FINAL

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Moon Camp Residential Subdivision TT No. 16136 EIR

Lead Agency:

County of San Bernardino

Prepared by:

RBF Consulting

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F I N A L
ENVIRONMENTAL IMPACT REPORT

MOON CAMP
RESIDENTIAL SUBDIVISION
TENTATIVE TRACT NO. 16136

SCH NO. 2002021105

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1.0 Introduction and Purpose

1.0 INTRODUCTION AND PURPOSE

1.1 PURPOSE OF THE EIR

The County of San Bernardino is the Lead Agency under the California Environmental Quality Act (CEQA), and is responsible for preparing the Environmental Impact Report (EIR) for the Moon Camp Residential Subdivision, Tentative Tract No. 16136 project (State Clearinghouse No. 2002021105). This EIR has been prepared in conformance with the CEQA (California Public Resources Code Section 21000 et. seq.), California CEQA Guidelines (California Code of Regulations, Title 14, Section 15000 et. seq.), and the rules, regulations, and procedures for implementation of CEQA, as adopted by the County of San Bernardino. The principal CEQA Guidelines sections governing content of this document are Sections 15120 through 15132 (Content of an EIR), and Section 15161 (Project EIR).

The purpose of this Draft EIR is to review the existing conditions, analyze potential environmental impacts, and identify feasible mitigation measures to avoid or lessen potentially significant effects to a level of non-significance, pursuant to CEQA Guidelines. The project proposes a 95-lot residential subdivision on 62.43 acres along the north shore of Big Bear Lake, in the unincorporated community of Fawnskin. The proposal includes the realignment of North Shore Drive, and a boat dock for 100 slips (for more detailed information regarding the proposal, refer to Section 3.0, *Project Description*).

The EIR has been prepared as a Project EIR, addressing the environmental effects of the proposed project. In accordance with Section 15121 of CEQA, a primary purpose of this EIR is to provide decision makers and the public with specific information regarding the environmental effects associated with development of the site, identify ways to minimize the significant effects and describe reasonable alternatives to the project. Mitigation measures are provided which may be adopted as Conditions of Approval in order to reduce the significance of impacts resulting from the project. In addition, this EIR is the primary reference document in the formulation and implementation of a mitigation monitoring and compliance program for the proposed project.

The County of San Bernardino, which has the principal responsibility of processing and approving the project, and other public agencies (i.e., responsible and trustee agencies, refer to Section 1.5 of this EIR) that may use this EIR in the decision making or permit process will consider the information in this EIR, along with other information that may be presented during the CEQA process. Environmental impacts are not always avoided or lessened to a level considered less than significant; in those cases, impacts are considered significant unavoidable impacts. In accordance with Section 15093(b) of the State CEQA Guidelines, if a public agency approves a project that has significant impacts that are not substantially mitigated (i.e., significant unavoidable impacts), the agency shall state in writing the specific reasons for approving the project, based on the Final EIR and any other information in the public record for the project. This is termed, per Section 15093 of the State CEQA Guidelines, a “statement of overriding considerations.”

This document analyzes the environmental effects of the project to the degree of specificity appropriate to the current proposed actions, as required by Section 15146 of the State CEQA Guidelines. The analysis considers the actions associated with the project, to determine the short-term and long-term effects associated with their implementation. This EIR discusses both the direct and indirect impacts of this project, as well as the cumulative impacts associated with other past, present, and reasonably foreseeable future projects. CEQA requires the preparation of an objective, full disclosure document to inform agency decision makers and the general public of the direct and indirect environmental effects of the proposed action; provide mitigation measures to significantly reduce or eliminate significant adverse effects; and identify and evaluate reasonable alternatives that could avoid or substantially lessen one or more of such effects to the proposed project.

1.2 COMPLIANCE WITH CEQA

The Draft EIR is subject to a 45-day review period by responsible and trustee agencies and interested parties. In accordance with the provision of Sections 15085(a) and 15087(a)(1) of the State CEQA Guidelines, as amended, the County of San Bernardino, serving as the Lead Agency, will: 1) publish a notice of availability of a Draft EIR in "The Grizzly" and "The Sun," newspapers of local and general circulation, respectively; and, 2) will prepare and transmit a Notice of Completion (NOC) to the State Clearinghouse. (Proof of publication is available at the offices of the Lead Agency.)

Any public agency or members of the public desiring to comment on the Draft EIR must submit their comments in writing to the individual identified on the document's NOC prior to the end of the public review period. Upon the close of the public review period, the Lead Agency will then proceed to evaluate and prepare responses to all relevant oral and written comments received from both citizens and public agencies during the public review period.

The Final EIR will consist of the Draft EIR, revisions to the Draft EIR, and responses to comments addressing concerns raised by responsible agencies or reviewing parties submitted during the public review period. After the Final EIR is completed and at least 10 days prior to action, a copy of the specific response to comments made by public agencies on the Draft EIR will be provided to the respective agency.

1.3 EIR SCOPING PROCESS

In compliance with the State CEQA Guidelines, the County of San Bernardino has taken steps to maximize opportunities to participate in the environmental process. During the preparation of the Draft EIR, an effort was made to contact various Federal, State, regional, and local government agencies and other interested parties to solicit comments and inform the public of the proposed project. This included the distribution of an Initial Study and Notice of Preparation (NOP), publication and posting of the NOP, and Public Scoping Meeting on March 2, 2002.

INITIAL STUDY

In accordance with Section 15063(a) of the State CEQA Guidelines, as amended, the County undertook the preparation of an Initial Study. The Initial Study determined that a number of environmental issue areas may be impacted by the construction and build-out of the project. As a result, the Initial Study determined that the Draft EIR should address the project's potentially significant impacts on a variety of environmental issue areas that are addressed in Section 5.0 of this EIR.

Based on the Initial Study, no impacts upon agricultural resources and mineral resources are anticipated as a result of the proposed development. As a result, these issues are addressed in Section 10.0, *Effects Found Not to be Significant*, of this EIR.

NOTICE OF PREPARATION

Pursuant to the provision of Section 15082 of the State CEQA Guidelines, as amended, the County of San Bernardino circulated a NOP via newspaper publication and local posting to public agencies, special districts, and members of the public requesting such notice, for a 30-day period commencing February 21, 2002 and ending March 22, 2002. The purpose of the NOP was to formally convey that the County is preparing a Draft EIR for the Moon Camp Tentative Tract #16136 and General Plan Land Use Amendment, and that as Lead Agency, was soliciting input regarding the scope and content of the environmental information to be included in the EIR. The Initial Study was circulated with the NOP. The NOP, Initial Study, and comments received in response to the NOP are provided in Appendices 15.1 and 15.2 of this EIR.

EARLY CONSULTATION (SCOPING)

During the NOP circulation period, the County of San Bernardino advertised a public scoping meeting. The meeting was held on March 2, 2002 at the North Shore Elementary School at Big Bear Lake and was intended to facilitate public input. The meeting was held with the specific intent of affording interested individuals/groups and public agencies and others a forum in which to orally present input directly to the Lead Agency in an effort to assist in further refining the intended scope and focus of the Project EIR as described in the NOP and Initial Study.

NOP AND SCOPING RESULTS

The following specific environmental concerns were raised by responses to the NOP for the project (the numerical reference in parenthesis is the EIR Section in which the analysis is provided). The NOP responses, and written comments received at the meeting are contained in Appendix 15.2:

NOP Written Comments

- Pebble plain habitat located on-site and adjacent National Forest lands (refer to Section 5.8, *Biological Resources*);
- Recreational activities, including the local paths and trails adjacent to Big Bear Lake (refer to Section 5.2, *Recreation*);
- Impacts to cultural resources (refer to Section 5.9, *Cultural Resources*);
- Wastewater services and facilities (refer to Section 5.3, *Public Utilities*);
- Impacts associated with wastewater odors (refer to Section 5.6, *Air Quality*);
- Hydrology/water quality (i.e., Big Bear Lake) and local water supplies, including drought conditions (refer to Section 5.11, *Hydrology and Drainage*);
- Bald eagle population and supporting habitat (perch trees) (refer to Section 5.8, *Biological Resources*);
- Cumulative impacts to all issue areas for projects in the vicinity of the project site (refer to Section 4.0, *Basis for Cumulative Analysis,* and Section 5.0, *Description of Environmental Setting, Impacts and Mitigation Measures*);
- Impacts associated with light and glare (refer to Section 5.4, *Aesthetics/Light and Glare*);
- Impacts to scenic resources (refer to Section 5.4, *Aesthetics/Light and Glare*);
- Impacts associated with increased traffic (refer to Section 5.5, *Traffic and Circulation* and Section 5.7, *Noise*);
- Air quality impacts, including air pollution from watercrafts, wood burning fireplaces and automobiles (refer to Section 5.6, *Air Quality*);
- Mature/old-growth trees on-site (refer to Section 5.8, *Biological Resources*);
- Biological resources impacts resulting from increased noise levels (refer to Section 5.7, *Noise*);
- Public health and safety associated with increased traffic volumes (refer to Section 5.5, *Traffic and Circulation*);
- Public utilities, including natural gas, water, wastewater and electricity service capabilities (refer to Section 5.3, *Public Utilities*);
- Biological resources, including flora, fauna and habitats located on-site and to the adjacent San Bernardino National Forest Lands. Species include: ashy-grey paintbrush, flycatchers, California spotted owl, herons, hawks, Southern

mountain buckwheat (*Eriogonum kennedyi* var. *austromontamum*) and threatened Bear Valley sandwort (*Arenaria ursine*) (refer to Section 5.8, *Biological Resources*);

- Impacts to wildlife corridors (refer to Section 5.8, *Biological Resources*);
- Affects of seismicity and slope stability (refer to Section 5.10, *Geology and Soils*);
- Impacts to Big Bear Lake from marina construction activities (refer to Section 5.8, *Biological* Resources and Section 5.11, *Hydrology and Soils*);
- Public services, including fire and police protection, libraries, schools, and solid waste disposal (refer to Section 5.3, *Public Services and Utilities*);
- Visual character of the local area (refer to Section 5.4, *Aesthetics/Light and Glare*);
- Impacts to parks and open space (refer to Section 5.2, *Recreation*);
- Impacts to recreational uses of lake (refer to Section 5.2, *Recreation*);
- Impacts from potential future subdivisions of individual lots (refer to Section 5.1, *Land Use and Relevant Planning*);
- Noise generated by traffic and watercraft (refer to Section 5.7, *Noise*);
- Impacts to springs from increased use of Big Bear Lake (refer to Section 5.11, *Hydrology and Drainage*);
- Biological surveys that are seasonal and the length of studies (refer to Section 5.8, *Biological Resources*); and
- Impacts associated with population growth (refer to Section 6.3, *Growth Inducing Impacts*).

<u>March 2, 2002 Public Scoping Meeting</u>

- Impacts to scenic views (refer to Section 5.4, *Aesthetics/Light and Glare*);
- Impacts associated with increased traffic volumes (refer to Section 5.5, *Traffic and Circulation*);
- Impacts associated with tree removal at building sites (refer to Section 5.8, *Biological Resources*);
- Impacts associated with increased light and glare (refer to Section 5.4, *Aesthetics/Light and Glare*);

- Impacts to water quality and supplies (refer to Section 5.11, *Hydrology and Drainage*);
- Impacts to wastewater services and facilities (refer to Section 5.3, *Public Utilities*);
- Impacts to Big Bear Lake water quality (refer to Section 5.11, *Hydrology and Drainage*);
- Public services, including fire and police protection, medical facilities, schools, and parks (refer to Section 5.3, *Public Services and Utilities*);
- Biological surveys that are seasonal and the length of studies (refer to Section 5.8, *Biological Resources*);
- Impacts associated with change in land use designations from BV/RL-40 (40-acre minimum lot size) to BV/RS Single-Residential (refer to Section 5.1, *Land Use and Relevant Planning*);
- Loss of public access through the project site, including the shoreline of Big Bear Lake (refer to Section 5.2, *Recreation*);
- Biological resources, including flora, fauna and habitats located on-site and on San Bernardino National Forest Lands (refer to Section 5.8, *Biological Resources*);
- Public utilities systems, including natural gas, waste disposal and electricity supplies/capabilities (refer to Section 5.3, *Public Services and Utilities*);
- Impacts to wildlife corridors (refer to Section 5.8, *Biological Resources*);
- Impacts resulting from seismic activity (refer Section 5.10, *Geology and Soils*);
- Cumulative traffic impacts to the north shore (refer to Section 5.5, *Traffic and Circulation*);
- Impacts associated with population growth (refer to Section 6.3, *Growth Inducing Impacts*);
- Impacts from odors produced by wastewater (refer to Section 5.6, *Air Quality*);
- Impacts to recreational uses on the lake (refer to Section 5.2, *Recreation*);
- Bald eagle population and supporting habitat (perch trees) (refer to Section 5.8, *Biological Resources*);
- Visual character of the Community of Fawnskin (refer to Section 5.4, *Aesthetics/Light and Glare*);

- Impacts to cultural resources (refer to Section 5.9, *Cultural Resources*);

- Impacts of noise generated by traffic and watercraft (refer to Section 5.7, *Noise*);

- Impacts to air quality, including air pollution from watercrafts, wood burning fireplaces and automobiles (refer to Section 5.6, *Air Quality*); and

- Impacts to slope stability (refer to Section 5.10, *Geology and Soils*).

The EIR focuses primarily on changes in the environment that would result from the proposed project. The EIR identifies potential impacts resulting from the construction and operation of the proposed project and provides measures to mitigate potential significant impacts. Those impacts which cannot be mitigated to levels less than significant are also identified. This EIR addresses impacts in the following areas:

- Land Use and Relevant Planning;
- Recreation;
- Public Services and Utilities;
- Aesthetics/Light and Glare;
- Traffic and Circulation;
- Air Quality;
- Noise;
- Biological Resources;
- Cultural Resources;
- Geology and Soils; and
- Hydrology and Drainage.

1.4 FORMAT OF THE EIR

The Draft EIR is organized into 15 sections. Section 1.0, *Introduction and Purpose*, provides CEQA compliance information. Section 2.0, *Executive Summary*, provides a brief project description and summary of the environmental impacts and mitigation measures. Section 3.0, *Project Description*, provides a detailed project description indicating project location, background and history, and project characteristics, phasing and objectives, as well as associated discretionary actions required. Section 4.0, *Basis for the Cumulative Analysis*, describes the approach and methodology for the cumulative analysis. Section 5.0, *Description of Environmental Setting, Impacts and Mitigation Measures*, contains a detailed environmental analysis of the existing conditions, project impacts, recommended mitigation measures and unavoidable adverse impacts. The analysis of each environmental category in this Section is organized as follows:

- "Existing Conditions" describes the physical conditions which exist at the time the Notice of Preparation was published and which may influence or affect the issue under investigation;

- "Significance Criteria" provides the thresholds which are the basis for conclusions of significance. The primary resource for the criteria is Appendix

G of the State CEQA Guidelines (California Code of Regulations, Section 15000-15387);

- "Project Impacts" describes potential environmental changes to the existing physical conditions which may occur if the proposed project is implemented;

- "Cumulative Impacts" describes potential environmental changes to the existing physical conditions which may occur if the proposed project is implemented together with all other past, present and reasonably foreseeable future projects producing related or cumulative impacts;

- "Mitigation Measures" are those specific measures which may be required of the project in order to avoid a significant impact; minimize a significant impact; rectify a significant impact by restoration; reduce or eliminate a significant impact by preservation and maintenance operations; or compensate for the impact by replacing or providing substitute resources or environment; and

- "Level of Significance After Mitigation" discusses whether the project's impact and the project's contribution to cumulative impacts can be reduced to levels that are considered less than significant.

Section 6.0, *Long-Term Implications of the Proposed Project*, discusses significant environmental changes that would be involved in the proposed action, should it be implemented and discusses growth inducing impacts of the proposed project. Section 7.0, *Alternatives to the Proposed Project*, describes a reasonable range of alternatives to the project or to the location of the project which could feasibly attain the basic project objectives and minimize the potential introduction of significant environmental impacts. Section 8.0, *Inventory of Mitigation Measures*, lists mitigation measures proposed to minimize the significant impacts. Section 9.0, *Inventory of Significance After Mitigation*, describes those impacts which remain significant following mitigation and require a Statement of Overriding Considerations. Section 10.0, *Effects Found Not to Be Significant*, provides an explanation of potential impacts which have been determined not to be significant or significantly below thresholds for significance. Section 11.0, *Organizations and Persons Consulted*, identifies all Federal, State or local agencies, other organizations and individuals consulted. Section 12.0, *Bibliography*, identifies reference sources for the EIR. Section 13.0, *Mitigation Monitoring Program*, identifies responsibilities and timing for monitoring mitigation. Section 14.0, *Comments and Responses,* will be included in the Final EIR and will provide comments and responses pertaining to the Draft EIR. Section 15.0, *Appendices*, contains technical documentation for the project.

1.5 RESPONSIBLE AND TRUSTEE AGENCIES

Certain projects or actions undertaken by a Lead Agency require subsequent oversight, approvals, or permits from other public agencies in order to be implemented. Such other agencies are referred to as *Responsible Agencies* and *Trustee Agencies.* Pursuant to Sections 15381 and 15386 of the State CEQA

Guidelines, as amended, Responsible Agencies and Trustee Agencies are respectively defined as follows:

> *"Responsible Agency"* means a public agency which proposes to carry out or approve a project, for which a Lead Agency is preparing or has prepared an EIR or Negative Declaration. For the purposes of CEQA the term "Responsible Agency" includes all public agencies other than the Lead Agency which have discretionary approval power over the project." (*Section 15381)*
>
> *"Trustee Agency* means a State agency having jurisdiction by law over natural resources affected by a project which are held in trust for the people of the State of California. Trustee Agencies include...." *(Section 15386, part)*

Responsible and *Trustee Agencies* and other entities which may use this EIR in their decision-making process or for informational purposes include, but may not be limited to, the following:

- Bear Valley Unified School District
- Big Bear Area Regional Wastewater Agency
- Big Bear Community Services District
- Big Bear Lake Department of Water and Power
- Big Bear Municipal Water District
- Big Bear Unified School District
- California Air Resources Board
- California Department of Fish and Game
- California Department of Transportation
- California Division of Forestry
- California Regional Water Quality Control Board
- California State Highway Patrol
- City of Big Bear Lake
- County of San Bernardino Department of Public Health
- County of San Bernardino Department of Public Works, Solid Waste Management Division
- County of San Bernardino Fire Department
- County of San Bernardino Sheriff's Department
- Edison International
- Redlands Water Department
- SANBAG
- South Coast Air Quality Management Agency
- Southern California Association of Governments
- Southern California Gas Company
- State Water Resources Control Board
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- U.S. Forest Service

1.6 INCORPORATION BY REFERENCE

Pertinent documents relating to this EIR have been cited in accordance with Section 15148 of the CEQA Guidelines, which encourages "incorporation by reference" as a means of reducing redundancy and length of environmental reports. The following documents, which are available for public review at the County of San Bernardino, are hereby incorporated by reference into this EIR. Information contained within these documents has been utilized for each section of this EIR. A brief synopsis of the scope and content of these documents is provided below:

- City of Big Bear Lake Final General Plan EIR, July 1999. The City of Big Bear Lake Final General Plan EIR, a Program EIR, analyzed the potential environmental impacts associated with the City of Big Bear Lake comprehensive update of its General Plan. Comprehensive mitigation and monitoring and reporting programs were developed, through proposed General Plan policies and programs, to address potential impacts. Implementation of the proposed policies and programs reduced potentially significant impacts to less than significant levels for the majority of impacts. To note, a few areas of special concern and sensitivity were given focused consideration in the development of the General Plan Update. These areas include Biological Resources, Water Resources and Air Quality. Impacts to Biological and Water Resources were reduced to less than significant levels. However, the EIR states that impacts to air quality would continue to be impacted by criteria pollutants associated with traffic. Information in the General Plan EIR was primarily utilized in the Moon Camp EIR as background data.

- County of San Bernardino General Plan, adopted 1989, revised 2001. The County of San Bernardino General Plan Update is the long-range planning guide for growth and development for the County of San Bernardino. The General Plan has two basic purposes: 1) to identify the goals for the future physical, social and economic development of the County; and 2) to describe and identify policies and actions adopted to attain those goals. It is a comprehensive document that addresses seven mandatory elements/issues in accordance with State law. These elements include Land Use, Housing, Circulation, Conservation, Open Space, Noise and Safety. Other optional issues that affect the County have also been addressed in the Plan. The County General Plan was utilized throughout this EIR as the fundamental planning document governing development on the project site. Background information and policy information from the Plan are cited in several sections of the EIR.

- County of San Bernardino General Plan EIR, 1989. The purpose of the General Plan EIR, a Program EIR, is to provide basic analysis of the potentially significant effects on the human and natural environment which may occur during the implementation of the General Plan Update. The General Plan's implementation program incorporates mitigation measures. However, project-specific impacts are assessed at the application stage. The General Plan's Program EIR provides a fundamental base from which environmental review will occur.

The most important feature of the General Plan EIR is its thresholds. The thresholds provide a commonly acceptable level for assessing project impacts on the environment. A project which has impacts below the threshold may be reviewed using the Mitigated Negative Declaration process. Projects which have impacts above the thresholds provide advance information allowing an applicant to submit the necessary information to determine if the impact can be mitigated through conventional means. If an impact cannot be mitigated through accepted practices, then normally, an environmental impact report for that project will be required.

- County of San Bernardino Development Code, adopted 1989, revised 2001. The County Development Code provides the regulations which must be followed by every project within the County's jurisdictional area. Information within the Code was utilized in various sections of this EIR, particularly as it relates to the range of permitted uses within the BV/RS Single Residential designation (refer to section 5.1, *Land Use and Relevant Planning*) and for the identification of additional constraints and requirements which govern development.

2.0 Executive Summary

2.0 EXECUTIVE SUMMARY

2.1 PROJECT ANALYSIS SUMMARY

The proposed Moon Camp Tentative Tract #16136 Residential Subdivision ("Moon Camp") encompasses approximately 62.43 acres along the northwest shore of Big Bear Lake, in the community of Fawnskin, County of San Bernardino. The Project site is located adjacent to the northwest shore of the Big Bear Lake, in the relatively undeveloped eastern portion of Fawnskin. The Project site is generally situated between Flicker Road to the north, Big Bear Lake to the south, Polique Canyon Road to the east, and Oriole Lane/Canyon Road to the west.

The Project proposes a 95-lot residential subdivision with lots ranging in size from 0.17 acres (7,292 square feet) to 2.11 acres. Lots would be sold individually and development of lots and construction of homes would be by custom design. The proposal is a Tentative Tract Map for 92 numbered and three lettered lots. The three lettered lots are identified as follows: (1) Lot "A" is a private street designed to provide access to the southernmost lots; (2) Lot "B" is a 1.4-acre strip of land that would remain between the relocation of State Route 38 and the private Street, Lot "A"; and (3) Lot "C" is a gated entrance to the Project, including a proposed boat dock, consisting of 100 boat slips, which would be available for use by residents of the tract and accessible by Lot "C".

The Project includes relocation of North Shore Drive, also referred to as State Route 38, to allow development of lakeshore lots. An approximately 2,498-foot segment of the roadway would be relocated. The maximum distance of relocation, as designed, is 207 feet to the north. The design includes a 76-foot road width, with 14-foot shoulder/bikeway access, resulting in a 104-foot right-of-way via a loop road that would include five separate cul-de-sac drives to access lakefront lots.

This EIR includes a comprehensive review of project affects, the significance of the affects and recommended mitigation measures. Section 5.0 of this EIR concludes that the proposed Project would generate impacts related to public services, utilities, aesthetics, traffic/circulation, air quality, noise, biological resources, cultural resources, geology/soils and hydrology/drainage. All impacts, with the exception of those identified for public services/utilities (ability to be served water), aesthetics, air quality, biological resources and hydrology (groundwater) can be mitigated to less than significant levels. The identified public services/utilities (ability to be served by water), aesthetic, air quality, biological resources and hydrology (groundwater) impacts require findings in accordance with Section 15091 of CEQA and a Statement of Overriding Considerations in accordance with Section 15093 of CEQA.

2.2 ENVIRONMENTAL ISSUES/MITIGATION SUMMARY

The following is a brief summary of the impacts, mitigation measures, and unavoidable significant impacts identified and analyzed in Section 5.0 of this EIR. Refer to the appropriate EIR Section for additional information.

EIR SECTION	IMPACTS	MITIGATION MEASURES	SIGNIFICANCE AFTER MITIGATION
5.1	**LAND USE AND RELEVANT PLANNING**		
	San Bernardino County General Plan		
	5.1-1 *The proposed Project conflicts with the land use plan, policies and regulations set forth in the San Bernardino County General Plan. Analysis has concluded that impacts would be less than significant with approval of a Land Use District Change and Circulation Element Amendment (Transportation/ Circulation Maps).*	5.1-1 No mitigation measures are recommended.	No unavoidable significant impacts related to Land Use and Relevant Planning have been identified following compliance with the San Bernardino County General Plan and Development Code policies and standards.
	San Bernardino County Development Code		
	5.1-2 *The proposed Project conflicts with the land use plan, policies and regulations of the San Bernardino County Development Code. Analysis has concluded that a less than significant impact would occur with approval of a Land Use District Change, Circulation Element Amendment and Conditional Use Permit.*	5.1-2 No mitigation measures are recommended.	
	Cumulative		
	5.1-3 *The proposed Project, combined with other future development, will increase the intensity of land uses in the area. Analysis has concluded that impacts are less than significant and no mitigation is required. Projects are evaluated on a project-by-project basis in accordance with the San Bernardino County General Plan and Development Code.*	5.1-3 No mitigation measures are recommended.	
5.2	**RECREATION**		
	Expansion and/or Construction of Recreational Facilities		
	5.2-1 *Implementation of the Moon Camp project involves the construction or expansion of recreational facilities which may have an adverse physical*	5.2-1 No mitigation measures are recommended.	No significant impacts related to Recreational facilities have been identified in this Section.

EIR SECTION	IMPACTS	MITIGATION MEASURES	SIGNIFICANCE AFTER MITIGATION
	effect on the environment. Compliance with the Big Bear MWD standards and permit requirements would reduce impacts to a less than significant level.		
	Public Access		
	5.2-2 *Implementation of the Moon Camp project would ~~not~~ affect public access along the north shore of Big Bear Lake. Mitigation requiring dedication of an easement along the south side of North Shore Drive has been incorporated. ~~The Project site is Private Property. Affects on public access are concluded as less than significant.~~*	5.2-2 ~~No mitigation measures are recommended.~~ The proposed project shall be conditioned to incorporate a pedal path easement along the south side of North Shore Drive, prior to map recordation.	
	Cumulative		
	5.2-3 *Cumulative development may result in increased use of existing recreational areas/facilities, thereby creating the potential for physical deterioration. Additionally, cumulative development may include recreational facilities (i.e., marina) that have the potential to result in physical impacts on the environment. Mitigation measures necessary for reducing impacts are addressed on a project-by-project basis to reduce impacts to a less than significant level.*	5.2-3 No mitigation measures are recommended.	
5.3	**PUBLIC SERVICES AND UTILITIES**		
	Fire Protection		
	5.3-1 *Project implementation could result in significant physical impacts with respect to fire protection. Analysis has concluded that impacts would be less than significant with the recommended mitigation measures.*	5.3-1a The fire flow requirement shall be 1750 gpm @ 2 hours based on homes in the range of 3,600 to 4,800 square feet, and 2,000 gpm @ 2 hours for homes greater than 4,800 square feet.	
		5.3-1b ~~Fire sprinklers for each residence shall be provided in lieu of additional manpower.~~ All residences less than 5,000 square feet shall be subject to the standard fire sprinkler requirement (NFPA 13D). Homes above 5,000 square feet shall be subject to the NFPA13R~~have a larger~~ sprinkler requirement ~~(~~FPA13R~~)~~.	
		5.3-1c A ~~f~~Fuels ~~modification program~~Management Plan, with specifications, shall be prepared and	

EIR SECTION	IMPACTS	MITIGATION MEASURES	SIGNIFICANCE AFTER MITIGATION
		subject to approval by the County of San Bernardino Fire Department and San Bernardino National Forest Service. The Fuels Management Plan shall implement the fire safety requirements of the FS1 Fire Safety Overlay District, including a 30-foot minimum setback requirement from the National Forest. The fuel modification zone shall be located entirely within the project's boundaries. ~~The 100 foot fuel modification requirement shall not terminate at a property line. The 100 foot fuel modification requirement shall extend beyond property lines. Where such fuel modification zone extends onto U.S. Forest Service land, an easement or permit shall be required to be obtained.~~ The minimum~~100 foot~~ fuel modification zone requirements may be greater in steeper areas (up to 300 ft.), as determined by the Fire ~~Agency~~ Department.	
		5.3-1d Cul-de-sac lengths shall be no longer than 350 feet.	
		5.3-1e A Homeowner's Association or a Special District shall be established to ~~assure~~ implement the Fuels Management Plan. The Fuels Management Plan shall specify any professional assistance, if necessary, to implement the action portion of the plan. The Plan shall determine if a Registered Professional Forrester is necessary for professional guidance to implement the Plan. ~~Long term vegetation maintenance. An annual vegetation maintenance program shall be included.~~ The HOA or Special District is to be responsible for fuel modification in common areas.	
		~~5.3-1f Fire resistance/drought tolerant landscaping shall be required and referenced in the Homeowner's Association or Special District Standards.~~	

EIR SECTION	IMPACTS	MITIGATION MEASURES	SIGNIFICANCE AFTER MITIGATION
	Police Protection		
	5.3-2 *Project implementation could result in significant physical impacts with respect to police protection. Analysis has concluded that a less than significant impact would occur.*	5.3-2 No mitigation measures are recommended.	
	Schools		
	5.3-3 *Project implementation could result in significant physical impacts to existing school facilities. Potential impacts to school facilities are concluded as less than significant following payment of school impact fees and compliance with all applicable requirements, codes, and ordinances.*	5.3-3 No mitigation measures are recommended.	
	Libraries		
	5.3-4 *Project implementation would increase the demand on library services. Analysis has concluded that that a less than significant impact would occur.*	5.3-4 No mitigation measures are recommended.	
	Wastewater		
	5.3-5 *Project implementation would generate additional wastewater beyond current conditions. Analysis has concluded that impacts would be less than significant with the recommended mitigation measures.*	5.3-5a Prior to issuance of building permits, the Project Applicant shall fund all on-site and off-site sewer improvements required to support development of the Project site. Such improvements shall be to the satisfaction of the BBARWA, and may include replacement of existing sewer lines rather than construction of parallel lines. 5.3-5b Prior to issuance of building permits, the Project Applicant shall provide evidence to the County of San Bernardino that the BBARWA has sufficient transmission and treatment plant capacity to accept sewage flows from the Project site. 5.3-5c The Project Applicant shall relocate the BBARWA 10" force main by installing new pipe (and/or bonding for the relocation) so that it is aligned within the south shoulder of the relocated State Route 38. The 10" force main shall be accessible for BBARWA to maintain and repair the sewer force main. The force main shall not pass through residential lots within the proposed tract.	

