposal facilities. The construction and operation of these facilities would result in a less than significant environmental impact.

Wastewater Generation

The project site is currently served by an existing septic tank and leach field system within the project site to dispose of wastewater. Implementation of the proposed project would increase wastewater flows over existing conditions. The total projected wastewater flow generated by the proposed project is approximately 38,142 gallons per day (CH2MHill 2013a). This is utilizing a conservative scenario of 100 percent occupancy of the hotel and all other facilities at full project buildout.

Wastewater Treatment

The existing wastewater system is not sufficient to treat wastewater from the proposed project. Therefore, the proposed project includes construction of a new wastewater collection and treatment and reclaimed system that would be constructed near the project entrance, downhill from the main resort area. The description of the wastewater treatment process is contained in the report prepared for the project, *Paraiso Springs Resort-Estimated Wastewater Production and Proposed Treatment, Irrigation, and Storage* (CH2MHill 2010b), and Memo to EMC Planning Group, subject: Paraiso Springs Resort – Review of Wastewater (Wallace Group 2012a).

To address the needs of the resort and meet all regulatory requirements, it was determined that wastewater would be treated to a tertiary filtered and disinfected level, as defined by Title 22 of the Code of California Regulations[13]. This would allow the water to be recycled for landscape and crop irrigation throughout the resort.

The wastewater treatment facility would consist of a membrane bioreactor (MBR) combined with ultraviolet light (UV) disinfection wastewater treatment plant, which would include fine screening at the head of the treatment plant. The screening would be comprised of both organic and inorganic material that would be macerated and washed,

[13] Disinfected tertiary recycled water is defined by Title 22 of the Code of California Regulations §60301.230 as follows: "Disinfected tertiary recycled water" means a filtered and subsequently disinfected wastewater that meets the following criteria: (a) The filtered wastewater has been disinfected by either: (1) A chlorine disinfection process following filtration that provides a CT (the product of total chlorine residual and modal contact time measured at the same point) value of not less than 450 milligram-minutes per liter at all times with a modal contact time of at least 90 minutes, based on peak dry weather design flow; or (2) A disinfection process that, when combined with the filtration process, has been demonstrated to inactivate and/or remove 99.999 percent of the plaque-forming units of F-specific bacteriophage MS2, or polio virus in the wastewater. A virus that is at least as resistant to disinfection as polio virus may be used for purposes of the demonstration. (b) The median concentration of total coliform bacteria measured in the disinfected effluent does not exceed an MPN of 2.2 per 100 milliliters utilizing the bacteriological results of the last seven days for which analyses have been completed and the number of total coliform bacteria does not exceed an MPN of 23 per 100 milliliters in more than one sample in any 30 day period. No sample shall exceed an MPN of 240 total coliform bacteria per 100 milliliters.

which would return most of the organic matter to the waste stream. The residual waste would be compacted and disposed of at the landfill. Waste would then flow through the screens to the biological treatment tank. Excess biomass would be hauled to a municipal septage receiving facility.

Water would exit the biological process through membranes submerged in the biological treatment tank, thereby accomplishing separation of solids and liquids. The membranes would be backwashed periodically with air and cleaned less frequently with chemical cleaning agents. The filtered water would then be disinfected in an ultraviolet (UV) system. The process would produce a level of tertiary filtered and disinfected water, as defined by Title 22 of the Code of California Regulations. The MBR system is designed to nitrify and denitrify, producing nitrate-nitrogen of less than 6 mg/L which meets County Standards as outlined in Monterey County Code Section 15.23.040 (c) (CH2MHill 2013a). Recycled water would then be used for irrigation within the project site.

The treatment facility will include two MBR units. These treatment units together will have the capacity to handle 40,000 gpd at average conditions or 80,000 gpd at peak conditions (CH2MHill 2013a).

Irrigation and Storage

The balance between irrigation and storage is sensitive to the resort occupancy rate, which determines the volume of wastewater production. For the evaluation of irrigation and storage, an occupancy rate of 85 percent for the hotel and 100 percent occupancy for other facilities at full project buildout was assumed for each phase of development (Phases 1 through 4). Phase 4 represents full buildout and includes all prior phases. Wastewater treatment capacity, supplemental irrigation, and seasonal storage requirements were also sized for maximum occupancy.

Recycled Water Balance

A water balance analysis was conducted for the projected recycled wastewater flows and landscape irrigation requirements of the proposed project. The water balance is based on estimates of the total area that could be irrigated, the volume of storage that would be needed given expected monthly wastewater flows, and supplemental freshwater requirements. Projected full-occupancy recycled water flows were determined for the four project phases, ranging from 18,312 gallons per day in Phase 1, to 36,495 gallons per day in Phase 4 at buildout.

The irrigation area of the proposed project is projected to be much smaller than the total development envelope. Landscaping for the proposed project is a complex mixture of wine grapes, grass, and trees and shrubs, with a total area of 23.8 acres. Based on the irrigation demands of the proposed project, approximately 1.7 million gallons of seasonal water storage (generally during November through February) would be needed for recycled water that exceeds the amount that can be used for irrigation.

Needed wet-weather storage capacity, based on a 120-day storage requirement for wastewater flows, totals 2.2 million gallons for Phase 1, and 4.38 million gallons by Phase 4.

From April through October, supplemental water use would be needed to meet the irrigation demand. Untreated well water will be pumped to the recycled water storage tank and introduced via an air gap system to supplement water. The peak month for supplemental water use is expected to be July, with approximately 2.57 million gallons to meet demand in Phase 1, and 2.01 million gallons in Phase 4. This is a difference of 0.8 million gallons at buildout.

Recycled Water Storage

The seasonal storage facility is planned to be an underground reinforced concrete reservoir. According to the data shown here, the maximum size of the underground recycled water reservoir would be 4.38 million gallons to meet County the requirement of 120 days of storage. During dry years at buildout, water would be stored during all months except June, July, and August; during typical years, all months except July and August; and during wet years, during all months. The actual duration of storage will vary greatly depending upon weather. Because the storage tanks are covered and do not receive surface runoff, no additional treatment during storage is anticipated.

The reservoir size for that amount of storage would be approximately 28,750 square feet (250 feet by 115 feet by 20.4 feet deep) constructed beneath the parking lot near the wastewater treatment facility. A smaller reservoir would be constructed in Phase 1, but would be expanded with future development phases. Future expansions would be sized according to actual water use data. The actual size and configuration of the underground reservoir will be determined during final design, considering final design level geotechnical engineering and landscape architectural data.

Conclusion

The proposed project will include construction of a new wastewater treatment and distribution system to accommodate the wastewater generated from the proposed project. The treatment facility will have the capacity to handle 40,000 gallons per day at average conditions, or 80,000 gallons per day at peak conditions, which exceeds the total projected wastewater flow of 38,142 gallons per day.

Treated wastewater will be used for irrigation within the project site. Based on the irrigation demands of the proposed project, seasonal water storage would be required for recycled water that exceeds the amount that can be irrigated, generally during November through February. The excess recycled water would be stored in a 4.38 million gallon reservoir which is adequate to meet County requirement of 120 days of storage.

The proposed project includes construction of new a wastewater treatment, distribution, and storage facility that will adequately process projected wastewater flows, construction and operation of the facility. Therefore, the proposed project would have a less than significant impact on wastewater services and/or facilities.

Increased Demand for Potable Water and Water Quality Issues

Impact 3.11-2	The proposed project would have sufficient water supplies available to serve the proposed project from existing resources, and new or expanded entitlements are not needed. However, the water supply for the proposed project currently exceeds the public health standard of 2.0 mg/L for fluoride. This would be considered a potentially significant impact (Less than Significant with Mitigation).

Water Demand and Availability

(Refer also to discussion under Impact 3.8-4: Long Term Water Supply in the Hydrology and Water Quality section of this EIR). Implementation of the proposed project would increase the peak day potable water demand for the proposed project. Assuming year-round full occupancy, the proposed project is conservatively projected to use approximately 42,380 gallons of potable water per day (CH2MHill 2010c, page 8) which equates to about 47.5 acre-feet of water per year at build out. This water will be reclaimed producing 36,495 gallons per day of reclaimed water which will be used for irrigation. An additional 14,280 gallons per day (16 acre-feet per year) would be needed to supplement the irrigation needs. Therefore, total projected water use at build out would be 63.5 acre-feet per year (47.5 acre-feet per year potable plus 16 acre-feet per year for irrigation). This water demand does not include water for the proposed pools and spas as water for these facilities will be supplied from the existing hot springs rather than the potable water supply.

An on-site pump test was conducted at the potable supply well, Well No.1 or Main Well and Well No. 2 from November 26 through December 6, 2007. The test resulted in a sustained yield of approximately 58.5 gallons per minute for Well No. 1 and 334.8 gallons per minute for Well No. 2.

According to the Monterey County Source Capacity Procedures, a ten-day pumping test for wells produced from non-alluvial formation for water systems will allow a source capacity credit of approximately 50 percent. This means that Well No.1 or the Main Well is allowed a capacity credit of approximately 29.3 gallons per minute and Well No. 2 is allowed a capacity credit of approximately 167 gallons per minute. Together these two wells can provide 196.3 gallons per minute, to meet the 29.4-gallon per minute peak potable water demand and also the supplemental irrigation water demand at buildout.

Water Treatment

Based on the most recent water quality tests conducted in September 2009, water from Well No.1 or Main Well and Well No. 2 cannot be used for potable purposes directly because fluoride levels exceed the public health standard of 2.0 mg/L. Three options for fluoride removal include ion exchange, reverse osmosis, and activated alumina. The treatment process recommended for the proposed project is activated alumina because of the low initial cost and low volume of waste generated (CH2MHill 2010c, page 8.)

The treatment process would involve passing water through a tank containing activated aluminum supported by a bed of gravel. The activated aluminum would require regeneration weekly using an acid solution. The waste regeneration solution would then be neutralized using caustic soda. This would require storage of an acid solution and

caustic soda for regeneration and cleaning of the material on-site. Please refer to Section 3.7 Hazards and Hazardous materials for a discussion of potential hazards associated with storage of these materials on site.

This activated alumina process would result in an approximate five percent loss of water volume as neutralized waste, would reduce the available capacity of the wells to approximately 186 gallons per minute. However the two wells can still provide for an adequate supply of potable water for the proposed project.

A field pilot test, *Field Pilot Test Report for the Paraiso Hot Springs Potable Water Treatment Plant – Fluoride Reduction AD74 Adsorption* (AdEdge Technologies 2012), was conducted demonstrating the proposed fluoride treatment process utilizing activated alumina filtration. The intent of the pilot test was to utilize information gathered as not only proof of concept but also for implementing a full-scale water treatment system at the site.

The results of the AdEdge pilot test concluded that the adsorption process of the activated alumina filtration process achieved the primary objective of reducing fluoride to a less than State of California primary drinking water maximum contaminant levels of 2.0 mg/L for fluoride. The pilot report also provided specific recommendations and parameters for full-scale activated alumina operations (AdEdge Technologies 2012, pages 8-9).

The project applicant would be required to design and install water system improvements to meet the standards found in Chapter 15.04 and 15.08 of the Monterey County Code and Titles 17 and 22 of the California Code of Regulations. As the wells do not currently meet the fluoride standards of 1.0 mg/L, well water would be treated with an activated alumina filtration process as identified in the *Paraiso Springs Resort-Estimated Potable Water Demand (*CH2MHill 2010c) and corresponding *Field Pilot test report for the Paraiso Hot Springs Potable Water Treatment Plant – Fluoride Reduction AD74 Adsorption* (AdEdge 2012). In addition, as identified in the *Paraiso Springs Resort-Estimated Potable Water Demand (*CH2MHill 2010c), both wells should be rehabilitated during construction of the proposed project in order to increase longevity and efficiency.

Water Treatment Waste Handling

The neutralized waste from the proposed activated alumina filtration process would contain fluoride and aluminum and would require special disposal or treatment. One option would be to haul the waste off site to an approved disposal site. This would require between one tanker truck per day and one every 3.5 days taking effluent to the Monterey Regional Water Pollution Control Agency wastewater treatment plant east of the City of Marina, approximately 35 miles northwest of the project site (Culligan MATRIX Solutions 2012). Another option would be to store, dilute with effluent water from the on-site wastewater treatment plant. As identified under Impact 3.10-4, above wastewater would be treated to tertiary standards and used for irrigation of the on-site plant material.

An analysis of the fluoride water treatment regeneration effluent was conducted in 2012 by Culligan MATRIX Solutions. The report concluded that the onsite-treatment option would provide optimal treatment operations and produce effluent fluoride concentrations that are relatively equal to or less than the water from well #2.

The project applicant would be required to design and install wastewater system improvements to adequately treat the neutralized waste from the proposed activated alumina filtration process. In addition, the applicant will be required to have disposal of the fluoride concentrate included in the wastewater discharge permit from the Regional Water Quality Control Board (RWQCB).

The following mitigation measure would be required to ensure the proposed water system improvements meet required standards and to ensure proper handling of the activated alumina waste products:

Mitigation Measure

MM 3.11-2 The project applicant shall contract with a qualified engineer to finalize an activated alumina water treatment plant consistent with recommendations outlined in the AdEdge Technologies Pilot Test Report (2012) identifying water system improvements to meet the standards as found in Chapter 15.04 and 15.08 of the Monterey County Code, and Titles 17 and 22 of the California Code of Regulations. Final water system improvement plans shall identify any necessary rehabilitation of Well No. 1 and Well No. 2 to increase longevity and efficiency, the specific water treatment facilities, and how the water treatment facilities will remove all constituents that exceed California Primary and Secondary maximum contaminant levels (e.g. fluoride, coliform, TDS, iron, etc.) from drinking water.

