

# City of Calistoga Planning & Building Department 1232 Washington Street

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**INITIAL STUDY** 

Prepared for the

**Indian Springs Expansion Project** 

1712 Lincoln Avenue (APN 011-340-019)

CITY OF CALISTOGA, CALIFORNIA

Lead Agency:

City of Calistoga Planning and Building Department Planning Division 1232 Washington Street Calistoga, CA 94515



## California Environmental Quality Act

#### **INITIAL STUDY**

#### **Environmental Checklist Form**

1. Project title: Indian Springs Expansion Project

2. Lead agency name and address: City of Calistoga

Planning Division

City Hall – 1232 Washington Street

Calistoga, CA 94515

3. Contact person and phone number: Erik V. Lundquist (P) 707.942.2827

Senior Planner

**4. Project location**: 1712 Lincoln Ave. (APN 011-340-019)

5. **Project sponsor's name and address:** Resort at Indian Springs, LLC

c/o John and Pat Merchant 1712 Lincoln Avenue Calistoga, CA 94515

6. General Plan Designation: Zoning District:

Community Commercial and "CC-DD", Community Commercial - Design District

Resort Character Area

8. Description of project: Indian Springs is located at 1712 Lincoln Avenue in Calistoga, California. The project site is located at the northern end of the core commercial area in downtown Calistoga. The subject property is approximately 16.6 acres in size and zoned for commercial development. Currently there are 41 guest units at the resort, including: 24 units at "The Lodge", 15 bungalow units and 2 cottage units (the "Hill House" and the "Merchant House"). Resort amenities include a spa facility; massage rooms; an Olympic-sized mineral pool; an adult pool; a clay tennis court; bocce ball courts; and several outdoor lounging areas.

The project involves resort expansion by adding 75 guest rooms (i.e. 9 8-unit bungalows and 3 cottage units), a restaurant, conference facility (i.e. Event Building), gym & yoga studio and hotel registration building. Landscaping, new parking areas, driveways and pedestrian pathways will also be developed. On and off site water, sewer, recycled water and storm drainage improvements will be installed to serve the project. The off site improvements will include the construction of new sewer and storm drain lines across the adjoining Gliderport property using a subgrade "jack and bore" method. The existing tennis court, several out buildings, trees, and mud ponds will be demolished and/or removed from the property to accommodate the expansion.

Indian Springs currently produces geothermal water from three geothermal wells. The water feeds the mineral pool, spa, laundry system, and steam rooms. All water that has human contact is currently routed into the City's sanitation sewer lines. All steam room water runs through each steam room and then out to the holding pond. The pond is also fed with overflow from the geyser fed holding tanks. The pond water is then used to irrigate the entire property. All water in the pond is non-human contact water.

Indian Springs proposes to install a heat exchanger in its large mineral pool and replumb the showers to reduce the geothermal water being sent to the City's sewer system.

The project requires approval of a Conditional Use Permit and Design Review. The Developer has also requested a Development Agreement.

**9. Introduction:** This mitigated negative declaration has been prepared by the City of Calistoga to provide the public and responsible and trustee agencies with information regarding the potential effects of the proposed project on the local and regional environment pursuant to the California Environmental Quality Act (CEQA).

#### 10. Other public agencies whose approval is required:

- 1. California Department of Conservation, Division of Oil, Gas and Geothermal Resources (Geothermal production and Re-Injection Wells)
- 2. California Department of Transportation, Caltrans (Encroachment Permit)
- 3. California Department of Fish and Game (1600 Agreement)
- 4. Napa County Department of Environmental Management (Land Use Permit and Well Permit)
- 5. City of Calistoga Department of Public Works (Encroachment Permit, Tree Permit and Well Permit)
- 6. City of Calistoga Building Division (Building Permit)

#### 11. Attachments:

- 1. Project Plans
- 2. Traffic Impact Study for the Indian Springs Expansion Project dated September 6, 2011
- 3. Addendum to the Indian Springs Expansion Traffic Impact Study dated March 19, 2012
- 4. Response to comments on the Traffic Impact Study for the Indian Springs Expansion Project dated May 22, 2012
- 5. Illingworth & Rodkin, Inc., *Indian Springs Resort and Spa Expansion Air Quality and Greenhouse Gas Assessment*, March 14, 2012
- 6. Glenn Lukos Associates, Inc., *Biological Technical Report*, Indian Springs Resort, July 2011
- 7. Joe Branum Tree Care, Inc. *Arborist Report & Requirements*, Indian springs Resort, July 26, 2012
- 8. Archaeological resource Service, *A Cultural Resources Evaluation and Historic Structures Evaluation of the Indian Springs Resort*, dated April 11, 2012
- 9. Reese & Associates, *Soil Investigation Report*, Indian Springs Resort and Spa Expansion, November 23, 2010
- 10. Illingworth & Rodkin, Inc., *Environmental Noise Assessment*, Indian Springs Resort and Spa Expansion, Updated July 13, 2012

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#### **CEQA REVIEW**

The *Indian Springs Expansion Project* is subject to the requirements of the California Environmental Quality Act (CEQA). The lead agency is the City of Calistoga. The purpose of this Initial Study is to provide a basis for deciding whether to prepare an Environmental Impact Report (EIR) or a Negative Declaration. This Initial Study is intended to satisfy the requirements of the California Environmental Quality Act, CEQA, (Public Resources Code, Div 13, Sec 21000-21177), the State CEQA Guidelines (California Code of Regulations, Title 14, Sec 15000-15387), and the City of Calistoga's Environmental Review and Compliance Procedures (Resolution No. 2007-065). CEQA encourages lead agencies and applicants to modify their projects to avoid significant adverse impacts (for example, CEQA Section 20180(c)(2) and State CEQA Guidelines Section 15070(b)(2) and discussion).

Section 15063(d) of the State CEQA Guidelines states the content requirements of an Initial Study as follows:

An Initial Study shall contain in brief form:

- (1) A description of the project including the location of the project;
- (2) An identification of the environmental setting;
- (3) An identification of environmental effects by use of a checklist, matrix, or other method, provided that entries on a checklist or other form are briefly explained to indicate that there is some evidence to support the entries;
- (4) A discussion of the ways to mitigate the significant effects identified, if any;
- (5) An examination of whether the project would be consistent with existing zoning, plans, and other applicable land use controls;
- (6) The name of the person or persons who prepared or participated in the Initial Study.

#### ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, potentially involving at least one impact that requires mitigation to be reduced to a level of "Less Than Significant" as indicated by the Environmental Checklist on the following pages

	Aesthetics	Agriculture and Forestry Resources		Air Quality
	Biological Resources	Cultural Resources	$\boxtimes$	Geology /Soils
$\boxtimes$	Greenhouse Gas Emissions	Hazards & Hazardous Materials	$\boxtimes$	Hydrology / Water Quality
$\boxtimes$	Land Use / Planning	Mineral Resources	$\boxtimes$	Noise
	Population / Housing	Public Services		Recreation
	Transportation/Traffic	Utilities / Service Systems		Mandatory Findings of Significance

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The following Environmental Checklist form is used to describe the impacts of the proposed Project, as detailed in the Project Description. Potential environmental impacts are described as follows:

**Potentially Significant Impact**: An environmental impact that could be significant and for which no feasible mitigation is known. If any potentially significant impacts are identified in this Checklist, an Environmental Impact report (EIR) must be prepared.

Less Than Significant with Mitigation Incorporated: An environmental impact that requires the incorporation of mitigation measures to reduce that impact to a less-than-significant level.

**Less Than Significant Impact**: An environmental impact may occur, however, the impact would not be considered significant based on CEQA environmental standards.

No Impact: No environmental impacts would occur.

#### **EVALUATION OF ENVIRONMENTAL IMPACTS:**

- A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
- "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced).

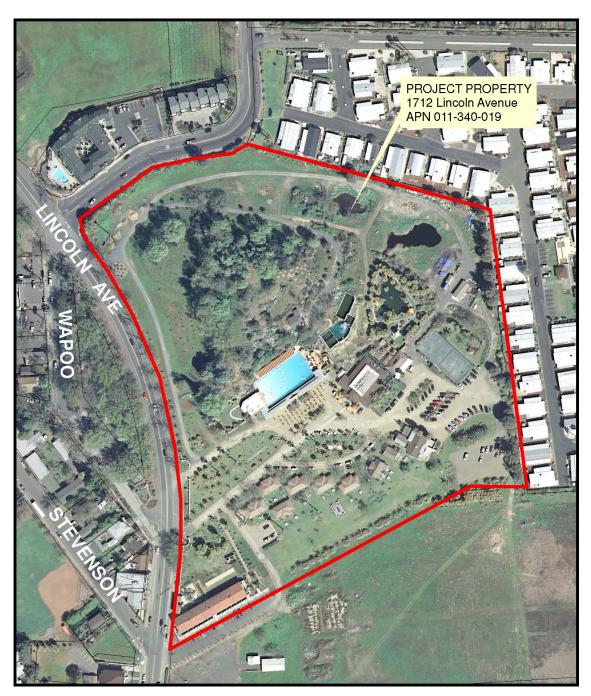
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
  - a) Earlier Analysis Used. Identify and state where they are available for review.
  - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
  - c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures, which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
- 9) The explanation of each issue should identify:
  - a) the significance criteria or threshold, if any, used to evaluate each question; and
  - b) the mitigation measure identified, if any, to reduce the impact to less than significance

FIGURE 1

North San Francisco Bay Region Healdsburg Windsor Se Helena Santa Rosa Napa Co. Yountville Sonoma co. Va Rohnert Parl Cotati Napa Sonoma Fairfield Suisun City Petalunia Amefican Canyon Vallejo Novato Benicia Marin Co. Hercules Pinole Martinez Fairfax San Anselmo Ross San Rafael San Pablo Pleasant Hill MUNI METRO Larkspur Richmond El Cerrito Corte Madera Orinda Lafayette Walnut C Santa Clara Valle Mill Valley AMTRAK Tiburon Alban Belvedere Berkeley Sausalito Moraga Emeryville 1 Inch equals 39,202 feet Biedmon Inch equals 7 miles

### FIGURE 2

Vicinity Map



VICINITY MAP 1712 Lincoln Avenue





#### **I. AESTHETICS –** Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?				
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				$\boxtimes$
c) Substantially degrade the existing visual character or quality of the site and its surroundings?				
d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?				

**Setting:** Calistoga's vistas and scenic corridors are a valued local asset for the community. Views of and from the City serve to situate the community in its local environment and landscape, and comprise an important element for Calistogans' sense of place. Calistoga is in the upvalley section of the Napa Valley, which is punctuated by small landmarks such as Mount Washington and Mount Lincoln. Most of the visually prominent features, such as the ridgelines of the Palisades.

Scenic resources in the Planning Area include:

- Views of the Palisade and Western Ranch from downstream.
- Open space associated with the Gliderport.
- Rural lands along Silverado Trail, including views of Mt. Washington.
- Views of Mount Lincoln from upper Lincoln Street.
- Mora Avenue, Greenwood Avenue and upper Grant Street corridors.
- Corridor through Pioneer Cemetery to the open space of the Herrero property across Highway 128.
- Corridor alongside the Bounsall property and adjacent agricultural parcels.
- Canopy of trees along Cedar Street.
- Highway 128 North of Petrified Forest Road.

Calistoga possesses a number of scenic corridors, most of which are associated with the City's major thoroughfares and the primary routes that connect Calistoga with the wider region. As the paths of transition between more rural surrounds and the urban area of the City itself, the

gateways or "entry corridors" to Calistoga are also located along these routes.

Scenic corridors in the Calistoga include:

- Silverado Trail and Highway 29, up-valley of Silverado Trail
- Highway 128/29 up- and down-valley of Lincoln Avenue
- Tubbs Lane
- Lincoln Avenue
- Foothill Boulevard
- Petrified Forest Road

Views of the night sky are a important part of the natural environment, particularly in a small community like Calistoga which generally enjoys excellent views of the night sky. As the City grows, light pollution has the potential to become an increasing issue. Calistoga recognizes the problems presented by light pollution. Forms of light pollution include:

- Glare, which is the uncomfortable brightness of a light source when viewed against a dark background.
- Light trespass, which is the spilling of light from beyond the property where the light is located.

Sky glow, in which where excess and poorly designed lighting obscures views of the night sky.

