Mitigation Monitoring and Reporting Program for the

Enchanted Resorts Project City of Calistoga, Napa County, California

State Clearinghouse No. 2010082028

Prepared for:



City of Calistoga

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Table 1: Enchanted Resorts Project Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of	Responsible for	Verification of	of Completion
mitigation measures	Wethod of Vermidation	Verification	Verification	Date	Initial
1. Aesthetics, Light, and Glare					
MM AES-4: Prior to issuance of building permits, the project applicant shall submit a photometric plan to the City of Calistoga for review and approval. The photometric plan shall identify types of exterior lighting fixtures and their locations on the project site. All light fixtures shall be fully shielded or employ full cutoff fixtures to prevent unwanted illumination of neighboring properties and substantial changes to ambient nighttime lighting. The photometric plan shall demonstrate that all exterior lighting fixtures shall not exceed 1.8 foot-candles of light as measured at the nearest property line.	Approval of plan	Prior to issuance of building permits	City of Calistoga		
2. Agricultural and Forest Resources					
MM AFR-2a: The applicant shall secure a new Timber Harvest Plan from the Department of Forestry and Fire Protection, prior to the commencement of construction. The Timber Harvest Plan shall conform to the project's Forest Management Plan and, prior to submission to the State, shall first be submitted to the City of Calistoga's Department of Public Works for ministerial review and approval to (1) insure conformance with the Forest Management Plan and (2) review trees marked for selective harvesting, to insure that tree removal near proposed structures maintains enough trees to screen views of said structures from the valley floor and surrounding land uses to the maximum extent feasible to minimize visual impacts referenced in Impact AES-2 and Impact AES-3 (Section 3.1, Aesthetics, Light and Glare). Prior to the removal of any tree in the Timber Harvest Plan section areas, the City shall be notified in writing and shall be provided a 15-day period to review tree marking for consistency with the Forest Management Plan and visual impact minimization referenced in Impact AES-2 and Impact AES-3.	Approval of Timber Harvest Plan; submittal of documentation	Prior to the commencement of construction	City of Calistoga		

Mitigation Measures		Timing of	Responsible for	Verification of	of Completion
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The Timber Harvest Plan shall be prepared by a Registered Professional Forester in accordance with the Z'Berg-Nejedly Forest Practice Act (Pub. Res. Code Section 4511, et seq.) and Forest Practice Rules (Title 14 Cal. Code of Reg. Chapter 4). The Timber Harvest Plan shall include an analysis of site conditions, proposed timber operations, and the location and methods of timber operations. It shall also implement the Forest Management Plan performance goals and standards.					
The project applicant shall provide funding for the City to retain the services of a third-party California Registered Professional Forester or arborist to independently review the implementation of this mitigation measure.					
Implementation of Mitigation Measure AFR-2a will (1) insure compliance with the Forest Practice Act's objectives of responsible forest resource management and natural resource protection, (2) insure preparation of the Timber Harvest Plan by a Registered Professional Forester, and (3) will reduce Impact AES-3 to a level of insignificance.					
MM AFR-2b: All tree removal operations conducted pursuant to an approved Timber Harvest Plan shall be under the direction of a California Registered Professional Forester, as required by state law.	Submittal of documentation; site inspection	During tree removal activities	City of Calistoga		
MM AFR-2c: Prior to construction, the Forest Reserves areas shall be thinned in accordance with the Forest Management Plan pursuant to the approved Timber Harvest Plan under the supervision of a California Registered Professional Forester.	Submittal of documentation; site inspection	Prior to construction	City of Calistoga		
MM AFR-2d: Prior to the removal of any tree that is not conducted pursuant to an approved Timber Harvest Plan, the project applicant shall obtain a Tree Removal/Disturbance Permit in accordance with the City Tree Removal Ordinance and the guidelines established by the project Forest Management Plan.	Notes on construction plans; submittal of documentation; site inspection	Prior to the removal of any tree that is not conducted pursuant to an approved Timber Harvest Plan	City of Calistoga		

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MM AFR-2e: An independent, third-party forester or arborist, paid for by the project applicant, shall be in attendance during tree removal, and all grading and disturbance of the project site prior to project completion, which is herein defined as construction of 13 custom homes, 20 Residence Club units, and 110 hotel units. The third-party forester's or arborist's services shall not be required after "project completion" as defined above.	Notes on construction plans; submittal of documentation; site inspection	During tree removal, grading, and construction activities	City of Calistoga		
MM AFR-2f: Tree removal equipment shall utilize existing roads to the maximum extent feasible to minimize disturbance to the project site.	Notes on construction plans; site inspection	During tree removal activities	City of Calistoga		
 MM AFR-2g: For all preserved trees that are within 25 feet of a grading or construction area, the following shall apply: (1) Prior to construction, temporary barriers shall be placed around an area 1.5 times the dripline of each tree or group of trees; (2) There shall be no storage or operation of construction 	Notes on construction plans; site inspection	Prior to and during construction activities that occur within 25 feet of a preserved tree(s)	City of Calistoga		
equipment within the barriers; (3) There shall be no construction materials or fill stockpiled within the barriers; and					
(4) There shall be no trenching or undergrounding of utilities within the barriers.					
The City may impose additional or alternative measures as determined necessary by the City's arborist or forester to avoid harm to a preserved tree.					