The project applicant shall contract with a qualified engineer to design and install wastewater system improvements and procedures that will adequately treat the neutralized waste from the proposed activated alumina filtration process. Final wastewater improvement plans shall identify the specific wastewater treatment improvements, operating parameters, wastewater volumes, waste constituents of the proposed full-scale system, and how the wastewater treatment process will produce effluent fluoride concentrations that are equal or less than the concentrations in the existing source water.

Monitoring Actions

Prior to recording the final map or issuance of any construction permits, the applicant shall submit the final water treatment plant design for review and approval by the Monterey County Health Department, Environmental Health Bureau.

Implementation of this mitigation measure would reduce potential impacts associated with safe drinking water to a less than significant level by ensuring that the water system improvements are constructed in accordance with County standards and meet California

Primary and Secondary maximum contaminant levels. Implementation of this mitigation measure would also reduce potential impacts associated with disposal/treatment of the neutralized waste from the proposed activated alumina filtration process water to a less than significant level by ensuring that the wastewater system improvements and procedures are put into place to ensure the process will produce effluent fluoride concentrations that are equal or less than the source water coming from the wells.

Construction of New or Expansion of Existing Storm Water Drainage Facilities

Impact 3.11-3: The proposed project would be required to detain the difference between the 100-year post-development runoff rate and the 10-year pre-development runoff rate. This may require the construction of new or expanded storm water detention facilities. This would be considered a potentially significant impact (Less than Significant with Mitigation).

The Monterey County Water Resources Agency has a standard design policy that requires storm water detention facilities be provided to limit the 100-year post-development runoff rate to the 10-year pre-development rate. The applicant as part of their initial project indicated that the proposed project, storm water in excess of pre-project conditions will be retained on site through the use of low impact design (LID) methods, often referred to as storm water best management practices (BMPs). Techniques will include roof runoff controls, site design and landscape planting, pervious paving, vegetated swales and buffer strips, and bioretention.

Mitigation Measure 3.8-2 (Section 3.8 Hydrology and Water Quality) requires that the project applicant contract with a registered Civil Engineer to prepare a final drainage plan with water detention facilities to limit the 100-year post-development runoff rate to the 10-year pre-development rate in accordance with Section 16.16.040.B.5 of the Monterey County Code and Monterey County Water Resource Agency (MCWRA). Further, Mitigation Measure 3.8-2 requires that this is accomplished through the use of LID features, BMPs and incorporation of relevant storm water recommendations as described in the Geologic and Soil Engineering Feasibility Report (Landset Engineers 2004). In the event that the detention objectives can not be accomplished through LID methodologies, Mitigation Measure 3.8-2 states that a detention basin may be used. The final drainage plan must be submitted for review and approval by the Public Works Department and Monterey County Water Resources Agency prior to the recording the Final Subdivision Map.

Implementation of Mitigation Measure 3.8-2 would require that the final drainage plan, including storm water detention facilities, are designed in accordance with County standards and incorporate LID features and BMPs. The Drainage Plan is required to be submitted for review and approval by the Public Works Department and Monterey County Water Resources Agency prior to the recording the Final Subdivision Map. Therefore, with implementation of Mitigation Measure 3.8-2, impacts associated with the construction of new of expanded storm water facilities will be reduced to a less than significant level.

Increased Generation of Solid Waste

Impact 3.11-4	The proposed project would result in an increase in solid waste generation. Solid waste would be disposed of at the Johnson Canyon Landfill, which has sufficient permitted capacity to accommodate waste generated by the proposed project. Therefore, the impact is less than significant.

Construction of the proposed project would result in the generation of additional solid waste. Solid waste would be disposed of at the Johnson Canyon Landfill located at 31400 Johnson Canyon Road, east of the City of Gonzales. The Johnson Canyon Landfill is operated by the Salinas Valley Solid Waste Authority. The proposed project would generate waste during construction activities and during long-term operations.

The proposed project's solid waste impacts were evaluated using information provided by the U.S. EPA, CalRecyle and the Paraiso Springs General Development Plan.

Construction Waste

U.S. EPA estimated generation rates of non-residential construction debris were used to determine construction-generated waste (i.e., 4.34 pounds [lbs] per square foot [sf] of building size) (EPA 2009 page 10). The projected solid waste generation from the construction of the proposed project is presented in Table 3.11-3, Solid Waste - Construction.

Table 3.11-3 Solid Waste - Construction

Facility Type	Basis of Demand/ Building Footprint (sf)	Demand Generation Factor (lbs/sf)	Total Waste Generated (tons)	Total Waste Diverted (50%) (tons)	Total Waste to Landfill (tons)
Hotel	115,575	4.34	251	125.5	125.5
Hamlet	18,550	4.34	43	22.5	22.5
Spa and Fitness Center	51,090	4.34	111	55.5	55.5
For Sale Time Share Units	124,240	4.34	270	135.0	135.0
Future Phase	5,150	4.34	11	5.5	5.5
				Total	**344.0**

Source: Preliminary Vesting Tentative Map, HG Architects, 7/15/05, revised 5/18/12, EPA 2009

The proposed project is expected to contribute approximately 344 tons or 573 cubic yard (yd3) (assuming a waste density of 1,200 lbs per yd3)[14], of construction waste to the landfill.

[14] According to Zekkos D.P., J.D. Bray, E. Kavazanjian, N. Matasovic, E. Rathje, M.Riemer, and K.H. Stokoe II, Framework for the Estimation of MSW Unit Weight Profile, Proceedings Sardinia 2005, Tenth International Waste Management and Landfill Symposium, October 2005, 1,200 lbs/yd3 is the mean value of fresh waste density.

Long-term Use Waste

Waste generation rates available from the *Monterey County General Plan*, CalRecycle, industry standards, and other historic data on Monterey County and California were used to determine solid waste generation rates for the proposed project. The projected solid waste generation from the construction of the proposed project is presented in Table 3.11-4, Solid Waster - Long-term Operations.

Table 3.11-4 Solid Waste - Long-term Operations

Facility Type	Basis of Demand/ Building Footprint (sf)	Demand Generation Factor (lbs/1,000sf)	Total Waste Generated (tons/year)	Total Waste Diverted (50%) (tons/year)	Total Waste to Landfill (tons/year)
Hotel	115,575	1,998	115	57.5	57.5
Hamlet	18,550	1,998	18	9.0	9.0
Spa and Fitness Center	51,090	1,998	51	25.5	25.5
For Sale Time Share Units	124,240	1,998	124	62.0	62.0
Future Phase	5,150	1,998	5	2.5	2.5
Total					**156.5**

Implementation for the proposed project would generate approximately 156.5 tons or 260 cubic yards of waste per year to the landfill.

Using the EPA Demand Generation Factor disposal rate, the landfill would have adequate capacity to accommodate both the short-term construction-related waste of 344 tons and the long-term operation waste of approximately 156.5 tons per year. Therefore, the proposed project would have a less than significant impact on the landfill.

As mandated by the California Integrated Waste Management Act of 1989, 50 percent of all solid waste must be diverted from landfills. As of 2007, with the passage of SB 1016, the Per Capita Disposal Measurement System, jurisdictional diversion rates were no longer utilized and only per capita disposal rates are measured. The new per capita disposal and goal measurement system moves the emphasis from an estimated diversion measurement number to using an actual disposal measurement number as a factor, along with evaluating program implementation efforts. These two factors help determine each jurisdiction's progress toward achieving its Integrated Waste Management Act (AB 939) diversion goals. The 50 percent diversion requirement is now being measured in terms of per-capita disposal expressed as pounds per person per day.

As of 2011, all of the jurisdictions in Monterey County achieved their per capita Calculated Disposal Rate (pounds/day/person) target, which the exception of Greenfield, which did not provide a report for 2011 (CalRecycle 2013). The Disposal Rate is one factor in determining a jurisdiction’s compliance with the intent of AB 939. In 2011, only 13 jurisdictions statewide did not meet their Calculated Disposal Rate targets (CalRecycle 2013). It is conservatively assumed that under the waste requirements set by

Monterey County, waste generated by the proposed project would not result in the county exceeding its per capita Disposal Rate target. This assumption was used in the waste generation calculations above. Therefore, the proposed project would not effect the County's current compliance with the California Integrated Waste Management Act of 1989. Impacts associated with solid waste are less than significant.

This page intentionally left blank.

3.12 TRANSPORTATION AND TRAFFIC

3.12.1 Introduction

This section of the EIR describes and discusses the potential environmental impacts of the proposed project on the roadway system and alternative transportation including (e.g. transit, bicycle, and pedestrian). The analysis described in this section is largely based on a project specific traffic impact analysis prepared for the applicant by Hatch Mott MacDonald in September 2008 (Revised January 21, 2011), a peer review by Hexagon Transportation Consultants, Inc.(dated April 18, 2011) and responses to the peer review prepared by Hatch Mott MacDonald (dated September 27, 2011). The traffic impact analysis analyzes existing traffic conditions, existing plus project conditions; and cumulative conditions. The results of the traffic impact analysis are summarized herein. For detailed supporting analysis, the reader is referred to the traffic impact analysis, which is included as Appendix H.

3.12.2 Environmental Setting

Existing Roadway System

Highways

U.S. Highway 101 is the primary north-south arterial within Monterey County, entering the Central Salinas Valley Planning Area at Chualar and connects all of the South County cities of Gonzales, Soledad, Greenfield and King City. Highway 101 is the County's most prominent trucking corridor and the principal transport route for goods and services into, out of, and through the Central Salinas Valley Planning Area.

County Roads

Paraiso Springs Road. Access to the project site is provided by Pariaso Springs Road, which is a two lane County road with a pavement width that varies from less than 16 feet immediately east of the project site to between 20 and 22 feet in the vicinity of Clark Road. Approximately 85 trips per day are on Paraiso Springs Road, which serves single family residential uses, a small winery, and the project site. Paraiso Springs Road connects with Arroyo Seco Road approximately one mile west of Highway 101.

Arroyo Seco Road. Arroyo Seco Road has an interchange with Highway 101 approximately one mile south of the City of Soledad. This County road provides regional access for the proposed project. Arroyo Seco Road extends in a southeasterly orientation to the west of the City of Greenfield and serves the Arroyo Seco River area south of Paraiso Springs Road.

Fort Romie Road. Fort Romie Road is a County road and extends between Arroyo Seco Road and River Road.

River Road. River Road is a County road and extends from Fort Romie Road northerly along the westerly edge of the Salinas Valley to Highway 68 west of the City of Salinas.

Existing Traffic to the Project Site

Under existing conditions, the project site is gated and traffic to the project site is approximately four trips during the morning peak hour on Paraiso Springs Road west of Clark Road.

Transit

Monterey-Salinas Transit (MST) provides fixed-route bus service in Monterey County and Peninsula cities. MST Line 23 provides service between Salinas and King City via US Highway 101 with stops at various locations along the highway at Chualar, Gonzales, Soledad, and King City. Transit service on Line 23 is provided on weekdays and on Saturday and Sundays.

Pedestrian Facilities and Bicycle Facilities

Pedestrian facilities include sidewalks, crosswalks and pedestrian signals. There is not a significant amount of foot-traffic in the vicinity of the proposed project and therefore sidewalks are not provided along Paraiso Spring Road, Arroyo Seco Road and other roadways in the project vicinity.

The Street and Highways Code (Section 890-894.2) categorizes three types of bicycle facilities:

- Bike path (Class I) - A completely separate right-of-way designed for the exclusive use of cyclists and pedestrians, with minimal crossings for motorists.
- Bike lane (Class II) - A lane on a regular roadway, separated from the motorized vehicle right-of-way by paint striping, designated for the exclusive or semi-exclusive use of bicycles. Bike lanes allow one-way bike travel. Through travel by motor vehicles or pedestrians is prohibited, but crossing by pedestrians and motorists is permitted.
- Bike route (Class III) - Provides shared use of the roadway, designated by signs or permanent markings and shared with motorists.

According to the Monterey County 2008 General Bikeways Plan there are no existing or proposed bicycle facilities provided in the vicinity of the project site.

3.12.3 Regulatory Framework

County of Monterey

The County of Monterey has two primary planning documents, the 1982 *Monterey County General Plan* and the Central Salinas Valley Area Plan (Monterey County 1986), which provide goals, objectives and policies related to transportation and circulation.

Monterey County General Plan

Goal 37 To promote a safe, effective, and economical transportation system that will service the existing and future land uses of the county.

Policy 37.2.1 Transportation demands of proposed development shall not exceed an acceptable level of service for existing transportation facilities, unless appropriate increases in capacities are provided for.

Policy 37.5.1 The design and location of new development shall consider and incorporate provisions for appropriate transportation modes.

Central Salinas Area Plan

CVS Policy 40.1.2 The County shall pursue measures to obtain official Scenic Route designations from the state for Highways 146 and 25, Arroyo Seco Road, Bitterwater Road, and Elm Avenue.

Monterey County Regional Transportation Plan

The Transportation Agency for Monterey County (TAMC) is responsible for periodically completing a long-range transportation planning document known as the Regional Transportation Plan (RTP). The purpose of the RTP is to provide policy guidelines regarding planning and programming of transportation projects in Monterey County for the next twenty years. The RTP identifies existing and future needs, evaluates modes and alternatives, and determines what can be completed with anticipated funding. As required by the California Transportation Commission Guidelines, each Regional Transportation Agency shall develop and update goals, objectives and policies for inclusion in the Policy Element of the RTP.