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		5.3-5d The Project Applicant shall install air release valves and vaults at high elevation points on the new force main to minimize odors. Air release valves shall be large enough to enclose 55-gallon drum carbon filters to control odors.	
	Water		
	5.3-6 *Project implementation would increase the demand for water beyond existing conditions. Analysis has concluded that due to the inability of water providers to confirm service to the project, impacts are concluded as significant and adverse. This conclusion is further supported by the potentially significant groundwater overdraft conditions cited in Section 5.11 of the EIR.*	5.3-6a ~~Prior to approval of building permits, a video inspection of water supply casings and screen shall be conducted in order to update~~ Values of production rates and pumping levels for on-site water supply wells shall be obtained through step-drawdown and constant rate pumping tests. Water samples shall be taken during the inspection for testing and analysis in accordance with standard requirements. 5.3-6b If either or both of the two existing on-site wells are utilized as a water source for the project, ~~T~~the Project Applicant shall equip the~~two existing on-site~~ wells to meet DWP and/or County Special Districts Department standards and dedicate these facilities and water rights to the appropriate water purveyor~~County of San Bernardino~~. Within the proposed tract, no individual private irrigation wells shall be permitted. 5.3-6c ~~If served by CSA 53-C through a contract with the City of Big Bear Lake Department of Water and Power, t~~ After a determination has been made regarding the water purveyor, the Project Applicant shall advance fair-share funds ~~or enter into a reimbursement agreement with the~~ to the appropriate water agency (CSA and/or DWP)~~(if required)~~ towards constructing a new reservoir and pipeline improvement at Cline-Miller Reservoir (with an estimated project cost at $481,100). These facilities would be dedicated to the appropriate water agency. 5.3-6d The following water conservation measures are the minimum measures that shall be complied with in conjunction with domestic water supply to the project. A Homeowners Association shall be	Due to the inability of water providers to confirm service to the project, project as well as cumulative impacts are concluded as significant and unavoidable. This conclusion is further supported by the significant and unavoidable conclusion cited in Section 5.11, *Hydrology and Drainage*, due to inconclusive testing of potential overdraft conditions for the groundwater basin associated with the North Shore Hydrologic Subunit. If the County of San Bernardino approves the project, the County shall be required to adopt findings in accordance with Section 15091 of the CEQA Guidelines and prepare a Statement of Overriding Considerations in accordance with Section 15093 of the CEQA Guidelines. No additional unavoidable significant impacts related to public services and utilities have been identified following implementation of the recommended mitigation measures and compliance with applicable County, service or utility provider requirements, County Codes and Ordinances.

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responsible for enforcing the water conservation measures. Additional measures may be imposed as a result of a contract for water supply between CSA 53-C and the City of Big Bear Lake DWP:

- Landscape shall not be irrigated between the hours of nine (9) a.m. and six (6) p.m.
- Residences, buildings and premises shall be limited to watering every other day.
- Landscape irrigation shall be limited to what is needed and shall not be excessive. Water from landscape irrigation shall not be allowed to run off into streets.
- Water shall not be allowed to leak from any waterline, faucet, or any other facility, either within or outside a private residence, business establishment or on private property. All such leaking waterlines, faucets, and other facilities shall be repaired immediately to prevent leakage.
- Sidewalks, paved driveways, and parkways shall not be washed off with hoses, except as required for sanitary purposes.
- Non-commercial washing of cars, and boats or any other vehicle shall only be done with an automatic shut-off nozzle on a hose, or with a bucket.
- New landscaping shall not exceed more than one-thousand square feet of turf on a parcel or lot or twenty-five percent of the available landscape area.
- A model landscaping and irrigation guide shall be prepared for the tract and required by homeowner association rules. The guide shall specify a plant palate that emphasizes native plants and cultivars that are suitable for the mountain climate. Plant materials shall be low water consuming and fire resistant. Irrigation shall emphasize drip and bubbler type emitters with limit aerial spray

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		irrigation methods. The guide shall be reviewed and approved by the Land Use Services Department.	
	Solid Waste		
	5.3-7 *Development of the Project area would result in increased solid waste generation. Project compliance with the Integrated Waste Management Plan for the County of San Bernardino (currently being revised) would reduce the amount of solid waste which is ultimately disposed of at the Barstow Landfill and maintain potential impacts at a less than significant level.*	5.3-7 No mitigation measures are recommended.	
	Natural Gas		
	5.3-8 *Project implementation would result in an increased demand for natural gas service beyond existing conditions and would require expansion of the existing gas system. Analysis has concluded that a less than significant impact would occur in this regard.*	5.3-8 No mitigation measures are recommended.	
	Electricity		
	5.3-9 *Project implementation would result in an increased demand for electrical service beyond existing conditions and would require expansion of the existing electrical system. Analysis has concluded that impacts would be less than significant.*	5.3-9 No mitigation measures are recommended.	
	Cumulative Impacts		
	5.3-10 *Cumulative development could result in an increased demand for public services and an increase in the consumption rates for public utilities, potentially requiring expansions of the existing utility systems. The inability of water providers to confirm service on a project level would also result in significant and unavoidable cumulative impacts. Analysis has concluded that cumulative development for the remaining service and utility affects are subject to standards and requirements of reviewing agencies and no additional mitigation is recommended.*	5.3-10 No mitigation measures are recommended.	

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5.4	**AESTHETICS/LIGHT AND GLARE**		
	Short-Term Aesthetic/Light and Glare Impacts		
	5.4-1 *Construction of the proposed project would temporarily alter the visual appearance of the site and introduce new short-term sources of light and glare. Analysis has concluded that impacts would be reduced to less than significant levels with implementation of the recommended mitigation measures.*	5.4-1a Construction equipment staging areas shall be located away from existing residential uses. Appropriate screening (i.e., temporary fencing with opaque material) shall be used to buffer views of construction equipment and material, when feasible. Staging locations shall be indicated on project Grading Plans. 5.4-1b All construction-related lighting associated with the construction of new roadways, the realignment of State Route 38, and the installation of utilities shall be located and aimed away from adjacent residential areas. Lighting shall use the minimum wattage necessary to provide safety at the construction site. A construction safety lighting plan shall be submitted to the county for review concomitant with Grading Permit applications for the subdivision of the lots.	Significant and unavoidable impacts related to Aesthetics/Light and Glare have been identified for viewshed alterations involving existing residents to the north, east and west of the project site. Additionally, significant and unavoidable impacts have been identified for views from State Route 38, a scenic highway, to the south and from the south shore of Big Bear Lake. If the County of San Bernardino approves the project, the County shall be required to cite their findings in accordance with Section 15091 of CEQA and prepare a Statement of Overriding Considerations in accordance with section 15093 of CEQA.
	Long-Term Aesthetic Impacts		
	5.4-2 *Implementation of the Moon Camp project would adversely impact scenic resources, scenic vistas and the visual character of the site and its surroundings. Analysis has concluded that a significant and unavoidable impact to the visual character and viewshed from the project site and surrounding areas would occur which cannot be mitigated to a less than significant level.*	5.4-2a Roof pitches shall not exceed 9/12 and no higher than two-story for any portion of the structure footprint for lots 62-92. 5.4-2b All homes shall provide a two-car garage with automatic garage doors. 5.4-2c A view envelope for each property shall be established by creating a line starting at 6 feet at each side lot line and moving up at a 30 degree angle until both lines meet at the middle of the property. The area located under these lines is the view envelope. Structures shall not protrude outside the view envelope. The view envelope orients the building ridgeline parallel to the view corridors on narrower lots providing views for residents located behind the property.	No additional significant impacts related to Aesthetic/Light and Glare have been identified following implementation of mitigation measures and/or compliance with applicable standards, requirements and/or policies by the County of San Bernardino.

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		5.4-2d New development shall be subordinate to the natural setting and minimize reflective surfaces. Building materials including siding and roof materials shall be selected to blend in hue and brightness with the surroundings. Colors shall be earth tones, shades of grays, tans, browns, greens, pale yellows, and shall be consistent with the mountain character of the area.	
		5.4-2e Outside parking/storage areas associated with the boat dock activities shall be completely screened from view by the placement of landscaping and plantings which are compatible with the local environment and, where practicable, are capable of surviving with a minimum of maintenance and supplemental water.	
		5.4-2f Construction plans for each individual lot shall include the identification and placement of vegetation with the mature height of trees listed. Landscaping and plantings should not obstruct significant views, within or outside of the project, either when installed or when they reach mature growth. The removal of existing vegetation shall not be required to create views.	
		5.4-2g A Note shall be placed on the Composite Development Plan stating that during construction plans review and prior to issuance of building permits for each lot, the building inspector shall refer to the Mitigation Monitoring and Compliance Program regarding these aesthetic impact mitigation measures. The building inspector shall coordinate with the Advance Planning Division the review and approval of building plans in relation to these aesthetic impact mitigation measures, prior to approval and issuance of building permits.	
	Long-Term Scenic Highway Impacts		
	5.4-3 *Implementation of the Moon Camp project would impact views of Big Bear Lake, the distant mountain ranges to the south and adjacent forest areas from North Shore Drive*	5.4-3a Any entry sign for the development shall be a monument style sign compatible with the mountain character, preferably, rock or rock-appearance.	

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	(State Route 38) which is a County and Federally recognized Scenic Highway/Byway. Analysis has concluded that significant and unavoidable impacts would occur as a result of project development.	5.4-3b Prior to recordation of the tract map (and/or any ground disturbance, whichever occurs first), landscaping plans for lettered lots B and C shall be submitted to and approved by the San Bernardino County Planning Department.	
	Long-Term Light and Glare Impacts		
	5.4-4 *The proposed Moon Camp project would introduce additional light and glare on-site which may affect the surrounding residents. Analysis has concluded that potential impacts would be reduced to less than significant levels with implementation of the recommended mitigation measures.*	5.4-4a All exterior lighting shall be designed and located as to avoid intrusive effects on adjacent residential properties and undeveloped areas adjacent to the project site. Low-intensity street lighting and low-intensity exterior lighting shall be used throughout the development to the extent feasible. Lighting fixtures shall use shielding, if necessary to prevent spill lighting on adjacent off-site uses. 5.4-4b Lighting used for various components of the development plan shall be reviewed for light intensity levels, fixture height, fixture location and design by an independent engineer, and reviewed and approved by the County Building and Safety Division. 5.4-4c The project shall use minimally reflective glass. All other materials used on exterior buildings and structures shall be selected with attention to minimizing reflective glare. 5.4-4d Vegetated buffers shall be used along State Route 38 to reduce light intrusion on residential development and on forested areas located adjacent to the project site. 5.4-4e Mitigation Measures 5.4-4a through 5.4-4d shall be included within the Conditions, Covenants and Restrictions (CC&Rs) of the Home Owner's Association (HOA). 5.4-4f All outdoor light fixtures shall be cutoff luminaries and shall only use high- or low-pressure sodium lamps. 5.4-4g The Project Applicant/Developer shall install light colored, reflective roof products. Such roofs shall utilize light colored, reflective	

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		materials that meet the performance standards developed by the Energy Star Labeled Roof Program, as well as the American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) Standards 90.1 and 90.2 on energy efficient buildings. This condition shall be verified by the County of San Bernardino Building and Safety Division prior to issuance of building permits.	
	Cumulative Impacts		
	5.4-5 *Build-out of the Moon Camp development, together with cumulative projects, may alter the nature and appearance of the area and contribute to the loss of undeveloped areas. Analysis has concluded that no significant impacts beyond the analysis contained in the County of San Bernardino General Plan and General Plan EIR are anticipated.*	5.4-5 No mitigation measures are recommended.	
5.5	**TRAFFIC AND CIRCULATION**		
	Existing Conditions with Project Traffic Analysis		
	5.5-1 *The intersection of Stanfield Cutoff and Big Bear Boulevard currently operates above 100 percent utilization in the peak month weekday evening peak hour. Although the Project does not generate significant traffic volumes, it would contribute to the intersection utilization at the weekday evening peak hour. Pro-rata share payment for intersection improvements to the intersection would reduce project affects to less than significant levels.*	5.5-1 For existing traffic conditions, the intersection of Stanfield Cutoff and Big Bear Boulevard currently requires the eastbound right turn lane to be converted to an eastbound through lane, through the intersection. The eastbound right turn lane is restricted to an eastbound through lane, and involves roadway widening. The project's pro rata share of these off-site road improvements is estimated to be $17,748.	Following implementation of recommended mitigation measures, Traffic and Circulation impacts would be reduced to a less than significant level.
	Year 2006 Traffic Analysis		
	5.5-2 *Project implementation, with year 2006 traffic conditions, would result in an increase in traffic volumes. Analysis has concluded that implementation of recommended mitigation measures would reduce impacts to the intersection of Stanfield Cutoff and Big Bear Boulevard to a less than significant level.*	5.5-2 Refer to Mitigation Measure 5.5-1. No additional mitigation measures are recommended.	

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	Year 2025 Traffic Analysis		
	5.5-3 *Project implementation, with year 2025 traffic conditions, would result in an increase in traffic volumes. Analysis has concluded that implementation of recommended mitigation measures would reduce impacts to the intersection of Stanfield Cutoff/Big Bear Boulevard and Stanfield Cutoff/North Shore Drive to a less than significant level.*	5.5-3 For future traffic conditions, the intersection of Stanfield Cutoff and North Shore Drive shall require a traffic signal. The project's pro rata share of the signal is $56,523.	
	Safety Hazards and Emergency Access		
	5.5-4 *Project implementation may increase hazards to vehicles, pedestrians and bicyclists due to the proposed project. Analysis has concluded that with implementation of the recommended mitigation measures, impacts would be less than significant.*	5.5-4a Parking shall be restricted on State Route 38. 5.5-4b A 150-foot eastbound left turn pocket shall be striped for traffic on North Shore Drive turning left into the project entry locations. 5.5-4c For future traffic conditions, intersection geometrics as recommended in Table 1b of the Kunzman Associates June 2003 *Traffic Analysis* report, shall be implemented. 5.5-4d All streets internal to the project shall be constructed to full ultimate cross-sections. ~~as adjacent development occurs.~~ 5.5-4e A STOP sign shall be installed to control outbound traffic on all site access roadways onto North Shore Drive. 5.5-4f The County of San Bernardino shall periodically review traffic operations in the vicinity of the site once the project is constructed in order to assure that the traffic operations are satisfactory. 5.5-4g Landscape plantings and signs shall be limited to 36 inches in height within 25 feet of project driveways to assure good visibility.	
5.6	**AIR QUALITY**		
	Short-Term Air Quality Impacts		
	5.6-1 *Significant short-term air quality impacts would occur during site*	5.6-1 In accordance with the County Development Code and SCAQMD	The following air quality impacts would remain

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	preparation and project construction. These impacts are considered significant before and after mitigation for ROG and NOx emissions from construction equipment exhaust. Impacts would be less than significant for other pollutants. (Mitigation in this instance refers to applicable County Development Code Sections and SCAQMD Rules.)	Rules, the Project Applicant shall incorporate the following measures during the construction phase of the Project to the satisfaction of the SCAQMD and County of San Bernardino. Compliance with this measure is subject to periodic field inspections by the SCAQMD and County of San Bernardino. Grading: Apply non-toxic soil stabilizers according to manufacturer's specifications to all inactive construction areas (previously graded for ten days or more); ▪ Replace ground cover in disturbed areas as quickly as possible; ▪ Enclose, cover, water two times daily or apply non-toxic soil binders in accordance to manufacturer's specifications to exposed piles (i.e., gravel, sand, dirt) with 5% or greater silt content; ▪ Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 mph; and ▪ All trucks hauling dirt, sand, soil, or other loose materials shall be covered and shall maintain at least two feet of freeboard (i.e., minimum vertical distance between top of the load and the top of the trailer). Paved Roads: ▪ Sweep streets at the end of the day if visible soil material is carried onto adjacent public paved roads.	significant and unavoidable following mitigation: ▪ ROG and NOx from construction activities; ▪ Project Operations: Exceedance of State and/or Federal emission levels (ROG, CO and PM10) from project operations; and ▪ Project implemen-tation would result in a significant un-avoidable impact with respect to consistency with the AQMP. If the County of San Bernardino approves the project, the County shall be required to cite their findings in accordance with Section 15091 of CEQA and prepare a Statement of Overriding Considerations in accordance with Section 15093 of CEQA.
	Long-Term Operational Impacts		
5.6-2	*The project would result in an overall increase in the local and regional pollutant load due to direct impacts from vehicle emissions and indirect impacts from electricity and natural gas consumption. Combined mobile and area source emissions would exceed SCAQMD thresholds for ROG, CO and*	5.6-2 To the extent feasible, the project shall incorporate the installation of EPA-certified wood burning stoves or fireplaces. If this is not feasible, then the installation of a ceramic coating on the honeycomb inside a catalytic combustor shall be investigated as a feasible alternative. Alternatively, the	

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	PM_{10}. These exceedances are considered significant and cannot be mitigated to a less than significant level.	use of natural gas fireplaces may be used as a feasible alternative.	
	Consistency with Air Quality Management Plan		
	5.6-3 *The project would not conflict with the Air Quality Management Plan (AQMP). Analysis has concluded that the proposed project is consistent with the AQMP criteria.*	5.6-3 No mitigation measures are recommended.	
	Cumulative Impacts		
	5.6-4 *Cumulative impacts to regional air quality resulting from development of the proposed Project would be less than significant.*	5.6-4 No mitigation measures are recommended.	
5.7	**NOISE**		
	Short-Term Construction Noise and Vibration Impacts		
	5.7-1 *Grading and construction within the Project area would result in temporary noise and/or vibration impacts to nearby noise sensitive receptors. Analysis has concluded that construction noise and vibration impacts would be less than significant following compliance with the County requirements.*	5.7-1a Construction activities shall be limited to the hours of 7:00 a.m. ~~and~~ to 7:00 p.m. Monday to Saturday and prohibited on Sundays and Federal Holidays. 5.7-1b All construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers, to the satisfaction of the County Engineer. 5.7-1c Stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receptors, to the satisfaction of the County Engineer. 5.7-1d Stockpiling and staging areas shall be located as far as practical from noise sensitive receptors during construction activities, to the satisfaction of the County Engineer.	No unavoidable significant impacts related to noise have been identified following implementation of recommended mitigation measures and compliance with applicable requirements set forth by the County of San Bernardino and the Big Bear Municipal Water District.
	Long-Term Noise Impacts		
	5.7-2 *Implementation of the Moon Camp Project would generate additional vehicular travel on the surrounding roadway network, thereby resulting in noise level increases. Analysis has concluded that long-term noise impacts would be less than significant for all analyzed roadway segments in*	5.7-2 No mitigation measures are recommended.	

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	Year 2006 and Year 2025 traffic scenarios. No mitigation measures are recommended.		
	Stationary Noise		
	5.7-3 *Implementation of the Moon Camp project would result in on-site noise associated with residential and parking lot activities and boat loading/unloading activities at the marina. Analysis has concluded that stationary source impacts would be reduced to less than significant levels with adherence to the County of San Bernardino General Plan policies relating to noise level standards and recommended mitigation measures.*	5.7-3 No mitigation measures are recommended.	
	Watercraft Noise		
	5.7-4 *Implementation of the Moon Camp project would result in increased watercraft activities on Big Bear Lake. Analysis has concluded that watercraft noise impacts would be reduced to less than significant levels with adherence to Rules and Regulations established by the Big Bear Municipal Water District for Big Bear Lake.*	5.7-4 No mitigation measures are recommended.	
	Cumulative		
	5.7-5 *Implementation of the Moon Camp Project, combined with cumulative projects, would increase the ambient noise levels in the site vicinity. Impact analysis and mitigation of impacts are determined on a project-by-project basis.*	5.7-5 No mitigation measures are recommended.	
5.8	**BIOLOGICAL RESOURCES**		
	Special Status Biological Resources		
	5.8-1 *Project implementation would affect species identified as special status. Implementation of recommended mitigation measures would reduce impacts to a less than significant level to biological species, with the exception of the Bald Eagle. Impacts to the Bald Eagle are concluded as significant and unavoidable.*	5.8-1a ~~Prior to vegetation clearing, grading, or other disturbance, the project site shall be surveyed during a year with precipitation at least 40 percent of average for the area to determine presence or absence of special status plant species and vegetation types. Surveys shall focus on listed special status vegetation types, and Threatened or Endangered, and CNPS List 1B and 2 species whose presence could not be determined during surveys due to lack of rainfall.~~	Significant and unavoidable impacts related Biological Resources have been identified for impacts to Bald Eagle populations. If the County of San Bernardino approves the project, the County shall be required to cite their findings in accordance with Section 15091 of CEQA and prepare a Statement of Overriding Considerations in

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		~~The location and extent of special status species populations shall be mapped and the size of the populations accurately documented.~~ ~~The project applicant shall pay compensation for the loss of special status botanical resources identified on the project site by the survey by funding the purchase and management of off-site habitat through contributions to a fund established by the California Wildlife Foundation on behalf of the CDFG. The California Wildlife Foundation is an independent 501(c)3 nonprofit corporation founded to assist the CDFG and other governmental agencies in the management of funds and mitigation banks designed to offset the impact of development on California's native flora and fauna. Off-site habitat containing the same species as those identified within resources impacted by the proposed project shall be purchased at a ratio agreed upon by the County of San Bernardino, San Bernardino National Forest, USFWS, and CDFG. The typical mitigation ratio is 3:1 (i.e., three acres of habitat purchased for preservation for each acre impacted by development).~~ ~~If additional surveys during a year with precipitation at least 40 percent of average do not encounter additional special status plant resources, the project applicant is responsible for the mitigation of a minimum of 11.8 acres of pebble plain and open Jeffrey pine forest in the western half of the project site that is known to be occupied by the federally-listed Threatened ash-gray Indian paintbrush (i.e., would be required to fund the purchase of 35.4 acres of offsite habitat from the California Wildlife Foundation if the agreed mitigation ratio is 3:1).~~ Prior to vegetation clearing, grading, or other disturbance, the project site shall be surveyed during a year with precipitation at least 40 percent of average for the area to determine presence or absence of special status plant species and vegetation types. Surveys shall focus on	accordance with section 15093 of CEQA. No additional significant impacts related to Biological Resources have been identified following implementation of mitigation measures and/or compliance with applicable standards, requirements and/or policies by the County of San Bernardino.

EIR SECTION	IMPACTS	MITIGATION MEASURES	SIGNIFICANCE AFTER MITIGATION
		special status vegetation types, and Threatened or Endangered, and CNPS List 1B and 2 species whose presence could not be determined during surveys due to lack of rainfall. The location and extent of special status species populations shall be mapped and the size of the populations accurately documented. Pebble plain habitat acreages will be recalculated following the survey using criteria established by the Habitat Management Guide for Pebble Plain Habitat on the National Forest System (2002). Should avoidance/retention on-site of the 4.91 acres of Pebble Plain habitat in permanent open space under a Conservation Easement Agreement not occur, the Project Applicant shall pay compensation for the loss of special status botanical resources identified on the project site during the survey by funding the purchase, establishment of a conservation easement, and management of off-site habitat within the conservation easement by an entity approved by the CDFG. Off-site habitat containing the same species as those identified within resources impacted by the proposed project shall be purchased at a ratio of 3:1 (i.e., three acres of habitat purchased for preservation for each acre impacted by development). Prior to the initiation of clearing or grading activities on the project site, the conservation easement will be established, the management entity will be approved by the CDFG, and a non-wasting endowment will be established for the monitoring and management of the preservation site by the management entity in perpetuity. If additional surveys during a year with precipitation at least 40 percent of average do not encounter additional special status plant resources, the Project Applicant is responsible for mitigating impacts to a minimum of 11.8-acres of pebble plain and open Jeffrey pine forest in the western half of the project site that is known to be occupied by the Federally-listed Threatened ash-gray	

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		Indian paintbrush. As such, the applicant would be required to fund the purchase and maintenance of 35.4-acres of offsite pebble plain and open Jeffrey pine forest habitat that contains special status plant species, including Ash-gray Indian paintbrush and others known to occur on the site.	
		5.8-1b Trees identified on Exhibits 3 and 4 of the Bald Eagle Survey Report (Appendix E, see attached) as eagle perch locations shall be preserved in place upon project completion and shall not be removed under any circumstances. Any development that may occur within the project site and in the individual lots must avoid impacts to these trees and their root structures. All construction or landscaping improvements, including irrigation, will be prohibited on or around the exposed root structures or within the dripline of these trees. These restrictions on development of the individual tentative tracts must be clearly presented and explained to any potential prospective developers and/or homeowners prior to assumption of title and close of escrow. This measure shall be identified as a Note on the Composite Development Plan.	
		5.8-1c Prior to vegetation clearing, grading, or other disturbance, the project site shall be surveyed to identify all large trees (i.e., greater than 20-inches in diameter at 4.5 feet from the ground) within 600 feet from the high water line. Trees identified on the project site as having a diameter in excess of 20-inches at four feet from the ground within 600 feet of the shoreline shall be documented and tagged. Any development that may occur within the project site and in the individual lots must avoid impacts to tagged trees and their root structures. All construction or landscaping improvements, including irrigation, will be prohibited on or around the exposed root structures or within the dripline of these trees. These restrictions on development of the individual tentative tracts must be clearly presented and explained to any potential prospective developers	

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		and/or homeowners prior to assumption of title and close of escrow. This measure shall be identified as a Note on the Composite Development Plan.	
		5.8-1d Seven days prior to the onset of construction activities, a qualified biologist shall survey within the limits of project disturbance for the presence of any active raptor nests. Any nest found during survey efforts shall be mapped on the construction plans. If no active nests are found, no further mitigation would be required. Results of the surveys shall be provided to the CDFG. If nesting activity is present at any raptor nest site, the active site shall be protected until nesting activity has ended to ensure compliance with Section 3503.5 of the California Fish and Game Code. Nesting activity for raptors in the region of the project site normally occurs from February 1 to June 30. To protect any nest site, the following restrictions on construction are required between February 1 and June 30 (or until nests are no longer active as determined by a qualified biologist): (1) clearing limits shall be established a minimum of 300 feet in any direction from any occupied nest and (2) access and surveying shall not be allowed within 200 feet of any occupied nest. Any encroachment into the 300/200 foot buffer area around the known nest shall only be allowed if it is determined by a qualified biologist that the proposed activity shall not disturb the nest occupants. Construction during the nesting season can occur only at the sites if a qualified biologist has determined that fledglings have left the nest.	
		5.8-1e Vegetation removal, clearing, and grading on the project site shall be performed outside of the breeding and nesting season (between March and September) to minimize the effects of these activities on breeding activities of migratory birds and other species.	