- **I. a)** Less than Significant. The project site is located on upper Lincoln Avenue and contains Mount Lincoln. Views of Mount Lincoln from upper Lincoln Avenue are currently filtered by existing vegetation and trees. The views of Mount Lincoln will not be affected by the project. All but three of the new guest units will be located on the back side of Mount Lincoln, adjoining the Calistoga Springs Mobile Home Park, unseen from Lincoln Avenue. The event building, restaurant and recycled water tank will be at the base of Mount Lincoln toward the northern end of the property. No new developments will occur on the slopes of Mount Lincoln. Due to the project's design and orientation less than significant impacts on the scenic vistas and resources identified in the General Plan are anticipated.
- **I. b)** No Impact. The site is not within a state scenic highway, no impacts are foreseeable.
- **I.** c) <u>Less than Significant</u>. The proposed project would add new architecturally sensitive buildings and complementary landscaping. The expansion is designed in a manner that does not dramatically alter project's frontage and maintains an appropriate transition from the downtown to the adjoining commercial developments and residential neighbors. The proposed exterior finishes capture the qualities and character of Calistoga's recognition as a historic spa town. As designed, the project will not substantially degrade the existing visual character or quality of the site and its surroundings.
- **I. d)** Less than Significant. Installation of lighting at the new facility will result in a minor increase in the nighttime lighting. In accordance with City standards, all exterior lighting will be the minimum necessary for operational and security needs. In addition, standard conditions of approval require light fixtures to be kept as low to the ground as possible and include shields to deflect the light downward and avoid highly reflective surfaces. Additionally, many of the

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fixtures will be on dimmers and many are required, by Title 24, to be on motion sensors devices. As designed, and as subject to standard conditions of approval, the project will not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

II. AGRICULTURE AND FORESTRY RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				
d) Result in the loss of forest land or conversion of forest land to non-forest use?				
e) Involve other changes in the existing				

City of Calistoga October 2012 environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

Setting: The property is located near the downtown commercial core, an urban setting.

- **II. a b)** No Impact. The California Department of Conservation Farmland Mapping and Monitoring Program designates the site as "Urban and Built-Up Land." (Dept. of Conservation, 2010 layer) The project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland mapping and Monitoring Program to non-agricultural use. The project area is not under Williamson Act contract.
- **II. c e**) **No Impact**. The project would not occur on land zoned as forest land or timberland, and would not involve other changes in the existing environment that would result in the conversion of farmland to non-agricultural use or conversion of forest land to non-forest use.

III. AIR QUALITY Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?				$\boxtimes$
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?				
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?				
d) Expose sensitive receptors to substantial pollutant concentrations?		$\boxtimes$		
e) Create objectionable odors affecting a substantial number of people?				

City of Calistoga October 2012 Setting: The City of Calistoga is located in northwestern Napa County. The Bay Area Air Quality Management District is the public agency entrusted with regulating stationary sources of air pollution in the nine counties that surround San Francisco Bay: Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, southwestern Solano, and southern Sonoma counties. There are four common air pollutants of concern in Calistoga. These pollutants include carbon monoxide, ozone, inhalable particulates and toxic air contaminants. These pollutants come from a variety of sources including motor vehicles, wood stoves, fireplaces, agricultural sprays, construction and agricultural activities. The air basin is in a Federal non-attainment status for 1-hour ozone and particulate matter (PM10).

III. a) No Impact. The most recent clean air plan in the *Bay Area 2010 Clean Air Plan* that was adopted by BAAQMD in September 2010. The proposed project would not conflict with the latest Clean Air planning efforts since (1) the project would have emissions well below BAAQMD thresholds (see Sections III b & c), (2) this development is an expansion of land use that is currently used for the same purposes as the proposed project, and (3) the project is too small to incorporate project-specific transportation control measures listed in the latest Clean Air Plan (i.e. *Bay Area 2010 Clean Air Plan*).

III. b) Less than Significant. The Bay Area is considered a non-attainment area for ground-level ozone and fine particulate matter ( $PM_{2.5}$ ) under both the federal Clean Air Act and the California Clean Air Act. The area is also considered non-attainment for respirable particulates or particulate matter with a diameter of less than 10 micrometers ( $PM_{10}$ ) under the California Clean Air Act, but not the federal act. The area has attained both State and federal ambient air quality standards for carbon monoxide. As part of an effort to attain and maintain ambient air quality standards for ozone and  $PM_{10}$ , the BAAQMD has established thresholds of significance for air pollutants. These thresholds are for ozone precursor pollutants (ROG and NOx),  $PM_{10}$  and  $PM_{2.5}$  and apply to both construction period and operational period impacts.

The new California Emissions Estimator Model Version 2011.1.1 (CalEEMod) was used to estimate construction criteria air pollutant and GHG emissions for construction and long-term operation. This model is recommended by the BAAQMD for use in computing average daily emissions from construction activities and long-term project operation. The UREMIS2007 model predicts emissions based on the project type, size, location, and specific information input by the user (e.g., vehicle trip generation).

Inputs to the model included land use type and size, and proposed construction schedule and equipment assumptions. Construction is scheduled to begin in 2012/2013, and the major phases of construction would occur over about 1 year. The CalEEMod model output worksheets are included in the Illingworth and & Rodkin, Inc. air Quality and Greenhouse Gas Assessment dated March 14, 2012.

#### **Construction Emissions**

The project size, type and acreage were input to the CalEEMod model. Specific construction

inputs, such as phase scheduling, equipment usage were based on information obtained from the project applicant<sup>1</sup>. Total emissions were computed. Average daily emissions were determined by dividing the total emissions by the number of construction days, assumed to be approximately 220 days. Total emissions and average daily emissions are reported in Table 1. BAAQMD has established emissions thresholds for construction activities that are also shown in Table 1. Average daily construction emissions would be well below these thresholds.

**Table 1 Maximum Average Daily Construction Emissions** 

Daily Construction Emissions							
Description	Reactive Organic Gases (ROG)	Nitrogen Oxides (NOx)	Respirable Particulate Matter (PM <sub>10</sub> )	Fine particulate matter (PM <sub>2.5</sub> )			
Total Emissions	0.40 tons	0.71 tons	0.04 tons	0.04 tons			
Average Daily Emissions	3.6 pounds	6.5 pounds	<1.0 pounds	<1.0 pounds			
BAAQMD Significance Thresholds	54 pounds	54 pounds	82 pounds	54 pounds			
Significant?	NO	NO	NO	NO			

#### **Operational Emissions**

Operational emissions were also modeled using the CalEEMod model. The land use sizes and model default trip generation rate and trip distances were used. No adjustments were made to the model, such as internal trip rates associated with the restaurant, so emissions may be overestimated. The project was assumed to be fully operational in 2015. Average daily emissions were determined by dividing the total annual emissions by the number of operational days, assumed to be 365 days. Total emissions and average daily emissions are reported in Table 2. BAAQMD has identified emission-based thresholds for operational impacts that are shown in Table 2. Project emissions would be well below these thresholds.

**Table 2 Average Daily Operational Emissions** 

Daily Operational Emissions							
Description	Reactive Organic Gases (ROG)	Nitrogen Oxides (NOx)	Respirable Particulate Matter (PM <sub>10</sub> )	Fine particulate matter (PM <sub>2.5</sub> )			
Total Emissions	0.76 tons	1.15 tons	0.73 tons	0.06 tons			
Average Daily	4.2 pounds	6.3 pounds	4.0 pounds	0.3 pounds			
BAAQMD Significance Thresholds	54 pounds	54 pounds	82 pounds	54 pounds			
Significant?	NO	NO	NO	NO			

<sup>&</sup>lt;sup>1</sup> Phone conversation with Paul Coates on March 13, 2012

III. c) Less than Significant. As discussed under Section III b, the project would have emissions less than significant thresholds adopted by BAAQMD for evaluating impacts to ozone and particulate matter. Therefore, the project would not contribute substantially to existing or projected violations of those standards. Carbon monoxide emissions from traffic generated by the project would be the pollutant of greatest concern at the local level. Congested intersections with a large volume of traffic have the greatest potential to cause high-localized concentrations of carbon monoxide. Air pollutant monitoring data indicate that carbon monoxide levels have been at healthy levels (i.e., below State and federal standards) in the Bay Area since the early 1990s. As a result, the region has been designated as attainment for the standard. There is an ambient air quality monitoring station in Napa that measures carbon monoxide concentrations. The highest measured level over any 8-hour averaging period during the last 3 years is less than 2 parts per million (ppm), compared to the ambient air quality standard of 9.0 ppm. The project would generate a small amount of traffic (less than 100 trips per busiest hour), so the contribution of project-generated traffic to these levels would be minimal and the project would not cause or contribute to a violation of an ambient air quality standard.

III. d) <u>Less than Significant with Mitigation Incorporation</u>. Operation of the project is not expected to cause any localized emissions that could expose sensitive receptors to unhealthy air pollutant levels. Construction activity would generate dust and equipment exhausts on a temporary basis. Nearby sources of air pollutant emissions are not anticipated to adversely affect new residents, which are considered sensitive receptors.

Construction activity is anticipated to involve some grading and minor trenching, building construction and painting. Because the site is currently developed, major grading activity that requires extensive use of heavy equipment is not anticipated. Grading activities would require the most diesel powered equipment, but this is only anticipated to include an excavator and a backhoe for about 8 hours per day during the first month of construction. The building phase may require a diesel-powered forklift to operate a few hours per day. While there may be intermittent use of other diesel-powered equipment during construction.

During construction activities, dust would be generated. Most of the dust would result during grading activities. The amount of dust generated would be highly variable and is dependent on the size of the area disturbed at any given time, amount of activity, soil conditions and meteorological conditions. Typical winds during late spring through summer are from the south. Nearby land uses, especially those residences located immediately to the south could be adversely affected by dust generated during construction activities. The BAAQMD CEQA Air Quality Guidelines consider these impacts to be less than significant if best management practices are employed to reduce these emissions.

Construction equipment and associated heavy-duty truck traffic generates diesel exhaust, which is a known Toxic Air Contaminant (i.e., TAC). As indicated under Sections III b & c, these emissions would not be considered to contribute substantially to existing or projected air quality violations. Emissions from TACs are typically evaluated through health risk assessments over the course of lifetime exposures (i.e., 24 hours per day over 70 years). Diesel exhaust poses

both a health and nuisance impact to nearby receptors. Construction emissions from heavy equipment usage near the northern and western boundaries could affect nearby residences. According to the applicant, this portion of the site would require little earth work and most of the construction that involves diesel-powered equipment would occur within a 1-month period. These construction activities are expected to occur during a relatively short time, and therefore, the impacts are considered to be less than significant if reasonable available control measures are applied. Although construction activities would be temporary, they would have the potential to cause both nuisance and health air quality impacts. PM<sub>10</sub> is the pollutant of greatest concern associated with dust. If uncontrolled, PM<sub>10</sub> levels downwind of actively disturbed areas could possibly exceed State ambient air quality standards. In addition, dust fall on adjacent properties could be a nuisance. If uncontrolled, dust generated ground clearing, grading and construction activities represents a potentially significant impact. Implementation of the measures recommended by BAAQMD and listed below would reduce the air quality impacts associated with grading and new construction to a less than significant.

#### Mitigation Measure AIR-1: Dust Control During Construction

Mitigation Measure AIR-1: The contractor shall implement the following Best Management Practices that are required of all projects:

- 1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- 2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- 3. 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.
- 4. All vehicle speeds on unpaved roads shall be limited to 15 mph.
- 5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- 6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- 7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- 8. Avoid staging construction equipment adjacent to existing residences or sensitive receptors.
- 9. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.
- 10. The contractor shall install temporary electrical service whenever possible to avoid the need for independently powered equipment (e.g. compressors).

III. e) <u>Less than Significant.</u> During construction localized emissions of diesel exhaust during equipment operation and truck activity may result in localized odors at times. These emissions may be noticeable from time to time by adjacent receptors. However, they would be localized and are not likely to adversely affect people off site in that they would result in confirmed odor complaints. The project is not expected to produce odors that would cause odor complaints. The project site is not affected by existing odor sources that would cause odor complaints from new users of the project.

IV. BIOLOGICAL RESOURCES Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) 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 California Department of Fish and Game or U.S. Fish and Wildlife Service?				
b) 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 California Department of Fish and Game or US Fish and Wildlife Service?				
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				
d) 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?				
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation				

policy or ordinance?		
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?		$\boxtimes$

Setting: The project area is located on Lincoln Avenue in the town of Calistoga, Napa County, California. (T8N and T9N, R7W and R8W, Carne Humana, Calistoga, Calif. 7½, Topographic Map). The study area covers over 16 acres and comprises the Indian Springs Resort Property. The study area includes areas that have been subject to varying levels of disturbance and development. The central portion of the hill form supports "disturbed" mixed oak woodland species with the surrounding areas exhibiting land-use/land cover types ranging from developed to non-native grassland.