TAMC Regional Impact Fee Nexus Study Update

In March 2008, TAMC updated the Nexus Study for a Regional Development Impact Fee. TAMC anticipates programming the fee revenue as part of its periodic Regional Transportation Plan update process, which is done every five years. The fee program itself will be updated to reflect changes in land use plans or shifts in transportation planning priorities to better mitigate the impacts of future growth. This update process will involve the following actions:

- Tracking status of construction, including percent complete and fee expended;
- Updating cost estimate of each project annually;
- Adding or deleting projects as conditions warrant, based on adopted transportation plans;
- Using an adopted travel forecast model to conduct deficiency plan and select link analyses;
- Recalculating maximum fee by zones;
- Recalculating revenue from regional fee program; and
- Assessing potential for adopting a revised fee structure in light of political feasibility and other funding sources.

Methodology

The Traffic Impact Analysis (TIA) analyzed Existing Plus Average Project Day for both 70 percent occupancy and 100 percent occupancy daily traffic levels of service on the study roadways and intersections. The trip generation rates were based on land use date prepared by the Institute of Transportation Engineers (ITE) and included trip generation for the resort hotel, single family homes, recreational homes and hotel employees. The TIA addressed the impacts associated with each of the four project phases.

Significance Threshold Criteria

In accordance with CEQA, the State CEQA Guidelines (including Appendix G) and agency and professional standards, a project impact would be considered significant if the proposed project would:

- Exceed the capacity of the existing circulation system, based on an applicable measure of effectiveness (as designated in a general plan policy, ordinance, etc.), taking into account all relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit;

- Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures or other standards established by county congestion management agency for designated roads or highways;

- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks; or

- Substantial increase in hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment).

Performance of the County's roads and highways is evaluated based on level of service (LOS) calculations. There are six levels of service representing varying roadway conditions ranging from ideal, LOS "A" to forced flow, LOS "F." Level of Service A represents free flow un-congested traffic conditions and Level of Service F represents highly congested traffic conditions with unacceptable delay to vehicles at intersections. The intermediate LOS represents incremental levels of congestion and delay between these two extremes.

Impact Analysis

Intersection and Roadway Segments Level of Service Impacts

Impact 3.12-1:	The Paraiso Springs Road/Clark Road intersection and the ten study roadway segments would operate at LOS A with the exception of Arroyo Seco Road between Fort Romie Road and Highway 101, which would operate at LOS B. In accordance with the County of Monterey significance criteria, this is considered an acceptable level of service. Therefore, the proposed project would result in a less than significant impact to study intersections and roadway segments. This would be a less than significant impact

The project site is located in a remote location and therefore by design would minimize the amount of short-distance convenience trips such as lunch hour restaurant clientele or short-term visits off-site from guests staying at the facility. The traffic impact analysis was however conservative and did not take these factors into consideration.

The traffic impact analysis analyzed the following intersections and roadway segments within the vicinity of the project site under "Existing" and "Existing plus Project" conditions:

- Intersection
    a. Paraiso Springs Road/Clark Road
- Roadway Segments
    b. Arroyo Seco Road (from Thorne Road to Clark Road)
    c. Arroyo Seco Road (from Fort Romie Road to State Highway 101)
    d. Fort Romie Road (from Foothills Road to State Highway 101)
    e. Foothill Road (from River Road to Paraiso Springs Road)
    f. Paraiso Springs Road (from Clark Road to Arroyo Seco Road)
    g. Paraiso Springs Road (southwest of Clark Road)
    h. Paraiso Springs Road (from the Project site to Clark Road)
    i. Paraiso Springs Road (Entrance to the project site)
    j. Clark Road (from Paraiso Springs Road to Arroyo Seco Road
    k. Arroyo Seco and Highway 101 Southbound and Northbound On and Off-Ramps

Project Trip Generation

The trip generation calculations must include the trips produced by the different uses on the site, and take into account the trip reduction measures the applicant has proposed as part of the project. Table 3.12.1, Project Trip Generation and Trip Reduction Summary, presented below, summarizes the trip generation and trip reduction measures used in the traffic analysis prepared by Hatch Mott MacDonald (2011).

The table shows that at build out without any trip reduction measures, the project would generate 885 daily trips. This calculation comes from using ITE trip generation numbers for the hotel, employees, and the two other types of residential units, then subtracting ten percent for overlap between the residential units and the resort.

To reduce the amount of traffic to the project site, the proposed project proposes a shuttle service for non-management employees. Satellite parking would occur at the existing park and ride lot and on Front Street in downtown Soledad, which has been endorsed by the City of Soledad (City of Soledad, Letter to the Monterey County Board of Supervisors, March 27, 2013). The shuttle service would remove a total of 492 employee trips per day from the area roadways.

Table 3.12.1 Project Trip Generation and Trip Reduction Summary

	No. Units/Employee	Daily Trips/Unit	Total Daily Trips
Trip Generation			
Resort Hotel (ITE330)	103	6.13	631
Residential (Residential Villas) (ITE210)	17	9.57	163
Residential/Recreational Homes (Condos)(ITE260)	60	3.16	190
Total Trips			**984**
Internal Trip Reduction (10%)			98
Net Trip Generation			**885**
Trip Reduction			
Employees taking shuttle	196	2.5	(492)
Guest Trips Eliminated			(40)
New Employee Shuttle Trips			36
New Guest Shuttle Trips			16
Net Trip Generation			**405**
Source: Hatch Mott MacDonald 2011			

In addition, a shuttle service would be available to guests arriving from the Monterey Peninsula Airport and for various types of day trips. It is assumed that 25 percent of the peak day check-in and check-out would involve 25 percent of the guest units and that 25 percent of the guests would arrive by air. It is assumed the 22 airport related trips would be replaced by the shuttle, and that 18 guest day trips would be replaced by the shuttle for a total reduction of 40 trips per day. The use of the shuttle would result in an additional 36 trips per day for employees and 16 trips per day for guest use for a total of 52 trips. 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.

Satellite Parking

The existing park and ride lot in Soledad provides 72 parking spaces of which between five and seven spaces are occupied on a daily basis leaving between 65-67 parking spaces available.

At buildout the day shift (largest shift) of the site would have 109 employees, of these 98 would use the shuttle from the park and ride lot. The trip reduction strategy assumes that large portion of these employees will live in Soledad and that one fourth (25%) of them will walk to the shuttle and not require any parking, one fourth (25%) will be what is termed a “kiss and ride drop off”, one fourth (25%) will car pool to the shuttle with at least two employees in a vehicle and use the Park and Ride and the last one fourth (25%) will take a single vehicle to the shuttle and use the Park and Ride. Translating this into required parking; those who walk or are dropped off would require no parking spaces,

those who share would require 12 parking spaces (24 employees with two employees per car) and those who drive alone would require 24 parking spaces requiring the use of approximately 36 Park and Ride spaces. This is would leave approximately 29 spaces available in the 65 space park and ride lot during the day. The peak demand will be at the change between the two largest shifts.

Project Traffic, Distribution and Assignment

The trip generation for the proposed project looked at a 70 percent occupancy, based on hotel occupancy rates of 68.2 percent occurring in the Monterey Peninsula in 2003. The trip generation also looked at 100 percent occupancy. Based on a 70 percent occupancy, the proposed project is anticipated to generate approximately 324 daily weekday trips (assuming the PM peak hour represents about eight percent of the daily traffic for the hotel and 10 percent for the residential areas), with 15 during the AM peak hour, 28 during the PM peak hour, and 64 during the Saturday peak hour.

On occasions when the proposed project reaches 100 percent occupancy, the proposed project is expected to generate approximately 405 daily weekday trips, with 12 trips during the AM peak hour, 15 trips during the PM peak hour, and 89 trips during the Saturday peak hour.

The anticipated project trip distribution and anticipated number of trips is shown in Table 3.12-2, Project Traffic Distribution and Assignment, below.

Table 3.12-2 Project Traffic Distribution and Assignment

Direction	Percentage	Project Daily Trips	
		Average (70 percent)	Peak(100 percent)
To/From the North			
Via Highway 101	60 percent	170	243
Via River Road/Fort Romie Road	5 percent	14	20
Via Foothill Road	5 percent	14	20
To and From the South			
Via Highway 101	10 percent	29	41
Via Arroyo Seco Road	20 percent	57	81
Total	100 percent	284	405
Source: Hatch Mott MacDonald 2008			

Table 3.12-3, Intersection Level of Service, on the following page shows the intersections examined and the corresponding level of services under existing conditions and with the project.

Table 3.12-3 Intersection Level of Service

Location	Existing Conditions (2009)		Existing + 70 percent Project Conditions		Existing + 100 percent Project Conditions		Long Term Cumulative Conditions	
	Volume (ADT)	LOS	Volume (ADT)	LOS	Volume (ADT)	LOS	Volume (ADT)	LOS
Arroyo Seco Rd (Thorne Rd to Clark Road)	1,800	A	1,866	A	1,896	A	3,100	A
Arroyo Seco Rd (Fort RomieRd to Hwy 101)	4,400	B	4,634	B	4,738	B	7,100	B
Fort Romie Rd (Foothill Rd to Arroyo Seco Rd)	2,200	A	2,216	A	2,224	A	3,600	A
Foothill Rd. (Fort Romie Rd. to Paraiso Springs Rd.)	220	A	236	A	244	A	260	A
Paraiso Springs Rd. (Clark Rd. To Arroyo Seco Rd.)	150	A	182	A	198	A	300	A
Paraiso Springs Rd. (Southwest of Clark Rd)	150	A	482	A	632	A	700	A
Paraiso Springs Rd. (Project site to Clark Rd.)	85	A	417	A	567	A	580	A
Paraiso Springs Rd. (Project Site entrance)	20	A	352	A	502	A	500	A
Clark Rd. (Paraiso Springs Rd to Arroyo Seco Rd.)	20	A	320	A	454	A	400	A
Arroyo Seco/Hwy 101 SB Off-ramp	2,000	A	2,100	A	2,145	A	2,840	A
Arroyo Seco/Hwy 101 SB On-ramp	550	A	567	A	574	A	760	A
Arroyo Seco/Hwy 101 NB Off-ramp	400	A	417	A	424	A	660	A
Arroyo Seco/Hwy 101 NB On-ramp	1,500	A	1,600	A	1,645	A	2,840	A

Source: Hatch Mott MacDonald 2008

Existing Plus Average (70 percent occupancy) Project and Existing Plus Average (100 percent occupancy) daily traffic would not have an effect on the level of service of study intersections and roadway segments as all roadway segments would operate at acceptable LOS A with the exception of Arroyo Seco Road between Fort Romie Road and Highway 101, which would operate at LOS B. The Paraiso Springs Road/Davis Road intersection would also remain at the same level of service as under Existing Conditions with implementation of the proposed project. Therefore, the proposed project would result in a less than significant impact to the study intersections and roadway segments with implementation of the proposed project.

Roadway Hazards

Impact 3.12-2:	Paraiso Springs Road is a rural road that will experience an increase in traffic with implementation of the project. The proposed project includes safety improvements on Paraiso Springs Road. This would be a less than significant impact

Appendix G of the CEQA Guidelines provides that a project would have a significant effect if the project would "substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses."

The American Association of State Highway and Transportation Officials Geometric Design Guidelines for Low Volume Roads states that "cross section widths of existing roads need not be modified except in those cases where there is evidence of a site-specific safety problem." The guidelines further indicate "the designer is discouraged at most sites from making unnecessary geometric design and roadside improvements. This establishes that the existing road network and roadway widths are adequate to accommodate existing traffic volumes with the exception of Paraiso Springs Road immediately outside of the project site.

Paraiso Springs Road between the project site and Clark Road will experience an increase in traffic from the existing 85 vehicles per day to approximately 409 vehicles per day under an average 70 percent occupancy. Under 100 percent occupancy, the proposed project would result in a traffic volume of approximately 557 vehicles per day. On an average day, Paraiso Springs Road would continue to be a relatively low volume road with a threshold of about 417 vehicles per day. To put the anticipated average daily traffic into perspective, Paraiso Springs Road is approximately two miles long between the existing gate at the project site and Clark Road. At approximately 40 miles per hour, it would take approximately three minutes to traverse this length of roadway. Only about one vehicle would be experienced in each direction every three to four minutes on Paraiso Springs Road. During the peak hour, only one or two vehicles would be encountered along this entire stretch of roadway as vehicles enter or exit the project site.

Paraiso Springs Road is a low volume road with low travel speeds which minimizes the potential for vehicular conflicts. The existing roadway is sufficient to accommodate the existing plus project traffic volumes. Studies have demonstrated that roadway delineation including pavement striping and curve warning signs can have a substantial beneficial effect in accident rates on rural roadways.

The proposed project includes a phased Roadway Improvement Plan (Hatch Mott MacDonald, 2008) that was prepared by the project applicant to provide safety improvements on Paraiso Springs Road. The phased improvements as shown on the plans prepare by Altas Land Surveys, Inc. (2011) include:

Phase 1: Install warning signs for curves, road narrows with advisory speed signs, and roadway delineations.

Phase 2: Widening roadway to a width of 18' from the project entrance to approximately 1300 feet east of the project boundary and install controlled "T" intersection at curve approximately 1225 feet from project boundary.

Phase 3: Widen roadway to a width of 20' as feasible and install centerline stripe from point 1300 feet from project boundary east to 3900 feet east of project boundary.

Phase 4: Widen roadway to a width of 20' as feasible and install centerline stripe and edgeline stripping from point 3900 feet from project boundary east to 6500 feet east of project boundary.

These improvements will be constructed prior to occupancy of each phase for the proposed project. With implementation of these improvements as part of the proposed project, the proposed project would have a less than significant impact on safety.