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3. Air Quality/Greenhouse Gas Emissions					
MM AIR-1: Prior to issuance of building permits, the project applicant shall prepare and submit plans to the City of Calistoga for review and approval demonstrating that project buildings can achieve the energy efficiency standards set forth in the latest adopted edition of the California Green Building Standards or more restrictive local standard. The approved plans shall be incorporated into to the proposed project.	Approval of plans	Prior to issuance of building permits	City of Calistoga		
 MM AIR-2: During construction activities, the following air pollution control measures shall be implemented: Exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. All haul trucks transporting soil, sand, or other loose material offsite shall be covered. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. All vehicle speeds on unpaved roads and surfaces shall be limited to 15 mph. All roadways, driveways, and sidewalks shall be paved as soon as possible. A publicly visible sign shall be posted with the telephone number and person to contact at the City of Calistoga regarding dust complaints. This person shall respond and take corrective action within 48 hours of a complaint or issue notification. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations. 	Notes on construction plans; site inspection	During construction activities	City of Calistoga		

Table 1 (cont.): Enchanted Resorts Project Mitigation Monitoring and Reporting Program

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4. Biological Resources					
MM BIO-1a: The following mitigation measure applies only if an offsite utility alignment involves a sub-surface crossing of the Napa River. During high-pressure directional drilling under the Napa River, the following avoidance and minimization measures shall be implemented:	Notes on construction plans; submittal of documentation; site inspection	Prior to or during high-pressure directional drilling under the Napa River (which ever	City of Calistoga		
Compliance with all applicable regulatory agency requirements.		is applicable)			
Existing trails and roads shall be used where and when feasible. Access to the drill site shall avoid disturbance to riparian vegetation and the streambed. Crossing the Napa River channel with machinery shall be avoided. Access to the drill entry and exit points shall be conducted from opposite banks.					
• The drill path shall be designed to an appropriate depth below the streambed to minimize the risk of a frac-out and to a depth to prevent the line from becoming exposed because of natural scouring of the Napa River. The drill entry and exit points shall be designed far enough from the banks of the streambed to avoid impacts to riparian vegetation.					
Machinery shall be operated in upland areas above the banks when feasible, and in a manner that minimizes disturbance to the banks of the Napa River.					
Machinery shall arrive onsite in a clean condition and shall be maintained free of fluid leaks. Equipment maintenance and fueling areas shall be located at least 30 meters (100 feet) away from the Napa River. Fueling shall occur behind a containment barrier that will prevent any spilled or leaked fuel from running into the Napa River. All equipment servicing shall occur within designated areas away from the Napa River. All motorized equipment used during construction or demolition activities shall be checked for oil, fuel, and coolant leaks prior to initiating work. Any equipment found to be					

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leaking fluids shall not be used in or within 30 meters of the Napa River.						
Bore pits shall be located outside the drip line of trees rooted in the banks, and no vegetation shall be removed from the banks without approval from a qualified biologist.						
• A dugout/settling basin shall be constructed at the drilling exit site to contain drilling mud and to prevent sediment from entering the Napa River. As appropriate, silt fences or other effective sediment and erosion control measures shall be used to prevent drilling mud from entering the Napa River. Excess drilling mud and other waste materials shall be disposed at an adequately sized disposal facility located away from the Napa River to prevent these materials from entering the watercourse.						
• Construction activities shall be conducted during the dry season (low flow period) to minimize potential transport of material from the project area downstream during a frac-out.						
 Riparian vegetation that extends over or into the water or that has roots extending into the water shall not be removed. Riparian vegetation that does not provide cover or foraging areas for shrimp may be trimmed or removed with approval from a qualified biologist. 						
• The Napa River shall be monitored by qualified personnel during drilling to observe signs of surface migration (frac-out) of drilling mud.						
• An Emergency Frac-out Response and Contingency Plan shall be prepared and approved by the applicable regulatory agencies (United States Army Corps of Engineers, Regional Water Quality Control Board, California Department of Fish and Game) prior to drilling. This plan shall be implemented immediately in the event of a frac-out.						