**IV. a, b & c)** <u>Less than Significant with Mitigation Incorporation.</u> The on site improvements associated with the project would not impact streams, drainages, or wetlands subject to the jurisdiction of the Corps pursuant to Section 404 of the Clean Water Act or the jurisdiction of CDFG pursuant to Section 1600 of the California Fish and Game Code.

The project proposes a 4-inch sanitary sewer force main and a 6-inch storm drain force main (pipelines) across the Gliderport property. The Gliderport property contains Napa Blue Grass, Calistoga Popcorn flower and wetlands. Both lines would be in close proximity to these protected species and habitat. The pipelines would be installed by jack and bore method, which avoids ground disturbance and reduces the potential impacts to sensitive areas.

#### Mitigation Measure BIO-1: Off Site Utility Construction

Mitigation Measure BIO-1: The following mitigation measure applies to all offsite utility alignments extending across the Gliderport property. All pipelines extended across the Glider Port shall be constructed using subsurface jack and bore methods. During high-pressure directional drilling, the following avoidance and minimization measures shall be implemented:

- 1. Compliance with all applicable regulatory agency requirements.
- 2. 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.
- 3. Existing trails and roads shall be used where and when feasible. Access to the drill site

- shall avoid disturbance to sensitive plants and wetlands.
- 4. The drill path shall be designed to an appropriate depth to minimize the risk of a fracout. The drill entry and exit points shall be designed far enough sensitive areas to avoid impacts..
- 5. Machinery shall be operated in non-sensitive areas.
- 6. 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 100 feet away from sensitive areas. Fueling shall occur behind a containment barrier that will prevent any spilled or leaked fuel from running into sensitive areas. All equipment servicing shall occur within designated areas away from the sensitive areas. 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 leaking fluids shall not be used in or within 100 feet of sensitive areas.
- 7. Bore pits shall be located outside the drip line of trees rooted in the banks, and no vegetation shall be removed without approval from a qualified biologist.
- 8. A dugout/settling basin shall be constructed at the drilling exit site to contain drilling mud and to prevent sediment from entering waterways. As appropriate, silt fences or other effective sediment and erosion control measures shall be used to prevent drilling mud from entering the waterways. Excess drilling mud and other waste materials shall be disposed at an adequately sized disposal facility located away from the site to prevent these materials from entering the watercourse.
- 9. Construction activities shall be conducted during the dry season to minimize potential transport of material from the project area downstream during a frac-out.
- 10. The property shall be monitored by qualified personnel during drilling to observe signs of surface migration (frac-out) of drilling mud.
- 11. 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.
- **IV. d)** Less than Significant with Mitigation Incorporation. Temporary construction-related activity and noise could disturb birds and other wildlife in and near the project area. Bird nests, eggs and young are protected under California Fish and Game Codes (§3503, §3503.5, and §3800) and are also protected under the Federal Migratory Bird Treaty Act (50 CFR 10.13) which makes it unlawful to "take" (kill, harm, harass, shoot, etc.) including nests, eggs, and young. Non-native species such as feral pigeon (*Columba livia*), house sparrow (*Passer domesticus*), and European starling (*Sturnus vulgaris*) are exempt from protection. If birds were to nest in or near the project area during construction activities, the nests could be affected and the impact would be significant.

Any construction activity during the migratory bird and raptor nesting period (February 15 to September 1) could disturb nesting birds. Therefore, if any construction activities were to occur before September 1, then preconstruction nest surveys would be required as described in the mitigation measure below to reduce the impacts to less than significant.

## Mitigation Measure BIO-2: Preconstruction Nest Surveys and Construction Exclusion Zones.

Mitigation Measure BIO-2: Preconstruction Nest Surveys and Construction Exclusion Zones: If construction would take place outside of the nesting season (September to January), then preconstruction nest surveys would not be necessary. However, if construction would take place during the nesting season (February-August), then preconstruction nest surveys shall be conducted as follows in order to avoid any potential impacts to nesting birds.

- 1. Nest surveys shall be conducted no earlier than 14 days prior to tree removal and/or breaking ground (surveys should be conducted a minimum of 3 separate days during the 14 days prior to disturbance); and
- 2. In the event that nesting birds are found, the Project applicant should consult with DFG and obtain approval for nest-protection buffers prior to tree removal and/or ground disturbing activities; and
- 3. Nest protection buffers will remain in effect until the young have fledged. All nest protection measures should apply to off-site impacts and within 300 feet of project activities. If a lapse in project-related work of 15 days or longer occurs, another focused survey and if required, consultation with DFG, will be required before project work can be reinitiated.

#### Pallid Bat

The project site contains suitable habitat for the pallid bat, a Species of Special Concern. Accordingly, Mitigation Measure BIO-3 requires that a pre-construction survey be conducted for the pallid bat if construction is to occur during the breeding season. With the implementation of this mitigation measure, impacts would be reduced to a level of less than significant.

#### Mitigation Measure BIO-3: Preconstruction Pallid Bat Surveys

Mitigation Measure BIO-3: 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:

- 1. Structures providing roost sites for this species must be avoided to the maximum extent practicable.
- 2. 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.
- 3. 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.
- 4. Demolition of any roost sites must be timed for the period when bats are not present on the site.

**IV. e)** Less than Significant with Mitigation Incorporation. An Arborist Report was prepared by Joe Branum Tree Care, Inc. dated July 26, 2012. There are protected trees, per the City's Tree Ordinance, on the property and that surround the property. The Arborist found that 111 palms will be at risk of damage, 142 palms will be removed or transplanted. Seventeen trees are at risk of damage and could be protected. Thirty trees must be removed. The Arborist Report recommends the that driveway and sidewalk be realigned to protect palm #568 and that the revise the site plan be revised, were feasible, to avoid removal or damage to trees #504, 521, 526, 530, 536, 544 and 548. In accordance with the City's Tree Ordinance, a tree protection and replacement plan will be required to be submitted to the City for review and approval to reduce the impact to the trees during construction as outlined in the mitigation measure below. As a result, impacts to trees are considered less than significant.

#### Mitigation Measure BIO-4: Tree Protection Plan

Mitigation Measure BIO-4: Prior to building permit issuance, a Tree Protection and Replacement Plan consistent with Chapter 19.01 shall be reviewed and approved by the Public Works Department. All requirements and restrictions contained in Chapter 19.01 of the Calistoga Municipal Code (CMC) shall be complied with, which shall incorporate replacement trees for those trees slated for removal and shall include any recommendations of the Project Arborist.

**IV. f)** No Impact. Currently, there are no adopted Habitat Conservation or Natural Community Conservation Plans within the City of Calistoga. There are also no approved local, regional or state habitat conservation plans related to or affected by these properties.

V. CULTURAL RESOURCES – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?				
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	. 🗆			
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		$\boxtimes$		
		$\boxtimes$		

City of Calistoga October 2012 d) Disturb any human remains, including those interred outside of formal cemeteries?

**Setting:** Prehistoric human use of Calistoga extends over several thousand years. In the context of the historic period, the study area is within the 17,962 acre Carne Humana Mexican land grant that was given to Edward Turner Bale in 1841. The project area is known to contain cultural resources and historic. A Cultural Resources Evaluation and Historic Structures Evaluation was conducted by Archaeological Services dated April 11, 2011.

- **V. a)** Less than Significant. The General Plan Community Identity Element identifies four potential historic districts. The property is located in a resort/spa district that includes the original octagonal plat and several out buildings associated with the Brannan's Cottage Hot Springs. The construction of new buildings and cabins, does not pose a threat to significant historic resources. The new structures will be somewhat removed from the existing historic structures and will not detract from their historic importance. The new structures have been design to complement rather than replicate the existing historic structures. The prehistoric site is not seen as a significant prehistoric deposit, and due to past damage, it is unlikely to yield further information about the past.
- **V. b)** Less than Significant with Mitigation Incorporation. The proposed project involves excavation activates that may expose previously undiscovered archaeological sites. However, because the scope and depth of excavation is minimal, the likelihood of discovering such resources is low. Requiring the permit holder to immediately cease operation in affected area if archaeological, historical or paleontological resources are encountered will mitigate potential impacts.
- **V. c)** Less than Significant with Mitigation Incorporation. The proposed project involves excavation activities that may expose previously undiscovered paleontological sites. However, because the scope and depth of excavation is minimal, the likelihood of discovering such resources is low. Requiring the permit holder to immediately cease operation in affected area if archaeological, historical or paleontological resources are encountered will mitigate potential impacts.
- **V. d)** Less than Significant with Mitigation Incorporation. The project site is not part of a formal cemetery. Thus, human remains are not expected to be encountered during construction of the proposed project. In the unlikely event that human remains are encountered at any time, State Health and Safety Code Section 7050.5 requires the project to halt until the County Coroner has made the necessary findings as to the origin and disposition of the remains pursuant to Public Resources Code Section 5097.98. Compliance with these regulations would ensure the proposed project would not result in significant impacts due to disturbing human remains.

#### Mitigation CR-1: Construction Monitoring

Mitigation Measure CR-1: During ground disturbing activities a qualified cultural resource

consultant shall be present to monitor the site and activities. If archaeological, historical, paleontological resources or other human remains are encountered, all construction activity in the affected area shall cease and no materials shall be removed until the qualified professional surveys the site and mitigation measures can be proposed by the qualified professional to the satisfaction of the Planning Division for approval and subsequent implementation by the Applicant as provided in CR-2.

#### Mitigation CR-2: Treatment of Archaeological Resources Discovered During Construction

Mitigation Measure CR-2: If archaeological materials are encountered during construction activities, the Contractor shall stop all work within a fifteen foot radius of the discovery and notify the City Engineer of the discovery. The find shall be inspected by a qualified archaeologist. The City shall ensure that the construction contractor personnel are informed that collecting archaeological materials discovered during construction is prohibited by law.

If the archaeologist determines that the find is potentially significant (e.g., meets the definition of historic resource or unique archaeological resource), all work must be stopped in the immediate vicinity to allow the archaeologist to recommend appropriate treatment. Such treatment could include modifying the project to allow the materials to be left in place, or undertaking data recovery of the materials in accordance with standard archaeological methods if such data recovery would not result in further erosion or collapse of the slope as determined by the City Engineer.

# Mitigation CR-3: Treatment of Human Remains, Associated Grave Goods, or Items of Cultural Patrimony

Mitigation Measure CR-3: If human remains are encountered during construction activities, there shall be no further excavation or disturbance of the remains, or nearby area until the Napa County Coroner has made the necessary findings as to origin, in accordance with Health and Safety Code 7050.5. In accordance with Public Resources Code 5097.98 if the coroner believes the human remains to be those of a Native American, he or she shall contact, by telephone within 24 hours the Native American Heritage Commission. The Native American Heritage Commission shall immediately notify the most likely descendent (MLD). The descendent shall inspect the site of the discovery and may recommend the means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods. The descendents shall complete their inspection and make their recommendation within 48 hours of their notification by the Native American Heritage Commission. The remains shall not be damaged or disturbed by further development until the City has discussed and conferred with the MLD regarding their recommendations.

Mitigation Measures CR-1 and CR-2 provides the means to identify and treat potentially significant archaeological resources that could be present at the project site. Therefore, with mitigation, the project would not cause a substantial adverse change in the significance of an archeological resource, and would result in no adverse effect. Mitigation Measure CR-3 provides guidance for the treatment of human remains, if found. These procedures are in accordance with regulatory requirements for the treatment of human remains, and adherence to

these procedures would reduce the potential impact to less than significant.

VI. GEOLOGY AND SOILS – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) 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? Refer to Division of Mines and Geology Special Publication 42.				
ii) Strong seismic ground shaking?				
iii) Seismic-related ground failure, including liquefaction?				
iv) Landslides?				
b) Result in substantial soil erosion or the loss of topsoil?				
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?				
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?				
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the				

disposal of waste water?

**Setting:** Reese & Associates prepared a Soils Investigation report dated November 23, 2010. The topography of the site is dominated by Mt. Lincoln, an isolated hill located in the north portion of the project. Elevations extend from about 441 feet (above mean sea level) from the top of Mt. Lincoln and extend down to the Napa Valley floor to the existing resort elevation of about 355 feet. The proposed expansion will extend along the west and east sides of Mt. Lincoln and the southeast portion of the property and will generally be located within relatively flat to gently sloping terrain.

Past grading has been performed on the property in the form of excavation and "mining" of fine-grained silt for use as commercial spa product. The excavations have resulted in various stockpiles located along the northeast portion of the property and "quarry" holes. Review of Google earth historical imagery shows excavation holes prevalent throughout the east side of the property and suspected, backfilled holes near the central west portion.

Published geologic maps indicate that Mt. Lincoln is underlain by tuff and agglomerate rocks of the Sonoma Volcanics unit (Huffman, 1980). This rock group includes a wide variety of different rock types ranging from relatively weak sediments to hard and strong cobbles and boulders within a very stiff to hard soil matrix. The remainder of the site is mapped as alluvium.