Emergency Access

Impact 3.12-3: The proposed project will provide adequate site access and adequate internal circulation for emergency responders. This would be a less than significant impact

The concern for emergency access involves insuring adequate site access and adequate internal circulation for emergency responders. The public roads leading to the project site are of adequate width and grade to provide access to emergency service vehicles without limitation. The onsite circulation has been designed such that there is emergency vehicle access in close proximity to all buildings and there are no dead end access points which would require emergency vehicles to need to back out. Turn-around locations are provided at the end of the single family timeshare villas and at the end of the Hillside Village condominiums. A service access road to the spa portion of the site will also provide emergency access to the hotel and spa which do not have immediate vehicular access. This service road connects to the timeshare condominium access road making a complete loop through the site. Therefore, the proposed project would have a less than significant impact on emergency access.

Alternative Transportation

Monterey-Salinas Transit (MST) provides fixed-route bus service from Line 23 between Salinas and King City via U.S. Highway 101 with stops at various locations along the highway at Chualar, Gonzales, Soledad, and King City. Pedestrian and bicycle facilities are not provided on roadways in the vicinity of the project site. However, the proposed project would provide a private shuttle service for employees from the park and ride lot and guests from the Monterey Peninsula Airport, as well as to activities outside of the area to reduce project trips to and from the project site. Therefore, the proposed project would not conflict with alternative transportation programs, and would have no impact in this regard.

Parking Capacity

A total of 310 parking spaces would be provided at the project site for the resort hotel. The Monterey County Zoning Ordinance parking requirements (Section 21) would require a total of 587 spaces. This is based on one parking space for 103 resort hotel units; two per every three employees; one per 50 square feet of restaurant use; one per 250 square feet per retail use, two per two- bedroom condominium and 2.2 per three-bedroom condominium.

As discussed above, the shuttle system will not only reduce vehicle trips, but will also reduce the number of required parking spaces. Assuming that 20 percent of all guests arrive by shuttle from the airport and that 90 percent of the employees will shuttle from off-site; and that 80 percent of the restaurant and retail patrons will be from the hotel, there would be a credit of 284 spaces for a net total of 303 parking spaces. This is summarized in Table 3.12-4, Project Parking Requirements and Adjustment.

Table 3.12-4 Project Parking Requirements and Adjustments

Use	Measurement	Zoning Ord Parking Standard	Zoning Ord Parking Spaces Required	Adjusted Parking Spaces
Guest Rooms	103 rooms	1/room	103	82
Employees	109 employees	2/3 employees	73	7
Restaurants	7,570 sq ft	1/50 sq ft	151	30
Retail	16,050 sq ft	1/250	64	13
Day Spa	2,500 sq ft	1/50 sq ft	50	50
Institute	5,150 sq ft	1/250 sq ft	21	21
Condos 2 bdrm	34 units	2/unit	68	54
Condos 3 Bdrm	26 units	2.2/unit	57	46
Total Required			**587**	**303**

Source: County of Monterey Zoning Ordinance parking requirements (Section 21)

No reductions in parking are provided for the day use facilities. Parking at the detached single family residential lots would be provided at two spaces per single-family residential unit. Therefore, adequate parking would be provided and there would be no impact associated with inadequate parking capacity at the project site.

This page intentionally left blank.

4 CEQA CONSIDERATIONS

This section of the Draft EIR discusses long-term growth implications of the proposed project as required by CEQA. The topics discussed include significant irreversible commitment of resources, growth-inducing impacts, significant and unavoidable environmental effects, and effects found not to be significant. Cumulative impacts to the proposed project are also discussed herein.

4.1 SIGNIFICANT AND UNAVOIDABLE ENVIRONMENTAL EFFECTS

For the purpose of this section, unavoidable adverse impacts are those effects of the proposed project that would significantly affect either natural systems or other community resources, and cannot be mitigated to a less than significant level. The proposed project, if implemented, would result in the following significant and unavoidable project impacts:

- **Climate Change**: The proposed project would generate a substantial volume of GHG emissions that, when combined with other sources of GHG emissions, exacerbate global warming. The proposed project's impact is cumulatively considerable. No mitigation measures are available to reduce the impact to a less than significant level. Therefore, the impact is significant and unavoidable.
- **Historic Resources**: The nine Victorian-era cottages that were demolished in 2003 were considered historic resources for the purposes of CEQA and were determined eligible for the California Register of Historical Resources.

  Mitigation measures 3.5-1a through 3.5-1f incorporated herein, would reduce the impact, but not to a less than significant level. However, as these historic resources cannot be recreated elsewhere, this would be considered a significant and unavoidable impact.

4.2 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

Section 15126.2(c) of the State CEQA Guidelines requires an EIR to discuss the significant irreversible environmental changes that would be involved in the proposed project should it be implemented. Examples include the following: uses of nonrenewable resources during the initial and continued phases of the project, since a large commitment of such resources makes removal or nonuse thereafter unlikely; primary and secondary impacts of a project that would generally commit future generations to similar uses (e.g., highway improvements that provide access to a previously inaccessible area); and/or irreversible damage that could result from any potential environmental accidents associated with the project.

4.2.1 Analysis

The proposed project would result in an increased intensity of development at the project site over existing conditions as well as the former use. A variety of nonrenewable and limited resources would be irretrievably committed for construction and operation, including but not limited to oil, natural gas, gasoline, lumber, sand and gravel, asphalt,

steel, water, land, energy, and construction materials. In addition, the proposed project would result in an increase in demand on public services and utilities over existing conditions.

An increase in the intensity of land uses on the project site would result in an increase in regional electric energy consumption to satisfy additional electricity demands of the proposed project. These energy resource demands relate to initial proposed project construction, as well as operational transport of goods and people, and lighting, heating, and cooling of buildings and resort facilities.

Redevelopment of the planning area to support intensified urban uses including a hotel, spa and fitness center and timeshare units, is regarded as a permanent and irreversible change. Grading, utility extensions, new and improved roadways, and construction of additional structures at the project site would change the character of the project site to one that is significantly more urbanized than current site conditions. The proposed project would generally commit future generations to similar intensified urban uses within the project site.

4.3 GROWTH-INDUCING IMPACTS

CEQA requires that any growth-inducing aspect of a project be discussed in an EIR. According to CEQA, it must not be assumed that growth in any area is necessarily beneficial, detrimental or of little significance to the environment. A project would have growth-inducing effects if it would:

- Foster economic or population growth, or the construction of additional housing (either directly or indirectly) in the surrounding environment;
- Remove obstacles to population growth;
- Tax existing community services or facilities, requiring the construction of new facilities that could cause significant environmental effects; or
- Encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively.

As such, this subsection of the EIR analyzes the potential environmental consequences of the foreseeable growth and development of the surrounding area that could be induced by implementation of the proposed project and all entitlement actions.

4.3.1 Methodology

In assessing the growth-inducing impacts of a project, the lead agency is not to assume that growth in an area is necessarily beneficial or of little significance environmentally (Title 14 CCR §15126.2(d)). Typically, growth-inducing impacts result from the provision of urban services and extension of infrastructure (including roadways, sewerage, or water service) into an undeveloped area. Growth-inducing impacts can also result from substantial population increase, if the new population may impose new burdens on existing community service facilities, such as increasing the demand for service and utilities infrastructure and creating the need to expand or extend services, which may induce further growth.

A project can remove infrastructure constraints, provide access, or eliminate other constraints on development, and thereby encourage growth that has already been approved and anticipated through the General Plan process. This planned growth would be reflected in land use plans that have been developed and approved with the underlying assumption that an adequate supporting infrastructure ultimately would be constructed. This can be described as accommodating or facilitating growth.

A project can remove infrastructure constraints, provide new access, or otherwise encourage growth, which is not assumed as planned growth in the general plans or growth projections for the affected local jurisdictions. This could include areas, which are currently designated for open space, agricultural uses, or other similar non-urban land uses. In such a case, the removal of infrastructure constraints or provision of access can trigger consideration of a change in land use designation to allow development at a higher level of intensity than originally anticipated. For this section, the terms "inducing" will be used for both types of growth.

Growth-inducing impacts may also be categorized as either direct or indirect. Direct growth-inducing impacts occur when a project directly fosters growth. This may occur in a variety of ways, including, but not limited to, the construction of new homes and businesses and the extension of urban services, such as utilities and improved roads, to previously undeveloped areas. Growth can also be induced directly due to the economic effect of a project whereby economic growth multiplier effects that can cause related growth in areas near the new project. Indirect growth is induced by the demand for housing, goods, and services associated with a project. There are many other factors that can affect the amount, location, and rate of growth in the region. These include the following:

- Market demand for housing, employment, and commercial services;
- Desirability of climate and living/working environment as reflected by market demand;
- Strength of the local employment and commercial economy;
- Availability of other roadway improvements (e.g. new and/or expanded arterial or highway capacity);
- Availability of other services/infrastructure (e.g. wastewater treatment, water, schools, etc.); and
- Land use and growth management policies of the counties and municipal jurisdictions.

To assess potential growth inducing impacts of the proposed project, the geographic range or extent of any possible growth inducing impacts was evaluated.

There would be little or no growth-inducement resulting from the proposed project. This statement is based on the following:

- The proposed project includes approximately77 residential, timeshare housing units; however, they would function more as vacation homes rather than full-times residences.
- The proposed project would be "self contained," in that it would not extend infrastructure or eliminate barriers to growth beyond the boundaries of the project site.
- The proposed project does not include expansion of infrastructure, including water, wastewater and roadways, beyond that needed to serve the project development.
- Due to the existing topography at the project site, a substantial portion of the project site would remain unchanged and scenic easements would be required 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 proposed project is not intended specifically to generate new growth, but rather to allow job growth to occur within Monterey County. Providing the hotel/resort spa and associated accessory uses could provide neighboring city residents with job opportunities.

4.4 EFFECTS FOUND NOT TO BE SIGNIFICANT

A significant effect on the environment is generally defined as a substantial or potentially substantial adverse change in the physical environment (CEQA Guidelines Section 15328). The term "environment," as used in this definition, means the physical conditions that exist within the area that will be affected by a proposed project including land, air, water, minerals, flora, fauna, ambient noise and objects of historic or aesthetic significance. The area involved shall be the area in which significant effects would occur either directly or indirectly as a result of the proposed project. The "environment" includes both natural and man-made conditions (CEQA Guidelines Section 15360).

Detailed analyses and discussion of environmental topics found to be significant are provided within Section 3.0 of this EIR. Listed below are those environmental issues (broad topics) found to have no impact as a result of the proposed project. This determination is based on the standards of significance contained within the CEQA Guidelines and the Notice of Preparation process for the proposed project.

Energy

Energy demands for the proposed project would be serviced by PG&E. Extension of utility services within the project site would be in accordance with County policies. The demand on energy resources is not anticipated to impact the current utilities level of service.

PG&E has builder incentive programs to encourage energy efficient construction. There is limited funding for these programs and incentives are awarded on a first come, first

serve basis. However, energy efficient construction reduces the demand on energy sources and promotes a healthier environment. Some simple design features that can be incorporated in the specifications may include tight construction and sealed ducts, energy saving windows, improved insulation and super-efficient heating and air conditioning systems.

Mineral Resources

According to the *Monterey County General Plan,* there are no mineral resources in the within or in the project vicinity. Therefore, the proposed project would have no impact on mineral resources.

Agricultural Resources

The project site is not currently in agricultural production and is not designated as important farmland. Therefore, the proposed project would have no impact on agricultural resources.

Population and Housing

The proposed project would include construction of a resort hotel and residential time-share units. This would increase transient population at the site but would not result in a substantial increase in permanent residential population at the project site. The proposal would not induce substantial population growth (see discussion under section 4.3 Growth Inducing Impacts above).

4.5 CUMULATIVE IMPACTS

4.5.1 CEQA Requirements

CEQA defines cumulative impacts as two or more individual effects which, when considered together, are substantial or which compound or increase other environmental impacts. An evaluation of cumulative impacts is required by CEQA when they are significant, but need not be as detailed as the discussion of project impacts. Cumulative conditions are defined as conditions in the foreseeable future with all approved, pending, and known planned development in place. The *CEQA Guidelines* require that an EIR discuss the cumulative impacts of a project where the project's incremental effect is cumulatively considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.

The criteria for determining significance of cumulative impacts are the same as those that apply to the project-level analysis unless otherwise noted in the section, where other agency standards regarding cumulative analyses may apply. Where the combined cumulative impact associated with the projects' incremental effect and the effects of other projects is not significant, the EIR indicates why the cumulative impact is not significant and is not discussed in further detail in the EIR. Where the EIR identifies a significant cumulative impact, but finds that the project's contribution to that impact would be less than considerable, an explanation for that conclusion is provided.

According to the California State CEQA Guidelines section 15130 (a)(1), there is no need to evaluate cumulative impacts to which the project does not contribute. Relevant potential cumulative impacts to which the proposed project could contribute include: aesthetics and visual resources, air quality, biological resources, climate change, cultural and historic resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, public services and utilities, and transportation and traffic. Each of these topics is addressed below.

4.5.2 Cumulative Impacts Assumptions and Analysis

An evaluation of the impacts generated from the implementation of the proposed project when considered in conjunction with development forecasts based on the buildout of *Monterey County General Plan*, is included in below. Thresholds of significance for impacts are those indicated in the relevant portions of Section 3.1 through 3.12 of this EIR. In addition, as outlined in Title 14 CCR § 15139(b) (3), the geographic scope of the proposed project varies depending on the type of impact discussed. For example, the cumulative impact area for long-term operational air quality emissions is the North Central Coast Air Basin and for aesthetics, cumulative impacts is the area within and adjacent to the project site.