EIR SECTION	IMPACTS	MITIGATION MEASURES	SIGNIFICANCE AFTER MITIGATION
		5.8-1f The use of the boat dock for motorized boating shall be prohibited between the dates of December 1 and April 1. No motorized boats shall be allowed to launch or moor in the vicinity of the boat dock at any time during this period. This restriction shall be clearly displayed on signage at the entrance to the parking lot and on the boat dock visible from both land and water. This requirement shall also be published in the Homeowner's Association CC&Rs.	
		~~5.8-1g Exterior construction shall be prohibited between the dates of December 1 and April 1 (of each year). Significant impacts to pebble plain habitat can be mitigated to a less than significant level through off-site preservation. The project applicant shall pay compensation for the loss of special status botanical resources identified on the site, by the survey, by contributing to the funding of purchase and management of off-site habitat. The Applicant shall acquire habitat in the Big Bear Valley and dedicate to the CDFG or suitable conservation organization. The California Wildlife Foundation is an independent 501(c)3 nonprofit corporation founded to assist the CDFG and other governmental agencies in the management of funds and mitigation banks designed to offset the impact of development on California's native flora and fauna. Off site habitat shall be purchased at a ratio agreed upon by the County of San Bernardino, San Bernardino National Forest, USFWS, and CDFG. The typical mitigation ratio is 3:1 (i.e., three acres of habitat purchased for preservation for each acre impacted by development. An area containing no less than 2.1 acres of pebble plain habitat in an area located adjacent to other open space areas within the project vicinity shall be preserved in perpetuity. The preserved areas shall be protected from future development through a conservation easement or other appropriate mechanism.~~	

EIR SECTION	IMPACTS	MITIGATION MEASURES	SIGNIFICANCE AFTER MITIGATION
	Sensitive Natural Communities/Habitats		
	5.8-2 *The proposed Project would impact portions of the Project site that are habitat for referenced sensitive species. Implementation of recommended mitigation measures would reduce impacts to a less than significant level.*	5.8-2a Street lamps on the project site shall not exceed 20 feet in height, shall be fully shielded to focus light onto the street surface and shall avoid any lighting spillover onto adjacent open space or properties. Furthermore, street lights shall utilize low color temperature lighting (e.g., red or orange). 5.8-2b Outdoor lighting for proposed homes on the individual tentative tracts shall not exceed 1,000 lumens. Furthermore, residential outdoor lighting shall not exceed 20 feet in height and must be shielded and focused downward to avoid lighting spillover onto adjacent open space or properties. These restrictions on outdoor lighting of the individual tentative tracts must be clearly presented and explained to any potential prospective developers and/or homeowners prior to assumption of title and close of escrow. This requirement shall also be published in the Homeowner's Association CC&Rs. 5.8-2c To limit the amount of human disturbance ~~to~~ on adjacent natural open space areas, signs shall be posted along the northeastern and eastern perimeter of the project site where the property boundary abuts open space~~ directing people to keep out of the adjacent natural open space areas and to keep dogs leashed in areas adjacent to natural open space areas. This requirement shall be published in the Homeowner Association CC&Rs~~ with the following statement: "Sensitive plant and wildlife habitat. Please use designated trails and keep pets on a leash at all times." In addition, a requirement stating that residents shall keep out of adjacent open space areas to the north with the exception of designated trails will be published in the Homeowner Association CC&Rs and a map of designated hiking trails will be provided to all residents.	

EIR SECTION	IMPACTS	MITIGATION MEASURES	SIGNIFICANCE AFTER MITIGATION
		5.8-2d Prior to ~~the issuance of individual building permits, landscaping designs~~ recordation of the final map, a landscaping plan for the entire tract shall be prepared (inclusive of a plant palette) with native trees and plant species, and, shall be submitted to the County of San Bernardino for review and approval by a qualified biologist. The review shall determine that no non-native or invasive plant species are to be used in the proposed landscaping. The biologist should suggest appropriate native plant substitutes. A note shall be placed on the Composite Development Plan indicating that all proposed landscaping (including landscaping on individual lots) shall conform with the overall approved tract map landscaping plan. A requirement shall be included stating that residents shall include a restriction of the use of tree and plant species to only native trees/plants approved per the overall tract map landscaping plan. the Homeowner Association CC&Rs shall also restrict (individual lot owners) to use only native tree and plant species approved per the overall tract map landscaping plan.	
		5.8-2e ~~Garages with automatic door openers shall be required. No exterior construction shall occur between December 1 and April 1, when bald eagles are present~~. Garages with automatic door openers shall be required. No exterior construction, grading or vegetation clearing shall be permitted between December 1 and April 1, which is the wintering period for bald eagles (i.e., the season when bald eagles are present in the Big Bear area).	
		Also refer to mitigation measures 5.8-1a to 5.8-1f.	
	Jurisdictional Waters		
	5.8-3 *Development of the proposed Project ~~does not have~~has the potential to impact jurisdictional waters. Analysis has concluded that potentially significant impacts would be reduced to a less than significant level~~impact~~*	5.8-3 ~~No mitigation measures are recommended.~~ Per the direction of the California Department of Fish and Game, all unavoidable impacts to State and Federal jurisdictional lakes, streams, and associated	

EIR SECTION	IMPACTS	MITIGATION MEASURES	SIGNIFICANCE AFTER MITIGATION
	~~*would occur in this regard after regulatory compliance*~~ *with implementation of the recommended mitigation measures*	habitat shall be compensated for with the creation and/or restoration of in-kind habitat on-site and/or off-site at a minimum 3:1 replacement-to-impact ratio. Additional requirements may be required through the permitting process depending on the quality of habitat impacted, project design and other factors.	
	Wildlife Movement		
	5.8-4 *Project implementation may interfere with the movement of a native resident or migratory wildlife species. Analysis has concluded that impacts are less than significant.*	5.8-4 No mitigation measures are recommended.	
	Regional and Local Policies/Plans		
	5.8-5 *Project implementation would not conflict with adopted regional and/or local policies/plans pertaining to biological resources. Analysis has concluded that impacts are less than significant.*	5.8-5 No mitigation measures are recommended.	
	Cumulative		
	5.8-6 *Cumulative development in the Project area may impact the area's biological resources. Analysis has concluded that* ~~*with implementation of the specified mitigation and compliance with all applicable County, State and Federal regulations concerning biological resources, a less than significant impact would occur in this regard.*~~*project implementation incrementally adding to impacts on bald eagle habitat in the Big Bear Valley would result in a significant and unavoidable cumulative impact to the wintering bald eagle population on Big Bear Lake.*	5.8-6 No mitigation measures are recommended.	
5.9	**CULTURAL RESOURCES**		
	Archaeological/Historical Resources		
	5.9-1 *The proposed Project may cause a significant impact to unknown archaeological and/or historic resources visible on-site. Implementation of recommended mitigation measures would reduce impacts to a less than significant level.*	5.9-1 Project-related grading, grubbing, trenching, excavations, and/or other earth-moving activities in the project area shall be monitored by a qualified archaeologist. In the event that a material of potential cultural significance is uncovered during such activities on the project site, all	No significant impacts related to Cultural Resources have been identified following implementation of mitigation measures referenced in this Section.

EIR SECTION	IMPACTS	MITIGATION MEASURES	SIGNIFICANCE AFTER MITIGATION
		earth-moving activities in the project area shall cease and the archeologist shall evaluate the quality and significance of the material. Earth-moving activities shall not continue in the area where a material of potential cultural significance is uncovered until resources have been completely removed by the archaeologist and recorded as appropriate.	
	Paleontological Resources		
	5.9-2 *The proposed Project may cause a significant impact to unknown paleontological resources on-site. Implementation of recommended mitigation measures would reduce impacts to a less than significant level.*	5.9-2a Grading shall be monitored during excavation in areas identified as likely to contain paleontologic resources by a qualified paleontological monitor. Monitoring shall be accomplished for any undisturbed subsurface older alluvium, which might be present in the subsurface. The monitor shall be equipped to salvage fossils as they are unearthed to avoid construction delays and to remove samples of sediments which are likely to contain the remains of small fossil invertebrates and vertebrates. The monitor must be empowered to temporarily halt or divert grading equipment to allow for removal of abundant or large specimens.	
		5.9-2b Recovered specimens shall be prepared to a point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates.	
		5.9-2c Identification and curation of specimens into a museum repository with permanent retrievable storage shall occur for paleontological resources.	
		5.9-2d A report of findings shall be prepared with an appended itemized inventory of specimens. The report shall include pertinent discussion of the significance of all recovered resources where appropriate. The report and inventory when submitted to the appropriate Lead Agency, shall signify completion of the program to mitigate impacts to paleontologic resources.	

EIR SECTION	IMPACTS	MITIGATION MEASURES	SIGNIFICANCE AFTER MITIGATION
	Burial Sites		
	5.9-3 *The proposed Project may cause a significant impact to Native American burial sites which could occur on-site. Implementation of the specified mitigation measures would reduce impacts to a less than significant level.*	5.9-3 In the event human remains are discovered during grading/ construction activities, work shall cease in the immediate area of the discovery and the Project Applicant shall comply with the requirements and procedures set forth in Section 5097.98 of the Public Resources Code, including notification of the County Coroner, notification of the Native American Heritage Commission, and consultation with the individual identified by the Native American Heritage Commission to be the "most likely descendent."	
	Cumulative		
	5.9-4 *Cumulative development may adversely affect cultural resources in the north shore area. Resources are evaluated and mitigated on a project-by-project basis.*	5.9-4 No mitigation measures are recommended.	
5.10	**GEOLOGY AND SOILS**		
	Slope Stability		
	5.10-1 *Development of the proposed Project could result in slope failures. Implementation of the recommended mitigation measures and compliance with the County Development Code and Uniform Building Code would reduce impacts to less than significant levels.*	5.10-1 The stability of ~~S~~south facing cut slopes shall be analyzed as part of the design-level geotechnical investigation. ~~u~~Utilize~~ing~~ 2:1 buttressed slopes using on site native soil materials, or ~~by~~ constructing geotextile-reinforced soil buttresses ~~where~~for planned unstable cut slopes~~ are planned~~ are typical engineering designs for stabilizing slopes. Either of these methods, or other methods must be approved by the San Bernardino County Department of Building and Safety~~Geologist for slope reinforcement may be utilized~~.	No significant impacts related to Geology and Soils have been identified following implementation of mitigation measures and/or compliance with applicable standards, policies and/or County of San Bernardino Development Code and standards set forth in the Uniform Building Code.
	Soil Erosion		
	5.10-2 *Development of the proposed Project could result in accelerated soil erosion. Project compliance with the County Development Code, the Uniform Building Code and the recommended mitigation measures would reduce impacts to a less than significant level.*	5.10-2a Due to the potential for erosion associated with younger alluvial deposits within the two major on-site stream channels, increased surface drainage quantities associated with development on-site shall be directed away from the stream channels.	

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		5.10-2b Prior to the issuance of Grading Permits, the Project Applicant shall prepare a Soil Erosion and Sedimentation Plan for submittal and approval by the County Building and Safety Department.	
	Ground Shaking		
	5.10-3 *Development of the proposed Project may increase the number of people/structures exposed to effects associated with seismically induced ground shaking. Implementation of the recommended mitigation measures and compliance with the County Development Code and the Uniform Building Code would reduce potential impacts to less than significant.*	5.10-3 Engineering design for all structures and roadways shall be based on the 2001 California Uniform Building Code. Construction plans shall be in accordance with seismic design standards set forth by the County's Development Code and Uniform Building Code.	
	Seiche		
	5.10-4 *Development of the proposed Project may expose people/structures to seiching as a result of significant ground motion related to an earthquake. Project compliance with recommended mitigation measures would reduce impacts to less than significant levels.*	5.10-4 Residential structures shall be located in areas which provide a minimum of five feet of freeboard above the high water line for any structures.	
	Expansive Soils		
	5.10-5 *Development of the proposed Project may create substantial risks to life property as a result of expansive soils. Implementation of the recommended mitigation measure would reduce impacts to less than significant levels.*	5.10-5 Prior to grading permit issuance, ~~geologic analysis/studies shall be required including 1)~~ a quantitative geotechnical analysis and~~of liquefaction, 2) a~~ design-level geotechnical engineering report shall be required and submitted to the County of San Bernardino Department of Building and Safety for their approval. ~~and 3) a design level engineering geology report.~~	
	Cumulative Impacts		
	5.10-6 *The proposed Project, combined with future development, may result in increased short-term impacts such as erosion and sedimentation, and long-term seismic impacts within the area. Mitigation is incorporated on a project-by-project basis to reduce impacts to a less than significant level in areas deemed suitable for development.*	5.10-6 No mitigation measures are recommended.	

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5.11	**HYDROLOGY AND DRAINAGE**		
	Drainage and Runoff		
	5.11-1 *The proposed Project could significantly alter drainage patterns which could result in increased erosion potential and runoff. Impacts are concluded as less than significant with implementation of the Project design features (i.e., the provision of adequate outlet structures, storm drains to contain flows and proper bluff drainage).*	5.11-1 The proposed cross culverts shall be sized for 100-year burn and bulking flow rates. The burn and bulking method would increase the runoff from the natural areas. The method provided in the Los Angeles County Hydrology Manual is recommended. In addition, the cross culverts shall all be designed with headwalls to prevent CMP crushing, and shall be maintained adequately.	Due to inconclusive testing of potential overdraft conditions for the ground water basin associated with the North Shore Hydrologic Subunit, project and cumulative impacts are concluded to be significant and unavoidable. If the County of San Bernardino approves the project, the County shall be required to adopt findings in accordance with Section 15091 of the CEQA Guidelines and prepare a Statement of Overriding Considerations in accordance with Section 15093 of the CEQA Guidelines. No additional significant impacts related to hydrology and water quality have been identified following implementation of the recommended mitigation measures and/or through regulatory compliance.
	Groundwater		
	5.11-2 *The proposed project may result in groundwater overdraft conditions. Although mitigation measures requiring further testing are referenced, based upon the evidence presented to date, it is concluded that groundwater overdraft is a significant adverse impact and until additional technical review is conducted, the project would result in an unavoidable adverse impact.*	~~5.11-2 Based upon the technical analysis presented, a potential groundwater overdraft condition would occur and no additional mitigation measures have been identified.~~ 5.11-2a Within three months of project approval, the Project Applicant shall submit a plan for a detailed geohydrologic investigation. The plan must present the possible sources of groundwater selected for the project and the methodology proposed to investigate those sources. If the on-site wells are to be utilized to serve this project, it must be determined if either could draw water from Big Bear Lake. The plan must be prepared by a California Registered Geologist. 5.11-2b Within six months of plan approval, the Project Applicant shall submit the results of the geohydrologic investigation. The report must be prepared by a California Registered Geologist. 5.11-2c Concurrently or within three months of approval by the geohydrologic report, the Project Applicant shall submit a groundwater monitoring plan in accordance with San Bernardino County's "Guidelines for Preparation of a Groundwater Monitoring Plan." The plan must be prepared by a California Registered Geologist.	

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	Water Quality – Construction		
	5.11-3 *Grading, excavation and construction activities associated with the proposed Project could impact water quality due to sheet erosion of exposed soils and subsequent deposition of particles and pollutants in drainage areas. Impacts would be reduced to a less than significant level through regulatory compliance and with incorporation of the recommended mitigation.*	5.11-3 Prior to Grading Permit issuance and as part of the Project's compliance with the NPDES requirements, a Notice of Intent (NOI) shall be prepared and submitted to the Santa Ana Regional Water Quality Control Board providing notification and intent to comply with the State of California general permit. Also, a Storm Water Pollution Prevention Plan (SWPPP) shall be completed for the construction activities on-site. A copy of the SWPPP shall be available and implemented at the construction-site at all times. The SWPPP shall outline the source control and/or treatment control BMPs to avoid or mitigate runoff pollutants at the construction-site to the "maximum extent practicable." At a minimum, the following shall be implemented from the *California Storm Water Best Management Practice Handbook - Construction Activity*: ▪ *CA 1 Dewatering Operations* – This operation requires the use of sediment controls to prevent or reduce the discharge of pollutants to storm water from dewatering operations. ▪ *CA 2 Paving Operations* – Prevent or reduce the runoff of pollutants from paving operations by proper storage of materials, protecting storm drain facilities during construction, and training employees. ▪ *CA 3 Structural Construction and Painting* – Keep site and area clean and orderly, use erosion control, use proper storage facilities, use safe products and train employees to prevent and reduce pollutant discharge to storm water facilities from construction and painting. ▪ *CA 10 Material Delivery and Storage* – Minimize the storage of hazardous materials on-site. If stored on-site, keep in designated areas, install secondary	

EIR SECTION	IMPACTS	MITIGATION MEASURES	SIGNIFICANCE AFTER MITIGATION
		containment, conduct regular inspections and train employees. ▪ *CA 11 Material Use* – Prevent and reduce the discharge of pesticides, herbicides, fertilizers, detergents, plaster, petroleum products and other hazardous materials from entering the storm water. ▪ *CA 20 Solid Waste Management* - This BMP describes the requirements to properly design and maintain trash storage areas. The primary design feature requires the storage of trash in covered areas. ▪ *CA 21 Hazardous Waste Management* - This BMP describes the requirements to properly design and maintain waste areas. ▪ *CA 23 Concrete Waste Management* – Prevent and reduce pollutant discharge to storm water from concrete waste by performing on and off-site washouts in designated areas and training employees and consultants. ▪ *CA 24 Sanitary Septic Water Management* – Provide convenient, well-maintained facilities, and arrange regular service and disposal of sanitary waste. ▪ *CA 30 Vehicle and Equipment Cleaning* – Use off-site facilities or wash in designated areas to reduce pollutant discharge into the storm drain facilities. ▪ *CA 31 Vehicle and Equipment Fueling* – Use off-site facilities or designated areas with enclosures or coverings to reduce pollutant discharge into the storm drain facilities. ▪ *CA 32 Vehicle and Equipment Maintenance* – Use off-site facilities or designated areas with enclosing or coverings to reduce pollutant discharge into the storm	

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		drain facilities. In addition, run a "dry site" to prevent pollution discharge into storm drains. ▪ *CA 40 Employee and Subcontractor Training* – Have a training session for employees and subcontractors to understand the need for implementation and usage of BMPs. ▪ *ESC 2 Preservation of Existing Vegetation* – Minimize the removal of existing trees and shrubs since they serve as erosion control. ▪ *ESC 10 Seeding and Planting* – Provide soil stability by planting and seeding grasses, trees, shrubs, vines, and ground cover. ▪ *ESC 11 Mulching* – Stabilize cleared or freshly seeded areas with mulch. ▪ *ESC 20 Geotextiles and Mats* – Natural or synthetics material can be used for soil stability. ▪ *ESC Dust Control* – Reduce wind erosion and dust generated by construction activities by using dust control measures. ▪ *ESC 23 Construction Road Stabilization* – All on-site vehicle transport routes shall be stabilized immediately after grading and frequently maintained to prevent erosion and control dust. ▪ *ESC 24* – Stabilized Construction Entrance – Stabilize the entrance pad to the construction area to reduce amount of sediment tracked off-site. ▪ *ESC 30 Earth Dikes* – Construct earth dikes of compacted soil to divert runoff or channel water to a desired location. ▪ *ESC 31 Temporary Drains and Swales* – Use temporary drains and swales to divert off-site runoff around the construction-site and stabilized areas and to direct it into sediment basins or traps.	

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		▪ *ESC 40 Outlet Protection* – Use rock or grouted rock at outlet pipes to prevent scouring of soil caused by high velocities. ▪ *ESC 41 Check Dams* – Use check dams to reduce velocities of concentrated flows, thereby reducing erosion and promoting sedimentation behind the dams. Check dams are small and placed across swales and drainage ditches. ▪ *ESC 50 Silt Fence* – Composed of filter fabric, these are entrenched, attached to support poles, and sometimes backed by wire fence support. Silt fences promote sedimentation behind the fence of sediment-laden water. ▪ *ESC 51 Straw Bale Barrier* – Place straw bales end to end in a level contour in a shallow trench and stake them in place. The bales detain runoff and promote sedimentation. ▪ *ESC 52 Sand Bag Barriers* – By stacking sand bags on a level contour, a barrier is created to detain sediment-laden water. The barrier promotes sedimentation. ▪ *ESC 53 Brush or Rock Filter* – Made of 0.75 to 3-inch diameter rocks placed on a level contour or composed of brush wrapped in filter cloth and staked to the toe of the slope provides a sediment trap. ▪ *ESC 54 Storm Drain Inlet Protection* – Devices that remove sediment from sediment laden storm water before entering the storm drain inlet or catch basin. ▪ *ESC 55 Sediment Trap* – A sediment trap is a small, excavated, or bermed area where runoff for small drainage areas can pass through allowing sediment to settle out.	

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	Water Quality – Long-Term		
	5.11-4 *Project development may result in long-term impacts to the quality of storm water and urban runoff, subsequently impacting water quality. Impacts would be reduced to less than significant levels with incorporation of the recommended mitigation measures along with State and County Development Code requirements.*	5.11-4a Prior to Grading Permit issuance, a Water Quality Management Plan shall be developed and shall include both Non-Structural and Source Control BMPs. The WQMP shall conform to the San Bernardino County Draft NPDES permit and WQMP standards. The following are the minimum required controls to be implemented as a part of the *Water Quality Management Plan (WQMP) for Urban Runoff.* ▪ *Education for Property Owners, Tenants and Occupations* – The Property Owners Association is required to provide awareness educational material, including information provided by San Bernardino County. The materials shall include a description of chemicals that should be limited to the property and proper disposal, including prohibition of hosing waste directly to gutters, catch basins, storm drains or the lake. ▪ *Activity Restrictions* – The developer shall prepare conditions, covenants and restriction of the protection of surface water quality. ▪ *Common Area Landscape Management* – For the common landscape areas on-going maintenance shall occur consistent with County Administrative Design Guidelines or city equivalent, plus fertilizer and pesticide usage consistent with the instructions contained on product labels and with regulation administered by the State Department of Pesticide Regulation or county equivalent. ▪ *Common Area Catch Basin Inspection* – Property Owners Associations shall have privately owned catch basins cleaned and maintained, as needed. These are intended to prevent sediment, garden waste, trash and other pollutants from entering the public streets and storm drain systems.	

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		▪ *Common Area Litter Control* – POAs shall be required to implement trash management and litter control procedures to minimize pollution to drainage waters. ▪ *Street Sweeping Private Streets and Parking Lots* – Streets and Parking lots shall be swept as needed, to prevent sediment, garden waste, trash and other pollutants from entering public streets and storm drain systems. The following controls from the *California Storm Water Best Management Practice Handbook - Municipal* shall be employed: ▪ *SC10 Housekeeping Practices* - This entails practices such as cleaning up spills, proper disposal of certain substances and wise application of chemicals. ▪ *SC32 Used Oil Recycling* - May apply to maintenance and security vehicles. ▪ *SC72 Vegetation Controls* – Vegetation control typically includes chemical (herbicide) application and mechanical methods. Chemical methods are discussed in SC10. Mechanical methods include leaving existing vegetation, cutting less frequently, hand cutting, planting low maintenance vegetation, collecting and properly disposing of clippings and cuttings, and educating employees and the public. ▪ *SC73 Storm Drain Flushing* - Although general storm drain gradients are sufficiently steep for self-cleansing, visual inspection may reveal a buildup of sediment and other pollutants at the inlets or outlets, in which case flushing may be advisable. 5.11-4b The Water Quality Management Plan (WQMP) shall include Structural or Treatment BMPs. The structural BMPs utilized shall focus on meeting potential TMDL requirements for noxious aquatic plants, nutrients,	

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sedimentation and siltation. The structural BMPs shall conform to the San Bernardino County NPDES permit and the San Bernardino WQMP standards.

Consistent with the WQMP guidelines contained in the *Draft National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements* for San Bernardino County, Structural BMPs shall be required for the proposed Project. They shall be sized to comply with one of the following numeric sizing criteria or be considered by the permittees to provide equivalent or better treatment.

Volume Based BMPs shall be designed to infiltrate or treat either:

- The volume of runoff produced from the 85th percentile 24-hour storm event, as determined from the local historical rainfall record; or
- The volume of the annual runoff produced by the 85th percentile 24-hours rainfall event, determined as the maximized capture storm water volume for the area, from the formula recommended in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87 (1998); or
- The volume of annual runoff based on unit basin storage volume, to achieve 80% or more volume treatment by the method recommended in California Stormwater Best Management Practice Handbook – Industrial/Commercial (1993); or
- The volume of runoff, as determined from the local historical rainfall record, that achieves approximately the same reduction in pollutant loads and flows as achieved by mitigation of the 85th percentile 24-hour runoff event.

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		OR Flow–based BMPs shall be designed to infiltrate or treat either: ▪ The maximum flow rate of runoff produced from a rainfall intensity of 0.2 inch of rainfall per hour; or ▪ The maximum flow rate of runoff produced by the 85th percentile hourly rainfall intensity, as determined from the local historical rainfall record, multiplied by a factor of two; or ▪ The maximum flow rate of runoff, as determined from the local historical rainfall record that achieved by mitigation of the 85th percentile hourly rainfall intensity multiplied by a factor of two. The following are the minimum required controls to be implemented as a part of the *Water Quality Management Plan (WQMP) for Urban Runoff*. ▪ *Control of Impervious Runoff* – Surface runoff shall be directed to landscaped areas or pervious areas. ▪ *Common Area Efficient Irrigation* – Physical implementation of the landscape plan consistent with County Administrative Design Guidelines or city equivalent, which may include provision of water sensors, programmable irrigation timers, etc. ▪ *Common Area Runoff-Minimizing Landscape Design* – Group plants with similar water requirements in order to reduce excess irrigation runoff and promote surface filtration. ▪ *Catch Basin Stenciling* – "No Dumping – Flows to Lake" or equivalent effective phrase shall be stenciled on catch basins to alert the public as to the destination of pollutant discharging into storm drain.	

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		▪ *Debris Posts* – These shall be installed to prevent large floatable debris from entering the storm drains. They shall be placed upstream of the cross culverts. ▪ *Inlet Trash Racks* – These shall be installed where appropriate to reduce intake and transport through the storm drain system of large floatable debris. Trash racks shall be provided where drainage from open areas enters storm drain or cross culverts.	
		5.11-4c Storm water treatment under the NPDES Permit and the future TMDL requirements shall include the construction of treatment BMPs. Treatment BMPs appropriate for on-site use shall include infiltration trenches and basins, swales, inlet filtration, and/or water quality basins. All storm water runoff shall be treated before leaving the site to reduce pollutants in Big Bear Lake. <u>Infiltration Trenches and Basins</u> Infiltration Trenches and/or Basins shall be used on site to meet potential future TMDLs for noxious aquatic plants and nutrients. Infiltration trenches and basins treat storm water runoff through filtration. A typical infiltration trench is essentially an excavated trench, that is lined with filter fabric and backfilled with stones. Depth of the infiltration trench shall range from three to eight feet and shall be located in areas with permeable soils, and water table and bedrock depth situated well below the bottom of the trench. Trenches shall not be used to trap coarse sediments since large sediment would likely clog the trench. Grass buffers may be installed to capture sediment before it enters the trench to minimize clogging. Infiltration basins shall be used for drainage areas between five and 50 acres. Infiltration basins shall be either in-line or off-line, and may treat different volumes such as the water quality volume or the 2-year or 10-year storm.	

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Swales

The project shall implement either vegetative swales, enhanced vegetated swales utilizing check dams and wide depressions, a series of small detention facilities designed similarly to a dry detention basin, or a combination of these treatment methods into a treatment train (series of Structural BMPs). The Water Quality Management Plan shall address treatment for the Project to assure that runoff from the site is treated to the "maximum extent practicable".

The swales shall be treated as water quality features and shall be maintained differently than grass areas. Specifically, pesticides, herbicide, and fertilizers, which may be used on the grass areas, shall not be used in the vegetation swales.

Filtration

Filtration shall be implemented as a treatment method and shall use drop-in infiltration devices or inline devices.

Drop-infiltration devices at all curb inlets within the internal parking lots shall be implemented to provide potential pollutant removal. Existing examples of these filtration devices include the Drain Pac Storm Drain Inserts and Fossil Filters. These types of devices are efficient at removing oil and grease, debris, and suspended solids from treated waters. Some of these devices have also exhibited high efficiencies at removing heavy metals and other pollutants.

Inline devices suggested for use onsite include the Continuous Deflection Separator (CDS® unit). Once the runoff has entered the storm drain, an in-line diversion would direct the treatment flow to a CDS® unit. The CDS® unit is a non-blocking, non-mechanical screening system, which would provide a second line of defense for solids removal. Adsorption materials can

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		be added within the CDS® unit to aid in the removal of oil and grease. The treated flow will exit the CDS® unit and continue downstream. To assure the efficiency of these filtration devices, monitoring shall be conducted. The use of street sweeps on the parking lots and streets shall aid in reducing the amounts of sediment and debris that flow through the devices. This will extend the effectiveness of the devices during a storm and will lower the frequency of required maintenance. The devices shall be checked and cleaned, if necessary, once a month during the rainy season, following any precipitation and at the end of the dry season prior to the first precipitation event of the rainy season. Consideration shall be given to using these filtration units in other areas besides the parking lot inlets. Another potential location is at the downstream end of the tributary pipes that feed the discharge point. Siting these units at a downstream point would allow for the treatment of a greater amount of runoff.	
Cumulative Impacts			
5.11-5	*The proposed Project along with other future development may result in increased hydrology and drainage impacts in the area. Due to inconclusive of potential overdraft conditions, cumulative groundwater impacts are concluded to be significant and unavoidable. Other hydrology and drainage impacts are evaluated on a project-by-project basis in order to mitigate to a less than significant level.*	5.11-5 No mitigation measures are recommended.	