Soil deposits encountered during geotechnical exploration are comprised of existing fills, natural topsoil, and discontinuous layers of silts, clays and clayey sands. Relatively deep localized deposits of soft silts were observed.

Accumulations of fill were encountered. The existing fills could be related to past "mining" of usable silt deposits, as previously discussed and backfilling of the resultant excavations. Based on the test borings, the fills appear to be about 5½ to 6½ feet thick and consist of a heterogeneous mixture of medium stiff to stiff sandy clays and silts. Laboratory tests performed on the fill materials indicate that the soils vary in consistency and exhibit a wide range of expansion potential from low to high. That is, the soils would tend to undergo low to high strength and volume changes with seasonal changes in moisture content.

Below the existing fill deposits, and elsewhere at the ground surface, natural sandy silts and sandy clays were encountered. These natural soils were observed to be porous. In the test borings, the porous upper soils ranged from approximately 2 to  $3\frac{1}{2}$  feet deep. These upper natural silty and clayey soils generally exhibited a low expansion potential. Below the weak porous upper soils, clays of high expansion potential were observed.

In general, the underlying soils consist of medium dense to dense clayey sands, silty sands and stiff to hard sandy clays.

#### Groundwater

Groundwater was observed during geotechnical exploration. Water levels were recorded at depths that varied between about 6½ to 11 feet below the existing ground surface. Hot water

was noted at a depth of about 20 feet. We understand that during the late 1800s, two geysers were present on the property. We believe that groundwater conditions vary seasonally, and water levels could rise and fall several feet annually. Precise groundwater location, or the presence of a perched water condition, is beyond the scope of this investigation.

#### Faults and Seismicity

The project is within the seismically active California Coast Range geomorphic province. This region is characterized by northwest trending mountain ranges, narrow valleys and broad basins generally reflecting the underlying geologic structure. Numerous active faults are present in the region and these faults are part of the active San Andreas system of faults. Faults in this system are typically northwest trending, strike-slip faults with a right-lateral sense of displacement. A number of the recognized active faults in the project vicinity are considered capable of affecting the site with moderate to very strong ground shaking in the future, including the Maacama Fault located 5 miles to the west, the Rodgers Creek Fault 9.2 miles to the southwest, the Collayomi Fault 13½ miles to the northwest, the West Napa Fault 14.8 miles to the southeast, the Concord-Green Valley Fault 17.7 miles to the southeast and the San Andreas Fault located 21 miles to the southwest. During the year 2000, the 5.2M magnitude Yountville earthquake affected the Napa Valley. The epicenter of this earthquake was located near Mount Veeder, and although strong shaking affected the City of Napa, shaking in the site vicinity was moderate with a potential for only light damage (USGS website).

VI. a) <u>Less than Significant.</u> In a seismically active region such as Northern California, there is always some possibility for future faulting at any site. However, historical occurrences of surface faulting have generally closely followed the trace of active faults (faults experiencing surface rupture in the past 11,000 years). The geologic maps reviewed did not indicate the presence of active faults projecting through the property, nor is the site within an Alquist-Priolo Earthquake Fault Zone as defined by the State of California. Therefore, the risk of fault-related ground surface rupture at site can be considered low.

Strong seismic shaking can induce a number of phenomena including liquefaction, densification and severe ground motions. Liquefaction is the phenomenon in which loose, saturated granular soils experience a sudden loss of shear strength when subjected to seismic shaking. Densification, occurs when a loose soil, saturated or dry, experiences reduction in void ratio during shaking. Both phenomenons can result in unacceptable total and/or differential settlements at the ground surface. Whether these phenomena would actually occur, and to what extent, depends on complicated factors, including the duration and intensity of ground shaking, and underlying soil and groundwater conditions.

The soil data from the borings at the site in accordance with the "Simplified Procedure for Evaluating Soil Liquefaction Potential" by H. B. Seed and I. M. Idriss, published in the Journal of the Soil Mechanics and Foundation Division of the American Society of Civil Engineers, dated September 1971, and "Liquefaction Resistance of Soils: Summary Report from the 1996 NCEER and 1998 NCEER/NSF Workshops on Evaluation of Liquefaction Resistance of Soils," by Youd, et al dated April 2001. It is found that the sandy and/or silty soils encountered in the test borings would not be subject to liquefaction.

The shaking intensity at the site will depend on the distance to the earthquake epicenter, depth and magnitude of the tremor, and the response characteristics of the materials beneath the site. Because of the proximity to the nearby fault zones and potential for strong ground shaking, it will be necessary to design and construct the project in strict accordance with current standards for earthquake-resistant construction. This impact is less than significant.

- **VI. b)** <u>Less than Significant.</u> The project includes measures to prevent soil erosion and sedimentation during and subsequent to construction. An Erosion and Sediment Control Plan would be prepared and approved for the project prior to construction. Therefore, the potential for substantial soil erosion or loss of topsoil for the project is less than significant.
- VI. c & d) Less than Significant with Mitigation Incorporation. Based upon the Reese & Associates Report, the site has 2 to 5 feet of weak, porous compressible soils and local areas of fill. Subsurface groundwater is also present. These soil conditions can be mitigated to less than significant level with proper design-level engineering.

#### Mitigation GEO-1: Design Level Geotechnical Report

Mitigation Measure GEO-1: Prior to the issuance of a grading or building permit for any portion of the project site, the applicant shall have a qualified geotechnical engineer and certified engineering geologist prepare and submit to the Planning and Building Department a final design-level geotechnical, geologic and seismic hazards investigation that complies with all applicable state and local code requirements. The final design-level geotechnical investigation shall:

- 1. Include an analysis of the expected ground motions at the site using accepted methodologies:
- 2. Determine structural design requirements as prescribed by the most current version of the California Building Code and City of Calistoga;
- 3. Determine the final design parameters for walls, foundations, foundation slabs, utilities, roadways, parking lots, sidewalks, and other surrounding improvements.

#### Mitigation GEO-2: Geotechnical Monitoring

Mitigation Measure GEO-2: A qualified geotechnical engineer shall be retained by the Applicant to be present on the project site during excavation, grading, and general site preparation activities to ensure the implementation of the geotechnical mitigations contained in the final design-level geotechnical investigation.

**VI. e)** <u>Less than Significant.</u> The proposed Project will convey wastewater generated onsite to the existing municipal wastewater system. Septic tanks or other alternative wastewater disposal systems will not be employed at the Project site. Therefore, no impacts to soils due to the use of septic systems are anticipated.

VII. GREENHOUSE GAS
EMMISSIONS Would the project:

Potentially Less Than No

Indian Springs Expansion Project 1712 Lincoln Avenue, Calistoga Initial Study/Mitigated Negative Declaration

	Significant Impact	Significant with Mitigation Incorporation	Significant Impact	Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			$\boxtimes$	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?		$\boxtimes$		

*Setting:* The project is located in the northern portion of Napa County, which is near the very northern edge of the San Francisco Bay Area Air Basin. Ambient air quality standards have been established at both the State and federal level. The Bay Area meets all ambient air quality standards with the exception of ground-level ozone, respirable particulate matter  $(PM_{10})$  and fine particulate matter  $(PM_{2.5})$ .

High ozone levels are caused by the cumulative emissions of reactive organic gases (ROG) and nitrogen oxides (NOx). These precursor pollutants react under certain meteorological conditions to form high ozone levels. Controlling the emissions of these precursor pollutants is the focus of the Bay Area's attempts to reduce ozone levels. Highest ozone levels in the Bay Area occur in the eastern and southern inland valleys that are downwind of air pollutant sources. High ozone levels aggravate respiratory and cardiovascular diseases, reduced lung function, and increase coughing and chest discomfort.

Particulate matter is another problematic air pollutant of the Bay Area. Particulate matter is assessed and measured in terms of respirable particulate matter or particles that have a diameter of 10 micrometers or less ( $PM_{10}$ ) and fine particulate matter where particles have a diameter of 2.5 micrometers or less ( $PM_{2.5}$ ). Elevated concentrations of  $PM_{10}$  and  $PM_{2.5}$  are the result of both region-wide (or cumulative) emissions and localized emissions. High particulate matter levels aggravate respiratory and cardiovascular diseases, reduce lung function, increase mortality (e.g., lung cancer), and result in reduced lung function growth in children.

The Bay Area Air Quality Management District (BAAQMD) is the regional agency tasked with managing air quality in the region. At the State level, the California Air Resources Board (a part of the California Environmental Protection Agency) oversees regional air district activities and regulates air quality at the State level. The BAAQMD has recently published CEQA Air Quality Guidelines that were used to evaluate air quality impacts of projects<sup>2</sup>.

VII. a) <u>Less than Significant.</u> Greenhouse gas emissions associated with the development of the proposed project were computed. The California Air Pollution Control Officers Association

<sup>&</sup>lt;sup>2</sup> Bay Area Air Quality Management District. 2010. BAAQMD CEQA Air Quality Guidelines. June.

(CAPCOA) and BAAQMD CEQA Air Quality Guidelines provide guidance for calculating project emissions<sup>3</sup>. Emissions from area sources, mobile sources and electricity usage are recommended by CAPCOA and BAAQMD. These emissions were first computed using the new CalEEMod model, as recommended by BAAQMD.

#### CalEEMod Model

As with criteria air pollutants, the CalEEMod model (Version 2011.1.1) was used to predict emissions of GHG from the proposed project. This is a computer model originally developed by the California Air Resources Board (CARB) as URBEMIS to estimate air pollutant emissions from land use developments<sup>4</sup>. The model predicts emissions for construction activities, area sources, and traffic associated with the project. The model uses the latest available statewide emission inventory models for mobiles sources (i.e., EMFAC2007) and construction equipment (i.e., OFFROAD2007).

CalEEMod provides GHG emissions in the form of equivalent CO<sub>2</sub> emissions (i.e., CO<sub>2</sub>e) in metric tons per year. The model provides emissions for transportation, areas sources, electricity consumption, natural gas combustion, electricity usage associated with water usage and wastewater discharge, and solid waste land filling and transport. The model applies effects of Pavley Rule and the Low Carbon Fuel Standard on motor vehicle emissions. CalEEMod also provides computations of CO<sub>2</sub>e emissions from natural gas usage, electricity usage and the indirect emissions of electricity usage associated with water and wastewater conveyance. Indirect emissions associated with solid waste generation were also computed using BGM.

#### Construction Period Emissions

The BAAQMD does not have an adopted *Threshold of Significance* for construction-related GHG emissions. The District recommends calculating the emissions and disclosure that GHG emissions would occur during construction. BAAQMD also encourages the incorporation of best management practices to reduce GHG emissions during construction where feasible and applicable. Best management practices assumed to be incorporated into construction of the proposed project include, but are not limited to: using local building materials of at least 10 percent and recycling or reusing at least 50 percent of construction waste or demolition materials.

The CalEEMod modeling conducted for the air quality analysis provided the estimate of construction GHG emissions. Emissions associated with construction were assumed to all occur mostly over one year, beginning in 2012 and continuing into 2013. Under this scenario, construction of the project would emit 113 metric tons of CO<sub>2</sub>. This would be the emissions from construction equipment, truck traffic and associated construction worker traffic. It does not include indirect emissions associated with the manufacturing and transport of building

<sup>&</sup>lt;sup>3</sup> California Air Pollution Control Officers Association, 2008, CEQA & Climate Change, January.

<sup>&</sup>lt;sup>4</sup> The model has been updated through funding provided mostly by Air Districts, with CalEEMod being the most recent update to URBEMIS2007.

<sup>&</sup>lt;sup>5</sup> The W-Trans Study developed peak-hour trip generation rates and the model requires daily trip generation rates. CalEEMod uses a similar methodology to predict trip generation rates as the W-Trans analysis (I.e., ITE methodologies).

materials.

These emissions were conservatively compared to the BAAQMD operational threshold of 1,100 annual metric tons and determined to be a *less-than-significant impact* for the construction period.

#### Project Operation Period Greenhouse Gas Emissions

Project GHG emissions were computed as if they were completely new emissions and did not take into account historical emissions from the site or future emissions that could occur without additional environmental review (entitled re-use of the project site). Project conditions were computed for 2015 and compared against the BAAQMD significance thresholds that are meant to be consistent with AB32 GHG emission targets. The AB32 Scoping Plan identifies 2020 as the target date to reduce statewide emissions to 1990 levels. BAAQMD developed their CEQA thresholds to be consistent with this target year.