Aesthetics

The most visually significant portions of the site are 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. Some of the proposed development would be visible from the Paraiso Valley floor and potentially from the upper section of Paraiso Springs Road approaching the site. Protecting surrounding landforms and the dominant natural features will help to mitigate the impact of this development upon the visual character of the area. Mitigation measure 3.1-1 requires 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 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 (Mitigation Measure 3.1-2). 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 and the surrounding area would be less than significant.

There are no other projects that are proposed in the vicinity of the project site that, when combined with the visual impacts of the project, would result in cumulative visual impacts.

Air Quality

Regional Emissions

The geographical area for overall cumulative air emission impacts is the North Central Coast Air Basin, which includes Monterey County, San Benito County, and Santa Cruz County, which is the extent of the jurisdiction of the MBUAPCD. The MBUAPCD updated the regional *Air Quality Management Plan* (AQMP) in 2008. The AQMP includes current air quality data, revises the emission inventory and emission forecasts, provides an analysis of emission reductions needed to meet and maintain State ozone standards, and includes adoption of five stationary source controls to achieve emission reductions. In developing the emission forecasts, the AQMP accounts for population growth for cities and counties located within the basin based on the population projections of the Association of Monterey Bay Area Governments (AMBAG).

These forecasts are then accommodated within the AQMP. According to the *MBUAPCD CEQA Guidelines*, projects that are consistent with the AQMP would not result in cumulative impacts as related to regional emissions that have been factored into the AQMP. In a letter dated April 8, 2010, AMBAG determined that the proposed project would be consistent with the growth forecasts in the County of Monterey. Therefore, the proposed project is consistent with the regional forecasts and the AQMP and would not result in cumulative regional air quality impact. Since 2010, it has become evident that actual population growth, hindered by the economic downturn, is less than what had been forecast by AMBAG at the time the AQMP was adopted; therefore, the proposed project remains within the regional forecasts upon which the AQMP is based.

Localized Emissions

The geographic area for cumulative localized pollutant impacts would be those intersections anticipated that could be affected by significant volumes of traffic from the proposed project; i.e. those intersections studied in the traffic study prepared by Hatch Mott McDonald (2008, 2011). The *MBUAPCD CEQA Guidelines* indicate that projects that reduce intersection level of service to LOS E or LOS F may result in localized increases in CO concentrations at those intersections. The traffic study evaluated vehicular trips from all existing, existing plus project, and cumulative conditions. According to the traffic impact report, implementation of the proposed project would not result in unacceptable levels of service at study intersections under cumulative conditions and therefore would result in a less than significant impact with respect to cumulative CO emissions at all study intersections in accordance with the *MBUAPCD CEQA Guidelines*. In addition, the proposed project would not result in toxic air contaminant (TAC) emissions at buildout.

Conclusion

Cumulative impacts related to regional and local air emissions (CO) are considered less than significant. In accordance with the *MBUAPCD CEQA Guidelines*, project contributions to regional cumulative air emissions are not considered significant when a

project is consistent with the AQMP. Cumulative CO concentrations with project buildout would not exceed state CO concentration standards, therefore the proposed project would result in a less than significant cumulative impact on air quality.

Climate Change

The climate change analysis in Section 3.4 is a cumulative impacts analysis. This impact is cumulatively considerable and therefore, significant and unavoidable. See Section 3.4 for the discussion and analysis.

Biological Resources

The proposed project in conjunction with other reasonably foreseeable growth areas within south Monterey County would result in a permanent loss of habitat and would contribute to biological resource impacts including disturbance to special status plant and animal species. Development of the project site is anticipated to contribute to these impacts. However, implementation of mitigation measures incorporated herein would reduce the project's potential contribution to this cumulative impact to a less than significant level by requiring avoidance, biological assessments, pre-construction surveys, biological monitoring, tree replacement, habitat replacement/restoration, habitat creation, or purchase of wetland/riparian habitat credits from an approved mitigation bank.

Implementation of these mitigation measures would ensure that the proposed project would not have a significant contribution to the potential loss of special status plant and animal species, or sensitive habitat in the region. Therefore, the proposed project would result in a less than significant cumulative impact to special status species, critical habitat, and wildlife movement.

Cultural Resources

Ground disturbing activities associated with the proposed project may result in the disturbance or destruction of buried historic, archeological, paleontological, or burial site resources. Mitigation incorporated herein would require that the project applicant mark cultural resource sites located within the boundary of the project site as exclusion zones on construction drawings and on the ground and conduct periodic cultural resource monitoring during ground disturbing activities. This would mitigate the impacts to archaeological resources at the project site. Development within the County is required to comply with Section 18.25: Preservation of Historic Resources would ensure that cumulative development does not result in a cumulative impact to historic resources within the County. Damage or destruction of cultural resources in conjunction with other projects in the area is not expected to result in cumulative considerable impact due to the isolated nature of the project site, the limited nature of additional projects vicinity of the project site, and the mitigation requirements imposed on those projects. As such, the proposed project would not have a cumulatively considerable impact on cultural resources.

Geology and Soils

The proposed project would not combine with any other factors or project and thus would not be considered significant due to the localized site-specific nature of geotechnical and seismic impacts. Therefore, the proposed project would not have impacts that are cumulatively considerable.

Hazards and Hazardous Materials

Hazardous impacts would be site specific and would not be affected or amplified by cumulative development in the area. As described in Section 3.7 of this EIR (Hazards and Hazardous Materials), with implementation of the proposed mitigation measures, the project would not contribute to an increase in the potential for soil or groundwater contamination or the potential risk of upset as a result of current or past land uses.

The proposed project would not combine with any planned growth in the area to form a hazards impact greater or more significant than the proposed project impact alone. Therefore, the proposed project would not have impacts that are cumulatively considerable.

Hydrology and Water Quality

The proposed project would contribute to cumulative drainage flows and surface water quality impacts when combined with other growth and development under buildout of the General Plan. However, mitigation measures incorporated herein would require that prior to recording the Final Subdivision Map, the project applicant prepare a final drainage plan that includes low impact design features and best management practices in order to detain the difference between the 100-year post-development runoff rate and the 10-year pre-development runoff rate in accordance with Section 16.16.040.B.5 of the Monterey County Code and MCWRA standards. With implementation of mitigation measures, the proposed project's contribution to cumulative stormwater runoff and contamination impacts would be considered less than significant.

Land Use and Planning

The proposed project would be generally consistent with policies in the *County of Monterey General Plan* and the *Central Salinas Valley Area Plan* with implementation of the mitigation measures identified within this EIR. In addition, the proposed project would not divide an established community or conflict with any other applicable land use plan or policy. Therefore, the proposed project as mitigated would not result in a cumulative considerable impact associated with land use and planning issues.

Noise

The proposed project along with reasonably foreseeable cumulative projects would result in increased traffic volumes along study roadway segments within the Central Salinas Valley Area Plan. This would expose residents living along the road segments to additional transportation noise. However, resulting noise levels would be within County noise standards for single-family residential uses and are considered to be less than significant.

Several policies in the Monterey County General Plan would ensure that foreseeable future development under the General Plan evaluate noise attenuation measures as part of the project design in order to attenuate noise levels under cumulative conditions. Therefore, the proposed project would not have impacts that are cumulatively considerable.

Public Services and Utilities

No significant increases in demand on public services and utilities have been identified for the proposed project. Implementation of proposed mitigation measures would ensure that storm water drainage facilities, potable water distribution and treatment facilities, and wastewater collection and treatment facilities are adequate to accommodate the increased demand associated with the proposed project.

Since the proposed project will not generate a significant increase in demand for public services and utilities it will have minimal affect on the cumulative impact to public services and utilities. The increased demand for public services associated with the proposed project and other future development would be accommodated by increased property tax revenue and development impact fees assessed for new construction in the planning area of the General Plan. As a result, impacts associated with providing public service facilities and utilities for cumulative development would be considered to be less than significant.

Transportation and Traffic

General Plan forecast volumes were obtained from the AMBAG Transcad Model Year 2030 forecasts to establish a growth factor of 69 percent. Arroyo Seco Road is expected to carry a total of 71,000 trips on an average day between Fort Romie Road and the U.S. Highway 101 Ramps. This number was used to estimate the approximate General Plan volumes on Fort Romie, Foothill, Arroyo Seco Road, Paraiso Springs Road, and Clark Road. There are no specific plans for development along Paraiso Springs Road and estimates of future traffic growth are not likely to be experienced. The existing plus project volumes along Paraiso Springs Road are expected to remain unchanged through the General Plan buildout. All study intersections and roadway segments will operate at LOS A with the exception of Arroyo Seco Road between Fort Romie Road and U.S. Highway 101, which will operate at LOS B. No mitigation measures would be necessary to alleviate a level of service deficiency under cumulative conditions (Hatch Mott McDonald 2008, page 9).

However, the project applicant would be required contribute their fair share towards the regional traffic impact fee as required by Chapter 21.90: Regional Development Impact Fee to help fund regional improvements in the County and reduce the project's cumulative impact to regional intersections and roadway segments (e.g. U.S. Highway 101). Payment of the regional traffic impact fees would reduce the cumulative impacts on the regional roadway system to a less than significant impact.

5 ALTERNATIVES TO THE PROPOSED PROJECT

CEQA requires a description of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project. Also required is an evaluation of the comparative merits of the alternatives (Title 14 CCR §15126.6(a)). An EIR is not required to consider every conceivable alternative to a project, but must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. CEQA further requires that the discussion of alternatives focus on those alternatives capable of eliminating any significant adverse environmental impacts or reducing them to a level of insignificance, even if these alternatives would impede to some degree the attainment of the project objectives or would be more costly (Title 14 CCR §15126.6(b)).

Alternatives are compared to the proposed project on a relative basis. For example, where both the proposed project and an alternative would have a less than significant effect, one of the two might still have relatively less impact, and be relatively superior to the other. Alternatives are compared to the project as proposed in project plans. Mitigation measures presented in the EIR may reduce the impact of the proposed project but in the alternatives analysis the comparison is based on the unmitigated project. Following the description and discussion of each alternative, the merits of the alternatives are compared and ranked.

5.1 DEVELOPMENT OF PROJECT ALTERNATIVES

Alternatives developed during the environmental review process have been evaluated and screened so that only a reasonable range of alternatives are carried forward for detailed analysis. Those alternatives determined to be unreasonable are eliminated from further consideration. The following sections discuss the alternative development and screening process and identify those alternatives that would fulfill the purpose of and the need for the proposed project that are selected for further consideration in this document.

5.1.1 Relationship to Project Objectives

In accordance with the CEQA Section 15124(b), a statement of objectives sought by the proposed project should be clearly stated to aid the Lead Agency in developing a reasonable range of alternatives to evaluate in the EIR. These objectives are also utilized to aid decision makers in preparation of findings or statement of overriding considerations (Title 14 CCR § 15124 (b). The following objectives outline the underlying purpose of the proposed project and will be used to evaluate each of the three alternatives to the proposed project:

- Redevelop the existing vacant Paraiso Springs Resort into a world-class destination spa/resort hotel;
- Build a project that is consistent with the objectives and policies of the Central Salinas Valley Area Plan and the 1982 Monterey County General Plan;

- Develop a mission style resort that provides visitor-serving support for the Monterey County wine corridor honoring the historic connection to the Soledad Mission's use of the property as a vineyard and retreat;
- Proactively engage the services of local businesses in the construction and on-going operation of the resort;
- Work with Monterey County, local wineries, and other related businesses to promote the Monterey wine corridor as a destination for tourism;
- Provide a therapeutic environment for wellness treatment and education;
- Utilize the existing mineral hot springs and sweeping views of the Central Salinas Valley as key amenity features;
- Provide services and amenities for both overnight and day guests;
- Provide an economically sustainable combination of hotel units and timeshare units of varying sizes;
- Create long-term employment and economic (tax revenue) opportunities for Monterey County;
- Provide an onsite interpretive display of the history and events associated with the Paraiso Springs Resort;
- Develop and provide opportunities to reduce green house gas emissions through the provision of a shuttle service for employees and guests, and on-site programs such as the use of electric service vehicles, solar energy generation, energy efficient building design, use of Energy Star appliances and fixtures, etc. to the greatest extent feasible; and
- Retain 150 acres of the project site as natural open space that would accommodate hiking trails and landscaping, and preserve the existing habitat and natural landforms.

5.1.2 Alternatives Screening Process

Consistent and standardized criteria for establishing the reasonableness or feasibility of certain alternatives are typically applied. Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent). No one of these factors establishes a fixed limit on the scope of reasonable alternatives (Title 14 CCR §15126.6(f) (1)). Among the factors that may be used to eliminate alternatives from detailed consideration include: (1) failure to meet most of the basic project objectives; (2) infeasibility; or (3) inability to avoid significant environmental impacts.

5.1.3 Alternatives Eliminated from Detailed Analysis

An "Alternative Site Location" was rejected because the Monterey County General Plan, Central Salinas Valley Area Plan, and Zoning Ordinance all contemplate a visitor serving

use at this location, the historic use of the site has been for visitor serving purposes, and the applicant specifically purchased and seeks to develop this property because of the attraction of the hot springs. An alternative location would not meet the basic project objectives of utilizing the mineral hot springs developing a mission style resort that provides visitor-serving support for the Monterey County wine corridor or honoring the historic connection to the Soledad Mission's use of the property as a vineyard and retreat. There are no other locations within the Central Salinas Valley that includes natural mineral hot springs or that includes the historic use by the Soledad Mission. Therefore, the "Alternative Site Location" was eliminated from consideration.

5.1.4 Alternatives Selected for Detailed Analysis

Below is a qualitative analysis of two alternatives to the proposed project. This analysis is intended to provide a relative comparison between the proposed project and each individual project alternative. In several cases, the description of the impact may be the same under each scenario when compared to the CEQA thresholds of significance (i.e., both scenarios would result in a less than significant impact determination). However, the actual degree of impact may be slightly different under each scenario, and this relative difference is the basis for a conclusion of greater or lesser impacts.