2.3 SUMMARY OF PROJECT ALTERNATIVES

In accordance with California Environmental Quality Act (CEQA) Guidelines Section 15126.6, Section 7.0 describes a range of reasonable alternatives to the proposed project which could feasibly attain the basic objectives of the proposed project, while evaluating the comparative merits of each alternative. The analysis focuses on alternatives capable of eliminating significant adverse environmental effects or

reducing them to less than significant levels, even if these alternatives would impede, to some degree, the attainment of the project objectives. Potential environmental impacts are compared to impacts from the proposed project. The following is a description of each of the alternatives evaluated in Section 7.0.

"NO PROJECT/NO DEVELOPMENT" ALTERNATIVE

Implementation of the "No Project/No Development" Alternative would retain the site in its current condition. None of the improvements proposed as part of the project and/or the existing designation would occur. The following discussion evaluates the potential environmental impacts associated with the No Project/No Development Alternative as compared to impacts from the proposed Project.

"NO PROJECT/EXISTING DESIGNATION" ALTERNATIVE

Implementation of the "No Project/Existing Designation" Alternative would be in accordance with the existing Official Land Use District Rural Living-40 (40-acre minimum lot size). This Alternative would result in 1.5 residential lots on the project site. This Alternative would be less intensive than the proposed Project. Approximately three persons (1.5 housing units x 2.15 persons/household) would be added to the permanent population of the Community of Fawnskin. It is further noted that in addition to a single-residential structure, other uses can be allowed including those in the "Additional Uses" section of the County Development Code, subject to a Conditional Use Permit. The following discussion evaluates the potential environmental impacts associated with the No Project/Existing Designation Alternative as compared to impacts from the proposed Project.

"REDUCED DENSITY, WITHOUT ROAD ALIGNMENT AND WITHOUT MARINA" ALTERNATIVE

For the Reduced Density, Without Road Realignment and Without Marina Alternative, development of 62 residential lots and associated infrastructure (as depicted in the project description) would occur on the north side of the existing State Route 38 alignment. State Route 38 would not be realigned and no residential development would occur to the south of State Route 38. The land area south of State Route 38, along the lakefront, would be retained in its current state. Approximately 133 persons (62 housing units x 2.15 persons/household) would be added to the permanent population of the Community of Fawnskin.

"REDUCED DENSITY, WITH PROJECT REDESIGN" ALTERNATIVE

For the Reduced Density, With Project Redesign Alternative, development of 66 residential lots and associated infrastructure would occur on project site. Implementation of this Alternative would include the realignment of State Route 38. Twenty-one (21) and 45 lots would be developed on the south and north sides of the realigned State Route 38, respectively. This Alternative would include a marina facility, with 72 boat slips. Approximately 142 persons (66 housing units x 2.15 persons/household) would be added to the permanent population of the Community of Fawnskin.

2.0 Executive Summary

2.0 EXECUTIVE SUMMARY

2.1 PROJECT ANALYSIS SUMMARY

The proposed Moon Camp Tentative Tract #16136 Residential Subdivision ("Moon Camp") encompasses approximately 62.43 acres along the northwest shore of Big Bear Lake, in the community of Fawnskin, County of San Bernardino. The Project site is located adjacent to the northwest shore of the Big Bear Lake, in the relatively undeveloped eastern portion of Fawnskin. The Project site is generally situated between Flicker Road to the north, Big Bear Lake to the south, Polique Canyon Road to the east, and Oriole Lane/Canyon Road to the west.

The Project proposes a 95-lot residential subdivision with lots ranging in size from 0.17 acres (7,292 square feet) to 2.11 acres. Lots would be sold individually and development of lots and construction of homes would be by custom design. The proposal is a Tentative Tract Map for 92 numbered and three lettered lots. The three lettered lots are identified as follows: (1) Lot "A" is a private street designed to provide access to the southernmost lots; (2) Lot "B" is a 1.4-acre strip of land that would remain between the relocation of State Route 38 and the private Street, Lot "A"; and (3) Lot "C" is a gated entrance to the Project, including a proposed boat dock, consisting of 100 boat slips, which would be available for use by residents of the tract and accessible by Lot "C".

The Project includes relocation of North Shore Drive, also referred to as State Route 38, to allow development of lakeshore lots. An approximately 2,498-foot segment of the roadway would be relocated. The maximum distance of relocation, as designed, is 207 feet to the north. The design includes a 76-foot road width, with 14-foot shoulder/bikeway access, resulting in a 104-foot right-of-way via a loop road that would include five separate cul-de-sac drives to access lakefront lots.

This EIR includes a comprehensive review of project affects, the significance of the affects and recommended mitigation measures. Section 5.0 of this EIR concludes that the proposed Project would generate impacts related to public services, utilities, aesthetics, traffic/circulation, air quality, noise, biological resources, cultural resources, geology/soils and hydrology/drainage. All impacts, with the exception of those identified for public services/utilities (ability to be served water), aesthetics, air quality, biological resources and hydrology (groundwater) can be mitigated to less than significant levels. The identified public services/utilities (ability to be served by water), aesthetic, air quality, biological resources and hydrology (groundwater) impacts require findings in accordance with Section 15091 of CEQA and a Statement of Overriding Considerations in accordance with Section 15093 of CEQA.

2.2 ENVIRONMENTAL ISSUES/MITIGATION SUMMARY

The following is a brief summary of the impacts, mitigation measures, and unavoidable significant impacts identified and analyzed in Section 5.0 of this EIR. Refer to the appropriate EIR Section for additional information.

EIR SECTION	IMPACTS	MITIGATION MEASURES	SIGNIFICANCE AFTER MITIGATION
5.1	**LAND USE AND RELEVANT PLANNING**		
	San Bernardino County General Plan		
	5.1-1 *The proposed Project conflicts with the land use plan, policies and regulations set forth in the San Bernardino County General Plan. Analysis has concluded that impacts would be less than significant with approval of a Land Use District Change and Circulation Element Amendment (Transportation/ Circulation Maps).*	5.1-1 No mitigation measures are recommended.	No unavoidable significant impacts related to Land Use and Relevant Planning have been identified following compliance with the San Bernardino County General Plan and Development Code policies and standards.
	San Bernardino County Development Code		
	5.1-2 *The proposed Project conflicts with the land use plan, policies and regulations of the San Bernardino County Development Code. Analysis has concluded that a less than significant impact would occur with approval of a Land Use District Change, Circulation Element Amendment and Conditional Use Permit.*	5.1-2 No mitigation measures are recommended.	
	Cumulative		
	5.1-3 *The proposed Project, combined with other future development, will increase the intensity of land uses in the area. Analysis has concluded that impacts are less than significant and no mitigation is required. Projects are evaluated on a project-by-project basis in accordance with the San Bernardino County General Plan and Development Code.*	5.1-3 No mitigation measures are recommended.	
5.2	**RECREATION**		
	Expansion and/or Construction of Recreational Facilities		
	5.2-1 *Implementation of the Moon Camp project involves the construction or expansion of recreational facilities which may have an adverse physical*	5.2-1 No mitigation measures are recommended.	No significant impacts related to Recreational facilities have been identified in this Section.

EIR SECTION	IMPACTS	MITIGATION MEASURES	SIGNIFICANCE AFTER MITIGATION
	effect on the environment. Compliance with the Big Bear MWD standards and permit requirements would reduce impacts to a less than significant level.		
	Public Access		
	5.2-2 *Implementation of the Moon Camp project would ~~not~~ affect public access along the north shore of Big Bear Lake. Mitigation requiring dedication of an easement along the south side of North Shore Drive has been incorporated. ~~The Project site is Private Property. Affects on public access are concluded as less than significant.~~*	5.2-2 ~~No mitigation measures are recommended.~~ The proposed project shall be conditioned to incorporate a pedal path easement along the south side of North Shore Drive, prior to map recordation.	
	Cumulative		
	5.2-3 *Cumulative development may result in increased use of existing recreational areas/facilities, thereby creating the potential for physical deterioration. Additionally, cumulative development may include recreational facilities (i.e., marina) that have the potential to result in physical impacts on the environment. Mitigation measures necessary for reducing impacts are addressed on a project-by-project basis to reduce impacts to a less than significant level.*	5.2-3 No mitigation measures are recommended.	
5.3	**PUBLIC SERVICES AND UTILITIES**		
	Fire Protection		
	5.3-1 *Project implementation could result in significant physical impacts with respect to fire protection. Analysis has concluded that impacts would be less than significant with the recommended mitigation measures.*	5.3-1a The fire flow requirement shall be 1750 gpm @ 2 hours based on homes in the range of 3,600 to 4,800 square feet, and 2,000 gpm @ 2 hours for homes greater than 4,800 square feet.	
		5.3-1b ~~Fire sprinklers for each residence shall be provided in lieu of additional manpower.~~ All residences less than 5,000 square feet shall be subject to the standard fire sprinkler requirement (NFPA 13D). Homes above 5,000 square feet shall be subject to the NFPA13R~~have a larger~~ sprinkler requirement ~~(~~FPA13R~~)~~.	
		5.3-1c A ~~f~~Fuels ~~modification program~~Management Plan, with specifications, shall be prepared and	

EIR SECTION	IMPACTS	MITIGATION MEASURES	SIGNIFICANCE AFTER MITIGATION
		subject to approval by the County of San Bernardino Fire Department and San Bernardino National Forest Service. The Fuels Management Plan shall implement the fire safety requirements of the FS1 Fire Safety Overlay District, including a 30-foot minimum setback requirement from the National Forest. The fuel modification zone shall be located entirely within the project's boundaries. ~~The 100 foot fuel modification requirement shall not terminate at a property line. The 100 foot fuel modification requirement shall extend beyond property lines. Where such fuel modification zone extends onto U.S. Forest Service land, an easement or permit shall be required to be obtained.~~ The minimum~~100 foot~~ fuel modification zone requirements may be greater in steeper areas (up to 300 ft.), as determined by the Fire ~~Agency~~ Department.	
		5.3-1d Cul-de-sac lengths shall be no longer than 350 feet.	
		5.3-1e A Homeowner's Association or a Special District shall be established to ~~assure~~ implement the Fuels Management Plan. The Fuels Management Plan shall specify any professional assistance, if necessary, to implement the action portion of the plan. The Plan shall determine if a Registered Professional Forrester is necessary for professional guidance to implement the Plan. ~~Long term vegetation maintenance. An annual vegetation maintenance program shall be included.~~ The HOA or Special District is to be responsible for fuel modification in common areas.	
		~~5.3-1f Fire resistance/drought tolerant landscaping shall be required and referenced in the Homeowner's Association or Special District Standards.~~	

EIR SECTION	IMPACTS	MITIGATION MEASURES	SIGNIFICANCE AFTER MITIGATION
	Police Protection		
	5.3-2 *Project implementation could result in significant physical impacts with respect to police protection. Analysis has concluded that a less than significant impact would occur.*	5.3-2 No mitigation measures are recommended.	
	Schools		
	5.3-3 *Project implementation could result in significant physical impacts to existing school facilities. Potential impacts to school facilities are concluded as less than significant following payment of school impact fees and compliance with all applicable requirements, codes, and ordinances.*	5.3-3 No mitigation measures are recommended.	
	Libraries		
	5.3-4 *Project implementation would increase the demand on library services. Analysis has concluded that that a less than significant impact would occur.*	5.3-4 No mitigation measures are recommended.	
	Wastewater		
	5.3-5 *Project implementation would generate additional wastewater beyond current conditions. Analysis has concluded that impacts would be less than significant with the recommended mitigation measures.*	5.3-5a Prior to issuance of building permits, the Project Applicant shall fund all on-site and off-site sewer improvements required to support development of the Project site. Such improvements shall be to the satisfaction of the BBARWA, and may include replacement of existing sewer lines rather than construction of parallel lines. 5.3-5b Prior to issuance of building permits, the Project Applicant shall provide evidence to the County of San Bernardino that the BBARWA has sufficient transmission and treatment plant capacity to accept sewage flows from the Project site. 5.3-5c The Project Applicant shall relocate the BBARWA 10" force main by installing new pipe (and/or bonding for the relocation) so that it is aligned within the south shoulder of the relocated State Route 38. The 10" force main shall be accessible for BBARWA to maintain and repair the sewer force main. The force main shall not pass through residential lots within the proposed tract.	

EIR SECTION	IMPACTS	MITIGATION MEASURES	SIGNIFICANCE AFTER MITIGATION
		5.3-5d The Project Applicant shall install air release valves and vaults at high elevation points on the new force main to minimize odors. Air release valves shall be large enough to enclose 55-gallon drum carbon filters to control odors.	
	Water		
	5.3-6 *Project implementation would increase the demand for water beyond existing conditions. Analysis has concluded that due to the inability of water providers to confirm service to the project, impacts are concluded as significant and adverse. This conclusion is further supported by the potentially significant groundwater overdraft conditions cited in Section 5.11 of the EIR.*	5.3-6a ~~Prior to approval of building permits, a video inspection of water supply casings and screen shall be conducted in order to update~~ Values of production rates and pumping levels for on-site water supply wells shall be obtained through step-drawdown and constant rate pumping tests. Water samples shall be taken during the inspection for testing and analysis in accordance with standard requirements. 5.3-6b If either or both of the two existing on-site wells are utilized as a water source for the project, ~~T~~the Project Applicant shall equip the~~two existing on-site~~ wells to meet DWP and/or County Special Districts Department standards and dedicate these facilities and water rights to the appropriate water purveyor~~County of San Bernardino~~. Within the proposed tract, no individual private irrigation wells shall be permitted. 5.3-6c ~~If served by CSA 53-C through a contract with the City of Big Bear Lake Department of Water and Power, t~~ After a determination has been made regarding the water purveyor, the Project Applicant shall advance fair-share funds ~~or enter into a reimbursement agreement with the~~ to the appropriate water agency (CSA and/or DWP)~~(if required)~~ towards constructing a new reservoir and pipeline improvement at Cline-Miller Reservoir (with an estimated project cost at $481,100). These facilities would be dedicated to the appropriate water agency. 5.3-6d The following water conservation measures are the minimum measures that shall be complied with in conjunction with domestic water supply to the project. A Homeowners Association shall be	Due to the inability of water providers to confirm service to the project, project as well as cumulative impacts are concluded as significant and unavoidable. This conclusion is further supported by the significant and unavoidable conclusion cited in Section 5.11, *Hydrology and Drainage*, due to inconclusive testing of potential overdraft conditions for the groundwater basin associated with the North Shore Hydrologic Subunit. If the County of San Bernardino approves the project, the County shall be required to adopt findings in accordance with Section 15091 of the CEQA Guidelines and prepare a Statement of Overriding Considerations in accordance with Section 15093 of the CEQA Guidelines. No additional unavoidable significant impacts related to public services and utilities have been identified following implementation of the recommended mitigation measures and compliance with applicable County, service or utility provider requirements, County Codes and Ordinances.

EIR SECTION	IMPACTS	MITIGATION MEASURES	SIGNIFICANCE AFTER MITIGATION

responsible for enforcing the water conservation measures. Additional measures may be imposed as a result of a contract for water supply between CSA 53-C and the City of Big Bear Lake DWP:

- Landscape shall not be irrigated between the hours of nine (9) a.m. and six (6) p.m.
- Residences, buildings and premises shall be limited to watering every other day.
- Landscape irrigation shall be limited to what is needed and shall not be excessive. Water from landscape irrigation shall not be allowed to run off into streets.
- Water shall not be allowed to leak from any waterline, faucet, or any other facility, either within or outside a private residence, business establishment or on private property. All such leaking waterlines, faucets, and other facilities shall be repaired immediately to prevent leakage.
- Sidewalks, paved driveways, and parkways shall not be washed off with hoses, except as required for sanitary purposes.
- Non-commercial washing of cars, and boats or any other vehicle shall only be done with an automatic shut-off nozzle on a hose, or with a bucket.
- New landscaping shall not exceed more than one-thousand square feet of turf on a parcel or lot or twenty-five percent of the available landscape area.
- A model landscaping and irrigation guide shall be prepared for the tract and required by homeowner association rules. The guide shall specify a plant palate that emphasizes native plants and cultivars that are suitable for the mountain climate. Plant materials shall be low water consuming and fire resistant. Irrigation shall emphasize drip and bubbler type emitters with limit aerial spray

EIR SECTION	IMPACTS	MITIGATION MEASURES	SIGNIFICANCE AFTER MITIGATION
		irrigation methods. The guide shall be reviewed and approved by the Land Use Services Department.	
	Solid Waste		
	5.3-7 *Development of the Project area would result in increased solid waste generation. Project compliance with the Integrated Waste Management Plan for the County of San Bernardino (currently being revised) would reduce the amount of solid waste which is ultimately disposed of at the Barstow Landfill and maintain potential impacts at a less than significant level.*	5.3-7 No mitigation measures are recommended.	
	Natural Gas		
	5.3-8 *Project implementation would result in an increased demand for natural gas service beyond existing conditions and would require expansion of the existing gas system. Analysis has concluded that a less than significant impact would occur in this regard.*	5.3-8 No mitigation measures are recommended.	
	Electricity		
	5.3-9 *Project implementation would result in an increased demand for electrical service beyond existing conditions and would require expansion of the existing electrical system. Analysis has concluded that impacts would be less than significant.*	5.3-9 No mitigation measures are recommended.	
	Cumulative Impacts		
	5.3-10 *Cumulative development could result in an increased demand for public services and an increase in the consumption rates for public utilities, potentially requiring expansions of the existing utility systems. The inability of water providers to confirm service on a project level would also result in significant and unavoidable cumulative impacts. Analysis has concluded that cumulative development for the remaining service and utility affects are subject to standards and requirements of reviewing agencies and no additional mitigation is recommended.*	5.3-10 No mitigation measures are recommended.	

EIR SECTION	IMPACTS	MITIGATION MEASURES	SIGNIFICANCE AFTER MITIGATION
5.4	**AESTHETICS/LIGHT AND GLARE**		
	Short-Term Aesthetic/Light and Glare Impacts		
	5.4-1 *Construction of the proposed project would temporarily alter the visual appearance of the site and introduce new short-term sources of light and glare. Analysis has concluded that impacts would be reduced to less than significant levels with implementation of the recommended mitigation measures.*	5.4-1a Construction equipment staging areas shall be located away from existing residential uses. Appropriate screening (i.e., temporary fencing with opaque material) shall be used to buffer views of construction equipment and material, when feasible. Staging locations shall be indicated on project Grading Plans. 5.4-1b All construction-related lighting associated with the construction of new roadways, the realignment of State Route 38, and the installation of utilities shall be located and aimed away from adjacent residential areas. Lighting shall use the minimum wattage necessary to provide safety at the construction site. A construction safety lighting plan shall be submitted to the county for review concomitant with Grading Permit applications for the subdivision of the lots.	Significant and unavoidable impacts related to Aesthetics/Light and Glare have been identified for viewshed alterations involving existing residents to the north, east and west of the project site. Additionally, significant and unavoidable impacts have been identified for views from State Route 38, a scenic highway, to the south and from the south shore of Big Bear Lake. If the County of San Bernardino approves the project, the County shall be required to cite their findings in accordance with Section 15091 of CEQA and prepare a Statement of Overriding Considerations in accordance with section 15093 of CEQA.
	Long-Term Aesthetic Impacts		
	5.4-2 *Implementation of the Moon Camp project would adversely impact scenic resources, scenic vistas and the visual character of the site and its surroundings. Analysis has concluded that a significant and unavoidable impact to the visual character and viewshed from the project site and surrounding areas would occur which cannot be mitigated to a less than significant level.*	5.4-2a Roof pitches shall not exceed 9/12 and no higher than two-story for any portion of the structure footprint for lots 62-92. 5.4-2b All homes shall provide a two-car garage with automatic garage doors. 5.4-2c A view envelope for each property shall be established by creating a line starting at 6 feet at each side lot line and moving up at a 30 degree angle until both lines meet at the middle of the property. The area located under these lines is the view envelope. Structures shall not protrude outside the view envelope. The view envelope orients the building ridgeline parallel to the view corridors on narrower lots providing views for residents located behind the property.	No additional significant impacts related to Aesthetic/Light and Glare have been identified following implementation of mitigation measures and/or compliance with applicable standards, requirements and/or policies by the County of San Bernardino.

EIR SECTION	IMPACTS	MITIGATION MEASURES	SIGNIFICANCE AFTER MITIGATION
		5.4-2d New development shall be subordinate to the natural setting and minimize reflective surfaces. Building materials including siding and roof materials shall be selected to blend in hue and brightness with the surroundings. Colors shall be earth tones, shades of grays, tans, browns, greens, pale yellows, and shall be consistent with the mountain character of the area.	
		5.4-2e Outside parking/storage areas associated with the boat dock activities shall be completely screened from view by the placement of landscaping and plantings which are compatible with the local environment and, where practicable, are capable of surviving with a minimum of maintenance and supplemental water.	
		5.4-2f Construction plans for each individual lot shall include the identification and placement of vegetation with the mature height of trees listed. Landscaping and plantings should not obstruct significant views, within or outside of the project, either when installed or when they reach mature growth. The removal of existing vegetation shall not be required to create views.	
		5.4-2g A Note shall be placed on the Composite Development Plan stating that during construction plans review and prior to issuance of building permits for each lot, the building inspector shall refer to the Mitigation Monitoring and Compliance Program regarding these aesthetic impact mitigation measures. The building inspector shall coordinate with the Advance Planning Division the review and approval of building plans in relation to these aesthetic impact mitigation measures, prior to approval and issuance of building permits.	
	Long-Term Scenic Highway Impacts		
	5.4-3 *Implementation of the Moon Camp project would impact views of Big Bear Lake, the distant mountain ranges to the south and adjacent forest areas from North Shore Drive*	5.4-3a Any entry sign for the development shall be a monument style sign compatible with the mountain character, preferably, rock or rock-appearance.	

EIR SECTION	IMPACTS	MITIGATION MEASURES	SIGNIFICANCE AFTER MITIGATION
	(State Route 38) which is a County and Federally recognized Scenic Highway/Byway. Analysis has concluded that significant and unavoidable impacts would occur as a result of project development.	5.4-3b Prior to recordation of the tract map (and/or any ground disturbance, whichever occurs first), landscaping plans for lettered lots B and C shall be submitted to and approved by the San Bernardino County Planning Department.	
	Long-Term Light and Glare Impacts		
	5.4-4 *The proposed Moon Camp project would introduce additional light and glare on-site which may affect the surrounding residents. Analysis has concluded that potential impacts would be reduced to less than significant levels with implementation of the recommended mitigation measures.*	5.4-4a All exterior lighting shall be designed and located as to avoid intrusive effects on adjacent residential properties and undeveloped areas adjacent to the project site. Low-intensity street lighting and low-intensity exterior lighting shall be used throughout the development to the extent feasible. Lighting fixtures shall use shielding, if necessary to prevent spill lighting on adjacent off-site uses. 5.4-4b Lighting used for various components of the development plan shall be reviewed for light intensity levels, fixture height, fixture location and design by an independent engineer, and reviewed and approved by the County Building and Safety Division. 5.4-4c The project shall use minimally reflective glass. All other materials used on exterior buildings and structures shall be selected with attention to minimizing reflective glare. 5.4-4d Vegetated buffers shall be used along State Route 38 to reduce light intrusion on residential development and on forested areas located adjacent to the project site. 5.4-4e Mitigation Measures 5.4-4a through 5.4-4d shall be included within the Conditions, Covenants and Restrictions (CC&Rs) of the Home Owner's Association (HOA). 5.4-4f All outdoor light fixtures shall be cutoff luminaries and shall only use high- or low-pressure sodium lamps. 5.4-4g The Project Applicant/Developer shall install light colored, reflective roof products. Such roofs shall utilize light colored, reflective	

EIR SECTION	IMPACTS	MITIGATION MEASURES	SIGNIFICANCE AFTER MITIGATION
		materials that meet the performance standards developed by the Energy Star Labeled Roof Program, as well as the American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) Standards 90.1 and 90.2 on energy efficient buildings. This condition shall be verified by the County of San Bernardino Building and Safety Division prior to issuance of building permits.	
	Cumulative Impacts		
	5.4-5 *Build-out of the Moon Camp development, together with cumulative projects, may alter the nature and appearance of the area and contribute to the loss of undeveloped areas. Analysis has concluded that no significant impacts beyond the analysis contained in the County of San Bernardino General Plan and General Plan EIR are anticipated.*	5.4-5 No mitigation measures are recommended.	
5.5	**TRAFFIC AND CIRCULATION**		
	Existing Conditions with Project Traffic Analysis		
	5.5-1 *The intersection of Stanfield Cutoff and Big Bear Boulevard currently operates above 100 percent utilization in the peak month weekday evening peak hour. Although the Project does not generate significant traffic volumes, it would contribute to the intersection utilization at the weekday evening peak hour. Pro-rata share payment for intersection improvements to the intersection would reduce project affects to less than significant levels.*	5.5-1 For existing traffic conditions, the intersection of Stanfield Cutoff and Big Bear Boulevard currently requires the eastbound right turn lane to be converted to an eastbound through lane, through the intersection. The eastbound right turn lane is restricted to an eastbound through lane, and involves roadway widening. The project's pro rata share of these off-site road improvements is estimated to be $17,748.	Following implementation of recommended mitigation measures, Traffic and Circulation impacts would be reduced to a less than significant level.
	Year 2006 Traffic Analysis		
	5.5-2 *Project implementation, with year 2006 traffic conditions, would result in an increase in traffic volumes. Analysis has concluded that implementation of recommended mitigation measures would reduce impacts to the intersection of Stanfield Cutoff and Big Bear Boulevard to a less than significant level.*	5.5-2 Refer to Mitigation Measure 5.5-1. No additional mitigation measures are recommended.	