The land use types, and sizes were input to the CalEEMod model and the model default trip generation rates were used<sup>5</sup>. A majority of the emissions from this type of project are associated with motor vehicle usage. Default trip generation rates produced by the CalEEMod model were used since the project traffic report only predicted peak-hour trips. This GHG analysis relies on annual predictions using daily traffic trip generation rates. The historical annual occupancy rate of 83 percent for Indian Springs was applied to the traffic emissions predicted by CalEEMod to predict annual emissions.

Annual emissions in term of metric tons per year are provided in Table 3 for the proposed project operating in 2015. The model outputs are contained in the Illingworth & Rodkin, Inc. Air Quality and Greenshouse Gas Assessment dated March 14, 2012. The summary results presented in Table 3 are the modeled emissions in terms of annual metric tons of equivalent CO<sub>2</sub> emissions (MT of CO<sub>2</sub>e/yr). Annual emissions resulting from the proposed project would be 720 metric tons. This increase in emissions caused by the proposed project would not exceed the BAAQMD threshold of 1,100 MT of CO<sub>2</sub>e/yr. Therefore, the project's GHG emissions would *not* be considered to have a cumulatively considerable contribution to a significant impact and would be considered *less than significant* 

**Table 3 Annual GHG Emissions in 2015** 

Project Name: Project Years:	Indian Springs Resort Expansion 2015				
Troject rears.	Emissions of CO2e	r Year			
Source Category	CalEEMod Unmitigated Emissions	CalEEMod Mitigated Emissions	Adjusted to Annual Occupancy Rate	Annual Occupancy Rate	
Proposed Project in 2020					
Transportation:	656	644	534	83%	
Area Source:	0	0	0	100%	
Energy:	169	151	169	100%	
Water & Wastewater:	5	5	4	83%	
Solid Waste:	20	14	12	83%	

Construction Emissions from URBEMIS
2012-13
Metric tons/year
113

Total

720

Source: CalEEMod modeling for 75-room resort and 3,000 square-foot hotel

Note: Mitigation measures in CalEEMod are part of project features. These include increased energy efficiency (by at least 15% over model defaults), use of energy star appliances, drought tolerant landscaping and efficient irrigation, geothermal sources for water heating, and increased waste recycling efforts.

VII. b) Less than Significant with Mitigation Incorporation. In 2007 the City of Calistoga City Council adopted a resolution to become a member of Cities for Climate Protection, a project of the International Council on Local Environmental Initiatives – Local Governments for Sustainability. In addition, the other four County municipalities and the County of Napa are members. By becoming a member, local governments commit to completing five milestones: 1) conduct a greenhouse gas emissions analysis; 2) set a target for emissions reduction; 3) draft a local action plan for meeting the target; 4) implement the action plan; and 5) monitor and report on the progress.

On August 18, 2009 the City Council considered certain draft countywide and local actions to achieve a greenhouse gas emissions reduction target of 15% below 2005 emission levels by 2020. This action was the result of a County-wide effort lead by the Napa County Transportation and Planning Agency has resulted in an inventory of GHG emissions and preparation of the Napa Countywide Community Climate Action Framework. Currently, the Planning Department is seeking to refine this climate action plan but asks that project due their fairshare to reduce project-specific increase in GHG emissions.

Project-specific increases in GHG emissions are expected to be negligible due to the estimated maximum vehicle trips per day and increasingly stringent Title 24 energy conservation requirements imposed as part of the building permit process. Additionally, water efficiency measures will help reduce GHG emissions. This negligible increase does not exceed the thresholds suggested by BAAQMD, is consistent with the ARB's Scoping Plan's reduction target and is consistent with the Climate Action Framework adopted by Napa County Transportation Planning Agency.

Although, to further reduce overall emissions, the following mitigation measures would reduce GHG emissions from the construction equipment.

#### Mitigation Measure AIR -1: Dust Control During Construction

#### Mitigation Measure GHG-1: Reduce Greenhouse Gases

Mitigation Measure GHG-1: The City shall require the contractor to implement the following performance based best management practices during construction as recommended by the Bay Area Air Quality Management District (2009 BAAQMD CEQA Air Quality Guidelines):

- 1. Alternative-fueled (e.g., biodiesel, electric) construction vehicles/equipment of at least 15 percent of the fleet;
- 2. Recycle at least 50 percent of construction waste or demolition materials.

The project will be implemented in an efficient manner using BMP's to reduce emissions to the greatest extent feasible. The project does not conflict with an adopted plan or policy for the reduction of GHG emissions. Mitigation Measure AIR-1 and GHG-1 would reduce emissions from construction equipment. The impact on GHG emissions is considered less than significant.

VIII. HAZARDS AND HAZARDOUS MATERIALS Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				
nazardous materiais?				

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b) 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?			
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			
d) 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?		$\boxtimes$	
e) 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 in the project area?			
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?			
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			
h) 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?			$\boxtimes$

- **VIII. a)** Less than Significant. Hazardous materials would be used during construction, including fuels for vehicles and equipment, and construction materials including concrete and solvents. The use of such materials is common on construction projects and therefore a less than significant impact is expected.
- **VIII. b)** Less than Significant. The proposed project will not involve activities whereby reasonable foreseeable upset and accident conditions will result involving the release of hazardous materials into the environment and therefore a less than significant impact is expected.
- **VIII. c f**) Less than Significant. The project would be located within one-quarter mile of an existing school but exposure to a significant or even measurable amount of hazardous material is highly unlikely. The project is not located on a hazardous materials site compiled pursuant to Government Code § 65962.5. There is no indication that contamination would be mobilized or encountered during construction. The project would not be located within an airport land use plan or within two miles of an airport. There would be no impacts.
- VIII. g) Less than Significant with Mitigation Incorporation. The Calistoga Fire Chief has reviewed the project and it was determined that fire trucks would be able to enter and exit the site upon widening the existing northern most driveway and providing an emergency vehicle access. With exception to driveway access to the "Hill House", on-site roadways are expected to be sufficient to accommodate the circulation of the emergency vehicles. The Fire Chief has recommended that the access to the "Hill House" be improved to accommodate emergency vehicle turnouts. This recommendation is reflected in Mitigation Measure HAZ-1.

#### Mitigation Measure HAZ-1: Emergency Vehicle Access

Mitigation Measure HAZ-1: Prior to rental of the "Hill House", the driveway acess shall be improved to accommodate emergency vehicle turnouts to the satisfaction of the Calistoga Fire Department.

**VIII.** h) <u>No Impact.</u> The project is not located in a High Fire Hazard Severity Zone as recommended by Cal Fire. The surrounding vegetation is primarily landscape specimen trees or mature manicured trees. No impact is anticipated.

IX. HYDROLOGY AND WATER QUALITY Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?				

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b) 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)?		
c) 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?		
d) 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?		
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?		
f) Otherwise substantially degrade water quality?		$\boxtimes$
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?		$\boxtimes$
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?		
i) Expose people or structures to a significant risk of loss, injury or death		

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a result of the failure of a levee or dam?		
j) Inundation by seiche, tsunami, or mudflow?		

Setting: Currently, storm water from the north and east portions of the project site drains southeasterly into a drainage swale along the southeasterly property line where it is collected in a 24-inch corrugated metal pipe and conveyed southeasterly through the adjoining mobile home park and into an open channel ("Main Ditch") and ultimately discharging into the Napa River. The westerly and southerly portion of the site drains southerly onto the adjacent parcel where it is collected in a drainage swale, conveyed southeasterly into the "Main Ditch" and ultimately discharging into the Napa River. Minor amounts of storm water from the north and westerly portion of the site drain into Lincoln Avenue and are conveyed in the City of Calistoga storm drain system to the Napa River.

**IX.** a) Less than Significant with Mitigation Incorporation. Section 303 of the federal Clean Water Act requires states to develop water quality standards to protect the beneficial uses of receiving waters. In accordance with California's Porter/Cologne Act, the Regional Water Quality Control Boards (RWQCBs) of the State Water Resources Control Board (SWRCB) are required to develop water quality objectives that ensure their region meets the requirements of Section 303 of the Clean Water Act.

Calistoga is within the jurisdiction of the San Francisco Bay RWQCB. The San Francisco Bay RWQCB adopted water quality objectives in its Stormwater Quality Management Plan (SQMP). This SQMP is designed to ensure stormwater achieves compliance with receiving water limitations. Thus, stormwater generated by a development that complies with the SQMP does not exceed the limitations of receiving waters, and thus does not exceed water quality standards.

Compliance with the SQMP is ensured by Section 402 of the Clean Water Act, which is known as the National Pollution Discharge Elimination System (NPDES). Under this section, municipalities are required to obtain permits for the water pollution generated by stormwater in their jurisdiction. The City of Calistoga has adopted a Stormwater Runoff Pollution Control ordinance to ensure new developments comply with SQMP. This ordinance requires the submittal of a plan to the City that demonstrating how the project will comply with the City's Stormwater Runoff Pollution Control ordinance.

The proposed use is not a point source generator of water pollutants with the exception of those related to landscaping, and thus, no quantifiable water quality standards apply to the project. As an urban development, the proposed project would add typical, urban, nonpoint-source pollutants to storm water runoff. These pollutants are permitted upon implementation of the appropriate best management practices (BMPs)/mitigation measures, and provided the levels do not exceed any receiving water limitations. BMPs will be incorporated into the project to the maximum extent practicable. Therefore, it is anticipated that the proposed project would not violate any water quality standards or waste discharge requirements, and would have no related significant impacts.

The continued use and overland release of non human contact geothermal water at the project site would not violate water quality standards or waste discharge requirements beyond what currently exists.

The discharge of wastewater into the City's sewer system is regulated by Chapter 13.08 Sewer Service of the Municipal Code. Discharge of geothermal water into the sewer system is prohibited unless special permission has been granted by the City Engineer (Section 13.08.340). The chemical composition of geothermal water discharged into the sewer system is regulated by Section 13.08.395, which addresses the allowable concentration of boron, total dissolved solids (TDS), chlorides, and sulfates. Although concentrations of TDS are slightly elevated and the boron content varies in the geothermal waters, sewer discharge would not resulting significant impacts because, as a condition of the project, the applicant would be required to develop and submit an Operations, Maintenance, and Monitoring Plan (OMMP) to the City of Calistoga. The OMMP shall be completed prior to issuance of any building permit or occupancy permit, or any use of geothermal water on the project. The OMMP shall be reviewed and approved by the City's Public Works Director prior to issuance of said permits or use of the facilities. The OMMP shall include a detailed description of the methods and procedures for monitoring and measuring geothermal use on the project, in order to ensure that such use is consistent with the project description and conditions of approval. The development and implementation of the OMMP would 1) require that TDS and boron concentration, as well as other unanticipated elevated constituents, be monitored to the satisfaction of the City of Calistoga and 2) would provide the City with up-to-date information and data on the quality and quantity of geothermal water used and discharged to the City sewer system. The requirement of the OMMP would further ensure that constituents of geothermal water do not exceed waste water treatment requirements set forth by the City. This impact is considered less than significant.

# Mitigation Measure HYDRO-1: Geothermal Operations, Maintenance, and Monitoring Plan

Mitigation Measure HYDRO-1: Prior to issuance of any building permit and/or commencement of geothermal water uses or operations, the Applicant shall develop and submit an Operations, Maintenance, and Monitoring Plan (OMMP) to the City of Calistoga. The OMMP shall be reviewed and approved by the City's Public Works Director prior to issuance of said permits and/or use of the facilities. The OMMP shall include a detailed description of the methods and procedures for monitoring, measuring, and reporting geothermal use on the project, in order to ensure that such use is consistent with the project description and Conditions of Approval.

Geothermal water for the direct heat system would circulate through a closed loop system using of heat exchangers to heat the swimming pools and provide domestic hot water. After heat is extracted by the exchangers, the cooler (120 to 135 degrees Fahrenheit) geothermal water would be injected back into the subsurface reservoir through the injection well. The only change that would occur from the produced fluids would be a decrease in temperature. A very minor change in pH could also occur as a result of temperature decrease but this would have a negligible effect on the overall fluid chemistry. Injected fluids will not come into contact with any components of the proposed project other than the heat exchangers and, because of that, no additional constituents would be injected into the reservoir. Therefore, the water does not

violate water quality standards for re-injection. In addition, it is important to note that the proposed re-injection of geothermal water must be approved by the California Division of Oil, Gas and Geothermal Resources (DOGGR), and the project must comply with certain conditions. DOGGR has indicated that this proposed project has been approved with conditions.

Although the proposed project would use geothermal source water containing minerals and metals and would discharge these waters through the sanitary sewer and by way of re-injection, no violation of water quality standards or waste discharge requirements would occur. This impact is less than significant.