This analysis will identify an environmentally superior alternative from among the two alternatives. The environmentally superior alternative is the alternative that would result in the fewest or least significant environmental impacts, while still achieving the basic objectives of the proposed project, as described during the planning effort.

The two alternatives evaluated include the following:

Alternative #1 - No Project Alternative

Alternative #2 –Valley Floor Alternative

The detailed analysis of each alternative as compared to the proposed project is presented below.

5.2 ANALYSIS OF PROJECT ALTERNATIVES

Analysis of the alternatives assumes that all applicable mitigation measures associated with the proposed project would be implemented with the alternatives, as appropriate. Nevertheless, applicable mitigation measures may be scaled to reduce or avoid potential impacts associated with the alternative under consideration and may not precisely match those identified for the proposed project.

5.2.1 Alternative #1: No Project Alternative

CEQA stipulates that a "no project" alternative be evaluated along with its impacts. The "no project" alternative is the circumstance under which the project does not proceed. The "no project" alternative analysis must discuss the existing conditions, as well as what

would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services (Title 14 CCR §15126.6(e)). If disapproval would result in predictable actions by others, such as the proposal of some other project, the "no project" consequence should be discussed. In certain instances, the no project alternative means "no build" wherein the existing environmental setting is maintained. However, where failure to proceed with the proposed project would not result in preservation of existing environmental conditions, the analysis should identify the practical result of the project's non-approval. It should not create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment.

This DEIR describes the current environmental conditions at the project site. Under the "no project" alternative, the project site would remain unchanged, and no new development would occur. In general, the project site would continue to show the evidence of the past, with a few buildings that served the prior resort, including but not limited to the fifteen vernacular cabins, a changing room, a recreation room, indoor and outdoor baths, six mobile homes, a lodge, a workshop, a yurt compound, a miner's shack, and several small outbuildings. There would be no impacts to oak woodlands or other habitats. However, the "no project" alternative would not eliminate the potential for the site to be developed, because existing land use and zoning designations allows a visitor-serving use at this location.

Impact Analysis

Air Quality

Air quality impacts are primarily associated with vehicle emissions. Short-term air quality impacts are associated with construction activities (e.g., earthmoving vehicles) in comparison to the long-term impacts of guest and visitor traffic and stationary source emissions. No new short-term construction or long-term operational air quality emissions would occur with implementation of the no project alternative. Under the no project alternative, the project site would remain in its existing condition and would not experience an increase in short-term or long-term air quality emissions. Therefore, this alternative would have fewer impacts on air quality in relation to the proposed project.

Aesthetics

No changes to the aesthetic quality or visual character of the project site would occur under the no project alternative. Under this alternative, no new structures would be built at the project site. This would avoid the removal of as many as 191 trees and other vegetation, in addition to preventing moderate changes in topography within the project site from grading activities. In addition, under this alternative, no new sources of light and glare would be introduced at the project site. Although development of the project site is not expected to substantially degrade the existing visual quality or character of the project site or surrounding area; and although these impacts were found to be less than significant as described in Section 3.1, Aesthetics and Visual Resources, this alternative would have fewer impacts on aesthetics in comparison to the proposed project.

Biological Resources

The project site would remain in its current condition under the no project alternative. Existing plant and wildlife habitats, including the removal of oak trees and riparian vegetation would not occur under this alternative. As identified in Section 3.3, Biological Resources, biological resource impacts resulting from implementation of the proposed project can be mitigated to less than significant. However, because the no project alternative would result in no impact to biological resources, this alternative would have fewer impacts on biological resources compared to the proposed project.

Cultural Resources

The project site would remain in its current condition; no ground-disturbing activities would occur under the no project alternative. As such, there would be a significant reduction in the potential for the disturbance or destruction of archaeological or paleontological resources. However, as identified in Section 3.4, Cultural Resources, impacts to historic resources resulting from implementation of the proposed project cannot be mitigated to a less than significant level due to the removal of the nine individually significant Victorian-era cottages in 2003. The project applicant would still be required to obtain an "after the fact" demolition permit and address the illegal removal of these cottages. This may include measures similar to those identified in MM 3.4-1a through MM 3.4-1c, which includes, but is not limited to providing archival quality reproductions of historic archives of the project site; providing a grant of $10,000 to assist with the cataloging, displaying and archiving of the resources; and design, and creation of full color brochure that describes the history of the project site that can be used in various locations in the Central Salinas Valley area. Even with implementation of these measures under the no project alternative, as these historic resources cannot be recreated, this would be considered a significant and unavoidable impact under the no project alternative and would result in no change in comparison to the proposed project.

Geology and Soils

The project site is subject to earthquakes and seismic ground shaking. In addition, the project site may be subject to secondary seismic effects such as liquefaction and landslides. The no project alternative would not result in the development of new structures within a seismically-active area that is susceptible to secondary seismic effects, and there would be no potential for short-term construction-related erosion. Therefore, no impacts would occur under this alternative. As identified in Section 3.6, Geology and Soils, with the incorporation of the recommended mitigation measures, the proposed project will result in a less than significant effect on geology and soils. However, since the no project alternative would result in no new buildings within a seismic hazard area at the project site, this alternative is viewed as having less impact than the proposed project with respect to geology and soils.

Hazards and Hazardous Materials

Under the no project alternative, the project site would remain undeveloped. In the short-term, the no project alternative would not require earthmoving activities that could result

in accidental spills or release of hazardous construction-related materials. However, structures located within the project site, which contain asbestos and lead would not be removed under this alternative. As identified in Section 3.6, Hazards and Hazardous Materials, the hazardous impacts would be considered less than significant. However, because the no project alternative would not result in additional hazardous materials use at the project site, this alternative would have fewer impacts to hazards and hazardous materials in comparison to the proposed project.

Hydrology and Water Quality

Under the no project alternative, the project site would remain undeveloped. In the short-term, the no project alternative would not require earthmoving activities that would result in increased erosion and sedimentation. In the long-term, the no project alternative would not result in an increase in impervious surfaces and storm water runoff (i.e., rate, volume, pollutants, etc.) within the project site, nor a change to net demand on the project site. As identified in Section 3.8, Hydrology and Water Quality, the hydrology and water quality impacts of the proposed project would be mitigated to a less than significant level. However, because the no project alternative would not result in alterations to the drainage and water quality characteristics of the project site, this alternative would have fewer impacts to hydrology and water quality in comparison to the proposed project.

Land Use and Planning

Under the no project alternative, the proposed project would remain in its current condition. The project site would also continue to be designated for Commercial use under the *Monterey County General Plan and* Central Salinas Valley Area Plan (CSVAP), Commercial-Visitor Serving (VO) under the Monterey County Zoning Ordinance As identified in Section 3.9, Land Use and Planning, the proposed project would not result in significant neighborhood or related land use impacts on policies, plans or ordinances. It must be noted that Policy 28.1.1.1 of the Central Salinas Valley Area Plan specifically identifies Recreation and Visitor Serving uses as being allowed on the project site (Paraiso Property). It is unlikely that the no project alternative would permanently preclude development of this property. Although this alternative would eliminate development on the project site for an undetermined time, it would result in the same conclusions as the proposed project with respect to consistency with all other policies, plans or ordinances. Therefore, this alternative would result in similar land use impacts in comparison to the proposed project.

Noise

Development creates short-term noise impacts from the operation of construction equipment and long-term noise impacts from increased vehicle traffic. Under the no project alternative, the project site would remain in its current condition. No noise from short-term construction or from long-term operational activities would occur; therefore, no noise impacts would result from this alternative. By implementing the mitigation measures set forth in Section 3.9, Noise, all impacts from short-term noise would be considered less than significant. However, because this alternative would not result in

development that would create increased traffic-related or other noise sources, the no project alternative would have fewer noise impacts in comparison to the proposed project.

Public Services and Utilities

Implementation of the no project alternative would not result in an increase in the need for public services such as law enforcement, fire services, libraries, and parks and recreation. As noted in Section 3.11, Public Services and Utilities, with the implementation of the mitigation measures, the proposed project would have a less than significant impact to public services and utilities. However, since the no project alternative would not result in an increase in demand for public services and utilities, this alternative would have fewer impacts in comparison to the proposed project.

Transportation and Traffic

No new buildings would be developed and, therefore, no additional vehicular trips would be generated by the proposed project under the no project alternative. The additional trips generated under the proposed project would contribute to additional traffic on Paraiso Springs Road, Clark Road, or River Road. However, since the no project alternative would not result in construction-related vehicle trips or add long-term operational traffic to the road network, this alternative would result in fewer impacts in comparison to the proposed project.

Conclusion

The no project alternative would result in fewer impacts in comparison to the proposed project, with the exception of cultural resources, where the level of impact would remain the same. However, the no project alternative would not meet the project objectives because it would not develop a mission style resort that provides visitor-serving support for the Monterey County wine corridor honoring the historic connection to the Soledad Mission's use of the property as a vineyard and retreat, provide an economically sustainable combination of hotel units and timeshare units of varying sizes, and provide a world class spa-resort in the Central Salinas Valley.

5.2.2 Alternative #2: Valley Floor Alternative

The valley floor alternative would eliminate the proposed development on slopes exceeding 30 percent. The objective of this alternative is to create better consistency with County policy related to development on slopes exceeding 30 percent, minimize retaining walls, and minimize the visibility of development on the site from surrounding area. This alternative would involve the following modifications to the site plan:

1. Redesign and relocate the parking area for the hamlet. Relocate parking spaces to areas along the entry road.

2. Redesign the parking area adjacent to the lots 21 and 22 such that the parking lot does not encroach into 30 percent slope. Some of these parking spaces will need to be relocated.

3. Relocate the timeshare condominium units on lots 21 and 22 from their current location long the top of the ridge in an area that requires encroachment onto 30 percent slopes to Indian Valley in the location of the single family lots. This alternative would remove the timeshare single family lots and replace them with the timeshare condominium units.

4. Remove the access road to the timeshare condominiums in lot 23. This proposed access road is along a very steep hillside. The timeshare condominiums on Lot 23 could either remain in that location with access along the path of the existing service road, or these units could be relocated to Indian Valley.

The result of these changes would be the retention of the 60 timeshare condominium units but the elimination of the 17 timeshare villa lots. The outcome would be removal of development at higher and more visible locations, and the removal of high retaining walls.

Impact Analysis

Air Quality

Emissions of airborne particulate matter are largely dependent on the amount of ground disturbance associated with site preparation activities. Therefore, slightly less particulate matter from short-term construction would occur under the valley floor alternative. In addition, the reduction of the number of parcels developed would correspondingly reduce construction exhaust emissions associated with construction activities. The elimination of timeshare units would reduce vehicular trips and long-term vehicular emissions generated by development within the project site. As such, fewer impacts to air quality would occur. With implementation of mitigation measures, as outlined in Section 3.3, Air Quality, impacts regarding air quality were found to be less than significant. However, this alternative would have fewer impacts on air quality relative to the proposed project.

Aesthetics

The smaller footprint under the valley floor alternative would result in fewer aesthetic changes to the project site. Fewer structures would be built; therefore, fewer trees and other vegetation would be removed, and fewer sources of light and glare would be introduced within the project site. It should also be noted that, as stated in Section 3.1, Aesthetics and Visual Resources, removal of trees must result in replacement ratio in accordance with Section 21.64.260 of the Monterey County Code. In addition, the valley floor alternative would avoid slopes greater than 30 percent particularly on lot #23 and on lots #18 and #19. Under the proposed project, the condominiums on lots #21 and #22 would be visible from Paraiso Springs Road. Relocation of these units off of this ridgeline would retain the existing aesthetic of the site when viewed from off site. These

lots would then remain as undeveloped open space and would be dedicated for scenic enjoyment for the remainder of the project site and those viewing the site from a distance. Implementation of the proposed project is not expected to substantially degrade the existing visual quality or character of the project site or surrounding area, and all impacts herein were found to be less than significant as outlined in Section 3.1: Aesthetics and Visual Resources. However, the valley floor alternative would have fewer impacts on aesthetics, light, and glare than the proposed project with a reduction in development and an emphasis on keeping development at lower elevations.

Biological Resources

The valley floor alternative would result in fewer timeshare units and the addition of additional open space. As such, there would be fewer disturbances to existing plant and wildlife habitats, including the removal of oak trees and other vegetation. As identified in Section 3.3, Biological Resources, biological resource impacts resulting from implementation of the proposed project can be mitigated to less than significant. However, because the valley floor alternative would result in less destruction or disturbance of biological resources, this alternative would have fewer impacts on biological resources in comparison to the proposed project.

Cultural Resources

The valley floor alternative would result in fewer timeshare units and the addition of additional open space. As such, there would be a reduction in the potential for the disturbance or destruction of archaeological or paleontological resources. However, as identified in Section 3.4, Cultural Resources, impacts to historic resources resulting from implementation of the proposed project cannot be mitigated to a less than significant level due to removal of the nine individually significant Victorian-era cottages in 2003. The project applicant would still be required to implement mitigation incorporated herein to reduce the impacts to historic resources. Even with implementation of these mitigation measures, as these historic resources cannot be recreated, this would continue to be a significant and unavoidable impact under the valley floor alternative and would result in no change in comparison to the proposed project.