EIR SECTION	IMPACTS	MITIGATION MEASURES	SIGNIFICANCE AFTER MITIGATION
	Year 2025 Traffic Analysis		
	5.5-3 *Project implementation, with year 2025 traffic conditions, would result in an increase in traffic volumes. Analysis has concluded that implementation of recommended mitigation measures would reduce impacts to the intersection of Stanfield Cutoff/Big Bear Boulevard and Stanfield Cutoff/North Shore Drive to a less than significant level.*	5.5-3 For future traffic conditions, the intersection of Stanfield Cutoff and North Shore Drive shall require a traffic signal. The project's pro rata share of the signal is $56,523.	
	Safety Hazards and Emergency Access		
	5.5-4 *Project implementation may increase hazards to vehicles, pedestrians and bicyclists due to the proposed project. Analysis has concluded that with implementation of the recommended mitigation measures, impacts would be less than significant.*	5.5-4a Parking shall be restricted on State Route 38. 5.5-4b A 150-foot eastbound left turn pocket shall be striped for traffic on North Shore Drive turning left into the project entry locations. 5.5-4c For future traffic conditions, intersection geometrics as recommended in Table 1b of the Kunzman Associates June 2003 *Traffic Analysis* report, shall be implemented. 5.5-4d All streets internal to the project shall be constructed to full ultimate cross-sections. ~~as adjacent development occurs.~~ 5.5-4e A STOP sign shall be installed to control outbound traffic on all site access roadways onto North Shore Drive. 5.5-4f The County of San Bernardino shall periodically review traffic operations in the vicinity of the site once the project is constructed in order to assure that the traffic operations are satisfactory. 5.5-4g Landscape plantings and signs shall be limited to 36 inches in height within 25 feet of project driveways to assure good visibility.	
5.6	**AIR QUALITY**		
	Short-Term Air Quality Impacts		
	5.6-1 *Significant short-term air quality impacts would occur during site*	5.6-1 In accordance with the County Development Code and SCAQMD	The following air quality impacts would remain

EIR SECTION	IMPACTS	MITIGATION MEASURES	SIGNIFICANCE AFTER MITIGATION
	preparation and project construction. These impacts are considered significant before and after mitigation for ROG and NOx emissions from construction equipment exhaust. Impacts would be less than significant for other pollutants. (Mitigation in this instance refers to applicable County Development Code Sections and SCAQMD Rules.)	Rules, the Project Applicant shall incorporate the following measures during the construction phase of the Project to the satisfaction of the SCAQMD and County of San Bernardino. Compliance with this measure is subject to periodic field inspections by the SCAQMD and County of San Bernardino. Grading: Apply non-toxic soil stabilizers according to manufacturer's specifications to all inactive construction areas (previously graded for ten days or more); ▪ Replace ground cover in disturbed areas as quickly as possible; ▪ Enclose, cover, water two times daily or apply non-toxic soil binders in accordance to manufacturer's specifications to exposed piles (i.e., gravel, sand, dirt) with 5% or greater silt content; ▪ Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 mph; and ▪ All trucks hauling dirt, sand, soil, or other loose materials shall be covered and shall maintain at least two feet of freeboard (i.e., minimum vertical distance between top of the load and the top of the trailer). Paved Roads: ▪ Sweep streets at the end of the day if visible soil material is carried onto adjacent public paved roads.	significant and unavoidable following mitigation: ▪ ROG and NOx from construction activities; ▪ Project Operations: Exceedance of State and/or Federal emission levels (ROG, CO and PM10) from project operations; and ▪ Project implemen-tation would result in a significant un-avoidable impact with respect to consistency with the AQMP. If the County of San Bernardino approves the project, the County shall be required to cite their findings in accordance with Section 15091 of CEQA and prepare a Statement of Overriding Considerations in accordance with Section 15093 of CEQA.
	Long-Term Operational Impacts		
5.6-2	*The project would result in an overall increase in the local and regional pollutant load due to direct impacts from vehicle emissions and indirect impacts from electricity and natural gas consumption. Combined mobile and area source emissions would exceed SCAQMD thresholds for ROG, CO and*	5.6-2 To the extent feasible, the project shall incorporate the installation of EPA-certified wood burning stoves or fireplaces. If this is not feasible, then the installation of a ceramic coating on the honeycomb inside a catalytic combustor shall be investigated as a feasible alternative. Alternatively, the	

EIR SECTION	IMPACTS	MITIGATION MEASURES	SIGNIFICANCE AFTER MITIGATION
	PM_{10}. These exceedances are considered significant and cannot be mitigated to a less than significant level.	use of natural gas fireplaces may be used as a feasible alternative.	
	Consistency with Air Quality Management Plan		
	5.6-3 *The project would not conflict with the Air Quality Management Plan (AQMP). Analysis has concluded that the proposed project is consistent with the AQMP criteria.*	5.6-3 No mitigation measures are recommended.	
	Cumulative Impacts		
	5.6-4 *Cumulative impacts to regional air quality resulting from development of the proposed Project would be less than significant.*	5.6-4 No mitigation measures are recommended.	
5.7	**NOISE**		
	Short-Term Construction Noise and Vibration Impacts		
	5.7-1 *Grading and construction within the Project area would result in temporary noise and/or vibration impacts to nearby noise sensitive receptors. Analysis has concluded that construction noise and vibration impacts would be less than significant following compliance with the County requirements.*	5.7-1a Construction activities shall be limited to the hours of 7:00 a.m. ~~and~~ to 7:00 p.m. Monday to Saturday and prohibited on Sundays and Federal Holidays. 5.7-1b All construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers, to the satisfaction of the County Engineer. 5.7-1c Stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receptors, to the satisfaction of the County Engineer. 5.7-1d Stockpiling and staging areas shall be located as far as practical from noise sensitive receptors during construction activities, to the satisfaction of the County Engineer.	No unavoidable significant impacts related to noise have been identified following implementation of recommended mitigation measures and compliance with applicable requirements set forth by the County of San Bernardino and the Big Bear Municipal Water District.
	Long-Term Noise Impacts		
	5.7-2 *Implementation of the Moon Camp Project would generate additional vehicular travel on the surrounding roadway network, thereby resulting in noise level increases. Analysis has concluded that long-term noise impacts would be less than significant for all analyzed roadway segments in*	5.7-2 No mitigation measures are recommended.	

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	Year 2006 and Year 2025 traffic scenarios. No mitigation measures are recommended.		
	Stationary Noise		
	5.7-3 *Implementation of the Moon Camp project would result in on-site noise associated with residential and parking lot activities and boat loading/unloading activities at the marina. Analysis has concluded that stationary source impacts would be reduced to less than significant levels with adherence to the County of San Bernardino General Plan policies relating to noise level standards and recommended mitigation measures.*	5.7-3 No mitigation measures are recommended.	
	Watercraft Noise		
	5.7-4 *Implementation of the Moon Camp project would result in increased watercraft activities on Big Bear Lake. Analysis has concluded that watercraft noise impacts would be reduced to less than significant levels with adherence to Rules and Regulations established by the Big Bear Municipal Water District for Big Bear Lake.*	5.7-4 No mitigation measures are recommended.	
	Cumulative		
	5.7-5 *Implementation of the Moon Camp Project, combined with cumulative projects, would increase the ambient noise levels in the site vicinity. Impact analysis and mitigation of impacts are determined on a project-by-project basis.*	5.7-5 No mitigation measures are recommended.	
5.8	**BIOLOGICAL RESOURCES**		
	Special Status Biological Resources		
	5.8-1 *Project implementation would affect species identified as special status. Implementation of recommended mitigation measures would reduce impacts to a less than significant level to biological species, with the exception of the Bald Eagle. Impacts to the Bald Eagle are concluded as significant and unavoidable.*	5.8-1a ~~Prior to vegetation clearing, grading, or other disturbance, the project site shall be surveyed during a year with precipitation at least 40 percent of average for the area to determine presence or absence of special status plant species and vegetation types. Surveys shall focus on listed special status vegetation types, and Threatened or Endangered, and CNPS List 1B and 2 species whose presence could not be determined during surveys due to lack of rainfall.~~	Significant and unavoidable impacts related Biological Resources have been identified for impacts to Bald Eagle populations. If the County of San Bernardino approves the project, the County shall be required to cite their findings in accordance with Section 15091 of CEQA and prepare a Statement of Overriding Considerations in

EIR SECTION	IMPACTS	MITIGATION MEASURES	SIGNIFICANCE AFTER MITIGATION
		~~The location and extent of special status species populations shall be mapped and the size of the populations accurately documented.~~ ~~The project applicant shall pay compensation for the loss of special status botanical resources identified on the project site by the survey by funding the purchase and management of off-site habitat through contributions to a fund established by the California Wildlife Foundation on behalf of the CDFG. The California Wildlife Foundation is an independent 501(c)3 nonprofit corporation founded to assist the CDFG and other governmental agencies in the management of funds and mitigation banks designed to offset the impact of development on California's native flora and fauna. Off-site habitat containing the same species as those identified within resources impacted by the proposed project shall be purchased at a ratio agreed upon by the County of San Bernardino, San Bernardino National Forest, USFWS, and CDFG. The typical mitigation ratio is 3:1 (i.e., three acres of habitat purchased for preservation for each acre impacted by development).~~ ~~If additional surveys during a year with precipitation at least 40 percent of average do not encounter additional special status plant resources, the project applicant is responsible for the mitigation of a minimum of 11.8 acres of pebble plain and open Jeffrey pine forest in the western half of the project site that is known to be occupied by the federally-listed Threatened ash-gray Indian paintbrush (i.e., would be required to fund the purchase of 35.4 acres of offsite habitat from the California Wildlife Foundation if the agreed mitigation ratio is 3:1).~~ Prior to vegetation clearing, grading, or other disturbance, the project site shall be surveyed during a year with precipitation at least 40 percent of average for the area to determine presence or absence of special status plant species and vegetation types. Surveys shall focus on	accordance with section 15093 of CEQA. No additional significant impacts related to Biological Resources have been identified following implementation of mitigation measures and/or compliance with applicable standards, requirements and/or policies by the County of San Bernardino.

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		special status vegetation types, and Threatened or Endangered, and CNPS List 1B and 2 species whose presence could not be determined during surveys due to lack of rainfall. The location and extent of special status species populations shall be mapped and the size of the populations accurately documented. Pebble plain habitat acreages will be recalculated following the survey using criteria established by the Habitat Management Guide for Pebble Plain Habitat on the National Forest System (2002). Should avoidance/retention on-site of the 4.91 acres of Pebble Plain habitat in permanent open space under a Conservation Easement Agreement not occur, the Project Applicant shall pay compensation for the loss of special status botanical resources identified on the project site during the survey by funding the purchase, establishment of a conservation easement, and management of off-site habitat within the conservation easement by an entity approved by the CDFG. Off-site habitat containing the same species as those identified within resources impacted by the proposed project shall be purchased at a ratio of 3:1 (i.e., three acres of habitat purchased for preservation for each acre impacted by development). Prior to the initiation of clearing or grading activities on the project site, the conservation easement will be established, the management entity will be approved by the CDFG, and a non-wasting endowment will be established for the monitoring and management of the preservation site by the management entity in perpetuity. If additional surveys during a year with precipitation at least 40 percent of average do not encounter additional special status plant resources, the Project Applicant is responsible for mitigating impacts to a minimum of 11.8-acres of pebble plain and open Jeffrey pine forest in the western half of the project site that is known to be occupied by the Federally-listed Threatened ash-gray	

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		Indian paintbrush. As such, the applicant would be required to fund the purchase and maintenance of 35.4-acres of offsite pebble plain and open Jeffrey pine forest habitat that contains special status plant species, including Ash-gray Indian paintbrush and others known to occur on the site.	
		5.8-1b Trees identified on Exhibits 3 and 4 of the Bald Eagle Survey Report (Appendix E, see attached) as eagle perch locations shall be preserved in place upon project completion and shall not be removed under any circumstances. Any development that may occur within the project site and in the individual lots must avoid impacts to these trees and their root structures. All construction or landscaping improvements, including irrigation, will be prohibited on or around the exposed root structures or within the dripline of these trees. These restrictions on development of the individual tentative tracts must be clearly presented and explained to any potential prospective developers and/or homeowners prior to assumption of title and close of escrow. This measure shall be identified as a Note on the Composite Development Plan.	
		5.8-1c Prior to vegetation clearing, grading, or other disturbance, the project site shall be surveyed to identify all large trees (i.e., greater than 20-inches in diameter at 4.5 feet from the ground) within 600 feet from the high water line. Trees identified on the project site as having a diameter in excess of 20-inches at four feet from the ground within 600 feet of the shoreline shall be documented and tagged. Any development that may occur within the project site and in the individual lots must avoid impacts to tagged trees and their root structures. All construction or landscaping improvements, including irrigation, will be prohibited on or around the exposed root structures or within the dripline of these trees. These restrictions on development of the individual tentative tracts must be clearly presented and explained to any potential prospective developers	

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		and/or homeowners prior to assumption of title and close of escrow. This measure shall be identified as a Note on the Composite Development Plan.	
		5.8-1d Seven days prior to the onset of construction activities, a qualified biologist shall survey within the limits of project disturbance for the presence of any active raptor nests. Any nest found during survey efforts shall be mapped on the construction plans. If no active nests are found, no further mitigation would be required. Results of the surveys shall be provided to the CDFG. If nesting activity is present at any raptor nest site, the active site shall be protected until nesting activity has ended to ensure compliance with Section 3503.5 of the California Fish and Game Code. Nesting activity for raptors in the region of the project site normally occurs from February 1 to June 30. To protect any nest site, the following restrictions on construction are required between February 1 and June 30 (or until nests are no longer active as determined by a qualified biologist): (1) clearing limits shall be established a minimum of 300 feet in any direction from any occupied nest and (2) access and surveying shall not be allowed within 200 feet of any occupied nest. Any encroachment into the 300/200 foot buffer area around the known nest shall only be allowed if it is determined by a qualified biologist that the proposed activity shall not disturb the nest occupants. Construction during the nesting season can occur only at the sites if a qualified biologist has determined that fledglings have left the nest.	
		5.8-1e Vegetation removal, clearing, and grading on the project site shall be performed outside of the breeding and nesting season (between March and September) to minimize the effects of these activities on breeding activities of migratory birds and other species.	

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		5.8-1f The use of the boat dock for motorized boating shall be prohibited between the dates of December 1 and April 1. No motorized boats shall be allowed to launch or moor in the vicinity of the boat dock at any time during this period. This restriction shall be clearly displayed on signage at the entrance to the parking lot and on the boat dock visible from both land and water. This requirement shall also be published in the Homeowner's Association CC&Rs.	
		~~5.8-1g Exterior construction shall be prohibited between the dates of December 1 and April 1 (of each year). Significant impacts to pebble plain habitat can be mitigated to a less than significant level through off-site preservation. The project applicant shall pay compensation for the loss of special status botanical resources identified on the site, by the survey, by contributing to the funding of purchase and management of off-site habitat. The Applicant shall acquire habitat in the Big Bear Valley and dedicate to the CDFG or suitable conservation organization. The California Wildlife Foundation is an independent 501(c)3 nonprofit corporation founded to assist the CDFG and other governmental agencies in the management of funds and mitigation banks designed to offset the impact of development on California's native flora and fauna. Off site habitat shall be purchased at a ratio agreed upon by the County of San Bernardino, San Bernardino National Forest, USFWS, and CDFG. The typical mitigation ratio is 3:1 (i.e., three acres of habitat purchased for preservation for each acre impacted by development. An area containing no less than 2.1 acres of pebble plain habitat in an area located adjacent to other open space areas within the project vicinity shall be preserved in perpetuity. The preserved areas shall be protected from future development through a conservation easement or other appropriate mechanism.~~	

EIR SECTION	IMPACTS	MITIGATION MEASURES	SIGNIFICANCE AFTER MITIGATION
	Sensitive Natural Communities/Habitats		
	5.8-2 *The proposed Project would impact portions of the Project site that are habitat for referenced sensitive species. Implementation of recommended mitigation measures would reduce impacts to a less than significant level.*	5.8-2a Street lamps on the project site shall not exceed 20 feet in height, shall be fully shielded to focus light onto the street surface and shall avoid any lighting spillover onto adjacent open space or properties. Furthermore, street lights shall utilize low color temperature lighting (e.g., red or orange). 5.8-2b Outdoor lighting for proposed homes on the individual tentative tracts shall not exceed 1,000 lumens. Furthermore, residential outdoor lighting shall not exceed 20 feet in height and must be shielded and focused downward to avoid lighting spillover onto adjacent open space or properties. These restrictions on outdoor lighting of the individual tentative tracts must be clearly presented and explained to any potential prospective developers and/or homeowners prior to assumption of title and close of escrow. This requirement shall also be published in the Homeowner's Association CC&Rs. 5.8-2c To limit the amount of human disturbance ~~to~~ on adjacent natural open space areas, signs shall be posted along the northeastern and eastern perimeter of the project site where the property boundary abuts open space~~ directing people to keep out of the adjacent natural open space areas and to keep dogs leashed in areas adjacent to natural open space areas. This requirement shall be published in the Homeowner Association CC&Rs~~ with the following statement: "Sensitive plant and wildlife habitat. Please use designated trails and keep pets on a leash at all times." In addition, a requirement stating that residents shall keep out of adjacent open space areas to the north with the exception of designated trails will be published in the Homeowner Association CC&Rs and a map of designated hiking trails will be provided to all residents.	

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		5.8-2d Prior to ~~the issuance of individual building permits, landscaping designs~~ recordation of the final map, a landscaping plan for the entire tract shall be prepared (inclusive of a plant palette) with native trees and plant species, and, shall be submitted to the County of San Bernardino for review and approval by a qualified biologist. The review shall determine that no non-native or invasive plant species are to be used in the proposed landscaping. The biologist should suggest appropriate native plant substitutes. A note shall be placed on the Composite Development Plan indicating that all proposed landscaping (including landscaping on individual lots) shall conform with the overall approved tract map landscaping plan. A requirement shall be included stating that residents shall include a restriction of the use of tree and plant species to only native trees/plants approved per the overall tract map landscaping plan. the Homeowner Association CC&Rs shall also restrict (individual lot owners) to use only native tree and plant species approved per the overall tract map landscaping plan.	
		5.8-2e ~~Garages with automatic door openers shall be required. No exterior construction shall occur between December 1 and April 1, when bald eagles are present~~. Garages with automatic door openers shall be required. No exterior construction, grading or vegetation clearing shall be permitted between December 1 and April 1, which is the wintering period for bald eagles (i.e., the season when bald eagles are present in the Big Bear area).	
		Also refer to mitigation measures 5.8-1a to 5.8-1f.	
	Jurisdictional Waters		
	5.8-3 *Development of the proposed Project ~~does not have~~has the potential to impact jurisdictional waters. Analysis has concluded that potentially significant impacts would be reduced to a less than significant level~~impact~~*	5.8-3 ~~No mitigation measures are recommended.~~ Per the direction of the California Department of Fish and Game, all unavoidable impacts to State and Federal jurisdictional lakes, streams, and associated	

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	~~*would occur in this regard after regulatory compliance*~~ *with implementation of the recommended mitigation measures*	habitat shall be compensated for with the creation and/or restoration of in-kind habitat on-site and/or off-site at a minimum 3:1 replacement-to-impact ratio. Additional requirements may be required through the permitting process depending on the quality of habitat impacted, project design and other factors.	
	Wildlife Movement		
	5.8-4 *Project implementation may interfere with the movement of a native resident or migratory wildlife species. Analysis has concluded that impacts are less than significant.*	5.8-4 No mitigation measures are recommended.	
	Regional and Local Policies/Plans		
	5.8-5 *Project implementation would not conflict with adopted regional and/or local policies/plans pertaining to biological resources. Analysis has concluded that impacts are less than significant.*	5.8-5 No mitigation measures are recommended.	
	Cumulative		
	5.8-6 *Cumulative development in the Project area may impact the area's biological resources. Analysis has concluded that* ~~*with implementation of the specified mitigation and compliance with all applicable County, State and Federal regulations concerning biological resources, a less than significant impact would occur in this regard.*~~*project implementation incrementally adding to impacts on bald eagle habitat in the Big Bear Valley would result in a significant and unavoidable cumulative impact to the wintering bald eagle population on Big Bear Lake.*	5.8-6 No mitigation measures are recommended.	
5.9	**CULTURAL RESOURCES**		
	Archaeological/Historical Resources		
	5.9-1 *The proposed Project may cause a significant impact to unknown archaeological and/or historic resources visible on-site. Implementation of recommended mitigation measures would reduce impacts to a less than significant level.*	5.9-1 Project-related grading, grubbing, trenching, excavations, and/or other earth-moving activities in the project area shall be monitored by a qualified archaeologist. In the event that a material of potential cultural significance is uncovered during such activities on the project site, all	No significant impacts related to Cultural Resources have been identified following implementation of mitigation measures referenced in this Section.

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		earth-moving activities in the project area shall cease and the archeologist shall evaluate the quality and significance of the material. Earth-moving activities shall not continue in the area where a material of potential cultural significance is uncovered until resources have been completely removed by the archaeologist and recorded as appropriate.	
	Paleontological Resources		
	5.9-2 *The proposed Project may cause a significant impact to unknown paleontological resources on-site. Implementation of recommended mitigation measures would reduce impacts to a less than significant level.*	5.9-2a Grading shall be monitored during excavation in areas identified as likely to contain paleontologic resources by a qualified paleontological monitor. Monitoring shall be accomplished for any undisturbed subsurface older alluvium, which might be present in the subsurface. The monitor shall be equipped to salvage fossils as they are unearthed to avoid construction delays and to remove samples of sediments which are likely to contain the remains of small fossil invertebrates and vertebrates. The monitor must be empowered to temporarily halt or divert grading equipment to allow for removal of abundant or large specimens.	
		5.9-2b Recovered specimens shall be prepared to a point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates.	
		5.9-2c Identification and curation of specimens into a museum repository with permanent retrievable storage shall occur for paleontological resources.	
		5.9-2d A report of findings shall be prepared with an appended itemized inventory of specimens. The report shall include pertinent discussion of the significance of all recovered resources where appropriate. The report and inventory when submitted to the appropriate Lead Agency, shall signify completion of the program to mitigate impacts to paleontologic resources.	

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	Burial Sites		
	5.9-3 *The proposed Project may cause a significant impact to Native American burial sites which could occur on-site. Implementation of the specified mitigation measures would reduce impacts to a less than significant level.*	5.9-3 In the event human remains are discovered during grading/ construction activities, work shall cease in the immediate area of the discovery and the Project Applicant shall comply with the requirements and procedures set forth in Section 5097.98 of the Public Resources Code, including notification of the County Coroner, notification of the Native American Heritage Commission, and consultation with the individual identified by the Native American Heritage Commission to be the "most likely descendent."	
	Cumulative		
	5.9-4 *Cumulative development may adversely affect cultural resources in the north shore area. Resources are evaluated and mitigated on a project-by-project basis.*	5.9-4 No mitigation measures are recommended.	
5.10	**GEOLOGY AND SOILS**		
	Slope Stability		
	5.10-1 *Development of the proposed Project could result in slope failures. Implementation of the recommended mitigation measures and compliance with the County Development Code and Uniform Building Code would reduce impacts to less than significant levels.*	5.10-1 The stability of ~~S~~south facing cut slopes shall be analyzed as part of the design-level geotechnical investigation. ~~u~~Utilize~~ing~~ 2:1 buttressed slopes using on site native soil materials, or ~~by~~ constructing geotextile-reinforced soil buttresses ~~where~~for planned unstable cut slopes~~ are planned~~ are typical engineering designs for stabilizing slopes. Either of these methods, or other methods must be approved by the San Bernardino County Department of Building and Safety~~Geologist for slope reinforcement may be utilized~~.	No significant impacts related to Geology and Soils have been identified following implementation of mitigation measures and/or compliance with applicable standards, policies and/or County of San Bernardino Development Code and standards set forth in the Uniform Building Code.
	Soil Erosion		
	5.10-2 *Development of the proposed Project could result in accelerated soil erosion. Project compliance with the County Development Code, the Uniform Building Code and the recommended mitigation measures would reduce impacts to a less than significant level.*	5.10-2a Due to the potential for erosion associated with younger alluvial deposits within the two major on-site stream channels, increased surface drainage quantities associated with development on-site shall be directed away from the stream channels.	

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		5.10-2b Prior to the issuance of Grading Permits, the Project Applicant shall prepare a Soil Erosion and Sedimentation Plan for submittal and approval by the County Building and Safety Department.	
	Ground Shaking		
	5.10-3 *Development of the proposed Project may increase the number of people/structures exposed to effects associated with seismically induced ground shaking. Implementation of the recommended mitigation measures and compliance with the County Development Code and the Uniform Building Code would reduce potential impacts to less than significant.*	5.10-3 Engineering design for all structures and roadways shall be based on the 2001 California Uniform Building Code. Construction plans shall be in accordance with seismic design standards set forth by the County's Development Code and Uniform Building Code.	
	Seiche		
	5.10-4 *Development of the proposed Project may expose people/structures to seiching as a result of significant ground motion related to an earthquake. Project compliance with recommended mitigation measures would reduce impacts to less than significant levels.*	5.10-4 Residential structures shall be located in areas which provide a minimum of five feet of freeboard above the high water line for any structures.	
	Expansive Soils		
	5.10-5 *Development of the proposed Project may create substantial risks to life property as a result of expansive soils. Implementation of the recommended mitigation measure would reduce impacts to less than significant levels.*	5.10-5 Prior to grading permit issuance, ~~geologic analysis/studies shall be required including 1)~~ a quantitative geotechnical analysis and~~of liquefaction, 2) a~~ design-level geotechnical engineering report shall be required and submitted to the County of San Bernardino Department of Building and Safety for their approval. ~~and 3) a design level engineering geology report.~~	
	Cumulative Impacts		
	5.10-6 *The proposed Project, combined with future development, may result in increased short-term impacts such as erosion and sedimentation, and long-term seismic impacts within the area. Mitigation is incorporated on a project-by-project basis to reduce impacts to a less than significant level in areas deemed suitable for development.*	5.10-6 No mitigation measures are recommended.	

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5.11	**HYDROLOGY AND DRAINAGE**		
	Drainage and Runoff		
	5.11-1 *The proposed Project could significantly alter drainage patterns which could result in increased erosion potential and runoff. Impacts are concluded as less than significant with implementation of the Project design features (i.e., the provision of adequate outlet structures, storm drains to contain flows and proper bluff drainage).*	5.11-1 The proposed cross culverts shall be sized for 100-year burn and bulking flow rates. The burn and bulking method would increase the runoff from the natural areas. The method provided in the Los Angeles County Hydrology Manual is recommended. In addition, the cross culverts shall all be designed with headwalls to prevent CMP crushing, and shall be maintained adequately.	Due to inconclusive testing of potential overdraft conditions for the ground water basin associated with the North Shore Hydrologic Subunit, project and cumulative impacts are concluded to be significant and unavoidable. If the County of San Bernardino approves the project, the County shall be required to adopt findings in accordance with Section 15091 of the CEQA Guidelines and prepare a Statement of Overriding Considerations in accordance with Section 15093 of the CEQA Guidelines. No additional significant impacts related to hydrology and water quality have been identified following implementation of the recommended mitigation measures and/or through regulatory compliance.
	Groundwater		
	5.11-2 *The proposed project may result in groundwater overdraft conditions. Although mitigation measures requiring further testing are referenced, based upon the evidence presented to date, it is concluded that groundwater overdraft is a significant adverse impact and until additional technical review is conducted, the project would result in an unavoidable adverse impact.*	~~5.11-2 Based upon the technical analysis presented, a potential groundwater overdraft condition would occur and no additional mitigation measures have been identified.~~ 5.11-2a Within three months of project approval, the Project Applicant shall submit a plan for a detailed geohydrologic investigation. The plan must present the possible sources of groundwater selected for the project and the methodology proposed to investigate those sources. If the on-site wells are to be utilized to serve this project, it must be determined if either could draw water from Big Bear Lake. The plan must be prepared by a California Registered Geologist. 5.11-2b Within six months of plan approval, the Project Applicant shall submit the results of the geohydrologic investigation. The report must be prepared by a California Registered Geologist. 5.11-2c Concurrently or within three months of approval by the geohydrologic report, the Project Applicant shall submit a groundwater monitoring plan in accordance with San Bernardino County's "Guidelines for Preparation of a Groundwater Monitoring Plan." The plan must be prepared by a California Registered Geologist.	

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	Water Quality – Construction		
	5.11-3 *Grading, excavation and construction activities associated with the proposed Project could impact water quality due to sheet erosion of exposed soils and subsequent deposition of particles and pollutants in drainage areas. Impacts would be reduced to a less than significant level through regulatory compliance and with incorporation of the recommended mitigation.*	5.11-3 Prior to Grading Permit issuance and as part of the Project's compliance with the NPDES requirements, a Notice of Intent (NOI) shall be prepared and submitted to the Santa Ana Regional Water Quality Control Board providing notification and intent to comply with the State of California general permit. Also, a Storm Water Pollution Prevention Plan (SWPPP) shall be completed for the construction activities on-site. A copy of the SWPPP shall be available and implemented at the construction-site at all times. The SWPPP shall outline the source control and/or treatment control BMPs to avoid or mitigate runoff pollutants at the construction-site to the "maximum extent practicable." At a minimum, the following shall be implemented from the *California Storm Water Best Management Practice Handbook - Construction Activity*: ▪ *CA 1 Dewatering Operations* – This operation requires the use of sediment controls to prevent or reduce the discharge of pollutants to storm water from dewatering operations. ▪ *CA 2 Paving Operations* – Prevent or reduce the runoff of pollutants from paving operations by proper storage of materials, protecting storm drain facilities during construction, and training employees. ▪ *CA 3 Structural Construction and Painting* – Keep site and area clean and orderly, use erosion control, use proper storage facilities, use safe products and train employees to prevent and reduce pollutant discharge to storm water facilities from construction and painting. ▪ *CA 10 Material Delivery and Storage* – Minimize the storage of hazardous materials on-site. If stored on-site, keep in designated areas, install secondary	

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		containment, conduct regular inspections and train employees. ▪ *CA 11 Material Use* – Prevent and reduce the discharge of pesticides, herbicides, fertilizers, detergents, plaster, petroleum products and other hazardous materials from entering the storm water. ▪ *CA 20 Solid Waste Management* - This BMP describes the requirements to properly design and maintain trash storage areas. The primary design feature requires the storage of trash in covered areas. ▪ *CA 21 Hazardous Waste Management* - This BMP describes the requirements to properly design and maintain waste areas. ▪ *CA 23 Concrete Waste Management* – Prevent and reduce pollutant discharge to storm water from concrete waste by performing on and off-site washouts in designated areas and training employees and consultants. ▪ *CA 24 Sanitary Septic Water Management* – Provide convenient, well-maintained facilities, and arrange regular service and disposal of sanitary waste. ▪ *CA 30 Vehicle and Equipment Cleaning* – Use off-site facilities or wash in designated areas to reduce pollutant discharge into the storm drain facilities. ▪ *CA 31 Vehicle and Equipment Fueling* – Use off-site facilities or designated areas with enclosures or coverings to reduce pollutant discharge into the storm drain facilities. ▪ *CA 32 Vehicle and Equipment Maintenance* – Use off-site facilities or designated areas with enclosing or coverings to reduce pollutant discharge into the storm	

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		drain facilities. In addition, run a "dry site" to prevent pollution discharge into storm drains. ▪ *CA 40 Employee and Subcontractor Training* – Have a training session for employees and subcontractors to understand the need for implementation and usage of BMPs. ▪ *ESC 2 Preservation of Existing Vegetation* – Minimize the removal of existing trees and shrubs since they serve as erosion control. ▪ *ESC 10 Seeding and Planting* – Provide soil stability by planting and seeding grasses, trees, shrubs, vines, and ground cover. ▪ *ESC 11 Mulching* – Stabilize cleared or freshly seeded areas with mulch. ▪ *ESC 20 Geotextiles and Mats* – Natural or synthetics material can be used for soil stability. ▪ *ESC Dust Control* – Reduce wind erosion and dust generated by construction activities by using dust control measures. ▪ *ESC 23 Construction Road Stabilization* – All on-site vehicle transport routes shall be stabilized immediately after grading and frequently maintained to prevent erosion and control dust. ▪ *ESC 24* – Stabilized Construction Entrance – Stabilize the entrance pad to the construction area to reduce amount of sediment tracked off-site. ▪ *ESC 30 Earth Dikes* – Construct earth dikes of compacted soil to divert runoff or channel water to a desired location. ▪ *ESC 31 Temporary Drains and Swales* – Use temporary drains and swales to divert off-site runoff around the construction-site and stabilized areas and to direct it into sediment basins or traps.	