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Table 1 (cont.): Enchanted Resorts Project Mitigation Monitoring and Reporting Program

Mitigation Measures	Method of Verification	Timing of	Responsible for	Verification of	of Completion
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MM BIO-1b: If ground clearing or vegetation removal activities occur during the nesting season (March 1 through August 31), a qualified biologist shall survey the nesting area for the sharpshinned hawk. If nesting is observed, the biological monitor shall establish an appropriate no-work buffer around the nest site during the breeding season. If work must be conducted within the no-work buffer during the nesting season, the biologist shall conduct a nest survey prior to construction to determine whether the sharp-shinned hawk nest is still active. When the biologist determines that the nest is no longer active, construction may commence within the no-work buffer. This mitigation measure does not apply if ground clearing or vegetation removal activities occur outside of the nesting season (September 1 through February 28 or 29).	Notes on construction plans; submittal of documentation; site inspection	Prior to ground clearing or vegetation removal activities that occur during the nesting season (March 1 through August 31)	City of Calistoga		
MM BIO-1c: Prior to ground disturbance activities that occur during the breeding season for the pallid bat (October 15 through February 15), all existing structures within project site and associated utility alignments shall be surveyed for pallid bats and their roosts by a qualified biologist. If pallid bats or their roost sites are found within the project site or associated utility alignments, the following avoidance measures shall be implemented, at the discretion of a qualified biologist:	Notes on construction plans; submittal of documentation; site inspection	Prior to ground disturbance activities that occur during the breeding season for the pallid bat (October 15 through February 15)	City of Calistoga		
An Avoidance and Habitat Replacement Plan shall be prepared and submitted to the California Department of Fish and Game for review and approval prior to commencement of construction. The plan shall evaluate the type of habitat to be disturbed, length of disturbance, equipment noise, adjacent habitat available, and habitat replacement methods (if appropriate). The plan shall be implemented during construction activities.					
Structures providing roost sites for this species must be avoided to the maximum extent practicable.					

Table 1 (cont.): Enchanted Resorts Project Mitigation Monitoring and Reporting Program

Mitigation Measures	Mothod of Varification	ethod of Verification Timing of	Responsible for	Verification of Completion		
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 If any breeding bats are discovered during construction, a biological monitor shall survey the area where roosting bats were discovered. If bats are observed nesting during the breeding season (between mid-October and the end of June), the biological monitor shall establish an appropriate no-work buffer around the nest or roost site for the duration of the breeding season. If work must be conducted within the no-work buffer during the breeding season, the biological monitor shall conduct a daytime survey prior to construction to determine whether the bats are still present. When the biological monitor determines that the bats are no longer nesting, construction may commence within the no-work buffer. All construction activity in the vicinity of an active roost must be limited to daylight hours and lights will not be used around roost sites at night. Demolition of any roost sites must be timed for the period when bats are not present on the site. 						
MM BIO-1d: If ground clearing or vegetation removal activities occur during the nesting season (February 1 through August 31), then pre-construction surveys for nesting birds shall be conducted in all areas suitable for nesting that are located within 500 feet of the project area to be impacted. Surveys shall be conducted no more than 14 days prior to the beginning of ground disturbance, with surveys occurring on a minimum of three separate days during this period. If an active nest is located, the project applicant shall consult with CDFG and obtain approval for nest protection buffers that must be established prior to tree removal or ground-disturbing activities. Nest protection buffers shall remain in place until the young have fledged. All nest protection measures shall apply to onsite and offsite construction activities. If a lapse in projected-related construction of 15 days or longer occurs, either (1) another survey will be required or (2) consultation with CDFG must occur before work may resume.	Notes on construction plans; submittal of documentation; site inspection	No more than 15 days prior to ground clearing or vegetation removal activities that occur during the nesting season (March 1 through August 31)	City of Calistoga			

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Mitigation Measures	Method of Verification	Timing of	Responsible for	Verification of Completion		
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This mitigation measure does not apply if ground clearing or vegetation removal activities occur outside of the nesting season (September 1 through January 31).						
MM BIO-2: Prior to issuance of grading permits, the project applicant shall retain a qualified biologist to prepare and submit a Jurisdictional Delineation to the appropriate resource agencies for review and approval. Such agencies may include but are not limited to the United States Army Corps of Engineers, the California Department of Fish and Game, and the San Francisco Bay Regional Water Quality Control Board. Should the approved Jurisdictional Delineation determine that the offsite utility work would impact regulated resources, the applicant shall obtain the necessary regulatory permits and mitigate impacts through either (1) offsite restoration of features of equal or greater value or (2) purchase of credits at an agency-approved mitigation bank in the region at no less than a 1:1 ratio.	Submittal of Jurisdictional Delineation to appropriate agency or agencies; submittal of documentation verifying implementation of mitigation (if necessary)	Prior to issuance of grading permits	City of Calistoga; United States Army Corps of Engineers (if necessary); California Department of Fish and Game (if necessary); San Francisco Bay Regional Water Quality Control Board (if necessary)			
5. Cultural Resources						
MM CUL-1: If potentially significant historic resources are encountered during subsurface excavation activities for the project area, all construction activities within a 50-foot radius of the resource shall cease until a qualified archaeologist determines whether the resource requires further study based on the type of resource found and its significance under CEQA. The City shall require that the applicant include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. Any previously undiscovered resources found during construction shall be recorded on appropriate California Department of Parks and Recreation forms and evaluated for significance in terms of California Environmental Quality Act criteria by a qualified archaeologist.	Notes on construction plans; submittal of documentation; site inspection	During subsurface excavation activities (if potentially significant historic resources are encountered)	City of Calistoga			