**IX. b)** Less than Significant. The proposed project would extract of geothermal water from the underlying reservoir to provide hot water. Some of this water would be re-injected back into the geothermal reservoir. The extraction and re-injection of water could affect the underlying geothermal reservoir by 1) reducing the available geothermal water in the reservoir thereby adversely affecting neighboring operations and reducing the life of the geothermal resource and 2) by causing adverse subsurface reaction in the reservoir through the injection process.

The geothermal resource beneath the City of Calistoga has been previously studied to determine the source and volume of the geothermally-heated groundwater water. An assessment of the size of the Calistoga geothermal reservoir and volume of available fluids was initially completed by Youngs and other in 1981 as part of a geothermal resource assessment completed by the California Division of Mines and Geology. <sup>6</sup> Subsequent to that, Murray (1986) used the initial resource data and estimated the reservoir longevity based on approximate annual usage of geothermal fluids in the Calistoga area at that time. <sup>7</sup>

Global GeoDyne, LLC prepared a preliminary evaluation to determine the feasibility to use an existing underutilized geothermal well ("Well R") for reinjection. Based upon this analysis it was determined that the it is feasible to utilize Well R for reinjection and that the anticipated volume, temperature, and cycle of disposal is not likely to negatively impact the existing hot water aquifer or groundwater system and therefore impacts are considered less than significant. A condition of use permit approval will require the applicant to obtain authorization from the California Department of Oil, Gas and Geothermal Resources prior to commencement of geothermal reinjection.

**IX.** c, d & e) <u>Less than Significant</u>. The portion of the site west of Mt Lincoln will drain toward Lincoln Avenue where it will be intercepted by swales, collected in grate inlets and conveyed southerly and easterly in a closed conduit pipe system. The portion of the site east of Mt Lincoln will drain easterly where it will be intercepted by swales, collected in grate inlets and conveyed southerly in a closed conduit pipe system. A mobile home park neighbors the easterly property line. An earth berm, several feet in height and width, planted with trees, will

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<sup>&</sup>lt;sup>6</sup> Youngs , L. Bacon, C., Chapman, R., Higgins, C., Majmunder, H. and Taylor, G., 1980, Resource Assessment of Low- and Moderate- temperature geothermal waters in Calistoga, Napa County, California, OFR 81-13 SAC. California Division of Mines and Geology, 168 pages.

<sup>&</sup>lt;sup>7</sup> Murray, K. S., PhD. October 1986. *Calistoga Geothermal Resource Assessment*, California Energy Commission.

be built along and easterly side of the property. This will provide a natural vegetated screen to protect the privacy of the neighbors as well as help to contain storm water flows on site. A new drain pipe network will fed an underground detention basin at the southeasterly portion of the site. The storm water will then be pumped in a force main southeasterly across the existing glider port property and discharged into the "Diablo Ditch". Historic flows will be maintained in the pipeline under the mobile home park and historic overland release will continue across the Gliderport property.

Storm water detention has been designed to reduce peak runoff. An underground detention system has been designed utilizing Kristar Cudo modules. The detention basin will be connected to a pump station where several pumps will pump storm water to the "Diablo Ditch". The pumps will be set to varying levels in order to discharge water at or below the existing peak runoff rates for the design storm events. The detention system has been designed to detain the difference in predevelopment and post development peak flows for the 100-year storm event. The actual discharge will be regulated by the pump settings.

In the case of pump failure, overland release has been provided. In such a case, storm water will fill the detention chamber and bubble up out of adjacent inlets and flow along a proposed service road to the southeast corner of the site where it will flow across the glider port property to the south and ultimately conveyed easterly into the "Diablo Ditch".

The final drainage study and calculations associated with this project will show that the impact to the 24-inch corrugated metal pipe which runs through the adjoining mobile home park will not be greater than the existing condition and therefore less than significant impacts are anticipated.

**IX.** f) **No Impact.** There are no other factors in this proposal that would otherwise substantially degrade water quality. Therefore, a less than significant impact is expected.

**IX. g-i)** No Impact. This site is not located within the 100 year floodplain according to the FEMA, Flood Insurance Rate Map, Community Panel 06055C0229E, dated September 26, 2008.

**IX.** j) <u>No Impact.</u> According to the General Plan (Figure SAF-4) is near but no portion of the project is within an inundation area. Therefore, exposure to people or structures to a significant risk of loss, injury or death due to inundation is not expected. Therefore, no impact is expected.

X. LAND USE AND PLANNING Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Physically divide an established community?				

b) 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	$\square$		
program, or zoning ordinance) adopted		Ш	
for the purpose of avoiding or mitigating an environmental effect?			
c) Conflict with any applicable habitat conservation plan or natural community			
conservation plan?			

**Setting:** The project is located within the City of Calistoga and is regulated by the City of Calistoga General Plan and Zoning Ordinance. The General Plan Land Use designation for the resort is Community Commercial (CC). Under General Plan Policy LU-2.2), these lands are to provide visitor and resident serving businesses.

The City of Calistoga Zoning Ordinance is intended to protect and promote public health and safety; to promote a safe, traffic circulation system; and to prevent human and property loss from hazards. These mandates are directly applicable to the project. The Zoning for the project site is Community Commercial – Design District (CC-DD). Under the CC zoning designation, it is recognized that site improvements may be required.

- **X. a)** No Impact. No aspects of the project proposal that will have an affect of physically dividing a community. Therefore, the project as proposed will have no impact on the surrounding established community.
- **X. b)** Less than Significant with Mitigation Incorporation. The subject parcel is located in the CC (Community Commercial) zoning district, which allows resorts and uses accessory to resorts subject to use permit approval. Use permit conditions of approval will ensure regulatory compliance with all applicable land use policies and regulations.

The proposed project would not conflict with elements of the City of Calistoga General Plan (2002) and Municipal Code adopted for the purpose of avoiding or mitigating the environmental effects of geothermal water use. Policy P3 of the Geothermal Element in the General Plan states: "New geothermal uses shall be approved only if they will not have an adverse impact on the longevity of the geothermal resource, biotic resources, waterways, the sewage treatment plant, and ability to dispose of the treated effluent."

Furthermore, the discharge of wastewater into the City's sewer system is regulated by Chapter 13.08 Sewer Service of the Municipal Code. Discharge of geothermal water into the sewer system is prohibited unless special permission has been granted by the City Engineer (Section 13.08.340). The chemical composition of geothermal water discharged into the sewer system is regulated by Section 13.08.395, which addresses the allowable concentration of boron, total dissolved solids (TDS), chlorides, and sulfates. Although concentrations of TDS are slightly

elevated and the boron content varies, this impact is not significant because, as a condition of the project, the applicant would be required to develop and submit an Operations, Maintenance, and Monitoring Plan (OMMP) to the City of Calistoga. The OMMP shall be completed prior to issuance of any building permit or occupancy permit, or any further use of geothermal water on the project. The OMMP shall be reviewed and approved by the City's Public Works Director prior to issuance of said permits or use of the facilities. The OMMP shall include a detailed description of the methods and procedures for monitoring and measuring geothermal use on the project, in order to ensure that such use is consistent with the project description and conditions of approval. The development and implementation of the OMMP would require that TDS and boron concentration, as well as other unanticipated elevated constituents, bee monitored to the satisfaction of the City of Calistoga and would provide the City with up-to-date information and data on the quality and quantity of geothermal water used and discharged to the City sewer system. The requirement of the OMMP would ensure that constituents of geothermal water do not exceed waste water treatment requirements set forth by the City. This impact is considered less than significant with mitigation.

# Mitigation Measure HYDRO-1: Geothermal Operations, Maintenance, and Monitoring Plan

**X. c) No Impact.** There are no habitat conservation plans or natural community conservation plans applicable to the project area. Therefore, there would be no impact.

XI. MINERAL RESOURCES Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				$\boxtimes$
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				$\boxtimes$

**XI. a and b)** No Impact. There are no known important mineral resources located within the City of Calistoga. Therefore, the General Plan does not delineate any important mineral resources locally. No adverse impacts to mineral resources would result from the proposed project.

XII. NOISE Would the project result in:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) 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?				
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?				
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?				
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?				
e) 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?				
f) 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?				$\boxtimes$

**Setting:** The property is bordered by a mobile home park to the north and east, other hotel/guest lodging establishments to the north and west, and the lands of the former Calistoga Gliderport to the south. A Noise Assessment was prepared by Illingworth & Rodkin dated July 13, 2012.

**XII.** a) <u>Less than Significant.</u> Based on the results of the noise measurement survey, the noise environment at the new residential (guest lodging) use proposed closest to Lincoln Avenue would be exposed to an  $L_{dn}$  of 56 dBA. This level meets the City's noise goal for normally acceptable exterior noise (60 dBA  $L_{dn}$ ) for residential areas, and thus would be considered less

than significant.

**XII. b)** Less than Significant with Mitigation Incorporation. No permanent exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels is anticipated. However, temporary ground vibration may occur during construction, which will be mitigated to a less than significant level with incorporation of Mitigation Measure NOISE-1, as discussed in XII d.

Mitigation Measure NOISE-1: Construction Noise

XII. c) Less than Significant. The proposed project would place new guest lodgings, parking and access drives adjacent to the mobile home park to the east and northeast of the project site. The use of the proposed guest lodging is expected to result in the typical noises associated with such uses, including voices of guests, guest parking and unloading, vehicular noise on the access drive and room service and maintenance activities. Though the auditory content of these new sounds may change noticeably from those currently heard in the mobile home park, the typical sound levels produced by the new uses are expected to result in average daytime, evening and nighttime sound levels within 3 to 5 dBA of those currently experienced at the existing residences adjacent to the project site. Changes in the existing noise environment at adjacent existing residences are expected to increase  $L_{\rm dn}$  levels at these homes by less than 5 dBA. Noise levels in these areas will also continue to comply with City General Plan Noise Standards. Therefore, the noise associated with the proposed residences is not judged to result in a noise impact on existing uses in the project area.

Traffic data from the W-Trans Traffic Impact Study for the project, dated 9-6-2011, was reviewed to calculate potential project-related traffic noise level increases along roadways serving the project site. These data included turning movement counts and projections at the Lincoln Avenue Brannan Street intersection for existing, project generated and future conditions. Link volumes for the existing plus project and future plus project scenarios were compared to conditions without the project to calculate the noise increase attributable to the project on area roadways.

This analysis indicated traffic volumes in the site vicinity would increase slightly on Lincoln Avenue and Brannan Street as a result of the proposed project. However, traffic noise levels due to the proposed project are calculated to increase by less than 1 dBA  $L_{dn}$  above existing and future conditions along these roadways. Because traffic noise increases resulting from the proposed project would increase ambient noise levels by less than 3 dBA  $L_{dn}$ , this is considered a less-than-significant impact.

**XII. d)** Less then Significant with Mitigation Incorporation. Construction of the project is expected to be complete within one building season, however construction activities are expected to generate noise levels that would exceed ambient noise levels at land uses in the vicinity of the project site. Project construction is expected to involve site improvements, such as the grading and paving of access roadways, establishment of utilities, cut and fill operations, foundation work, building framing, jack and boring and landscaping. The hauling of excavated material and construction materials would also generate truck trips on local roadways.

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Noise impacts from construction activities depend on the various pieces of construction equipment, the timing and length of noise generating activities, the distance between the noise generating construction activities for individual projects are typically carried out in stages. During each stage of construction, there would be a different mix of equipment operating. Construction noise levels would vary by stage and vary within stages based on the amount of equipment in operation and location where the equipment is operating. Typical construction noise levels at a distance of 50 feet are shown in Tables 6 and 7. Table 6 shows the average noise level ranges by phase for housing construction and Table 7 shows the maximum noise level ranges for different construction equipment. Most demolition and construction noise is in the range of 80 to 90 dBA at a distance of 50 feet from the source. Based on a review of the proposed site improvements, much of the construction activities on the northern and eastern edges of the site would occur within 150 feet of the adjacent mobile homes.

TABLE 6:Typical Ranges of Noise Levels for Domestic Housing Construction at 50 Feet,  $L_{eq}$  in dBA

	Construction Equipment on Site	
Construction Stage	All pertinent equipment present	Minimum required equipment present
Ground Clearing	83	83
Excavation	88	75
Foundations	81	81
Erection	81	65
Finishing	88	72

Source: U.S.E.P.A., Legal Compilation on Noise, Vol. 1, p. 2-104, 1973.

The highest noise levels would be generated during demolition, excavation, road building, and foundation work. Large pieces of earth-moving equipment, such as graders, excavators, and bulldozers, generate maximum noise levels of 85 to 90 dBA at a distance of 50 feet. Mobile homes adjacent to the project site may be exposed to intermittent maximum noise levels of between 80 to 90 dBA and average noise levels of 70 to 80 dBA during busy construction periods when construction activities occur at the portion of the project site nearest these homes. These noise levels drop off at a rate of about 6 dBA per doubling of distance between the noise source and receptor. The hotel/guest lodging establishments to the north and west across Lincoln Avenue and Brannan Street would exposed to lower noise levels during project construction activities due to increased distances and lower intensity of work in these areas, however some of these areas may be exposed to average noise levels of greater than 60 dBA during busy construction periods.