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		▪ *ESC 40 Outlet Protection* – Use rock or grouted rock at outlet pipes to prevent scouring of soil caused by high velocities. ▪ *ESC 41 Check Dams* – Use check dams to reduce velocities of concentrated flows, thereby reducing erosion and promoting sedimentation behind the dams. Check dams are small and placed across swales and drainage ditches. ▪ *ESC 50 Silt Fence* – Composed of filter fabric, these are entrenched, attached to support poles, and sometimes backed by wire fence support. Silt fences promote sedimentation behind the fence of sediment-laden water. ▪ *ESC 51 Straw Bale Barrier* – Place straw bales end to end in a level contour in a shallow trench and stake them in place. The bales detain runoff and promote sedimentation. ▪ *ESC 52 Sand Bag Barriers* – By stacking sand bags on a level contour, a barrier is created to detain sediment-laden water. The barrier promotes sedimentation. ▪ *ESC 53 Brush or Rock Filter* – Made of 0.75 to 3-inch diameter rocks placed on a level contour or composed of brush wrapped in filter cloth and staked to the toe of the slope provides a sediment trap. ▪ *ESC 54 Storm Drain Inlet Protection* – Devices that remove sediment from sediment laden storm water before entering the storm drain inlet or catch basin. ▪ *ESC 55 Sediment Trap* – A sediment trap is a small, excavated, or bermed area where runoff for small drainage areas can pass through allowing sediment to settle out.	

EIR SECTION	IMPACTS	MITIGATION MEASURES	SIGNIFICANCE AFTER MITIGATION
	Water Quality – Long-Term		
	5.11-4 *Project development may result in long-term impacts to the quality of storm water and urban runoff, subsequently impacting water quality. Impacts would be reduced to less than significant levels with incorporation of the recommended mitigation measures along with State and County Development Code requirements.*	5.11-4a Prior to Grading Permit issuance, a Water Quality Management Plan shall be developed and shall include both Non-Structural and Source Control BMPs. The WQMP shall conform to the San Bernardino County Draft NPDES permit and WQMP standards. The following are the minimum required controls to be implemented as a part of the *Water Quality Management Plan (WQMP) for Urban Runoff.* ▪ *Education for Property Owners, Tenants and Occupations* – The Property Owners Association is required to provide awareness educational material, including information provided by San Bernardino County. The materials shall include a description of chemicals that should be limited to the property and proper disposal, including prohibition of hosing waste directly to gutters, catch basins, storm drains or the lake. ▪ *Activity Restrictions* – The developer shall prepare conditions, covenants and restriction of the protection of surface water quality. ▪ *Common Area Landscape Management* – For the common landscape areas on-going maintenance shall occur consistent with County Administrative Design Guidelines or city equivalent, plus fertilizer and pesticide usage consistent with the instructions contained on product labels and with regulation administered by the State Department of Pesticide Regulation or county equivalent. ▪ *Common Area Catch Basin Inspection* – Property Owners Associations shall have privately owned catch basins cleaned and maintained, as needed. These are intended to prevent sediment, garden waste, trash and other pollutants from entering the public streets and storm drain systems.	

EIR SECTION	IMPACTS	MITIGATION MEASURES	SIGNIFICANCE AFTER MITIGATION
		▪ *Common Area Litter Control* – POAs shall be required to implement trash management and litter control procedures to minimize pollution to drainage waters. ▪ *Street Sweeping Private Streets and Parking Lots* – Streets and Parking lots shall be swept as needed, to prevent sediment, garden waste, trash and other pollutants from entering public streets and storm drain systems. The following controls from the *California Storm Water Best Management Practice Handbook - Municipal* shall be employed: ▪ *SC10 Housekeeping Practices* - This entails practices such as cleaning up spills, proper disposal of certain substances and wise application of chemicals. ▪ *SC32 Used Oil Recycling* - May apply to maintenance and security vehicles. ▪ *SC72 Vegetation Controls* – Vegetation control typically includes chemical (herbicide) application and mechanical methods. Chemical methods are discussed in SC10. Mechanical methods include leaving existing vegetation, cutting less frequently, hand cutting, planting low maintenance vegetation, collecting and properly disposing of clippings and cuttings, and educating employees and the public. ▪ *SC73 Storm Drain Flushing* - Although general storm drain gradients are sufficiently steep for self-cleansing, visual inspection may reveal a buildup of sediment and other pollutants at the inlets or outlets, in which case flushing may be advisable. 5.11-4b The Water Quality Management Plan (WQMP) shall include Structural or Treatment BMPs. The structural BMPs utilized shall focus on meeting potential TMDL requirements for noxious aquatic plants, nutrients,	

EIR SECTION	IMPACTS	MITIGATION MEASURES	SIGNIFICANCE AFTER MITIGATION

sedimentation and siltation. The structural BMPs shall conform to the San Bernardino County NPDES permit and the San Bernardino WQMP standards.

Consistent with the WQMP guidelines contained in the *Draft National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements* for San Bernardino County, Structural BMPs shall be required for the proposed Project. They shall be sized to comply with one of the following numeric sizing criteria or be considered by the permittees to provide equivalent or better treatment.

Volume Based BMPs shall be designed to infiltrate or treat either:

- The volume of runoff produced from the 85th percentile 24-hour storm event, as determined from the local historical rainfall record; or
- The volume of the annual runoff produced by the 85th percentile 24-hours rainfall event, determined as the maximized capture storm water volume for the area, from the formula recommended in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87 (1998); or
- The volume of annual runoff based on unit basin storage volume, to achieve 80% or more volume treatment by the method recommended in California Stormwater Best Management Practice Handbook – Industrial/Commercial (1993); or
- The volume of runoff, as determined from the local historical rainfall record, that achieves approximately the same reduction in pollutant loads and flows as achieved by mitigation of the 85th percentile 24-hour runoff event.

EIR SECTION	IMPACTS	MITIGATION MEASURES	SIGNIFICANCE AFTER MITIGATION
		OR Flow–based BMPs shall be designed to infiltrate or treat either: ▪ The maximum flow rate of runoff produced from a rainfall intensity of 0.2 inch of rainfall per hour; or ▪ The maximum flow rate of runoff produced by the 85th percentile hourly rainfall intensity, as determined from the local historical rainfall record, multiplied by a factor of two; or ▪ The maximum flow rate of runoff, as determined from the local historical rainfall record that achieved by mitigation of the 85th percentile hourly rainfall intensity multiplied by a factor of two. The following are the minimum required controls to be implemented as a part of the *Water Quality Management Plan (WQMP) for Urban Runoff*. ▪ *Control of Impervious Runoff* – Surface runoff shall be directed to landscaped areas or pervious areas. ▪ *Common Area Efficient Irrigation* – Physical implementation of the landscape plan consistent with County Administrative Design Guidelines or city equivalent, which may include provision of water sensors, programmable irrigation timers, etc. ▪ *Common Area Runoff-Minimizing Landscape Design* – Group plants with similar water requirements in order to reduce excess irrigation runoff and promote surface filtration. ▪ *Catch Basin Stenciling* – "No Dumping – Flows to Lake" or equivalent effective phrase shall be stenciled on catch basins to alert the public as to the destination of pollutant discharging into storm drain.	

EIR SECTION	IMPACTS	MITIGATION MEASURES	SIGNIFICANCE AFTER MITIGATION
		▪ *Debris Posts* – These shall be installed to prevent large floatable debris from entering the storm drains. They shall be placed upstream of the cross culverts. ▪ *Inlet Trash Racks* – These shall be installed where appropriate to reduce intake and transport through the storm drain system of large floatable debris. Trash racks shall be provided where drainage from open areas enters storm drain or cross culverts.	
		5.11-4c Storm water treatment under the NPDES Permit and the future TMDL requirements shall include the construction of treatment BMPs. Treatment BMPs appropriate for on-site use shall include infiltration trenches and basins, swales, inlet filtration, and/or water quality basins. All storm water runoff shall be treated before leaving the site to reduce pollutants in Big Bear Lake. <u>Infiltration Trenches and Basins</u> Infiltration Trenches and/or Basins shall be used on site to meet potential future TMDLs for noxious aquatic plants and nutrients. Infiltration trenches and basins treat storm water runoff through filtration. A typical infiltration trench is essentially an excavated trench, that is lined with filter fabric and backfilled with stones. Depth of the infiltration trench shall range from three to eight feet and shall be located in areas with permeable soils, and water table and bedrock depth situated well below the bottom of the trench. Trenches shall not be used to trap coarse sediments since large sediment would likely clog the trench. Grass buffers may be installed to capture sediment before it enters the trench to minimize clogging. Infiltration basins shall be used for drainage areas between five and 50 acres. Infiltration basins shall be either in-line or off-line, and may treat different volumes such as the water quality volume or the 2-year or 10-year storm.	

EIR SECTION	IMPACTS	MITIGATION MEASURES	SIGNIFICANCE AFTER MITIGATION

Swales

The project shall implement either vegetative swales, enhanced vegetated swales utilizing check dams and wide depressions, a series of small detention facilities designed similarly to a dry detention basin, or a combination of these treatment methods into a treatment train (series of Structural BMPs). The Water Quality Management Plan shall address treatment for the Project to assure that runoff from the site is treated to the "maximum extent practicable".

The swales shall be treated as water quality features and shall be maintained differently than grass areas. Specifically, pesticides, herbicide, and fertilizers, which may be used on the grass areas, shall not be used in the vegetation swales.

Filtration

Filtration shall be implemented as a treatment method and shall use drop-in infiltration devices or inline devices.

Drop-infiltration devices at all curb inlets within the internal parking lots shall be implemented to provide potential pollutant removal. Existing examples of these filtration devices include the Drain Pac Storm Drain Inserts and Fossil Filters. These types of devices are efficient at removing oil and grease, debris, and suspended solids from treated waters. Some of these devices have also exhibited high efficiencies at removing heavy metals and other pollutants.

Inline devices suggested for use onsite include the Continuous Deflection Separator (CDS® unit). Once the runoff has entered the storm drain, an in-line diversion would direct the treatment flow to a CDS® unit. The CDS® unit is a non-blocking, non-mechanical screening system, which would provide a second line of defense for solids removal. Adsorption materials can

EIR SECTION	IMPACTS	MITIGATION MEASURES	SIGNIFICANCE AFTER MITIGATION
		be added within the CDS® unit to aid in the removal of oil and grease. The treated flow will exit the CDS® unit and continue downstream. To assure the efficiency of these filtration devices, monitoring shall be conducted. The use of street sweeps on the parking lots and streets shall aid in reducing the amounts of sediment and debris that flow through the devices. This will extend the effectiveness of the devices during a storm and will lower the frequency of required maintenance. The devices shall be checked and cleaned, if necessary, once a month during the rainy season, following any precipitation and at the end of the dry season prior to the first precipitation event of the rainy season. Consideration shall be given to using these filtration units in other areas besides the parking lot inlets. Another potential location is at the downstream end of the tributary pipes that feed the discharge point. Siting these units at a downstream point would allow for the treatment of a greater amount of runoff.	
Cumulative Impacts			
5.11-5	*The proposed Project along with other future development may result in increased hydrology and drainage impacts in the area. Due to inconclusive of potential overdraft conditions, cumulative groundwater impacts are concluded to be significant and unavoidable. Other hydrology and drainage impacts are evaluated on a project-by-project basis in order to mitigate to a less than significant level.*	5.11-5 No mitigation measures are recommended.	

2.3 SUMMARY OF PROJECT ALTERNATIVES

In accordance with California Environmental Quality Act (CEQA) Guidelines Section 15126.6, Section 7.0 describes a range of reasonable alternatives to the proposed project which could feasibly attain the basic objectives of the proposed project, while evaluating the comparative merits of each alternative. The analysis focuses on alternatives capable of eliminating significant adverse environmental effects or

reducing them to less than significant levels, even if these alternatives would impede, to some degree, the attainment of the project objectives. Potential environmental impacts are compared to impacts from the proposed project. The following is a description of each of the alternatives evaluated in Section 7.0.

"NO PROJECT/NO DEVELOPMENT" ALTERNATIVE

Implementation of the "No Project/No Development" Alternative would retain the site in its current condition. None of the improvements proposed as part of the project and/or the existing designation would occur. The following discussion evaluates the potential environmental impacts associated with the No Project/No Development Alternative as compared to impacts from the proposed Project.

"NO PROJECT/EXISTING DESIGNATION" ALTERNATIVE

Implementation of the "No Project/Existing Designation" Alternative would be in accordance with the existing Official Land Use District Rural Living-40 (40-acre minimum lot size). This Alternative would result in 1.5 residential lots on the project site. This Alternative would be less intensive than the proposed Project. Approximately three persons (1.5 housing units x 2.15 persons/household) would be added to the permanent population of the Community of Fawnskin. It is further noted that in addition to a single-residential structure, other uses can be allowed including those in the "Additional Uses" section of the County Development Code, subject to a Conditional Use Permit. The following discussion evaluates the potential environmental impacts associated with the No Project/Existing Designation Alternative as compared to impacts from the proposed Project.

"REDUCED DENSITY, WITHOUT ROAD ALIGNMENT AND WITHOUT MARINA" ALTERNATIVE

For the Reduced Density, Without Road Realignment and Without Marina Alternative, development of 62 residential lots and associated infrastructure (as depicted in the project description) would occur on the north side of the existing State Route 38 alignment. State Route 38 would not be realigned and no residential development would occur to the south of State Route 38. The land area south of State Route 38, along the lakefront, would be retained in its current state. Approximately 133 persons (62 housing units x 2.15 persons/household) would be added to the permanent population of the Community of Fawnskin.

"REDUCED DENSITY, WITH PROJECT REDESIGN" ALTERNATIVE

For the Reduced Density, With Project Redesign Alternative, development of 66 residential lots and associated infrastructure would occur on project site. Implementation of this Alternative would include the realignment of State Route 38. Twenty-one (21) and 45 lots would be developed on the south and north sides of the realigned State Route 38, respectively. This Alternative would include a marina facility, with 72 boat slips. Approximately 142 persons (66 housing units x 2.15 persons/household) would be added to the permanent population of the Community of Fawnskin.

3.0 Project Description

3.0 PROJECT DESCRIPTION

3.1 PROJECT LOCATION AND SETTING

PROJECT LOCATION

The proposed Moon Camp Tentative Tract #16136 Residential Subdivision ("Moon Camp") encompasses approximately 62.43 acres along the northwest shore of Big Bear Lake, in the community of Fawnskin, County of San Bernardino (refer to Exhibit 3-1, *Regional Vicinity*). The Big Bear Lake area serves primarily as a destination resort community and many of the residences are second homes. As many as 50,000 people visit the area on peak holiday weekends. The north shore area is less populated than the south shore and most visitors utilize the south shore commercial and recreational amenities such as ski areas, restaurants, and hotel facilities.

The Project site is located adjacent to the northwest shore of Big Bear Lake, in the relatively undeveloped eastern portion of Fawnskin (refer to Exhibit 3-2, *Local Vicinity*). More specifically, the site is located in the northern half of Section 13, Township 2 North, Range 1 West, San Bernardino Base and Meridian (APN: 0304-082-14, 0304-091-12, 13, and 21). The Project site is generally situated between Flicker Road to the north, Big Bear Lake to the south, Polique Canyon Road to the east, and Oriole Lane/Canyon Road to the west. Regional access to the site is provided via State Route 38, which currently bisects the property.

EXISTING CONDITIONS ON-SITE

The 62.43-acre Project site (designated RL-40, Rural Living, by the County of San Bernardino) slopes from north to south. Elevations range from 6,747 feet above mean sea level (MSL) at the lakefront, to a high of 6,960 feet above MSL at the northeast boundary. Total relief is therefore 483 feet and slopes range from five percent (5%) to forty percent (40%). A natural drainage ravine occurs in the eastern portion of the property. The site is vegetated with Jeffrey Pine forest with approximately 2,772 trees existing on-site and a pebble plain habitat occurs in the western portion of the property. State Route 38, dirt roads, and trails traverse the Project site (refer to Exhibit 3-3, *Aerial Photograph*). Additionally, two water wells, which are currently non-operational, exist on the Project site.

SURROUNDING LAND USES

The site is bounded by the following land uses:

North: Single-family residences along Flicker Road, a local street, border the site to the north. Flicker Road traverses the site's northern boundary in an east/west direction. United States Forest Service lands occupy the eastern portion of the site's northern boundary.

South: Big Bear Lake borders the site to the south.

Exhibit 3-1

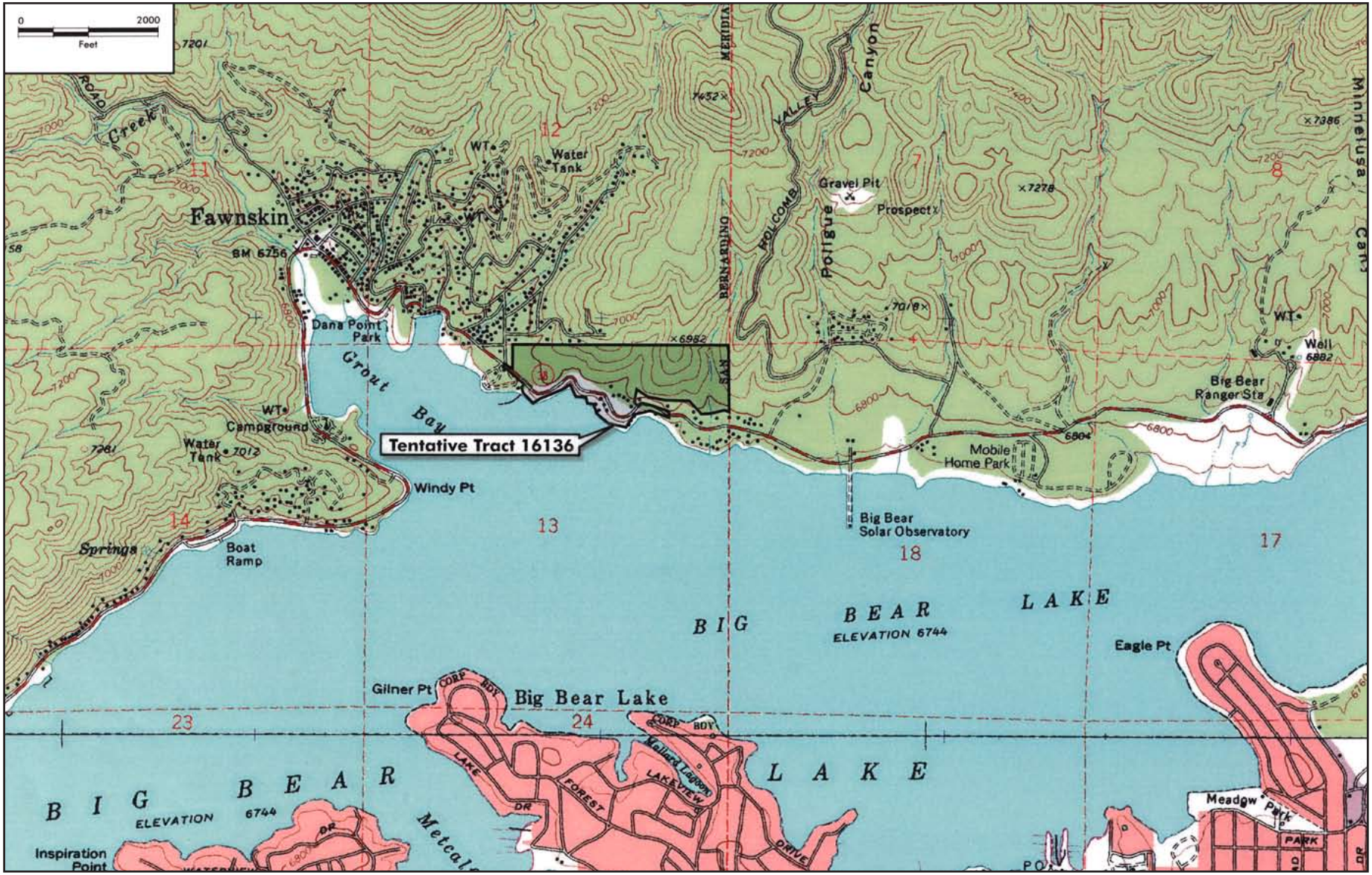
RBF CONSULTING

PLANNING ■ DESIGN ■ CONSTRUCTION

12/05 JN 10-101901

MOON CAMP TT #16136
ENVIRONMENTAL IMPACT REPORT

Regional Vicinity



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PLANNING ■ DESIGN ■ CONSTRUCTION

12/05 JN 10-101901

MOON CAMP TT #16136
ENVIRONMENTAL IMPACT REPORT

Local Vicinity

Exhibit 3-2

Exhibit 3-3

RBF CONSULTING

PLANNING ■ DESIGN ■ CONSTRUCTION

12/05 JN 10-101901

MOON CAMP TT #16136
ENVIRONMENTAL IMPACT REPORT

Aerial Photograph

East: Single-family residences along North Shore Drive (State Route 38) border the site to the south. The residences are located on the southern portion of the site's eastern boundary. United States Forest Service lands occupy the northern portion of the site's eastern boundary.

West: Single-family residences along Oriole Lane border the site to the west.

Table 3-1, *Existing Land Use Designations*, outlines the Project site's current land use designations based upon references contained in the San Bernardino County General Plan Land Use Element.

Table 3-1
Existing Land Use Designations

Existing Land Use		Official Land Use District	IL
Project Site	Vacant	RL-40	IL1
North	Forest, Residential (NW)	RC, RL-40, and RS	IL1 & IL5
South	Big Bear Lake, Residential (SE)	FW, RS	IL1
East	Vacant, Residential (SE)	RC, RS	IL1 & IL5
West	Vacant, Residential	PD-12/1, RS	IL1
IL	Infrastructure Improvement Level – Levels range from 1 to 5 and are tied to the availability of the basic infrastructure required for development (roads, water and wastewater). IL-1 represents the most intense urban areas before development can be permitted to the degree allowed by a site's official land use designation, existing and planned infrastructure must be in place at levels consistent with the designated IL areas. Typical lot sizes for IL-1 is less than ½ acre.		
RC	Resource Conservation: Allows for, but is not limited to: row, field, tree, and nursery crop cultivation; single dwelling unit; social care facility; and animal raising. Minimum parcel size is 40 acres.		
RS	Single Residential: Allow for, but is not limited to: row, field, tree, and nursery crop cultivation; single dwelling unit; and social care facility. The minimum net parcel size is 7,200 square feet. The maximum housing density is 4 dwelling units per acre.		
RL-40	Rural Living: Allows for, but is not limited to: row, field, tree and nursery crop cultivation; single dwelling unit; social care facility and animal raising. The minimum parcel size for the RL designation is 2.5 acres. The minimum parcel size for the RL-40 designation is 40 acres.		
PD-12/1	Planned Development: Allows for row, field, tree, and nursery crop cultivation; single dwelling unit; social care facility and animal raising. Minimum parcel size is 40 acres – map suffix allows lot sizes less than 40 (e.g., PD-12/1 = Planned Development – 12 units/acre).		
FW	Floodway: Uses only permitted where the property owner understands that the use is placed at their own risk and that it shall not obstruct and/or deflect flows onto other property. Minimum parcel size is 10 acres.		
Source: County of San Bernardino Development Code.			

3.2 BACKGROUND AND HISTORY

The community of Fawnskin was founded in 1916. By 1918, Fawnskin had already grown into a community of more than 100 summer homes with a string of resort camps lining the lakeshore to the east. Among these resorts was Moon Camp. By

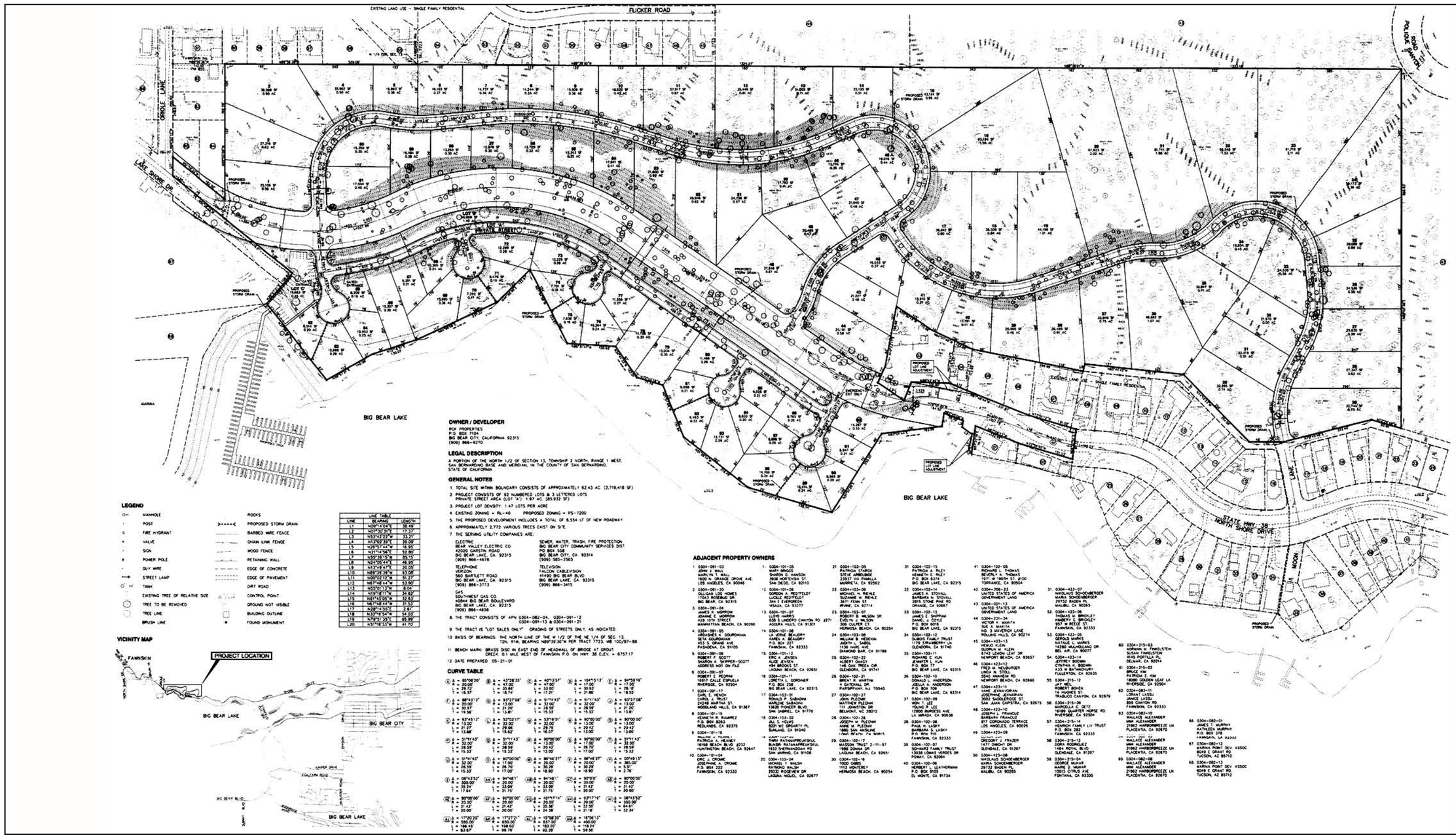
1928, at least nine commercial camps or lodges were in operation in proximity to Fawnskin. The popularity of the camps continued into the 1940's and by the 1960's, with rapid advances in modern transportation technology, American lifestyles began to erode the popularity of such resort camps.

The site has historically remained vacant. However, on-site improvements include North Shore Drive, which currently bisects the property in an east/west direction, and two on-site water wells that are non-operational at this time. One water well is located on the north side of State Route 38 and the other well on the south side of State Route 38. Additionally, the Big Bear Municipal Water District has previously granted permitting rights to a dock facility. Refer to Section 5.2, *Recreation*, for additional information.