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Potentially significant cultural resources consist of but are not limited to stone, bone, fossils, wood, or shell artifacts or features, including hearths, structural remains, or historic dumpsites. If the resource is determined to be significant under CEQA, the City and a qualified archaeologist shall determine whether preservation in place is feasible. Such preservation in place is the preferred mitigation. If such preservation is infeasible, the qualified archaeologist shall prepare and implement a research design and archaeological data recovery plan for the resource that meets the requirements set forth in CEQA. The archaeologist shall also conduct appropriate technical analyses and prepare a comprehensive written report that meets the standards set forth in CEQA and conforms to the Office of Historic Preservation standards for Phase I Cultural Resource studies and the Archaeological Resource Management Report format. The report will be filed with the appropriate information center (California Historical Resources Information System), and provisions made for the permanent curation of the recovered materials at an appropriate repository.					
MM CUL-2a: If potentially significant archaeological resources are encountered during subsurface excavation activities, all construction activities within a 50-foot radius of the resource shall cease until a qualified archaeologist determines whether the resource requires further study to determine its significance under CEQA. The City shall require that the applicant include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. Any previously undiscovered resources found during construction shall be recorded on appropriate Department of Parks and Recreation forms and evaluated for significance in terms of California Environmental Quality Act criteria by a qualified archaeologist. Potentially significant cultural resources consist of but are not limited to stone, bone, fossils, wood, or shell	Notes on construction plans; submittal of documentation; site inspection	During subsurface excavation activities (if potentially significant archaeological resources are encountered)	City of Calistoga		

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Mitigation Measures	Method of Verification	erification Timing of	Responsible for Verification	Verification of Completion		
mitigation measures	Method of Verification	Verification		Date	Initial	
artifacts or features, including hearths, structural remains, or historic dumpsites. If the resource is determined to be significant under CEQA, the City and a qualified archaeologist shall determine whether preservation in place is feasible. Such preservation in place is the preferred mitigation.						
The archaeologist shall also conduct appropriate technical analyses and prepare a comprehensive written report that meets the standards set forth in CEQA and conforms to the Office of Historic Preservation standards for Phase I Cultural Resource studies and the Archaeological Resource Management Report format. The report will be filed with the appropriate information center (California Historical Resources Information System), and provisions made for the permanent curation of the recovered materials at an appropriate repository.						
MM CUL-2b: During ground disturbance activities associated with either (or both) of the two offsite utility alignments in the area north of SR-29/128, the project applicant shall retain a qualified archaeologist to conduct construction monitoring. The archaeologist shall consult with a Native American representative/monitor regarding monitoring activities, as appropriate. In addition, although the main project area (south of SR-29/128) is considered to have low sensitivity for prehistoric resources, there is the possibility that unknown prehistoric resources are present below the ground surface. Therefore, since it is unknown if prehistoric resources are within the main project area (south of SR-29/128), periodic monitoring of ground disturbance in areas likely to have been utilized by Native Americans is warranted. The periodic monitoring in the main project area would be conducted by either the archaeologist or the Native American representative/monitor in conjunction with the monitoring efforts for the area north of SR-29/128.	Notes on construction plans; submittal of documentation; site inspection	During ground disturbance activities associated with either (or both) of the two offsite utility alignments in the area north of SR-29/128	City of Calistoga			

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Mitigation Measures	Method of Verification	Timing of	Responsible for	Verification	ation of Completion	
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The periodic monitoring would be conducted in areas considered likely for Native American resources not the entire southern project area. The periodic monitoring would be conducted by either a qualified archaeologist or a Native American representative/monitor and would be determined as the need for monitoring arose.						
MM CUL-3: In the event that plant or animal fossils are discovered during subsurface excavation activities for the proposed project, all excavation within 50 feet of the fossil shall cease until a qualified paleontologist has determined the significance of the find and provides recommendations in accordance with Society of Vertebrate Paleontology standards, as follows:	Notes on construction plans; submittal of documentation; site inspection	During subsurface excavation activities (in the event plant or animal fossils are discovered)	City of Calistoga			
• The paleontologist shall notify the City of Calistoga to determine procedures to be followed before construction is allowed to resume at the location of the find. If the find is determined to be significant and the City determines that avoidance is not feasible, the paleontologist shall design and implement a data recovery plan consistent with the Society of Vertebrate Paleontology standards. The plan shall be submitted to the City for review and approval. Upon approval, the plan shall be incorporated into the project.						
MM CUL-4: If previously unknown human remains are encountered during construction activities, Section 7050.5 of the California Health and Safety Code applies, and the following procedures shall be followed: In the event of an accidental discovery or recognition of any human remains, Public Resource Code Section 5097.98 must be followed. Once project-related ground disturbance begins and if there is accidental discovery of human remains, the following steps shall be taken:	Notes on construction plans; submittal of documentation; site inspection	During construction activities (if previously unknown human remains are encountered)	City of Calistoga			