Geology and Soils

The project site is subject to earthquakes and seismic ground shaking. In addition, the project site may be subject to secondary seismic effects such as liquefaction and landslides. The valley floor alternative would result in a smaller construction footprint and fewer timeshare units in comparison to the proposed project. The reduction in timeshare units would reduce exposure of persons and structures to seismic hazards. There would be a lower potential for short-term, construction related erosion to occur and, therefore, would have a lower potential to create adverse impacts. In addition, the additional open space would result in the permanent preservation of many of the steep slopes on the project site. This would reduce potential adverse impacts from long-term erosion hazards and landsliding. Therefore, fewer impacts would occur under this alternative. As identified in Section 3.6, Geology and Soils, with the incorporation of the recommended mitigation measures, the proposed project will have a less than significant

effect on geology and soils. However, the valley floor alternative would result in fewer buildings at the project site. As such, there would be fewer units within a seismic hazard area and less potential for short- and long-term erosion, this alternative is viewed as having less impact to geology and soils in comparison to the proposed project.

Hazards and Hazardous Materials

The valley floor alternative would result in fewer timeshare units and the dedication of additional open space. In the short-term, less earthmoving activities would take place that would result in accidental spills or release of hazardous construction-related materials. In the long-term, there would a slight reduction in the use of hazardous materials within the project site. As identified in Section 3.6, Hazards and Hazardous Materials, the hazardous impacts would be considered less than significant. However, because the valley floor alternative would result in less use of hazardous material and fewer incidents for accidental spills or release of hazardous construction-related materials, this alternative would have fewer impacts to hazards in comparison to the proposed project.

Surface Water Hydrology

The valley floor alternative would result in fewer timeshare units and the dedication of additional open space. Fewer impervious surfaces would be created, which would result in a lower potential for surface runoff resulting in lower storm water volume and velocity. In addition, the reduction in impervious surface coverage would increase the potential for natural groundwater recharge. As identified in Section 3.7, Surface Water Hydrology, the hydrology and water quality impacts of the proposed project would be mitigated to a less than significant level. However, because the valley floor alternative would result in fewer alterations to the drainage and water quality characteristics of the project site, this alternative would have fewer impacts to hydrology and water quality in comparison to the proposed project.

Land Use and Planning

As with the proposed project, the valley floor alternative is consistent with the current land use designation of the project site. As identified in Section 3.8, Land Use and Planning, the proposed project would not be inconsistent with policies, plans or ordinances. This alternative would eliminate development on 30 percent slopes which is consistent with the General Plan and Zoning Ordinance which discourages development on slopes in excess of 30 percent except in circumstances where there is no alternative and when placing development on slopes over 30 percent better achieves the objectives of the County. The alternative would also reduce the intensity of development on the project site resulting in the same conclusions as the proposed project with respect to consistency with all other policies, plans or ordinances. Therefore, this alternative would result in fewer land use impacts in comparison to the proposed project.

Noise

Development creates short-term noise impacts from the operation of construction equipment and long-term noise impacts from increased vehicle traffic. Under the valley

floor alternative, fewer timeshare units would be developed, and proportionally less noise from short-term construction or long-term operational activities would occur. As such, fewer noise impacts would occur. With the mitigation measures, as set forth in Section 3.9 Noise, all noise impacts from the proposed project were found to be less than significant. However, the valley floor alternative would have fewer noise impacts in comparison to the proposed project due to a reduction in vehicle trips to the project site.

Public Services and Utilities

The reduction of timeshare units would result in a corresponding lower demand for public services and utilities at the project site, including a slight reduction in the amount of calls to the Sheriff's office, a reduction in the demand for potable water, generation of wastewater, and the solid waste. This alternative is estimated to result in fewer calls for law enforcement services. As noted in Section 3.10, Public Services and Utilities, the proposed project would have a less than significant impact to public services. However, because the valley floor alternative would result in a slight reduction in demand for public services, this alternative would have less of an impact in comparison to the proposed project.

Transportation and Traffic

Implementation of the valley floor alternative would result in elimination of the proposed 17 timeshare villa lots. Hence, this alternative would result in a corresponding trip reduction in comparison to the proposed project operational trips. Therefore, because the valley floor alternative would reduce the generation of construction-related vehicle trips and long-term operational traffic, this alternative would have fewer transportation and circulation impacts in comparison to the proposed project.

Conclusion

The smaller foot print and fewer timeshare units proposed by the valley floor alternative would result in corresponding fewer impacts to all environmental issue areas with the exception of impacts to cultural resources, which would be similar to the proposed project. However, the valley floor alternative would result in 17 fewer timeshare units and, therefore would meet the proposed project objectives to a lesser degree compared to the proposed project. These objectives include development of 50 acres of the project site and providing an economically sustainable combination of hotel units and timeshare units of varying sizes.

5.2.3 Environmentally Preferable Alternative

CEQA Guidelines requires an EIR to identify an "environmentally superior alternative" (Title 14 CCR §15126(e) (2)). If the no project alternative is the environmentally superior alternative, the EIR must also identify an environmentally superior alternative from among the other alternatives.

Both of the alternatives would have fewer environmental impacts relative to the proposed project, with the no project alternative having the fewest, or no additional environmental

impacts at all. Table 5.1, Comparison of Project Alternatives to the Proposed Project, below, provides a summary of alternative impacts in comparison to the proposed project.

Table 5.1 Comparison of Project Alternatives to the Proposed Project

Environmental Category	Alternative #1 - No Project Alternative	Alternative #2 – Valley Floor Alternative
Aesthetics and Visual Resources	Less	Slightly Less
Air Quality	Less	Slightly Less
Biological Resources	Less	Slightly Less
Cultural Resources	Similar	Similar
Geology and Soils	Less	Slightly Less
Hazards and Hazardous Materials	Less	Slightly Less
Surface Water Hydrology	Less	Slightly Less
Land Use and Planning	Similar	Slightly Less
Noise	Less	Slightly Less
Public Services and Utilities	Less	Slightly Less
Transportation and Traffic	Less	Slightly Less
Consistency with Project Objectives	Less	Slightly Less
Source: EMC Planning Group 2013		

As identified in Table 5-1, the no project alternative is the environmentally superior alternative, as the project site would remain in its existing condition, thereby avoiding any potentially adverse environmental impacts.

As stated above, if the no project alternative is environmentally superior, the EIR must also identify another environmentally superior alternative among the remaining alternatives. Based on this review, the valley floor alternative is considered the environmentally superior alternative. The reduced footprint, reduction in timeshare units, and increase in open space at the project site would correspondingly reduce the environmental impacts of the proposed project. Therefore, the valley floor alternative is the environmentally superior alternative.

6 REFERENCES CITED

AdEdge Technologies. 2012. *Field Pilot Test Report for the Paraiso Hot Springs Potable Water Treatment Plant – Fluoride Reduction AD74 Adsorption*. April 30, 2012.

Archaeological Consulting. 1984. *Preliminary Cultural Resources Reconnaissance at Paraiso Hot Springs Monterey County, California.* August 2, 1984.

Archaeological Consulting. 2012a. Letter to Ms. Teri Wissler Adam, EMC, subject: Peer Review of the archaeological study for the improvements to Paraiso Springs Road. November 30, 2012.

Archaeological Consulting. 2012b. Letter to Ms. Teri Wissler Adam, EMC, subject: Peer Review of archaeological studies for the Paraiso Springs Development. November 29, 2012.

ARM (Archaeological Resource Management). 2004. C*ultural Resource Evaluation of Prehistoric Resources at the Paraiso Springs at 34358 Paraiso Springs Road in the County of Monterey*. June 28, 2004.

ARM (Archaeological Resource Management). 2005. *Revised Evaluation of Historical Resources at 34358 Paraiso Springs Road in the County of Monterey*. January 13, 2005.

ARM (Archaeological Resource Management). 2008. *Cultural Resource Evaluation of the Paraiso Springs Resort Project at 34358 Paraiso Springs Road in the County of Monterey.* May 7, 2008.

ARM (Archaeological Resource Management). 2012. *Cultural Resource Evaluation of Improvements to Paraiso Springs Road in the County of Monterey*. February 8, 2012.

Arulmoli, K., Baez, J.I., Blake, T.F., Earnest, J., Gharib, J., Goldhammer, J., Hsu, D., Kupferman, S., O'Tousa, J., Rela, C.R., Reeder, W., Simantob, E., and Youd, T.L. 1999. *Recommendations for Implementation of DMG Special Publication 117, Guidelines for Analyzing and Mitigating Liquefaction Hazards in California. Southern California Earthquake Center, University of Southern California*, 63p. 1999.

Atlas Land Surveys, Inc. 2011. *Exhibit of Proposed Improvements.* December 9, 2011.

Bierman Hydro-Geo-Logic. 2012. Memo from Richard James and Aaron Bierman to Monterey County, subject: Well Interference. August 20, 2012.

Biological Consulting Services. 2010a. *Paraiso Springs California Tiger Salamander 2010 Spring Survey Results*. September 2010.

Biological Consulting Services. 2010b. *Paraiso Springs 2010 California Red-Legged Frog Visual Survey Results*. September 2010.

California Air Pollution Control Officers Association (CAPCOA). 1997. *Gasoline Service Station Industry Wide Risk Assessment Guidelines*, CAPCOA Air Toxics "Hot Spots" Program Guidance Document 1998-02-27. November 1997.

California Air Resources Board. 2011. Aerometric Data Analysis and Measurement System (ADAM), Air Quality Data. 2007 through 2011.

California Climate Change Center. 2006. *Our Changing Climate: Assessing the Risks to California*. 2006.

California Department of Education. 2008. http://star.cde.ca.gov/. Accessed September, 2008.

California Department of Fish and Wildlife (CDFW). 2013. California Natural Diversity Database (CNDDB). Records of Occurrence for Palo Escrito Peak, Soledad, North Chalone Peak, Sycamore Flat, Paraiso Springs, Greenfield, Junipero Serra Peak, Reliz Canyon, and Thompson Canyon USGS quadrangles. Sacramento, California, February 2013.

California Department of Fish and Wildlife (CDFW). 2012. *Staff Report on Burrowing Owl Mitigation*. March 2012. www.dfg.ca.gov/wildlife/nongame/docs/BUOWStaffReport.pdf

California Department of Water Resources. 2004. *California's Groundwater Bulletin 118.* February 27, 2004.

California Energy Commission. 2006. *Inventory of California Greenhouse Gas Emissions and Sinks 1990 to 2004*. December 2006.

California Native Plant Society (CNPS). 2013. *Inventory of Rare and Endangered Plants*. Records of Occurrence for Palo Escrito Peak, Soledad, North Chalone Peak, Sycamore Flat, Paraiso Springs, Greenfield, Junipero Serra Peak, Reliz Canyon, and Thompson Canyon USGS quadrangles. February 2013. www.cnps.org/inventory

California Office of Planning and Research. 2008. C*EQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA) Review*. 2008.

CalRecycle. 2013a. www.calrecycle.ca.gov/SWFacilities/Directory/27-AA-0005/Detail/. Accessed March 7, 2013.

CalRecycle. 2013b. *Diversion/Disposal Progress Report*. www.calrecycle.ca.gov/LGCentral/Reports/Jurisdiction/DiversionDisposal.aspx Accessed March 12, 2013.

Cao, T., Bryant, W.A., Rowshandel, B., Branum, D. and Willis, C.J. 2003. *The Revised 2002 California Probabilities Seismic Hazards Map, California Division of Mines and Geology*. June 2003.

CAPCOA (California Air Pollution Control Officers Association). 1997. *Gasoline Service Station Industry Wide Risk Assessment Guidelines. CAPCOA Air Toxics "Hot Spots" Program Guidance Document 1998-02-27*. November 1997.

CAPCOA (California Air Pollution Control Officers Association). 2010. *Quantifying Greenhouse Gas Mitigation Measures.* August 2010.

CARB (California Air Resources Board). 2008. *Climate Change Scoping Plan.* October 2008.

CARB (California Air Resources Board). 2011a. *Aerometric Data Analysis and Measurement System (ADAM), Air Quality Data.* 2007 through 2011.

CARB (California Air Resources Board). 2011b. C*alifornia Greenhouse Gas Emissions Inventory 2008-2009.* December 2011. www.arb.ca.gov/cc/inventory/pubs/reports/ghg_inventory_00-09_report.pdf. Accessed March 2013

CARB (California Air Resources Board). 2011c. *Supplement to the AB 32 Scoping Plan Functional Equivalent Document.* 2011. www.arb.ca.gov/cc/scopingplan/fed.htm. Accessed March 2013.

Cardno ENTRIX. 2013. *Salinas River Stream Maintenance Program Draft EIR.* March 2013.

CDMG. 1998. *Maps of Known Active Fault Near-Source Zones in California and Adjacent Portions of Nevada. International Conference of Building Officials, map scale ¼ inch ~ 1 km.* 1998.

Central Coast Bat Research Group. 2008a. *Report for the Bat Assessment Survey for Paraiso Springs Resort.* March 25, and July 23, 2008.

Central Coast Bat Research Group. 2008b. *2008 Interim Report for the Bat Assessment Survey for Paraiso Springs Resort.* March 25, 2008.

CH2MHill. 2005a. Technical Memo to Thompson Holdings, LLC, subject: Paraiso Springs Resort: Existing Hydrologic and Hydraulic Site Conditions. July 15, 2005.

CH2MHill. 2005b. Technical Memo to Thompson Holdings, L.L.C., subject: Paraiso Springs Resort: Preliminary Fire Protection Plan. July 15, 2005.

CH2MHill. 2005c. Technical Memo to Thompson Holdings, L.L.C., subject: Paraiso Springs Resort: Preliminary Site Earthwork Report. July 15, 2005.

CH2MHill. 2008. Memo to Thomson Holdings, LLC, subject: Paraiso Springs Resort-Response to Hydrology and Hydraulic Analysis and Erosion Control Measures Review Comments. October 28, 2008.