3.3 PROJECT CHARACTERISTICS

The Project proposes a 95-lot residential subdivision with lots ranging in size from 0.17 acres (7,292 square feet) to 2.11 acres (refer to Exhibit 3-4, *Site Plan*). Lots would be sold individually and development of lots and construction of homes would be by custom design. Access to 64 residential lots located within the northerly Project area (located north of North Shore Drive), would be provided via a loop road. The remaining 31 residential lots would be located south of North Shore Drive. The proposal is a Tentative Tract Map for 92 numbered and three lettered lots. The three lettered lots are identified as follows: (1) Lot "A" is a private street designed to provide access to the southernmost lots; (2) Lot "B" is a 1.4-acre strip of land that would remain between the relocation of State Route 38 and the private Street, Lot "A"; and (3) Lot "C" is a gated entrance to the Project, including a proposed boat dock, consisting of 100 boat slips, which would be available for use by residents of the tract and accessible by Lot "C". Common areas, including the parking lot, boat docks, private streets, and common landscape lots would be maintained by a home owner's association to be established with the recordation of the final map. Lots proposed along the lake front (Nos. 62-92) would be provided with gated access and private streets. Lot Nos. 1 to 61 would be located along a public street and would not be gated.

The Project includes relocation of North Shore Drive, also referred to as State Route 38, to allow development of lakeshore lots. An approximately 2,498-foot segment of the roadway would be relocated. The maximum distance of relocation, as designed, is 207 feet to the north. The design includes a 76-foot road width, with 14-foot shoulder/bikeway access, resulting in a 104-foot right-of-way via a loop road that would include five separate cul-de-sac drives to access lakefront lots. Of the estimated 2,772 trees existing on the Project site, approximately 655 trees (24 percent) would be removed for roadway construction. Additional tree removal could occur during individual lot development and construction of custom homes; the design of which is not part of this Project. State Route 38 would remain open at all times during construction of the proposed roadway realignment, with proper traffic controls implemented.


FLICKER ROAD
EXISTING LAND USE - SINGLE FAMILY RESIDENTIAL
PROPOSED 43,139 SF STORM DRAIN 0.99 AC
PROPOSED STORM DRAIN
PROPOSED 10' LOT LINE ADJUSTMENT
PROPOSED 20' LOT LINE ADJUSTMENT
PROPOSED 30' LOT LINE ADJUSTMENT
PROPOSED 40' LOT LINE ADJUSTMENT
PROPOSED 50' LOT LINE ADJUSTMENT
PROPOSED 60' LOT LINE ADJUSTMENT
PROPOSED 70' LOT LINE ADJUSTMENT
PROPOSED 80' LOT LINE ADJUSTMENT
PROPOSED

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The Project also requires a General Plan Amendment/Land Use District Amendment from RL-40 Rural Living (40-acre minimum lot) to RS-7200 Single Residential (7,200 square foot minimum lot size). The proposed realignment of North Shore Drive requires an Amendment to the County's Circulation Element.

3.4 PROJECT OBJECTIVES

The following objectives have been identified for the proposed Project:

- Provide up to 92 single-family residential lots to be developed as custom lots in the future;
- Establish single-family residential lots that are part of a planned development;
- Realign State Route 38 to improve the design of the roadway. More specifically, eliminate existing sharp curves of the roadway to minimize conflicts on State Route 38 and Project access roads. The proposed roadway realignment would also create the opportunity for lakefront residential lots; and
- Provide marina facilities for residents of Moon Camp to access Big Bear Lake.

3.5 PHASING

The proposed subdivision is a custom lot residential development. All lots would be sold for future construction of custom homes. Individual improvements and continued buildout of Moon Camp would occur incrementally over time beginning with the realignment/construction of North Shore Drive. The exact details of construction of each individual lot would be evaluated by the County of San Bernardino on a project-by-project basis. If the market continues strong, then all the off-site improvements would be installed (all improvements within the tract, but not on individual lots) and the final tract map recorded as one phase.

3.6 AGREEMENTS, PERMITS AND APPROVALS

The County of San Bernardino is the Lead Agency for the Project and has discretionary authority over the primary Project proposal. To implement this Project, the Applicant will need to obtain the following permits/approvals:

- Big Bear Municipal Water District – Per the discretion of the Water District: a Dock System and License Agreement, Yacht Club Dock License, and/or Shore Zone Alteration Permit.
- Caltrans – Project Study Report (PSR) and Traffic Impact Study (TIS) for SR-38 Encroachment Permit.

- City of Big Bear Lake, Department of Water and Power, or Big Bear City Community Services District, or the County of San Bernardino Special Districts – Water service permits and approvals.

- County of San Bernardino Board of Supervisors – Approval of a General Plan Amendment (for Land Use and Circulation Elements), Conditional Use Permit for Marina Parking Lot, Tentative Tract Map, Certification of the Environmental Impact Report.

- California Department of Fish & Game – 1602 Streambed Alteration Agreement.

- California Division of Forestry – Timber Harvest Plan (THP). The property is located within the boundaries of the U.S. National Forest Service but is not owned by the U.S. Forest Service.

- California State Water Resources Control Board – General Storm Water Permit for Construction and Storm Water Pollution Prevention Plan (SWPPP).

- California Regional Water Quality Control Board – Clean Water Act Section 401 Permit.

- U.S. Army Corps of Engineers – Clean Water Act Section 404 Permit.

4.0 Basis for Cumulative Analysis

4.0 BASIS FOR CUMULATIVE ANALYSIS

Section 15355 of the State California Environmental Quality Act (CEQA) Guidelines, as amended, provides the following definition of cumulative impacts: "Cumulative impacts refers to two or more individual effects which, when considered together, are considerable, or which compound or increase other environmental impacts." Pursuant to Section 15130(a) of the aforementioned Guidelines, cumulative impacts of a project shall be discussed when the project's affect is cumulatively considerable, as defined in Section 15065(c) of the Guidelines. The Initial Study Checklist provided as part of Appendix 15.1 indicates that the proposed project may yield potentially significant cumulative effects. As a result, Section 5.0 of this EIR provides a cumulative impact assessment for each applicable environmental issue, and does so to a degree which reflects each impact's severity and likelihood of occurrence.

As indicated above, a cumulative impact involves two or more individual effects. Per State CEQA Guidelines Section 15130(b), the discussion or cumulative impacts shall be guided by the standards of practicality and reasonableness. Per CEQA Guidelines Section 15130(b) the following elements are necessary in an adequate discussion of significant cumulative impacts:

1. Either:

   a. A list of past, present and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the Agency, or

   b. A summary of projections contained in an adopted General Plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact.

2. A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available; and

3. A reasonable analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects.

Table 4-1, *Cumulative Projects List*, identifies related projects and other possible development in the area determined as having the potential to interact with the proposed project to the extent that a significant cumulative effect may occur. Information integral to the identification process was obtained from the City of Big Bear Lake, County of San Bernardino, and a review of several secondary data sources. The resulting related projects include primarily only those determined to be at least indirectly capable of interacting with the Moon Camp project. Table 4-1*, Cumulative Projects List,* summarizes the related projects according to location, type, and number of units realistically expected to develop on the site.

In addition, it is noted that the Traffic Analysis and corresponding Air Quality and Noise Assessments were prepared in accordance with the Congestion Management Program requirements for San Bernardino County. The study area was determined based on the contribution of project traffic to the surrounding roadway system.

Table 4-1
Cumulative Project List

Project Name	Location	Description	Status
County of San Bernardino			
TR 12217 (Marina Point)	North Shore Drive, southwest side, south of Red Robin Drive, in Fawnskin	132-unit Condominium Complex on approximately 12.5 acres plus approximately 15.7 acres of off-site lake improvements.	Recorded but not constructed.
TR 15465 (Kelsch)	Brookside Lane, Cedar Dell in Fawnskin	Single-Family Residential, minimum 20,000 square foot lots to establish 62 residential lots. Five lettered lots for water tank, interior road and open space conservation. Total of 74 acres.	Has not Recorded.
Relocation of Moonridge Zoo from the South Shore	North Shore Drive, adjacent to Discovery Center	Animal Park on a 25 acre lot, develop 5 to 7 acres to house approximately 150 animals and include; educational facilities, hospital, concession stands, and promissory.	Has not Recorded.
City of Big Bear Lake			
Site Approval (CUP) and Design Review 2001-167	41865 Fox Farm Road	To construct and operate a self-storage facility totaling 68,200 s.f. covered recreational vehicle storage facility totaling 18,840 s.f. and a two-story 5,916 s.f. mixed-use building.	Recorded but not constructed.
Site Approval (CUP) and Design review 2001-043, major Deviation 2001-044, and Minor Subdivision 2001-062 (TT No. 15705)	39708, 39720, 39730, 39738 and 39756 Big Bear Boulevard	To construct a 91-unit hotel with ancillary uses including a 4,000 s.f. banquet facility, 1,068 s.f. restaurant, 1,700 s.f. lounge 500 s.f. lobby service bar and a 624 s.f. maintenance building and structure.	Recorded but not yet constructed.
TT application 2002-006, TT Map No. 16297 – Wolf Creek Estates, Variance 2002-007, and Developer Agreement Variance	Southern portion of the Bear Meadows condominium project, Lot 4-D of Tract 12092.	To subdivide a 2.46-acre parcel into 10 lots for lot sales and future single family residential home construction.	Recorded but not yet constructed.
Plot Plan Review 2002-034	40679 Lakeview Drive	To reuse an existing vacant building as an indoor retail mall and use an existing off-site parking lot.	Recorded but not yet constructed.

5.0 Description of Environmental Setting, Impacts and Mitigation Measures

5.0 DESCRIPTION OF ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES

5.1 LAND USE AND RELEVANT PLANNING

The purpose of this Section is to identify the existing land use conditions, analyze project compatibility with existing uses, consistency with relevant planning policies and to recommend mitigation measures to lesson the significance or avoid potential impacts. Information presented in this section is based upon site surveys performed by RBF Consulting in February 2002, site photographs, the County of San Bernardino General Plan and Development Code, and the General Plan EIR for the City of Big Bear Lake. This section provides on-site and surrounding land use conditions and land use policy requirements set forth by the County of San Bernardino.

EXISTING CONDITIONS

ON-SITE

The Project site encompasses approximately 62.43 acres (AC) and is situated along the northwest shore of Big Bear Lake, in the relatively undeveloped eastern portion of the community of Fawnskin, County of San Bernardino (refer to Exhibit 3-2, *Local Vicinity*). The Project site is generally bounded by Flicker Road to the north, Big Bear Lake to the south, Polique Canyon Road to the east, and Oriole Lane and Canyon Road to the west. The Project site is located immediately adjacent to broad expanses of contiguous forestland within the San Bernardino National Forest to the north and northeast. State Route 38 (North Shore Drive) traverses the southern portion of the property in an east/west orientation.

The property is an inholding within the boundaries of the U.S. National Forest, however, is not owned by the U.S. Forest Service (USFS) and therefore requires no permitting by the USFS.

OFF-SITE

Surrounding land uses involve a mixture of resource conservation, floodway, and single-family residential uses. The site is bounded by the following land uses:

North: Forest land and single-family residential uses are located along Flicker Road and Deer Trail Lane.

South: Big Bear Lake and single-family residential uses located to the south, fronting the north and south sides of State Route 38 (North Shore Drive).

East: Forest land and residential uses exist adjacent to the southeast corner of the Project site and east of Polique Canyon Road.

West: Vacant land and single-family residential uses are located to the west including residences along Canyon Road and further west, the greater Fawnskin community. Fawnskin is developed more extensively with single-family residential lots and boating facilities.

LAND USE POLICIES

SAN BERNARDINO COUNTY GENERAL PLAN

The San Bernardino General Plan was adopted on July 1, 1989 and was revised on November 22, 2001. The General Plan is organized according to four planning issues: Natural Hazards, Man-Made Hazards, Natural Resources, and Man-Made Resources. With this organizational style, the General Plan outlines the priority for the County in the type of resources that need to be preserved, and how these resources are to be preserved. Additionally, the General Plan identifies regional and subregional planning areas within the County.

NATURAL HAZARDS

This section identifies the conditions of potential danger or risk to life and/or property resulting from acts of nature. Four major groups of natural hazards are addressed in the General Plan including Geologic, Flood, Fire, Wind and Erosion. Mapping of these issues and application of the policies delineate areas subject to hazards. By identifying the areas of potential danger, development may be precluded thereby providing open space for health and safety purposes. The Natural Hazards section, in combination with the Man-made Resources issue and mapping overlays, satisfies the mandatory requirements of the Safety Element.

San Bernardino County is subject to many geologic hazards, including seismic activity (earthquake-induced phenomena such as fault rupture, ground shaking, liquefaction, seismically-generated subsidence, seiche, and dam inundation), landslide/mudslide (mudflow), non-seismic subsidence, erosion and volcanic activity. Each of these can affect property and existing or potential uses. The Project site is located in a geologic hazard area. Refer to the *Development Code* section below and Section 5.10, *Geology and Soils*, for further discussion relative to geologic conditions on the Project site.

A combination of climate, topography, vegetation and development patterns creates high fire hazard risks throughout the County, especially in the many areas of wildland/urban intermix located in foothills and mountainous areas Countywide. As development encroaches upon wildland areas, the potential for disastrous loss of watershed, structures, and life (human and wildlife) increases. The Project site is located in a high fire hazard area. Establishment of a coordinated program to condition development in some of these fire hazard areas has been adopted through the Foothill Hazards (Greenbelt) Overlays and the Mountain Fire Zone. The Foothill Hazard Overlays, the Mountain Fire Zone and additional high fire hazard areas are included in the Fire Hazard Overlay Mapping. Continuous evaluation and application

of Hazard Overlays and accompanying policies and standards for adequate services, facilities, mapping and developmental regulation are required as pressure for development increases countywide. Included in developmental regulation are requirements for minimum road widths (to provide adequate access for both fire fighting equipment and evacuating residents) and clearance around structures to prevent the rapid spread of fire from one structure to another. Refer to the *Development Code* section below and Section 5.3, *Public Utilities*, for further discussion relative to potential fire hazards on the Project site.

In response to state law, the Peakload Water Supply System Guidelines were developed (refer to Figure II-5 of the General Plan, *Peakload Water Supply System Guidelines*). These guidelines, designed to ensure an ample water supply, are the sum total of required fire flow, operational daily consumption and emergency storage.

Refer to Section 5.11, *Hydrology and Drainage*, for a discussion of site conditions relative to potential flood and erosion hazards.

MAN-MADE HAZARDS

The General Plan identifies conditions of potential danger or risk to life and health or property due to the acts of man and use of his technology. Three issues relevant to man-made hazards are addressed in this section including Noise, Aviation Safety, and Hazardous Waste/Materials. This section satisfies the mandatory requirements of the Noise Element.

Refer to Section 5.7, *Noise*, for a discussion of site conditions relative to potential noise hazards. Refer to Section 10.0, *Effects Found Not to be Significant,* for a discussion of site conditions relative to potential aviation safety and hazardous waste/materials hazards.

NATURAL RESOURCES

Natural resources are plentiful in San Bernardino County, with the exception of the water supply, which is at critically low levels in the mountain areas. These natural resources are a necessity for the quality of life that is desirable for residents and visitors in the County. This section establishes the concepts of carrying capacity, threshold levels of impact, renewable versus nonrenewable kinds of resources, ecological viability, and long-term versus short-term deleterious effects. Natural resources in the County are allocated to the following seven categories:

- Biological;
- Cultural/Paleontological;
- Air Quality;
- Water;
- Open Space/Recreation/Scenic;
- Soils/Agriculture; and
- Minerals.

Biological resources are defined in this Element as native species of plants and wildlife (resident and migratory). Some species are endangered or threatened with extinction and require intensive management for their preservation, while others are relatively abundant and require only the application of general conservation practices for their continued existence. This Element notes that the status of biological resources in the County is generally declining due to increased urbanization and encroachment into previously rural areas. Housing demand has spurred growth in all areas of the County affecting many species directly through habitat loss and indirectly through increased use of open space and recreational lands. The Project site contains biological resources, including certain species of plants and wildlife considered endangered or threatened. Refer to the *Development Code* section below and Section 5.8, *Biological Resources*, for further discussion relative to the biological resources on the Project site.

San Bernardino County contains a wealth of scenic resources, which have in many cases been recognized by local jurisdictions, the County, or state and federal agencies as worthy of special protection to preserve their aesthetic value. In recognition of the visual quality of the areas through which they pass, the County has designated certain roadways as scenic routes. In some instances, these roadways have also been designated as state scenic highways by the California Department of Transportation (Caltrans). In addition, the U.S. Forest Service has officially designated the length of the "Rim of the World Highway," which includes portions of Highways 138, 18, and 38, as a Scenic Byway. In the County, scenic highways are subject to additional land use and aesthetic controls under the County's Scenic Highway Overlay District.

The County has designated State Highway 38, which traverses the Project site, as a Scenic Highway. As a result, all development within the Scenic Corridor[1] would be subject to compliance with various policies and development standards. Refer to the *Development Code* section below and Section 5.4, *Aesthetics/Light and Glare*, for further discussion relative to Scenic Highway Overlay District requirements.

Refer to Section 5.6, *Air Quality*, and Section 5.9, *Cultural Resources*, for a discussion of site conditions relative to air quality and cultural/paleontological resources, respectively. Refer to Section 5.3, *Public Utilities*, and Section 5.11, *Hydrology and Drainage*, for a discussion of site conditions relative to water resources. Refer to Section 10.0, *Effects Found Not to be Significant,* for a discussion of site conditions relative to soils/agriculture and mineral resources.

MAN-MADE RESOURCES

The General Plan defines man-made resources as those characteristics and services, facilities and activities for which man is directly responsible, including the following:

- Wastewater Systems;
- Solid Waste Management;
- Transportation/Circulation;

[1] The General Plan defines the Scenic Corridor as that area which extends "200 feet on either side of the designated route, measured from the outside edge of the right-of-way, trail, or path."

- Energy/Telecommunications;
- Housing/Demographics; and
- Land Use/Growth Management.

This section describes the County residents, their housing, the services they use, what can be done with the land, and what infrastructure is needed to support development.

According to the *Transportation/Circulation* Section of the General Plan, there are approximately 3,620 miles of County maintained roads in County unincorporated areas, of which approximately 2,930 miles are paved. In addition, there are hundreds of miles of State highways and freeways. State Route 38 (North Shore Drive) traverses the southern portion of the Project site in an east/west orientation. This Section further notes the following with respect to the Project area:

> *"The County's Mountain region is served by a limited number of roads which climb steeply and curve sharply over a difficult landscape. Engineering and construction of new roads or improvements of existing roads can be very costly and time consuming. In several Mountain communities the existing roadways are already severely overcrowded and deteriorated by local and tourist traffic. In many cases populated areas are served by local roads without all-weather surfacing which may impair emergency vehicle access or escape routes during emergencies. Severe winter conditions can damage and slow traffic on State and County-maintained road systems. Because of the increased number and intensity of recreational, residential and commercial development planned for the Mountains, existing roadways will be even more severely burdened in the future. Furthermore, the steep terrain and physical environment of the Mountains make it difficult or impractical to build new roads or widen existing roads."*

The Transportation/Circulation maps utilize a computerized mapping system to illustrate a hierarchy of roads and highways. Road designations on the maps indicate the ultimate planned road facility. The circulation maps show basic categories of facilities (i.e., Freeways, Major Arterial Highways, etc.). These are broad classifications reflecting certain functional and technical differences. State Route 38 (North Shore Drive) is designated as a State Highway. State Highways are subject to special standards and conditions that do not fit into the categories described above.

Refer to Section 5.5, *Traffic and Circulation*, for further discussion regarding transportation/circulation resources. Refer to Section 5.3, *Public Utilities*, for a discussion regarding wastewater systems and solid waste management. Refer to Section 10.0, *Effects Found Not to be Significant,* for a discussion regarding energy/telecommunications and housing/demographics.

Land Use Element

The Land Use Element is the primary policy base for guiding the physical development of the privately owned unincorporated land in San Bernardino County. The Land Use Element correlates all land use issues into a set of coherent

development policies. The goals, policies, and actions of the Element relate directly to other elements and issues addressed in the General Plan. The Land Use Element policies relevant to the proposed Project are as follows:

> *LU-2 Because the County wants to promote and provide safe, attractive, varied residential areas convenient to public facilities, employment and shopping centers, the following policies/actions shall be implemented:*
>
> *(a) Require that the design and siting of new residential development meet locational and development standards that ensure compatibility with adjacent land uses and community character.*
> *(b) Allow varied approaches to residential development in order to foster a variety of housing types and densities and more efficient use of the land.*
> (c) *Adopt regulations . . . .*

The Land Use Element is divided into two sections: 1) Location, Distribution and Intensity of Land Uses, and 2) Growth Management. A description of the sections is provided below.

Location, Distribution, and Intensity of Land Uses

All private lands in the County are designated for specific land uses. This section specifies the purpose, locational criteria, building intensity standards, population density and the intended uses of each land use District.

Official Land Use Districts

The General Plan has established 17 Official Land Use Districts that are applied only to privately owned lands in the County. As illustrated on the Official Land Use Districts Map, the Project site is designated Rural Living (RL)-40. The intended use of the RL District is to provide sites for rural residential uses, incidental agricultural uses, and similar and compatible uses.

Official Land Use Districts for land uses adjacent to the Project site are outlined in Table 5.1-1, *Summary of Land Uses*, and described below.

Table 5.1-1
Summary of Land Uses

Existing Land Use		Official Land Use District	Improvement Level*
Project Site	Vacant	RL-40	IL1
North	Forest, Single-Family Residential (NW)	RC, RL-40, RS	IL1 & IL5
South	Big Bear Lake, Single-Family Residential (SE)	FW, RS	IL1
East	Vacant, Forest, Single-Family Residential (SE)	RC, RS	IL1 & IL5
West	Vacant, Single-Family Residential	PD-12/1, RS	IL1

* Refer to the *Improvement Standards* section below for definitions of Improvement Levels.

- Resource Conservation (RC): The RC District is intended to provide sites for open space and recreational activities, single-family homes on very large parcels, and similar compatible uses.

- Rural Living (RL): The RL District is described above.

- Single Residential (RS): The intended use of the RS District is to provide sites for single-family residential uses, incidental agricultural and recreational uses, and similar and compatible uses.

- Planned Development (PD): The intended use of the PD District is to provide sites for a combination of residential, commercial, industrial, agricultural, open space and recreation uses, and similar and compatible uses.

- Floodway (FW): The FW District is intended to provide sites for animal raising, grazing, crop production, and similar and compatible uses.

Improvement Standards

Additional public facilities and services are usually required when new residential, commercial or industrial uses are established. In several areas, major public service and facility deficiencies already exist. In order to ensure that future developments do not become fiscal liabilities to County residents, policies were developed to require that future development proceed at a pace commensurate with the provision of services.

The County recognizes that there is a direct relationship between the intensity of land uses and the amounts of facilities and services that are needed to support such uses. There are five levels of development intensity, ranging from very high density developments in urban areas, to very low density developments in very rural areas. The amount of infrastructure facilities and services required in areas with high density development is significantly more than that required in areas with low density development. Thus, the County established onsite and offsite improvement standards that are deemed essential in each of the five different levels of development intensity. This system of matching development intensity with essential improvements is referred to as the "Improvement Level" (IL) system. Five ILs were established to correspond with the five different intensity levels. Improvement Level 1 (IL1) is applied to very urban areas, while IL5 is applied to very rural areas. Improvement Levels are assigned to an area based on the long-term planned development and lifestyle commitment of the area. Future development is expected to provide the appropriate and applicable infrastructure facilities and services prior to, or in concert with anticipated or proposed development.

The designated Improvement Level for each area is illustrated on the Infrastructure/ Improvement Levels Overlay Map. According to this Map, the Project site has been designated IL1. Improvement Level 1 is applied to those areas planned for a higher intensity level of development. This may include large areas designated for commercial, industrial or multi-family residential uses, city spheres of influence areas planned for high-density uses, and higher-density single family residential uses. In most cases, IL1 is suitable in what may be considered the core areas of established

urban or urbanizing communities. The typical ultimate lot size in IL1 is less than 0.5 acre.

Figure II-15 of the San Bernardino County General Plan, *Improvement Standards – Mountain*, lists the required improvements for the five different levels of development intensity in the "Mountain" areas. According to Figure II-15, IL1 requires the following improvements:

- Legal and physical access
- Grants of Easements[1]
- Paved access
- Curbs and gutters
- Sidewalks
- Street lights at standard spacing
- Water purveyor
- Sewer[2] or Septics
- Drainage improvements[3]
- Paved dip section
- Fireflow

Notes
1 Includes necessary rights-of way for transportation and circulation, drainage and flood control facilities, and utilities.
2 Sewers shall be required as necessary by the EHS Department if necessary for reasons of health and safety.
3 The requirement will be waived in areas where a sub-regional plan and fee or other financing mechanism exists to provide necessary improvements. Provided, however, that the Transportation/Flood Control Department may require additional improvements if necessary for reasons of health and safety.

Improvement Levels for areas surrounding the Project site are outlined in Table 5.1-1, *Summary of Land Uses*, and described below.

- IL1: Refer to the description provided above.

- IL5: Level 5 is applied to areas with little or no development potential, and where only very sparse development is expected in the long term. These areas are typically in remote or inaccessible locations, or in relatively vast open space areas where severe environmental and physical constraints or lack of resources virtually preclude development. The typical ultimate lot size for IL-5 is greater than 20 AC.

According to Figure II-15 of the San Bernardino County General Plan, IL5 requires legal and physical access, grants of easements, and septic improvements.

Maps

The General Plan Text is supported by a series of thematic maps:

- The Official Land Use Districts Map;

- Composites of Overlays for:
  - Hazards/Noise;
  - Resources;
  - Transportation/Circulation; and
  - Infrastructure/Improvement Levels.

The Official Land Use Districts Map is a graphic representation of the location and distribution of the Official Land Use Districts that are applied in the County.

Overlays are applied to areas with special or unique physical characteristics. In such areas, special policies, and special development and performance standards may be established to protect public health and safety. The Hazards Overlay Maps depict areas of known hazards, both natural and manmade. They include the following:

- Geologic (Seismic and Landslide);
- Flood;
- Fire;
- Noise;
- Aviation Safety Areas; and
- Hazardous Waste.

The Project site is located within a Geologic Hazards Overlay District and a Fire Safety Overlay District. Areas considered geologically hazardous involve Alquist-Priolo Special Studies Zones and those areas susceptible to liquefaction and landslides. Areas considered fire hazardous involve those areas subject to wildland/urban intermix and high fire hazard as identified by the County Fire Warden including, but not limited to, areas previously designated in Mountain Fire Zone, and the Hillside and Foothill Fire Hazard Zones.

The Natural Resources Overlay Maps depict the following:

- Biological;
- Cultural;
- Paleontological;
- Open Space/Recreation/Scenic – Regional Trail Alignments, Open Space Areas, Wildlife Corridor Zones, Green Belt Areas, Buffer Areas;
- Important Farmlands;
- Agricultural Preserves;
- Mineral Resource Zones (MRZs); and
- Water Resources.

The Project site is located within a Biotic Resources Overlay District and a Scenic Resources Overlay District. Areas considered a biotic resource involve habitats of threatened, endangered and rare plants and wildlife and special habitat areas, as identified by Federal and State agencies and County Code. Areas considered a scenic resource include areas worthy of special protection to preserve their aesthetic value.

The General Plan Transportation/Circulation Maps utilize a computerized mapping system to illustrate the hierarchy of roads and highways. Refer to the *Man-Made Resources* section above for further discussion regarding these maps.

The combined Infrastructure/Improvement Level Maps show the general location of waste disposal sites (both County and non-County operated), sewage treatment plants, public schools (unincorporated areas only), homeless shelters in operation as of February 1988, and the Improvement Level (IL) areas 1 through 5, as described above.

Growth Management

The *Growth Management* section of the General Plan focuses on ways to monitor and manage future growth of the County in order to preserve valuable resources and maintain a high quality of life for all residents. This section includes: Growth Monitoring, Urban/Rural Service Boundaries, Intergovernmental Coordination, and Infilling. Refer to Section 6.3, *Growth Inducing Impacts*, for a discussion regarding growth management.

Regional/Sub-Regional Planning Areas

The General Plan identifies regional-subregional planning areas within the County. The County is comprised of three regions: the Valley, Mountain, and Desert, each with distinct geographic and physical characteristics. For planning purposes, these three regions were further divided into eight sub-regions: West Valley, East Valley, Mountain, Victor Valley, Barstow, Baker, Morongo Basin and Lower Colorado River. Each sub-region is divided into community-sized planning/specific plan areas. Profiles of each region, sub-region and community-sized planning/specific plan area are provided along with the policies unique to each area. The Project site is situated within the Mountain Region, the Big Bear Lake Planning Area, and the Bear Valley (BV) (Fawnskin) Community.

SAN BERNARDINO COUNTY DEVELOPMENT CODE

The San Bernardino County Development Code (Title 8) provides regulations governing the uses of land, buildings, structures, the height of buildings and structures, the sizes of yards about buildings and structures, as well as other matters.