**TABLE 7:** Construction Equipment 50-foot Noise Emission Limits

<b>Equipment Category</b>	L <sub>max</sub> Level (dBA) <sup>1,2</sup>	Impact/Continuous			
Auger Drill Rig	85	Continuous			
Backhoe	80	Continuous			
Bar Bender	80	Continuous			
Chain Saw	85	Continuous			

Compressor <sup>3</sup>	70	Continuous
Compressor (other)	80	Continuous
Concrete Mixer	85	Continuous
Concrete Pump	82	Continuous
Concrete Saw	90	Continuous
Concrete Vibrator	80	Continuous
Crane	85	Continuous
Dozer	85	Continuous
Excavator	85	Continuous
Front End Loader	80	Continuous
Generator	82	Continuous
Generator (25 KVA or less)	70	Continuous
Gradall	85	Continuous
Grader	85	Continuous
Grinder Saw	85	Continuous
Horizontal Boring Hydro Jack	80	Continuous
Insitu Soil Sampling Rig	84	Continuous
Jackhammer	85	Impact
Paver	85	Continuous
Pneumatic Tools	85	Continuous
Pumps	77	Continuous
Rock Drill	85	Continuous
Scraper	85	Continuous
Slurry Trenching Machine	82	Continuous
Soil Mix Drill Rig	80	Continuous
Street Sweeper	80	Continuous
Tractor	84	Continuous
Truck (dump, delivery)	84	Continuous
Vacuum Excavator Truck (vac-truck)	85	Continuous
Vibratory Compactor	80	Continuous
Vibratory Pile Driver	95	Continuous
All other equipment with engines larger than 5 HP	85	Continuous
Internal Manager 1 of 50 foot forms the construction	·	%-1

Notes: 1.Measured at 50 feet from the construction equipment, with a "slow" (1 sec.) time constant.

- 2. Noise limits apply to total noise emitted from equipment and associated components operating at full power while engaged in its intended operation.
- 3. Portable Air Compressor rated at 75 cfm or greater and that operates at greater than 50 psi.

# Mitigation Measure NOISE-1: Construction Noise

Mitigation Measure NOISE-1: The applicant shall develop a construction mitigation plan subject to the City's review and approval. The following conditions shall be incorporated into the mitigation plan to reduce construction noise impacts:

1. Muffle and maintain all equipment used on site. All internal combustion engine-driven

- equipment shall be fitted with mufflers, which are in good condition. Good mufflers shall result in non-impact tools generating a maximum noise level of 80 dB when measured at a distance of 50 feet.
- 2. Utilize "quiet" models of air compressors and other stationary noise sources where technology exists.
- 3. Locate stationary noise-generating equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are near a construction project area.
- 4. Prohibit unnecessary idling of internal combustion engines.
- 5. Prohibit audible construction workers' radios on adjoining properties.
- 6. Pursuant to the Municipal Code, restrict noise-generating activities at the construction site or in areas adjacent to the construction site to the hours between 7:00 a.m. and 7:00 p.m., Monday through Saturday, and not at all on Sundays and holidays.
- 7. Allowable construction hours shall be posted clearly on a sign at each construction site.
- 8. Designate a "noise disturbance coordinator" who would be responsible for responding to any local complaints about construction noise. This individual would most likely be the contractor or a contractor's representative. The disturbance coordinator would determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and would require that reasonable measures warranted to correct the problem be implemented. Conspicuously post a telephone number for the disturbance coordinator at the construction site and include it in the notice sent to neighbors regarding the construction schedule. Implementation of the above measures will limit the overall noise level and duration of construction activities, while also giving any persons disturbed by occasional loud noises an identifiable method of recourse.

**XII.** e and f) No Impact. The project is not located within an airport land use plan or within two miles of a public airport, and is not located in the vicinity of a private airstrip. Therefore the project would not expose people to excessive aircraft noise levels.

XIII. POPULATION AND HOUSING Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporati on	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			$\boxtimes$	
b) Displace substantial numbers of				

existing housing, necessitating the construction of replacement housing elsewhere?				
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?  Setting: The 2010 United States Census 5,155.	estimated th	e City of Calist	⊠ oga's populati	ion to be
XIII. a-c) Less the Significant. This prominor civil improvements. No new hom proposed as part of this project. This approxime employees and this new employment However, the City's housing impact mit housing needs would be applied to the burreduce the very limited population growth insignificance. The project will not displace of people or necessitate the construction of	nes or extensional may result may lead to tigation fee, ilding permits the potentially increase substantial increase.	on of public ro t in a slight incre o some populati which provides associated with resulting from the numbers of exist	adways or uticase in full-time on growth in funding to me this project, whis project to a sing housing or	lities are e or part- the City eet local which will a level of
XIV. PUBLIC SERVICES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?				
Police protection?				$\boxtimes$
Schools?				$\boxtimes$
Parks?				$\boxtimes$
Other public facilities?				$\boxtimes$

City of Calistoga October 2012 **XIII.** a) No Impact. The project site is located within the City of Calistoga. The site is currently served by the Calistoga Fire Department and the Calistoga Police Department. No new facilities or public services will be required as a result of approval of this project. Prior to commencing construction, the project will be subject to the payment of building permit fees which pay for the time and services provided by the City to review and inspect the project. Based on the project valuation, the project is also subject to payment of a housing impact fee and increased property taxes which are used to offset the project's fair share contribution toward public services.

Fire protection measures are required as part of the entire project development pursuant to the Fire Chief's conditions of approval including the provision of sufficient, permanent water for fire protection. City fire services and police protection are already provided to this site and there will be no foreseeable impacts to emergency response times resulting from this project with the inclusion of conditions of approval from the Public Works and Fire Departments. School impact mitigation fees, which assist local school districts with capacity building measures, will be levied pursuant to building permit submittal. The proposed project will have little to no impact on public parks. Therefore, proposed project will have no impact on public services.

XV. RECREATION	Potentially Significant Impact	Less Than Significant with Mitigation Incorporati on	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				$\boxtimes$

**XV. a** – **b**) **No Impact.** No portion of this resort expansion project, nor any foreseeable result thereof, would significantly increase the use of existing recreational facilities. This project does not include recreational facilities nor does it require the construction of expansion of recreational facilities which will have a significant adverse effect on the environment. Therefore, no impact is expected.

XVI. TRANSPORTATION/TRAFFIC Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporati on	Less Than Significant Impact	No Impact
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?				
b) 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 the county congestion management agency for designated roads or highways?				
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?				$\boxtimes$
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				
e) Result in inadequate emergency access?		$\boxtimes$		
f) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				

Setting: Whitlock & Weinberger Transportation, Inc. (W-Trans) has completed a Traffic Impact Study for the Indian Springs Expansion Project dated September 6, 2011 (Attachment No. 2), an Addendum to the Indian Springs Expansion Traffic Impact Study dated March 19, 2012 (Attachment 3) and Response to comments on the Traffic Impact Study for the Indian Springs Expansion Project dated May 22, 2012 (Attachment 4).

The study area consisted of State Route (SR) 29 (Lincoln Avenue) fronting the existing Indian Springs Resort site and the intersection of SR 29 (Lincoln Avenue)/Brannan Street-Wapoo Avenue. Operating conditions during the weekday p.m. and weekend midday peak periods were evaluated as these time periods reflect the highest traffic volumes area wide and for the proposed project. The evening peak hour occurs between 4:00 and 6:00 p.m. and typically reflects the highest level of congestion of the day during the homeward bound commute, while the weekend midday peak occurs between 3:30 and 4:30 p.m.

SR 29 (Lincoln Avenue)/Brannan Street-Wapoo Avenue is a two-way stop-controlled, four-legged intersection with stop controls on the Brannan Street and Wapoo Avenue approaches.

In the vicinity of the project site *SR* 29 (*Lincoln Avenue*) runs in a generally northeast to southwest alignment and has two 12-foot travel lanes separated by a solid double-yellow center line. White edge line striping is provided on both sides of the road and the speed limit south of Brannan Street is posted at 35 and 25 miles per hour (mph) for the northbound and southbound directions respectively.

**XVI.** a and b) <u>Less than Significant.</u> The anticipated trip generation for the proposed project was estimated using standard rates published by the Institute of Transportation Engineers (ITE) in Trip Generation, 8th Edition, 2008. The trip generation potential of the project as planned was developed using the published standard rates for a Resort Hotel (Land Use #330); and Quality Restaurant (Land Use #931) as these descriptions most closely match the proposed project.

Upon the addition of project-related traffic to the Existing volumes, the study intersection (Silverado Trail and Lincoln Avenue) is expected to operate acceptably at LOS A overall during both peak periods evaluated.

The study intersection is expected to continue operating acceptably at the same levels of service upon the addition of project-generated traffic and therefore the project's existing plus project conditions impact is less-than-significant, so no improvements are needed.

Upon the addition of project-generated traffic to the anticipated Future volumes, the study intersection is expected to operate acceptably. The study intersection will continue operating at acceptable Levels of Service with the addition of project-generated trips and therefore the project's future plus project conditions impact is less-than-significant, so no improvements are needed.

**XVI.** c) <u>No Impact.</u> Construction would be completed using ground-based vehicles. The project would not affect air traffic patterns or result in safety risks. There would be no impact.

**XVI. d)** Less than Significant with Mitigation Incorporation. Vehicular access to the project will continue to be via the existing access driveways located along the east side of SR 29 (Lincoln Avenue) near Stevenson Street and Wapoo Avenue (south). A gated emergency access driveway will be constructed on the east side of SR 29 (Lincoln Avenue) just south Brannan Street.

# Sight Distance

At unsignalized intersections, a substantially clear line of sight should be maintained between the driver of a vehicle waiting at the crossroad and the driver of an approaching vehicle. Adequate time must be provided for the waiting vehicle to either cross, turn left, or turn right, without requiring the through traffic to radically alter their speed. Sight distance should be measured from a 3.5-foot height at the location of the driver on the minor road to a 4.25-foot object height in the center of the approaching lane of the major road. Set back for the driver on the crossroad shall be a minimum of 15 feet, as measured from the edge of the traveled way.

Sight distance along SR 29 (Lincoln Avenue) at the existing project access driveways was evaluated based on sight distance criteria contained in the Highway Design Manual. The recommended sight distances for minor street approaches that are either a private road or a driveway are based on stopping sight distance, with the approach travel speeds as the basis for determining the recommended sight distance. Additionally, the stopping sight distance needed for a following driver to stop if there is a vehicle waiting to turn into a side street or driveway is evaluated based on stopping sight distance criterion and the approach speed on the major street.

Sight distance at the existing access driveways was field measured. Although sight distance requirements are not technically applicable to driveways, the stopping sight distance criterion for private street intersections was applied for evaluation purposes. The speed limit along the segment of SR 29 (Lincoln Avenue) at the existing project access driveways is posted at 25 mph; however, since speeds along this segment are typically higher than the posted speed limit, a design speed of 35 mph was conservatively used to evaluate sight distance requirements. Based on a design speed of 35 mph, the minimum stopping sight distance needed is 250 feet.

The estimated sight distance from the existing project access driveways to the north on SR 29 (Lincoln Avenue) is restricted by a horizontal curve and some foliage on the east side of the road. Despite these restrictions sight distance in this direction is clear for approximately 325 feet, which exceeds the minimum sight distance recommended for speeds up to 40 mph. Looking to the south on SR 29 (Lincoln Avenue) there is clear sight distance for approximately 550 feet, which exceeds the minimum sight distance needed for speeds up to 55 mph. Therefore, it was determined that there is adequate sight distance in both directions from the existing project access driveways.

Though sight distance requirements are met at the existing project access driveway locations, it is possible that existing vegetation situated on either side of the driveways or along the project frontage could impede clear sight lines if not maintained. A condition of the use permit will require that vegetation is appropriately maintained to ensure sight distance at the driveway entrances.

Sight distance at the corner of Brannan Street and SR 29 (Lincoln Avenue) is limited by an oleander hedge planted adjacent to the sidewalk. Collisions and incidents have occurred at this intersection due to right hand turning speed and limited sight distance. The project has the potential to increase the dangers at this intersection. The Department of Public Works has recommended that traffic calming measures be developed at this intersection to improve safety. This recommendation is reflected in Mitigation Measure TRANS-1.