CH2MHill. 2010a. Letter from D. Rueden to J. Thompson, subject: Paraiso Springs Resort Geology Report and potential project impact mitigation. March 10, 2010.

CH2MHill. 2010b Technical Memo to Bill Thompson, Thompson Holdings, LLC, subject: Paraiso Springs Resort-Estimated Wastewater Production and Proposed Treatment, Irrigation, and Storage. January 27, 2009 revised August 3, 2010.

CH2MHill. 2010c. Technical Memo to Bill Thompson, Thompson Holdings, LLC, subject: Paraiso Springs Resort-Estimated Potable Water Demand and Potable Water Source. January 27, 2009 revised August 3, 2010.

CH2MHILL. 2012a. Technical Memo to John Thompson/Thompson Holdings, LLC, Subject: Paraiso Springs Resort – Drainage Analysis and Drainage Plan Comments. May 2, 2012.

CH2MHill. 2012b. Technical Memo to John Thompson/Thompson Holdings, LLC, subject: Paraiso Spring Resort (PLN040183) – Stream Setback Plan. April 20, 2012.

CH2MHill. 2013a. Letter to John Thompson, Thompson Holdings, LLC, subject: Paraiso Springs Resort – PLN040183: Response to Comments from Monterey County Peer Review Letter dated December 12, 2012. January 18, 2013.

CH2MHill. 2013b. Letter to John Thompson, Thompson Holdings, LLC, subject: Paraiso Springs Resort – PLN040183: Stream Channel Modification. Response to comments from Monterey County. February 14, 2013

CH2MHill. 2013 c. Letter to John Thompson, Thompson Holdings, LLC, subject: Paraiso Springs Resort – PLN040183: Stream Channel Modification. Follow up to Technical Memo, subject: Stream Setback Plan dated April 20, 2013. April 10, 2013.

City of Soledad. 2013. Letter to the Monterey County Board of Supervisors. March 27, 2013.

Clovis, Meg, Cultural Affairs Manager, Monterey County Parks Department. 2008. Personal Interview conducted with RBF staff. January 7, 2008.

Culligan MATRIX Solutions. 2012. *Paraiso Springs Resort Fluoride Water Treatment Regeneration Effluent Analysis.* May 29, 2012.

Education.com. 2013. Soledad Unified School District. www.education.com/schoolfinder/us/california/district/soledad-unified-school-district/. Accessed March 12, 2013.

Energy Information Administration. 2001. *Other Gases: Hydrofluorocarbons, Perfluorocarbons, and Sulfur Hexafluoride*. October 29, 2001.

EPA (United States Environmental Protection Agency). 2006a. *High GWP Gases and Climate Change*. October 19, 2006.

EPA (United States Environmental Protection Agency). 2006b. *Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990 to 2004*. April 2006.

EPA (United States Environmental Protection Agency). 2009. *Estimating 2003 Building related costs Construction and Demolition Materials Amounts*. 2009. www.epa.gov/wastes/conserve/imr/cdm/pubs/cd-meas.pdf. Accessed February 28 2013.

EPA (United States Environmental Protection Agency). 2010. *Class I Ozone Depleting Substances.* August 19, 2010.

EPA (United States Environmental Protection Agency). 2011a. *Protection of Stratospheric Ozone: Listing of Global Warming Potential for Ozone Depleting Substances*. March 28, 2011.

EPA (United States Environmental Protection Agency). 2011b. *Draft Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990 to 2011*. www.epa.gov/climatechange/Downloads/ghgemissions/US-GHG-Inventory-2011.pdf. Accessed February 2013.

EPA (United States Environmental Protection Agency). 2013. *Six Common Air Pollutants*. www.epa.gov/air/urbanair/. Accessed March 6, 2013.

Federal Emergency Management Agency (FEMA). 2009. *Flood Insurance Rate Map (FIRM) for Monterey County, California and Incorporated Areas, Panel Number 060195 0825 G.* April 2, 2009.

Ford, John. Senior Planner, County of Monterey Resource Management Agency, Planning Department. 2013. Emails to EMC Planning Group regarding stream channel impacts. March 19, 2013.

Forest City Consulting. 2005. *Forest Management Plan for Commercial/Visitor Serving Parcels APN's 418-361-004, 418-381-002, 418-381-021 Paraiso Springs 34358 Paraiso Springs Road Monterey County, California*. July 11, 2005.

Hatch Mott MacDonald. 2008. *Paraiso Springs Roadway Improvement Plan*. September 5, 2008.

Hatch Mott MacDonald. 2011. *Paraiso Springs Resort Monterey County, California Traffic Analysis Report. Final Report*. January 21, 2011.

Hatch Mott MacDonald. 2011. *Paraiso Hot Springs Resort Monterey County, California Traffic Analysis Report Response to Comments*. September 27, 2011.

Paraiso Hot Springs Resort, Monterey County California Traffic Analysis Response to Comments (Hatch Mott MacDonald 2011)

Higgins Associates a Division of Hatch Mott MacDonald. 2008. *Paraiso Springs Resort Monterey County, California Traffic Analysis. Report Final Report*. September 12, 2008.

Hexagon Transportation Consultants. 2011. *Peer Review of the Traffic Study Report for the Paraiso Springs Resort Project in Monterey County, California.* May 6, 2011.

Hill Glazier (HG) Architects. 2005. *Paraiso Springs Resort Preliminary Vesting Tentative Map*. July 5, 2005 revised May 18, 2012.

Intergovernmental Panel on Climate Change, Climate Change. 1996. *The Science of Climate Change – Contribution of Working Group I to the Second Assessment Report of the IPCC*. 1996.

Intergovernmental Panel on Climate Change. 2007. *Climate Change 2007: The Physical Science Basis, Summary for Policymakers*. February 2007.

LandSet Engineers. 2004. *Geologic and Soil Engineering Feasibility Report for Paraiso Hot Springs Spa Resort Monterey County, California Project LSW-0337-01*. December 2004.

LandSet Engineers, Inc. 2008. Response to Geotechnical and Geologic Review Comments. May 22, 2008.

Lawson, A.C., chairman. 1908. *The California Earthquake of April 18, 1906: Report of the California State Earthquake Investigation Commission*. Washington, D.C., Carnegie Institution of Washington, Publication 87, 1, 2 parts, 451 p. 1908.

Lee & Pierce. 2007. *Phase I Environmental Assessment for 34358 Paraiso Springs Road Monterey APN's 418-361-004, 418-381-022, 418-381-021, Soledad, CA*. October 1, 2007.

Monarque, Chuck, Chief Deputy. Monterey County Sheriff's Department. 2013. *Email* Conversation. March 2013.

Monterey Bay Unified Air Pollution Control District (MBUAPCD). 2008a. *2008 Air Quality Management Plan for the Monterey Bay Region (Sixth Revision to the 1991 Air Quality Management Plan)*. August 2008.

Monterey Bay Unified Air Pollution Control District (MBUAPCD). 2008b. *California Environmental Quality Act (CEQA) Air Quality Guidelines*. Adopted October 1995. Revised February 2008.

Monterey County. 1971. *Monterey County Historical Inventory. Monterey County Planning Commission.* January 13, 1971 (adopted by Board of Supervisors February 23, 1971).

Monterey County. 1982. *Monterey County General Plan.* August 1982 with Amendments through November 5, 1996.

Monterey County. 1987. *Central Salinas Valley Area Plan*. November 1987.

Monterey County. 1997. *Monterey County Zoning Ordinance Title 21 (For Inland Areas)*. Adopted September 1997.

Monterey County. 2008. *Draft Environmental Impact Report Monterey County 2007 General Plan*. September 2008. www.co.monterey.ca.us/planning/gpu/2007_GPU_DEIR_Sept_2008/2007_GPU_DEIR_September_2008.htm . Accessed May 2013.

Monterey County Code. 2013. http://library.municode.com/index.aspx?clientId=16111. Accessed March 8, 2013.

Monterey County Free Libraries. 2008. www.co.monterey.ca.us/library/. Accessed September, 2008.

Monterey County Library. 2013. www.co.monterey.ca.us/library/about.html. Accessed February 21, 2013.

Monterey County Parks. 2013. www.co.monterey.ca.us/parks/Default.asp. Accessed March, 2013.

Monterey County Resource Management Agency. 2012. Letter to Mr. John Thompson, subject: Paraiso Springs (PLN040183) Results of Peer Review. December 12, 2012.

Monterey County Sheriffs Office. 2013. Phone Conversation with the Sheriffs Office Human Resources Department. March 2013.

Monterey County Water Resources Agency. 1997. *Water Resources Report: Water Year 1994-1995*. October 1997.

Monterey County Water Resources Agency. 2003. *Proposed Zone 2C Boundary and Existing Zone 2A Boundary (map)*. 2003.

Monterey County Water Resources Agency. 2006. *Monterey County Groundwater Management Plan*. May 2006.

Monterey County Water Resources Agency. 2008. *Monterey County Flood Management Plan*. 2008 Update.

Monterey County Water Resources Agency. 2010a. Memo re: Paraiso Springs Resort (PLN 040183) Response to Preliminary Engineering Reports for Paraiso Hot Springs Resort, prepared by CH2MHill, dated August 2010. November 24, 2010.

Monterey County Water Resources Agency. 2010b. PowerPoint show for 2010 Irrigation and Nutrient Management Field Day. http://cemonterey.ucdavis.edu/files/76533.pdf. Accessed February 23, 2010.

Painter Preservation & Planning. 2008. *Historic Resource Report – Paraiso Hot Springs Monterey County, California*. February 2008.

Petersen, M.D., Bryant, W.A., Cramer, C.H., Cao, Tianqing, Reichle, M.S., Frankel, A.D., Leinkaemper, J.J., McCroy, P.S., and Schwartz, D.P. 1996. *Probabilistic seismic hazard assessment for the State of California. California Division of Mines and Geology Open-File Report 96-08 (U.S. Geological Survey Open-File Report 96-706), 33p. map scale 1 inch=107 miles*. 1996.

Rana Creek Environmental Planning. 2005. *Paraiso Hot Springs Biological Assessment*. July 2005.

Rana Creek Environmental Planning. 2008a. *Paraiso Hot Springs Biological Assessment - Supplement*. July 2008.

Rana Creek Environmental Planning. 2008b. *Habitat Assessment for California Tiger Salamander and California Red-Legged Frog*. June 2008.

Regan Biological and Horticultural Consulting. 2013. *Paraiso Springs Resort – Monterey County PLN 040183*. April 11, 2013.

RMC. 2003. *Salinas Valley Water Project Engineer's Report*. January 2003.

Setterland, Mark. Deputy Building Official, County of Monterey. Email to John Ford, Monterey County Planning. March 25, 2013.

Soledad City Fire Department. 2013. www.ci.soledad.ca.us/index.aspx?nid=169. Accessed March, 2013.

Soledad Police Department. 2013. www.ci.soledad.ca.us/Directory.aspx?DID=4. Accessed March 2013.

Thompson Holdings, LLC. 2005. Paraiso Springs General Development Plan. 2005.

United States Army Corps of Engineers and Monterey County Water Resources Agency. 2001. *Draft Environmental Impact Report/Environmental Impact Statement for the Salinas Valley Water Project*. www.mcwra.co.monterey.ca.us/SVWP/DEIR_EIS_2001/. Accessed May 2013.

United States Geological Survey. 1995. *Groundwater Atlas of the United States: California, Nevada*. 1995.

U.S. Department of Agriculture, Natural Resources Conservation Service. 1978. *Soil Survey of Monterey County*. 1978.

U.S. Fish and Wildlife Service (USFWS). *2013 Endangered Species Program. Protected species list for Monterey County*. www.fws.gov/endangered/. Accessed February 2013.

Von Rueden, Dave. CH2MHill. Email message to applicant, March 2013.

Wallace Group. 2012a. Memo to EMC Planning Group, subject: Paraiso Springs Resort – Review of Wastewater System. November 9, 2012.

Wallace Group. 2012b. Memo to EMC Planning Group, subject: Paraiso Springs Resort – Review of Water System. November 16, 2012.

Wallace Group. 2013a. Memo to EMC Planning Group, subject: Paraiso Springs Resort – Review of Wastewater System. Comments to Applicant's response to November 9, 2012 Peer Review. February 12, 2013.

Wallace Group. 2013b. Memo to EMC Planning Group, subject: Paraiso Springs Resort – Review of Water System. Comments to Applicant's response to November 16, 2012 Peer Review. February 12, 2013.

WRA Environmental Consultants. 2009. *Section 404 Wetland Delineation: Paraiso Springs Resort*. February 2009.

WRA Environmental Consultants. 2012. *Biological Assessment for the Paraiso Springs Road Widening*. February 2012.

WRA Environmental Consultants. 2013a. Untitled letter prepared for John Thompson, Thompson Holdings, LLC subject: riparian impacts. March 14, 2013.

WRA Environmental Consultants. 2013b. Untitled letter prepared for John Thompson, Thompson Holdings, LLC subject: stream channel impacts. February 14, 2013.

WRA Environmental Consultants. 2013c. *Paraiso Springs Resort Riparian Impact Assessment*. April 26, 2013.

Zinn Geology. 2008a. Letter from E. Zinn, Zinn Geology, to M. Kleames, Pacific Crest Engineering, dated 18 January, 2008 regarding the CEQA peer review of the Geologic and Soil Engineering Feasibility Report for Paraiso Hot Springs, prepared by LandSet Engineers dated December 31, 2004. January 2008.

Zinn Geology. 2008b. Letter from E. Zinn, Zinn Geology, to M. Kleames, Pacific Crest Engineering, dated 11 November, 2008 regarding continued geology report deficiencies and potential project impact mitigation proposed Paraiso Hot Springs Resort. November 11, 2008.

This page intentionally left blank.