Mitigation Measures	Method of Verification	Timing of		Verification of Completion		
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• There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the Napa County Coroner's Office is contacted to determine if the remains are Native American and if an investigation into cause of death is required. If the coroner determines the remains are Native American, the coroner shall contact the NAHC within 24 hours, and the NAHC shall identify the person or persons it believes to be the most likely descendant of the deceased Native American. The most likely descendant 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 5097.98.						
6. Geology, Soils, and Seismicity						
MM GEO-1: Prior to issuance of building permits for the proposed project, the project applicant shall submit grading and building plans to the City of Calistoga for review and approval that reflect the applicable recommendations from the previously prepared design-level geotechnical report and addenda. The applicant shall have the option of commissioning a new design-level geotechnical report in lieu of relying on the previous reports, provided that it meets city requirements for such reports. The proposed project's plans incorporate all applicable seismic design standards of the latest adopted edition of the California Building Standards Code or local amendments. The project applicant shall adhere to these approved plans in constructing the project.	Approval of plans	Prior to issuance of building permits	City of Calistoga			

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7. Hazards and Hazardous Materials					
MM HAZ-2a: Prior to issuance of demolition or grading permits (whichever comes first), the project applicant shall prepare and submit a Soil and Groundwater Management Plan to the City of Calistoga for review and approval. The plan shall identify specific actions and procedures that would be employed in the event that contaminated soil or groundwater is encountered during construction activities in and around the site of the former underground storage tanks. Such actions and measures shall be in accordance with guidance issued by the California Department of Toxic Substances Control and the San Francisco Bay Regional Water Quality Control Board, as applicable. In the event that potentially contaminated soil or groundwater is detected during construction activities, all work shall cease within 50 feet of the affected area and the actions and procedures set forth in the Soil and Groundwater Management Plan shall be implemented. The plan shall be implemented if or when potential hydrocarbon soil or groundwater contamination is detected during constriction.	Approval of plan	Prior to issuance of demolition or grading permits (whichever comes first)	City of Calistoga		
MM HAZ-2b: Prior to issuance of demolition permits for any structures located on the project site, the project applicant shall retain a certified hazardous waste contractor to properly remove and dispose of all materials containing asbestos and lead paint in accordance with federal and state law. The applicant shall submit documentation to the City of Calistoga demonstrating that this contractor has been retained as part of the demolition permit application. Upon completion of removal and disposal, the project applicant shall provide documentation to the City of Calistoga demonstrating that these activities were successfully completed.	Submittal of documentation	Prior to issuance of demolition permits for any structures located on the project site	City of Calistoga		

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MM HAZ-2c: Prior to issuance of the first certificate of occupancy for the proposed project, the project applicant shall implement one of the following options for each of the onsite water wells:	Site inspection; obtainment of authorization (if necessary)	Prior to issuance of the first certificate of occupancy for the proposed	City of Calistoga		
1. Convert the well to an inactive state and maintain it as follows:		project			
• The well shall not allow impairment of water quality.					
• The top of the well or well casing shall be equipped with a watertight locking cover to prevent unauthorized access.					
 The well shall be marked and labeled to allow for easy identification. 					
 The area surrounding the well shall be kept clear of brush, debris, and other materials. 					
Should the property owner seek to reactivate any of the inactive wells at a later date, the owner shall obtain authorization from the City of Calistoga pursuant to the criteria provided in Section 19.06.020 of the Calistoga Municipal Code, which may entail additional environmental review.					
2. Destroy the well pursuant to review and approval by the City of Calistoga Public Works Department and Napa County Department of Environmental Management.					
MM HAZ-2d: Prior to issuance of grading permits, the project applicant shall retain a qualified contractor to properly remove and dispose of the two septic systems in accordance with applicant state and local regulations. Documentation shall be provided to the City of Calistoga verifying that this was successfully completed as part of the grading permit application.	Submittal of documentation	Prior to issuance of grading permits	City of Calistoga		

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MM HAZ-4: Prior to issuance of the first building permit, the project applicant shall retain a California licensed forester to prepare and submit a plan to the City of Calistoga that addresses the following issues, including but not limited to wildland-urban interface fire safety issues, including fire-resistant construction, vegetation management and maintenance, and other wildland fire safety requirements set forth in the City's Municipal Code. The forester shall coordinate with the project architect, as necessary, to ensure project buildings to meet building code requirements for new construction in Urban Wildland "Very High Severity Zones." The Calistoga Fire Chief shall review the plan and, if necessary, recommend changes to achieve compliance with Municipal Code standards prior to issuance of the first building permit. The approved plan shall be incorporated into the proposed project.	Approval of plans	Prior to issuance of the first building permit	City of Calistoga		
8. Hydrology and Water Quality					
MM HYD-1: Prior to the issuance of grading or building permits for either the onsite development project or the pipeline installation project, the project applicant shall prepare and submit a Stormwater Pollution Prevention Plan (SWPPP) to the City of Calistoga that identifies specific actions and Best Management Practices (BMPs) to prevent stormwater pollution during construction activities. Additionally, the project shall file a Notice of Intent with the State Water Resources Control Board. The SWPPP shall identify a practical sequence for BMP implementation and maintenance, site restoration, contingency measures, responsible parties, and agency contacts. The SWPPP shall include but not be limited to the following elements:	Notes on construction plans; approval of plans; site inspection	Prior to the issuance of grading or building permits for either the onsite development project or the pipeline installation project	City of Calistoga		
Temporary erosion control measures shall be employed for disturbed areas.					
Specific measures shall be identified to protect downstream drainage features during construction of the proposed project.					