# Mitigation Measure TRANS-1: Traffic Calming

Mitigation Measure TRANS-1: Prior to occupancy, traffic calming measures (e.g. curb extension or pedestrian bulbout) shall be installed on the southern side of Brannan Street at the corner of Lincoln Avenue subject to the review and approval of the City.

### Access Analysis

## Left-Turn Lane Warrants

The need for a left-turn lane on SR 29 (Lincoln Avenue) was evaluated based on criteria contained in the Intersection Channelization Design Guide, National Cooperative Highway Research Program (NCHRP) Report No. 279, Transportation Research Board, 1985, as well as a more recent update of the methodology developed by the Washington State Department of Transportation. The NCHRP report references a methodology developed by M. D. Harmelink that includes equations that can be applied to expected or actual traffic volumes in order to determine the need for a left-turn pocket based on safety issues. Based on our research and discussions with Caltrans staff, this methodology is consistent with the "Guidelines for Reconstruction of Intersections," August 1985, which is referenced in Section 405.2, Left-turn Channelization, of Caltrans' Highway Design Manual.

The need for left-turn channelization in the form of a left-turn pocket on SR 29 (Lincoln Avenue) was evaluated based on Future plus Project peak hour volumes as well as safety criteria. Under Future plus Project conditions, a left-turn lane is not warranted on SR 29 (Lincoln Avenue) at any of the project access driveways during either of the peak periods evaluated.

#### Right-Turn Lane Warrants

The need for a right-turn lane at the project access driveways on SR 29 (Lincoln Avenue) was also evaluated based on criteria contained in the Intersection Channelization Design Guide. It was determined that right-turn lanes are not warranted on SR 29 (Lincoln Avenue) at any of the project access driveways during either of the study periods.

**XVI.** e) Less than Significant with Mitigation Incorporation. The Calistoga Fire Chief has reviewed the project and it was determined that fire trucks would be able to enter and exit the site upon widening the existing northern most driveway and providing an emergency vehicle access. With exception to driveway access to the "Hill House", on-site roadways are expected to be sufficient to accommodate the circulation of the emergency vehicles. The Fire Chief has recommended that the access to the "Hill House" be improved to accommodate emergency

vehicle turnouts. This recommendation is reflected in Mitigation Measure HAZ-1.

# Mitigation Measure HAZ-1: Emergency Vehicle Access

# XVI. f) Less than Significant with Mitigation Incorporation.

# Pedestrian Facilities

Given the proximity of commercial and residential land uses surrounding the site, it is reasonable to assume that some project patrons and employees will want to walk, bicycle, and/or utilize transit to reach the project site. Sidewalks exist along the southern portion of the project frontage; however, a large gap in the sidewalk network exists along the remaining frontage south of Brannan Street. The project site plan identifies a network of existing and proposed pedestrian pathways throughout the project site connecting the project's amenities and facilities, but does not indicate installation of sidewalks along the project's street frontage.

The City suggests installation of a pedestrian crosswalk across Brannan Street at the intersection with SR 29 (Lincoln Avenue) as well as the installation of sidewalks along the entire Indian Springs Resort frontage with SR 29 (Lincoln Avenue). A Deferred Improvement Agreement was made between the City and the owners of Indian Spring Resort, which states that sidewalks along the entire frontage with SR 29 (Lincoln Avenue) must be installed within 180 days of written notification by the Public Works Director. Installation of sidewalks along the entire project frontage will be required as a condition of approval and a letter submitted by the Public Works Department notifying the owners that they may no longer defer this improvement. Construction of a multi use pathway (Class I) on site with a dedicated easement for public access may serve as an acceptable alternative to a sidewalk in the public right-of-way.

The absence of a crosswalk on Brannan Street and a public sidewalk along the project's entire frontage with SR 29 (Lincoln Avenue) contradicts specific objectives suggested in the UDP, and results in inadequate pedestrian connectivity between existing facilities and the project site.

# Mitigation Measure TRANS-2: Pedestrian Connectivity

Mitigation Measure TRANS-2: Prior to occupancy, a crosswalk shall be installed across Brannan Street at the intersection with SR 29 (Lincoln Avenue) and pathway shall be constructed along the entire project frontage with SR 29 (Lincoln Avenue) subject to the review and approval of the City.

#### Bicycle Facilities

A variety of existing and planned bikeways are provided in the vicinity of the project; however, the project site plan does not provide for a Class II bike lane along the project's SR 29 (Lincoln Avenue) frontage as identified in the General Plan. Also, the project site plan does not identify on-site bicycle parking or storage facilities.

Existing and planned bikeways in the vicinity of the proposed project will provide a variety of access options for bicyclists traveling to nearby destinations and outlying areas. The project site plan does not include the planned Class II bike lane along the project's frontage with SR 29

(Lincoln Avenue), as identified in the General Plan. Construction of a multi use pathway (Class I) on site with a dedicated easement for public access may serve as an acceptable alternative to a sidewalk in the public right-of-way. Also, bicycle parking within public spaces is not proposed as a component of the project site.

## Mitigation Measure TRANS-3: Bicycle Connectivity

Mitigation Measure TRANS-3: Prior to occupancy, a Class II bike lane shall be provided along the project's frontage with SR 29 (Lincoln Avenue) subject to the review and approval of the Planning and Building Department and Caltrans. Construction of a multi use pathway (Class I) on site with a dedicated easement for public access may serve as an acceptable alternative to a Class II bike lane in the public right-of-way.

# Mitigation Measure TRANS-4: Bicycle Parking

Mitigation Measure TRANS-4: Prior to occupancy, bicycle racks shall be provided to accommodate short-term bicycle parking needs subject to the review and approval of the Planning and building Department.

#### **Transit**

Existing transit routes are adequate to accommodate project-generated transit trips. Existing stops are within an acceptable walking distance of the site. The project's impact is less-than-significant, so no improvements are needed.

XVII. UTILITIES AND SERVICE SYSTEMS Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				$\boxtimes$
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				$\boxtimes$
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				
d) Have sufficient water supplies				

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existing entitlements and resources, or are new or expanded entitlements needed?		
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?		$\boxtimes$
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?		
g) Comply with federal, state, and local statutes and regulations related to solid waste?		

**XVIII.** a) <u>No Impact.</u> The City's treatment plant has significant capacity to handle the increase flows anticipated as a result of this project. The project will not exceed wastewater treatment requirements as established by the Regional Water Quality Control Board and will not result in a significant impact related to wastewater discharge.

**XVIII.** b) <u>No Impact.</u> The proposed project involves expansion of an existing resort. The proposed project would not generate substantial amounts of wastewater nor would it require water in amounts that would impact existing facilities.

**XVIII. c)** Less than Significant with Mitigation Incorporation. To accommodate storm water runoff a 6-inch storm drain force main (pipeline) across the Gliderport property will be installed. The Gliderport property contains Napa Blue Grass, Calistoga Popcorn flower and wetlands. This storm drain would be in close proximity to these protected species and habitat. The pipeline would be installed by jack and bore method reducing the potential impacts to sensitive areas and would be subject to certain standards as described in Mitigation Measure BIO-1. With the incorporation of the mitigation measure the impacts are considered less than significant.

# Mitigation Measure BIO-1: Off Site Utility Construction

**XVIII.** d) <u>No Impact.</u> The proposed project does not require substantial increase in water usage. The project is consistent with the projected land use development as identified in the City of Calistoga General Plan. Under the General Plan, it is assumed that there are sufficient water resources and supply to accommodate projects approved through the now established Growth Management Allocation procedures. No impacts are identified.

XVIII. e) No Impact. The proposed project would not result in the generation of water in

excess of the capacity of the current wastewater treatment system. The proposed project involves the expansion of an existing resort, which has a slight domestic demand.

**XVIII.** f) No Impact. The project will be served by a landfill with sufficient capacity to meet the project's demands. No significant impact will occur from the disposal of solid waste generated by the project.

**XVIII. g)** No Impact. Construction activities would also require disposal of solid waste generated from demolishing the existing structure and scrap or surplus construction materials. The anticipated volume of solid waste could be accommodated by the Clover Flat landfill.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?				
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?				
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?				$\boxtimes$

**XIX.** a) <u>Less than Significant</u>. With implementation of the standard mitigation measures and additional recommended mitigation measures, the project does not have the potential to degrade the quality of the environment, including fish or wildlife species or their habitat, plant or animal communities, or important examples of the major periods of California history or prehistory.

The Property Owner would be responsible for ensuring mitigation measures are properly implemented. With these measures in place, the potential for project-related activities to degrade the quality of the environment would be reduced to less than significant levels.

**XIX. b)** Less than significant. The proposed project does not have impacts that are individually limited, but cumulatively considerable. The proposed resort expansion is consistent with the General Plan land use and zoning designation. Aspects of the project manage storm water runoff, help preserve groundwater resources, and minimize the impact on the environment including green building practices. Traffic generated by the project would be consistent with that projected in the General Plan The expansion will not cause an increase in traffic which is substantial or exceeds LOS standards. Traffic mitigation fees are required to be paid to assist with the overall City roadway maintenance. Therefore, the project does not pose cumulative impacts.

**XIX.** c) No Impact. The proposed project would not result in any environmental effects that will cause substantial adverse effects on human beings.

#### **REFERENCES:**

The following information sources were utilized in the preparation of this initial study and are available for review at the Planning & Building Department, City of Calistoga, City Hall, 1232 Washington Street, Calistoga:

ABAG Liquefaction Maps and Information, website accessed on June 1, 2011. http://gis.abag.ca.gov/Website/liq\_scenario\_maps/Run.htm

Archaeological resource Service, A Cultural Resources Evaluation and Historic Structures Evaluation of the Indian Springs Resort, dated April 11, 2012

Bay Area Air Quality Management District, BAAQMD CEQA Guidelines, December 2010 (Updated May 2011)

BKF Engineers, Surveyors, and Planners, *Domestic & Irrigation Demand Analysis*, Indian Springs Resort & Spa, July 2012

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BKF, Engineers, Surveyors, and Planners, *Preliminary Stormwater Mitigation Plan*, Indian Springs Resort & Spa, July 2012

BKF, Engineers, Surveyors, and Planners, *Sanitary Sewer Study*, Indian Springs Resort & Spa, July 2012

BKF, Engineers, Surveyors, and Planners, Site Plan, Indian Springs Resort & Spa, July 2012

BKF, Engineers, Surveyors, and Planners, *Existing Conditions and Demolition Plan*, Indian Springs Resort & Spa, July 2012

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California Air Resources Board, Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles, October 2000.

California Department of Conservation, California Geological Survey, Geologic Map of the Calistoga 7.5' Quadrange, Napa County, CA, A Digital Database, 2004.

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California EPA. Cortese List Data Resources, Website accessed on June 1, 2011. http://www.calepa.ca.gov/SiteCleanup/CorteseList/default.htm

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Federal Emergency Management Agency, Flood Insurance Rate Map # 06055C0229E, September 26, 2008.

Glenn Lukos Associates, Inc., Biological Technical Report, Indian Springs Resort, July 2011

Global GeoDyne, LLC, *Indian Springs Injection Well Report and Preliminary Evaluation*, Indian Springs Resort and Spa, March 1, 2012

Ian Murray Design, Architectural Drawings, March 2, 2012

Illingworth & Rodkin, Inc., Indian Springs Resort and Spa Expansion Air Quality and Greenhouse Gas Assessment, March 14, 2012

Illingworth & Rodkin, Inc., *Environmental Noise Assessment*, Indian Springs Resort and Spa Expansion, Updated July 13, 2012

Joe Branum Tree Care, Inc. Arborist Report & Requirements, Indian springs Resort, July 26, 2012

Phil Manoukian + Associates, Landscape Design, Indian Springs Resort and Spa, July 6, 2012

Reese & Associates, *Soil Investigation Report*, Indian Springs Resort and Spa Expansion, November 23, 2010

San Francisco Bay Regional Water Quality Control Board, Water Quality Control Plan (Basin Plan), September 15, 2009.

Sea Gull Lighting, Dark Sky Outdoor Lantern, March 19, 2012

United States Department of Agriculture, Natural Resource Conservation Service, Web Soil Survey, accessed on February 24, 2010

Whitlock & Weinberger Transportation, Inc. (W-trans), Addendum to the Indian Springs Expansion Traffic Impact Study, March 19, 2012

Whitlock & Weinberger Transportation, Inc. (W-trans), Response to Comments on the Traffic Impact Study for the Indian Springs Expansion Project, May 22, 2012

### **ENVIRONMENTAL DETERMINATION:**

On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

X

I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

	10.12-2012
Erik V. Lundquist, Senior Planner, City of Calistoga	Date
Property Owner's or Authorized Agent's Signature	10-11-12 Date
Property Owner's or Authorized Agent's Signature	Date