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Specific measures shall be identified to protect the Napa River and floodplain during pipeline construction.					
No disturbed surfaces shall be left without erosion control measures in place during the winter and spring months.					
• Sediment shall be retained onsite by a system of sediment basins, traps, or other appropriate measures.					
• The construction contractor shall prepare Standard Operating Procedures for the handling of hazardous materials on the construction site to eliminate or reduce discharge of materials to storm drains.					
BMP performance and effectiveness shall be determined either by visual means where applicable (e.g., observation of above- normal sediment release), or by actual water sampling in cases where verification of contaminant reduction or elimination (such as inadvertent petroleum release) is required by the RWQCB to determine adequacy of the measure.					
• In the event of significant construction delays or delays in final landscape installation, native grasses or other appropriate vegetative cover shall be established on the construction site as soon as possible after disturbance, as an interim erosion control measure throughout the wet season.					
MM HYD-2: Prior to the issuance of building or grading permits for the proposed project, the project applicant shall submit a stormwater quality management plan to the City of Calistoga for review and approval. The plan shall include a detailed drainage plan and identify location, size, and type of pollution prevention measures to prevent polluted stormwater runoff from leaving the developed areas within the project site. The approved measures shall be incorporated into the proposed project. Examples of stormwater pollution prevention measures and practices that should be incorporated into the plan include, but are not limited to:	Approval of plans; site inspection	Prior to the issuance of building or grading permits	City of Calistoga		

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Strategically placed bioswales and landscaped areas that promote percolation of runoff					
Pervious pavement					
Roof drains that discharge to landscaped areas					
Trash enclosures with screen walls and roofs					
Stenciling on storm drains					
Curb cuts in parking areas to allow runoff to enter landscaped areas					
Rock-lined areas along landscaped areas in parking lots					
Catch basins					
Oil/water separators					
Regular sweeping of parking areas and cleaning of storm drainage facilities					
Employee training to inform maintenance personnel of stormwater pollution prevention measures					
MM HYD-4: Prior to approval of the final map, the project applicant shall prepare and submit drainage plans to the City of Calistoga for review and approval that demonstrate that adequate drainage can be provided. The drainage plans shall adhere to the City of Calistoga's latest adopted storm drainage standards and shall demonstrate that the proposed project can detain onsite runoff to provide no increase in the peak 10-year, 25-year, 50-year, and 100-year event flow rates relative to the predevelopment condition. The approved plans shall be incorporated into the proposed project.	Approval of plans	Prior to approval of the final map	City of Calistoga		

Mitigation Measures	Method of Verification	Timing of	Responsible for	Verification of	of Completion
Wittigation Measures	Method of Verification	Verification	Verification	Date	Initial
10. Noise					
 MM NOI-1: During construction activities associated wooffsite utility work, the project applicant shall require construction contractors to adhere to the following noise attenuation requirements: Construction activities shall be limited to the hours be a.m. to 7 p.m., Monday through Saturday. Construction activities shall not occur on Sundays or federal holiday. City of Calistoga shall have the discretion to permit construction activities to occur outside of allowable ho on Sundays or federal holidays if compelling circumst warrant such an exception (e.g., weather conditions net to pour concrete). 	plans; site inspection tween 7 on ys. The ours or ances	During construction activities associated with the offsite utility work	City of Calistoga		
 All construction equipment shall use noise-reduction f (e.g., mufflers and engine shrouds) that are no less efforthan those originally installed by the manufacturer. If reduction features were installed by the manufacturer, contractor shall require that at least a muffler be install the equipment. 	ective no noise then the				
 Construction staging and heavy equipment maintenant activities shall be performed a minimum distance of 30 from the nearest residence, unless safety or technical f take precedence (e.g., a heavy equipment breakdown). Residents and businesses along streets where pipeline installation will occur shall be notified a minimum of in advance of the first day of planned construction actions the notification shall indicate the anticipated duration construction activities and the typical hours during whe construction would occur, and provide contact informating individuals with questions or concerns. 	00 feet factors 14 days vities. of ich				

Michael Brandman Associates
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Mitigation Measures	Method of Verification	Timing of	Responsible for	Verification of	cation of Completion	
mitigation measures	Wethod of Vermidation	Verification	Verification	Date	Initial	
MM NOI-5: During project operations, the project applicant shall limit the noise levels produced by live music and/or amplified noise in outdoor activity areas to a maximum average noise level of 60 dB at the exterior of the nearest residential receptor (onsite or offsite). Noise levels shall be monitored using either a fixed system that can be monitored remotely or handheld noise meters. Resort hotel staff shall receive periodic training regarding proper use of the noise monitoring equipment.	Site inspection	During project operations	City of Calistoga			
11. Public Services and Utilities		1				
MM PSU-1a: Prior to approval of the final map, the project applicant shall prepare and submit roadway plans to the City of Calistoga that demonstrate that adequate roadway access and turning radii can be provided for fire apparatus. As appropriate, the plans shall use engineering software and fire apparatus turning templates to (1) demonstrate that fire pumper apparatus can safely negotiate turns with adequate bumper and overhang clearances and (2) demonstrate that adequate turning radii are provided at required locations. If necessary, the City shall recommend changes necessary to ensure that adequate access and turning radii shall be provided. Additionally, the plans shall depict "No Parking – Fire Lane" restrictions in locations where on-street parking would impair fire apparatus turning radii. Finally, the main gatehouse/kiosk or powered gate shall comply with Fire Code access standards, including the provision of a Fire Department-approved override control device ("knock box"). The approved plans shall be incorporated into the proposed project.	Approval of plans	Prior to approval of the final map	City of Calistoga			

Mitigation Measures	Method of Verification	Timing of	Responsible for	Verification o	of Completion	
miligation measures	Method of Vernication	Verification	Verification	Date	Initial	
MM PSU-1b: Prior to approval of the final map, the project applicant shall prepare and submit plans that demonstrate that the Emergency Vehicle Access provides (1) a minimum of 67 feet of turning radii at all turnouts and (2) provides a grooved or scored surface on segments where the grade is 15 percent or greater. In addition, any barriers or bollards restricting access to the Emergency Vehicle Access shall provide a clear width of 20-feet and have an approved locking system. The approved plans shall be incorporated into the proposed project.	Approval of plans	Prior to approval of the final map	City of Calistoga			
 MM PSU-1c: Prior to approval of the final map, the City of Calistoga shall verify that all roadway cross-sections where fire hydrants would be located adhere to the following requirements: Roadway cross-sections provide a minimum of 26 feet of allweather surface width. The all-weather surface must be capable of supporting a 75,000-pound fire apparatus pursuant to the requirements of the California Fire Code Appendix D. "No Parking – Fire Truck Only" signage shall be installed at the hydrants and on the pavement. The pad supporting fire hydrants shall be composed of a minimum of 4 inches of concrete over a minimum of 10 inches of base. Breakaway spool or bolts are required over the concrete pad. 	Approval of plans	Prior to approval of the final map	City of Calistoga			
MM PSU-1d: Prior to approval of the final map, the project applicant shall prepare and submit plans to the City of Calistoga for review and approval that demonstrate that the water system connection size, flow, pressure capacity, and redundancy meet California Fire Code requirements. Minimum fire flow shall be 2,500 gallons per minute over a 2-hour period, and all buildings shall be equipped with an automatic fire sprinkler system.	Approval of plans	Prior to approval of the final map	City of Calistoga			

Mitigation Measures	Method of Verification	Timing of	Responsible for	Verification of	of Completion
Miligation Measures	Method of Vernication	Verification	Verification	Date	Initial
MM PSU-1e: Prior to the issuance of a grading permit or building permit for any structure on the project site, the project applicant shall prepare and submit information documenting compliance with regulations of the Calistoga Municipal Code and the California Fire Code, including provisions pertaining to the site's location in a Very High Fire Hazard Severity Zone. If necessary, the City shall consult with a certified fire professional to interpret and/or determine compliance.	Submittal of documentation	Prior to the issuance of a grading permit or building permit for any structure on the project site	City of Calistoga		
MM PSU-2: Prior to issuance of building permits for the resort hotel uses, the project applicant shall prepare and submit plans to the City of Calistoga that incorporate recommended crime prevention measures identified by the Calistoga Police Department. The measures shall include, at a minimum, (1) a telecommunication system that allows for direct 911 access, (2) video surveillance of common areas such as parking facilities, (3) in-room safes, and (4) radio repeaters in wine caves. The approved plans shall be incorporated into the proposed project.	Approval of plans	Prior to issuance of building permits for the resort hotel uses	City of Calistoga		
MM PSU-3a: Prior to issuance of building permits, the project applicant shall prepare and submit improvement and landscaping plans to the City of Calistoga that demonstrate the use of outdoor water conservation measures and practices. Examples of such measures and practices include the use of drought-tolerant native plants for landscaping, stormwater storage, rain gardens, graywater reuse and storage, and possible use of recycled wastewater for landscape irrigation. The approved plans shall be incorporated into the proposed project.	Approval of plans	Prior to issuance of building permits	City of Calistoga		
MM PSU-3b: Prior to approval of the final map, the project applicant shall prepare and submit documentation to the City of Calistoga that incorporates one or more of the following options to address irrigation water supply and demand:	Approval of plans	Prior to approval of the final map	City of Calistoga		

Mitigation Measures	Method of Verification	Timing of	Responsible for	Verification of	of Completion
miligation measures	Wethod of Vermidation	Verification	Verification	Date	Initial
The applicant may purchase additional domestic water from the City.					
• The applicant may reduce the amount of landscaping proposed by over 40 percent and leave a more natural ambiance for the resort.					
The overall landscaping may be designed and installed in phases over time, such that the irrigation demand would not exceed the available supply.					
The approved option(s) shall be incorporated into the proposed project.					
MM PSU-6a: Prior to issuance of building permits, the project applicant shall retain a qualified contractor to perform construction and demolition debris recycling. Upper Valley Disposal shall be consulted regarding construction and demolition debris recycling requirements. Following the completion of construction activities, the project applicant shall provide documentation to the satisfaction of the City of Calistoga demonstrating that construction and demolition debris was recycled.	Submittal of documentation	Prior to issuance of building permits	City of Calistoga		
MM PSU-6b: Prior to issuance of the certificate of occupancy for the resort hotel, the project applicant shall prepare and submit plans to the City of Calistoga identifying onsite recycling collection facilities. Such facilities shall be provided in a centralized location within enclosed facilities. Signage shall clearly identify accepted materials, and recycling collection vessels (dumpsters, receptacles, bins, toters, etc.) shall be distinctly different in appearance from solid waste collection vessels.	Approval of plans; site inspection	Prior to issuance of the certificate of occupancy for the resort hotel	City of Calistoga		

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
12. Transportation					
MM TRANS-1: Prior to issuance of building permits, the project applicant shall pay impact fees to the City of Calistoga for improvements to the intersection of SR-29/128/SR-29 (Foothill Boulevard/Lincoln Avenue) as defined in the Calistoga Municipal Code, Section 17.10.030.	Receipt of fees	Prior to issuance of building permits	City of Calistoga		
MM TRANS-2: Prior to issuance of building permits, the project applicant shall pay impact fees to the City of Calistoga for improvements to the intersections of SR-128/Petrified Forest Road, SR-29/Silverado Trail, and SR-29/128/SR-29 (Foothill Boulevard/Lincoln Avenue) as defined in the Calistoga Municipal Code, Section 17.10.030. The improvements shall consist of the installation of a traffic signal or modern roundabout.	Receipt of fees	Prior to issuance of building permits	City of Calistoga		
MM TRANS-3a: Prior to approval of the final map, the applicant shall depict on site improvement plans the following signs:	Approval of plans	Prior to approval of the final map	City of Calistoga		
• CA MUTCD signs W1-5 and W7-3 (Curvy Road along with a supplemental 18 Percent Grade) at the north end (bottom of the hill) facing traffic entering from SR-29/SR-128.					
• CA MUTCD signs SW4-1(CA) and W7-3 (Watch Downhill Speed with the supplemental 19 Percent Grade) at the south end of the road (top of the hill) facing exiting traffic.					

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
MM TRANS-3b: Prior to approval of the final map, the applicant shall depict on site improvement plans a double-yellow centerline stripe at the following locations (referenced to the station numbers provided on the plans):	Approval of plans	Prior to approval of the final map	City of Calistoga		
 Madrone Drive 14+00 to 16+75 18+00 to 20+00 23+00 to 25+00 29+00 to 30+50 34+00 to 35+00 38+25 to 43+50 Ponderosa Road 19+00 to 20+50 23+25 to 24+50 Manzanita Road 13+50 to 14+50 					
MM TRANS-3c: Prior to approval of the final map, the applicant shall verify that site improvement plans show landscaping and signs located in a manner to ensure that adequate sight lines are maintained.	Approval of plans	Prior to approval of the final map	City of Calistoga		
MM TRANS-4: Prior to approval of the final map, the applicant shall depict on site improvement plans clear stopping sight distance of at least 250 feet at the curve locations listed below (referenced to the station numbers provided on the plans). In order to obtain clear sight lines, removal of trees and/or earth grading on the inside of the curve may be required. As an alternative, the road may be widened at these locations so that a fire truck could negotiate the curve without entering the opposing lane.	Approval of plans	Prior to approval of the final map	City of Calistoga		

Mitigation Measures	Method of Verification	Timing of Verification	Responsible for Verification	Verification of Completion	
				Date	Initial
Madrone Drive					
- 14+50 to 15+50					
- 24+50 to 25+50					
- 29+75 to 30+25					
- 34+00 to 34+75					
- 38+25 to 38+75					
- 42+50 to 43+50					
MM TRANS-5a: During project operations, on-demand or regularly scheduled van/shuttle service shall be provided between the project and destinations in Calistoga, including access to transit for project employees. Such a shuttle service should accommodate bicycles for both project patrons and employees.	Site inspection	During project operations	City of Calistoga		
MM TRANS-5b: Prior to approval of the final map, the applicant shall demonstrate on site improvement plans that appropriate half-width improvements along the SR-29/128 frontage provide sufficient width for the installation of future Class II bicycle lanes. The City of Calistoga shall review and approve the proposed facilities for adequacy.	Approval of plans	Prior to approval of the final map	City of Calistoga		
MM TRANS-5c: Prior to approval of the final map, the applicant shall depict on site improvement plans appropriate bicycle storage facilities for resort guests and employees. The City of Calistoga shall review and approve the proposed facilities for adequacy.	Approval of plans	Prior to approval of the final map	City of Calistoga		