Land Use Districts

The Land Use District maps illustrate the Official Land Use Plan, classifications, and boundaries of Land Use Districts. The Project site is classified as Rural Living-40 (RL) District (Section 84.0320). Permitted uses within the RL District include the following:

- Row, Field, Tree and Nursery Crop Cultivation;
- Single dwelling unit;
- Social Care Facility with six (6) or fewer clients; and
- Animal raising.

Overlay Districts

As specified in Section 85.0101, Overlay Districts are established to recognize and map environmental hazard constraints, environmental resource amenities, or community concerns, which should be taken into consideration when land development is being proposed. Overlay Districts establish regulations in addition to those imposed by the Land Use District. Overlay Districts are designated where development within a Land Use District is affected by or would affect such environmental hazard constraints, environmental resource amenities, or community concerns.

The Project site is located within the following four Overlay Districts: the Fire Safety (F~~R~~S) Overlay District; Geologic Hazard (GH) Overlay District; the Biotic Resources (BR) Overlay District; and the Scenic Resources (SR) Overlay District. The F~~R~~S Overlay District is created to provide greater public safety in areas prone to wildland brushfires, by establishing additional development standards for these areas. ~~The FR Overlay District is created to provide greater public safety in areas prone to wildland brushfires, by establishing additional development standards for these areas. The FR Overlay District is divided into two review areas, each of which represents a different level of wildland hazard. A different set of requirements is applied in each review area. The provisions for these requirements are cumulative in that all of the requirements that are specified for Fire Safety Review Area 2 shall also apply to Fire Safety Review Area 1, in addition to those specified for only Fire Safety Review Area 1.~~ The project site is located within Fire Safety Area 1 (FS1).

~~Fire Safety Review Area 1 (FR1).~~ Fire Safety ~~Review~~ Area 1 includes wildland areas that are marginally developable, areas which are not likely to be developed, and the area of transition between wildlands and areas that are partially developed or are likely to be developed in the future. The area of transition is often characterized by an abrupt slope change. Natural hazards are prevalent throughout Area 1, especially in areas with natural ungraded slopes greater than thirty percent (30%). Area 1 includes areas of very high to extreme fire hazard.

- ~~Fire Safety Review Area 2 (FR2). Land within Area 2 is relatively flat, and is either partially or completely developed, or, if it is not developed, is usually suitable for development. Present and future development within Area 2 is exposed to the impacts of wildland fires and other natural hazards primarily due to its proximity to Area 1.~~

Since ~~T~~the ~~P~~project ~~site~~ is located within a FS1 designated area, it is ~~located within Fire Safety Review Area 2 (RR2), therefore would be~~ subject to compliance with various requirements relative to construction, building separations, project design, and erosion and sediment control as specified in Section 85.020220, ~~Area FR1 and FR2 Requirements~~ *Building Standards for FS1*.

The GH Overlay District is created to provide greater public safety by establishing review procedures and setbacks for areas that are subject to potential geologic problems such as ground shaking, earthquake faults, liquefaction, and subsidence. According to Section 85.020410, *Geologic Reports*, a detailed geologic study is

required for the Project confirming the presence/absence of hazardous faults and if applicable, shall establish appropriate setbacks from active faulting. In portions of the Geologic Hazard Overlay District where slope stability is a concern, the geologic report shall evaluate landslides and other slope instabilities that could affect the project and identify recommendations for mitigation. For areas within the Overlay District where liquifaction is a concern, the geologic report shall evaluate the potential for liquefaction based upon anticipated ground shaking, historic groundwater levels and characteristics of alluvial materials. If the investigation determines that a potential for liquefaction exists, a geotechnical investigation may be required.

The purpose of the BR Overlay District is to implement General Plan policies regarding the protection and conservation of beneficial rare and endangered plants and animal resources and their habitats that have been identified within unincorporated areas of the County.

Section 85.030220, *Development Standards*, identifies the following standards for development within a BR Overlay District:

> *"When a land use is proposed or an existing land use is increased by more than twenty-five percent (25%) within a Biotic Resources Overlay District, the applicant shall have a report prepared identifying all biotic resources located on the site and those on adjacent parcels, which could be impacted by the proposed development. The report shall outline mitigating measures designed to reduce or eliminate impacts to the identified resource(s), and shall be submitted along with the application for the proposed development. The report shall be prepared by an appropriate expert such as a qualified biologist, botanist, herpetologist or other professional "life scientist."*
>
> *The conditions of approval of any land use application shall incorporate the identified mitigating measures to protect and preserve the habitats of the identified plants and/or wildlife."*

Refer to Section 5.8, *Biological Resources*, for a discussion regarding biological conditions on the Project site and the County's Plant Protection and Management Ordinance (Division 9 of the Development Code).

It is the intent of the SR Overlay District is to provide development standards that will protect, preserve and enhance the aesthetic resources of the County. Design considerations can be incorporated in many instances to allow development to coexist and not substantially interfere with the preservation of unique natural resources, roadside views and scenic corridors of such natural resources. It is also the intent of the SR Overlay District to implement state and federal programs and regulations regarding scenic highway routes. Section 85.030610, *Development Standards*, identifies various criteria used to evaluate a project's compliance with the intent of the overlay. The compliance criteria for the SR Overlay District generally involve the following issues:

- Building and structure placement;
- Review area;

- Access drives;
- Landscaping;
- Roads, pedestrian walkways, parking and storage areas;
- Above ground utilities;
- Grading;
- Timber harvesting;
- Storage areas; and
- Signage.

Refer to Section 5.4, *Aesthetics/Light and Glare*, for further discussion relative to SR Overlay District requirements.

Planning Areas

Section 86.040250, *Bear Valley Planning Area*, outlines the following development standards and land uses to replace or modify the corresponding development standards or land uses provided in the Land Use Districts and applicable Overlay Districts:

- Maximum Structure Height (feet): 35
- Minimum Lot Size (SF): 7,200
- Maximum Lot Coverage (building coverage): 40%
- Maximum Lot Dimensions (width to depth ratio)
  ≥10 AC: 1:4
  ≤10 AC: 1:3
- Minimum Lot Dimensions (width/depth in feet)
  interior lot: 60/100
  corner lot: 70/100
  lot size 1 acre+: 150 wide
- Front Yard Setback (feet): 15
- Site Yard Setbacks (feet): 20% of lot width, need not exceed 15
- Rear Yard Setbacks (feet): 15
- Street Side Yard Setbacks (feet): 15

Plant Protection and Management

Refer to Section 5.8, *Biological Resources*, for a discussion regarding the Project's compliance with the County's Plant Protection and Management Ordinance (Division 9 of the Development Code).

SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

The Southern California Association of Governments (SCAG) is the Metropolitan Planning Organization for six counties in Southern California including: Los Angeles, Orange, San Bernardino, Riverside, Ventura and Imperial. As the regional planning association, SCAG is mandated by the Federal government to research and draw up plans for transportation, growth management, hazardous waste management, and air quality. Therefore, SCAG has developed the Regional Comprehensive Plan and Guide (RCPG) which is a general planning guide for the six counties to follow in: Strategy, Economy, Growth Management, Mobility (transportation), Air Quality,

Housing, Human Resources and Services, Finance, Open Space and Conservation, Water Resources, Water Quality, Energy, Hazardous Waste Management, Integrated Solid Waste Management and Plan Implementation. The proposed Project is not considered by SCAG to be regionally significant, and therefore, no additional review is necessary.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

The South Coast Air Quality Management District (SCAQMD) is the air pollution control agency for Los Angeles and Orange counties and parts of Riverside and San Bernardino counties. The SCAQMD is responsible for controlling emissions from stationary sources of pollution, such as large power plants, refineries and gas stations. In order to achieve the federally mandated five percent annual reduction goal, SCAQMD has developed and adopted the Air Quality Management Plan (AQMP). A 1997 AQMP was prepared by the SCAQMD and adopted by the District Governing Board on November 15, 1996. The 1997 Plan contains two tiers of control measures. Short and intermediate term measures are scheduled to be adopted through the year 2005. These measures rely on known technologies and other actions to be taken by several agencies that currently have the statutory authority to implement the measures. They are designed to satisfy the Federal Clean Air Act (CAA) requirement of Reasonably Available Control Technology (RACT) and the California Clean Air Act (CCAA) requirement of Best Available Retrofit Control Technology (BARCT). Refer to Section 5.6, *Air Quality,* for a discussion regarding the Project's consistency with the 1997 AQMP.

IMPACTS

SIGNIFICANCE CRITERIA

Appendix G of the California Environmental Quality Act (CEQA) Guidelines contains the Initial Study Environmental Checklist form which includes questions relating to land use and relevant planning. The issues presented in the Initial Study Checklist have been utilized as thresholds of significance in this Section. Accordingly, a project may create a significant environmental impact if it causes one or more of the following to occur:

- Physically divides an established community (refer to Section 10.0, *Effects Found Not to be Significant*);
- Conflicts with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect (refer to Impact Statements 5.1-1 and 5.1-2); and/or
- Conflicts with any applicable habitat conservation plan or natural community conservation plan (refer to Section 5.8, *Biological Resources*).

Generally, the intermixing of land uses may result in land use incompatibilities. Land use compatibility impacts associated with land development are a factor of quality of

life issues, including, but not limited to traffic, noise, air quality and aesthetics (views/physical scale). While these may generally be perceived as subjective issues, the significance criteria detailed in each of the respective issues sections provides a basis for assessing land use compatibility impacts.

SAN BERNARDINO COUNTY GENERAL PLAN

5.1-1 *The proposed Project conflicts with the land use plan, policies and regulations set forth in the San Bernardino County General Plan. Analysis has concluded that impacts would be less than significant with approval of a Land Use District Change and Circulation Element Amendment (Transportation/Circulation Maps).*

As described in the *Existing Conditions* subsection, the San Bernardino County General Plan is organized according to four planning issues: Natural Hazards, Man-Made Hazards, Natural Resources, Man-Made Resources. Additionally, the General Plan identifies regional/subregional planning areas within the County.

The General Plan contains recommendations for development that pertain to the Project area (refer to the *Existing Conditions* discussion). The following analysis evaluates the Project's consistency/compliance with these recommendations:

NATURAL HAZARDS

As previously noted, four major groups of natural hazards are addressed under this issue area including Geologic, Flood, Fire, Wind and Erosion.

The Project site is located in a Geologic Hazards Overlay District. Refer to Section 5.10, *Geology and Soils*, for a discussion of potential Project impacts associated with geologic hazards.

The Project site is located in a Fire Safety Overlay District. Accordingly, Project development would be subject to compliance with various policies and standards for adequate services and facilities, including developmental regulation requirements for minimum road widths and clearance around structures. Additionally, the Project would be required to be adequately served by water supplies for domestic use and community fire protection in accordance with standards as determined by the County and the local fire protection agency/authority. A less than significant impact would occur in this regard following compliance with fire flow requirements and with the provision of adequate and reliable water storage for community fire protection. Refer to the *Development Code* section below and Section 5.3, *Public Services and Utilities,* for further discussion regarding potential fire hazards.

Refer to Section 5.11, *Hydrology and Drainage*, for a discussion of potential Project impacts relative to flood and erosions hazards.

MAN-MADE HAZARDS

The issues relevant to man-made hazards addressed in this section include Noise, Aviation Safety, and Hazardous Waste/Materials. Refer to Section 5.7, *Noise*, for a

discussion of potential impacts relative to noise hazards. Refer to Section 10.0, *Effects Found Not to be Significant,* for a discussion of potential impacts relative to aviation safety and hazardous waste/materials hazards.

NATURAL RESOURCES

This section identified seven categories of natural resources in the County, including biological and scenic resources. As previously noted, the Project site contains certain species of plants and wildlife considered endangered or threatened. Refer to Section 5.8, *Biological Resources*, for a discussion of potential impacts relative to biological resources and an evaluation of the Project's compliance with the Biotic Resources Overlay District Requirements.

State Highway 38 is a County designated Scenic Highway. Refer to Section 5.4, *Aesthetics/Light and Glare*, for a discussion of potential impacts relative to scenic resources and an evaluation of the Project's compliance with the Scenic Resources Overlay District Requirements.

Refer to Section 5.6, *Air Quality*, and Section 5.9, *Cultural Resources*, for a discussion of potential impacts relative to air quality and cultural/paleontological resources, respectively. Refer to Section 5.11, *Hydrology and Drainage*, and Section 5.3, *Public Services and Utilities*, for a discussion of potential impacts relative to water resources. Refer to Section 10.0, *Effects Found Not to be Significant,* for a discussion of potential impacts relative to soils/agriculture and mineral resources.

MAN-MADE RESOURCES

Transportation/Circulation. The Project proposes the relocation of approximately 2,498 linear feet of State Route 38 (North Shore Drive). State Route 38 (North Shore Drive) is classified as a State Highway. The Project would be required to construct this Highway in compliance with the special standards and conditions specified by Caltrans. As indicated in Section 5.5, *Traffic and Circulation*, implementation of the proposed Project would not overburden State Route 38 (North Shore Drive), as it would result in a less than significant impact to the Level of Service (LOS) for the Highway. Also, as the proposed highway improvements would occur in two phases, the Project would not impair emergency vehicle access or escape routes during emergencies. Highway construction would be subject to compliance with various development criteria and Caltrans standards relative to setbacks, prohibited direct access, the provision of left turn lanes (as necessary), shoulder width requirements, and pedestrian crossing requirements. The Project's proposed realignment of State Route 38 (North Shore Drive) would be subject to County of San Bernardino and Caltrans policies and standards. With the proposed amendment to the Transportation/Circulation Maps, the Project would be considered compatible and consistent with the General Plan. Thus, it is concluded that impacts would be less than significant.

Additionally, the Project proposes one loop road north of State Route 38 (North Shore Drive) providing access to 64 northerly residential lots and one loop road and five separate cul-de-sac drives south of State Route 38 providing access to 31 lakefront lots. These proposed improvements would be subject to compliance with

the General Plan's minimum standards and requirements for roads and access improvements for new developments. A less than significant impact is anticipated in this regard after compliance with the standards and requirements.

Refer to Section 5.5, *Traffic and Circulation*, for further discussion regarding potential impacts to transportation/circulation resources. Refer to Section 5.3, *Public Utilities*, for a discussion regarding potential impacts to wastewater systems and solid waste management. Refer to Section 10.0, *Effects Found Not to be Significant,* for a discussion regarding potential impacts to energy/telecommunications and housing/ demographics.

Land Use/Growth Management. The proposed Project would be considered compatible and consistent with the relevant Land Use Element policies (Policy LU-2) based on the following conclusions:

- Project development would meet the Locational Criteria and the Building Intensity Standards for the RS District as discussed below in the *Official Land Use Districts* section.

- The Project would be considered compatible with adjacent land uses and community character since it would be an extension of the existing land use pattern of RS Districts.

- The Project would allow for a variety of housing types since the proposed 95-lot residential subdivision would provide 92 residential lots ranging in size from 0.17 acres (7,292 square feet) to 2.11 acres (refer to Exhibit 3-4, *Site Plan – Tentative Tract #16136*).

Location, Distribution, and Intensity of Land Uses

Official Land Use Districts

As previously noted, the Project site is currently designated RL-40 (Rural Living). The Project proposes a Land Use District Change from RL-40 to Single Residential (RS). The RS District is described as follows:

- Single Residential (RS): The intended use of the RS District is to provide sites for single-family residential uses, incidental agricultural and recreational uses, and similar and compatible uses. The purpose of the RS District is as follows:

    - To provide areas for single-family homes on individual lots.

    - To provide areas for accessory and non-residential uses that complement single residential neighborhoods.

    - To discourage incompatible non-residential uses in single-family residential neighborhoods.

The Locational Criteria for the RS District are as follows:

- Areas that are not adjacent to Regional Industrial or Agriculture District except where the ultimate minimum residential parcel sizes shall be 1.0 acre or larger.

- Areas that are within one mile of major arterial and/or existing major public transit route.

The Building Intensity Standards for the RS District are as follows:

- Maximum Housing Density — 4 DU/AC
- Minimum Net Parcel Size — 7,200 SF
- Minimum District Size — 10 AC
- Maximum Building Coverage — 40%
- Maximum Building Height — 35 feet

Development of the proposed Project would be consistent with the standards and criteria established for the RS District. The Project would be consistent with the purpose and intended use of the RS District, since it proposes development of 92 single-family residential lots, and a boat dock and parking lot (for use by residents), which would be considered incidental recreational and accessory uses that would complement the proposed residences. The Project would be consistent with the Locational Criteria for the RS District since the Project site is not located adjacent to a Regional Industrial or Agriculture District and is located within one mile of State Route 38 (North Shore Drive), a major arterial.[2] The Project would be consistent with the Building Intensity Standards for the RS District regarding maximum housing density, minimum net parcel size and minimum District size since the Project proposes a maximum of four DU/AC, a minimum net parcel size of 7,292 SF and a Project area (District) exceeding 10 AC (the Project site is approximately 62.43 AC). The proposed residential lots would be sold individually and development of lots and construction of dwellings would be by custom design. Therefore, future lot development would be required to comply with the 40 percent maximum building coverage and the 35-foot maximum building height. With the proposed change to the Official Land Use District (from RL-40 to RS), the Project would be considered compatible and consistent with the General Plan. Additionally, it should be noted that the Project can be considered a reasonable extension of the existing land use pattern in the surrounding area. As outlined in Table 5.1-1, *Summary of Land Uses*, existing RS Districts are located north, south, east and west of the Project site. A less than significant impact would occur with the proposed Official Land Use District Change.

Improvement Standards

As previously noted, the Project site has been designated IL1, thus, would be required to provide each of the improvements specified in Figure II-15 of the San Bernardino County General Plan, *Improvement Standards – Mountain*. The Project would be subject to implementation of the IL1 standards according to detailed

[2] The Project site is actually traversed by State Route 38.

County guidelines. With implementation of the required improvements, the Project would provide the appropriate and applicable infrastructure facilities and services essential to the proposed residential uses. Additionally, the Project would represent a reasonable extension of the existing pattern of infrastructure facilities and services in the surrounding area. As outlined in Table 5.1-1, *Summary of Land Uses*, existing IL1 areas are located north, south, east and west of the Project site. A less than significant impact is anticipated in this regard.

Maps

The Project proposes a Land Use District Change from RL-40 to Single Residential (RS) District. The Official Land Use Districts Map would require an amendment reflecting the property's District Change to RS. As noted in the *Official Land Use Districts* discussion above, a less than significant impact would occur with the proposed Land Use District Change.

According to the Hazards and the Natural Resources Overlay Maps, the Project site is located within a Geologic Hazards Overlay District, a Fire Hazards Overlay District, a Scenic Resources Overlay District, and a Biotic Resources Overlay District. Accordingly, the Project would be subject to compliance with special policies, and special development and performance standards intended to protect public health/safety and natural resources. Refer to the *Development Code* section below for a discussion regarding the Project's compliance with policies and standards required in Overlay Districts.

The Project proposes an amendment to the Transportation/Circulation Maps, changing the alignment of State Route 38 (North Shore Drive). As noted in the *Man-Made Resources* discussion above, a less than significant impact would occur with the proposed Transportation/Circulation Maps Amendment.

No change to the Infrastructure/Improvement Level Maps is proposed by the Project and no impact would occur in this regard.

Regional/Sub-regional Planning Areas

The Project site is located within the Mountain Region, the Big Bear Lake Planning Area, and the Bear Valley (BV) (Fawnskin) Community. Refer to the *Planning Areas* Section below for a discussion of the Project's consistency with development criteria for the BV Community.

SAN BERNARDINO COUNTY DEVELOPMENT CODE

5.1-2 *The proposed Project conflicts with the land use plan, policies and regulations of the San Bernardino County Development Code. Analysis has concluded that a less than significant impact would occur with approval of a Land Use District Change, Circulation Element Amendment and Conditional Use Permit.*

Land Use District Change

The Project proposes a Land Use District Change from Rural Living (RL) District (Section 84.0320) to Single Residential (RS) District (Section 84.0325). According to Section 83.020110, *Findings*, a General Plan Land Use District Change requires that the following be true:

- The proposed land use District change is in the public interest, there will be a community benefit, and other existing and permitted uses will not be compromised.

- The proposed land use District change is consistent with the goals and policies of the General Plan, and will provide a reasonable and logical extension of the existing land use pattern in the surrounding area.

- The proposed land use District change does not conflict with provisions of this Code, or any applicable specific plan.

- The proposed land use District change will not have a substantial adverse effect on surrounding property.

These criteria are true for the proposed Project based on the following conclusions:

- Implementation of the proposed Project would be considered an extension of the existing land use pattern (i.e., surrounding single-family residential uses). Further, while the Project is large in comparison to an individual lot development, it offers the opportunity for a cohesively planned development, which would be subject to compliance with the County's administrative design guidelines, as well as the development standards specified for the RS District. Also, the Project would be required to comply with the mitigation measures specified in this EIR to avoid or lessen potential Project impacts. The measures identified in this document have taken into consideration the property's setting, opportunities, and constraints. Following compliance with the specified development standards, design guidelines, and mitigation measures, Project implementation would not compromise existing single-family residential and rural land uses.

- As discussed above, the proposed Project is considered consistent with the relevant Land Use Element goals and policies. Also, the proposed single-family residential development is considered a reasonable extension of the existing land use pattern in the surrounding area since existing RS Districts (i.e., single-family residential developments) are located north, south, east and west of the Project site (refer to Table 5.1-1, *Summary of Land Uses*).

  Compliance with the established development standards, design guidelines, and mitigation measures, would improve the interface between rural and residential uses, where appropriate.

- Analysis provided in this section (i.e., the *Development Code* section) has concluded that the proposed Project would not conflict with the provisions of

the San Bernardino County Development Code with approval of a Land Use District Change, Circulation Element Amendment and Conditional Use Permit.

- The proposed Land Use District Change would not have a substantial adverse effect on surrounding properties following compliance with the established development standards, design guidelines, and mitigation measures. The Project is considered compatible with the surrounding land uses based on two factors: the Land Use District Change proposed by the Project would meet each of the criteria required for a Land Use District Change; and the Project's proposed single-family residential development would be an extension of the existing land use pattern of RS Districts (single-family residential).

Permitted Uses and Development Standards

According to Code Section 84.0325, Single Residential (RS) District, permitted uses within the Single Residential (RS) District shall include the following:

- Row, Field, Tree and Nursery Crop Cultivation;
- Single dwelling unit;
- Social Care Facility; and
- Accessory Uses specified by Chapter 5 (of Title 8, Division 4).

Land uses subject to department review/conditional use permit include the following:

- Mobilehome Park;
- Additional uses as specified by Chapter 4 (of Title 8, Division 4); and
- Animal raising.

According to Section 84.0401, *Additional Use Criteria*, the land uses listed in Section 84.0410 shall be allowed in any Official Land Use District subject to a Conditional Use Permit when one or more of the following criteria have been met:

- The location of the land use is determined by other land uses which are directly supported by the proposed use; or

- The land use is part of the community or regional infrastructure; or

- The location of the proposed use is determined by the location of raw materials in their natural state such as mineral deposits, natural vegetation and energy sources; or

- The character of the proposed use is such that it requires a remote location away from other land uses; or

- The land use is deemed essential or desirable to the public convenience or welfare.

The Project proposes single-family residential uses that are permitted within the RS District. The Project also proposes a Marina boat dock and parking lot, which may be permitted within the RS District, subject to an approved CUP. According to Section 84.0410(c) and (q), *List of Additional Uses*, the proposed boat dock and parking lot would be allowed in any Official Land Use District subject to the criteria noted above (Section 84.0401). The proposed boat dock and parking lot would be conditionally permitted since they meet two of the criteria listed above: their location would be determined by the proposed residential uses they would support and the land use is deemed essential or desirable to the public convenience or welfare. It is further noted, as discussed in Section 5.2, *Recreation*, that the marina dock/boatslip facilities are subject to requirements set forth by the Big Bear Municipal Water District, County of San Bernardino, and City of Big Bear Lake.

The following property development standards apply to all land uses within the RS District:

- Maximum Structure Height (feet): 35
- Minimum Lot Size (SF): 7,200
- Maximum Lot Coverage (building coverage): 40%
- Maximum Lot Dimensions (width to depth ratio)
  - ≥10 AC: 1:4
  - ≤10 AC: 1:3
- Minimum Lot Dimensions (width/depth in feet)
  - ≥1 AC: 150/150
  - ≤1 AC: 60/100
- Front Yard Setback (feet): 25
- Side Yard Setbacks (feet): 10 & 5
- Rear Yard Setbacks (feet): 15
- Street Side Yard Setbacks (feet):
  - Street type: Local: 15
  - Street type collector/wider: 25
- Maximum Housing Density (DU/AC): 4
- Minimum District Size (AC): 10

Based on the proposed site plan (refer to Exhibit 3-4, *Site Plan*), the proposed Project would be consistent with the property development standards for the RS District regarding minimum lot size, and maximum and minimum lot dimensions, since the Project proposes a minimum lot size of 7,292 SF and the proposed residential lots meet the maximum and minimum lot dimensions (refer to Exhibit 3-4, *Site Plan*). Additionally, the proposed Project would be consistent with the property development standards regarding maximum housing density and minimum District size, since the Project proposes a maximum of 4.0 DU/AC and the Project area (District) exceeds 10 AC (the Project site is approximately 62.43 AC). The proposed residential lots would be sold individually and development of lots and construction of dwellings would be by custom design. Through the site plan review process, future lot development would be required to comply with each of the development standards for the RS District including the 35-foot maximum structure height, 40 percent maximum lot coverage, and the front, side, rear, and street side yard setbacks. Additionally, future development would be required to comply with the County's administrative design guidelines and mitigation measures identified in this

EIR to avoid or lessen potential impacts. A less than significant impact would occur in this regard.

Overlay Districts

The Project site is located within a Fire Safety (FR) Overlay District and within Fire Safety Review Area 1 (FR1). Therefore, the Project would be subject to compliance with various requirements relative to construction, building separations, project design, and erosion and sediment control, as specified in Section 85.020220,*Building Standards for FS1.* Also, the proposed Project, including future residential lot development, would be subject to compliance with the County's design guidelines relative to fire protection (i.e., access, fire flow, safety standards, building setbacks, fuel modification areas, roof coverings, and chimneys). A less than significant impact would occur in this regard following compliance with the specified requirements.

The Project site is located within a Geologic Hazard (GH) Overlay District. The proposed Project is in compliance with Section 85.020410, *Geologic Reports.* As noted in Section 5.10, *Geology and Soils, Geomatrix Consultants, Inc.* has prepared a Geology and Soils Study of the Project site (refer to Section 15.7, *Geology/Soils Analysis*). The Study has confirmed the absence of faults and marsh areas on the Project site. The Project would be required to comply with various development standards (set forth in Section 5.10 of this EIR). A less than significant impact would occur in this regard after compliance with the specified development standards.

The Project site is located within a Biotic Resources (BR) Overlay District. The proposed Project is in compliance with the development standards for this District. As noted in Section 5.8, *Biological Resources*, BonTerra Consulting has prepared a Biological Resources Assessment of the Project site. The Assessment identifies biotic resources located on the Project site and on adjacent parcels that could be impacted by the proposed development. The report outlines mitigation measures intended to avoid or lessen impacts to the identified resource(s). The conditions of approval for the proposed Project would be required to incorporate the identified mitigation measures. A less than significant impact would occur in this regard.

The Project site is located within a Scenic Resources (SR) Overlay District. Thus, the Project would be subject to compliance with various compliance criteria as specified in Section 85.030610, *Development Standards.* Refer to Section 5.4 *Aesthetics/Light and Glare*, for an analysis of the Project's compliance with these criteria.

Planning Areas

The proposed Project would be consistent with the development standards for the Bear Valley Planning Area regarding minimum lot size, and maximum and minimum lot dimensions since the Project proposes a minimum lot size of 7,292 SF and the proposed residential lots meet the maximum and minimum lot dimensions. The proposed residential lots would be sold individually and development of lots and

construction of dwellings would be by custom design. Through the site plan review process, future lot development would be required to comply with the 35-foot

maximum structure height, 40 percent maximum lot coverage, and the front, side, rear, and street side yard setbacks. Additionally, future development would be required to comply with the County's administrative design guidelines and mitigation measures identified in this EIR to avoid or lessen potential impacts. A less than significant impact would occur in this regard.

CUMULATIVE

5.1-3 *The proposed Project, combined with other future development, would increase the intensity of land uses in the area. Analysis has concluded that impacts are less than significant and no mitigation is required. Projects are evaluated on a project-by-project basis in accordance with the San Bernardino County General Plan and Development Code.*

Development of the site, as proposed, would not result in any cumulative significant land use impacts, as other projects are implemented in the area. Each new project would undergo the same review process, as the proposed Project, in order to preclude potential land use compatibility issues and planning policy conflicts. It is assumed that cumulative development would progress in accordance with the City of Big Bear Lake and County of San Bernardino General Plan and Development Code. Each project would be analyzed independent of other land uses, as well as within the context of existing and planned developments, to ensure that the goals, objectives and policies of the General Plans are consistently upheld.

MITIGATION MEASURES

This section directly corresponds to the identified impact statements in the impacts subsection.

SAN BERNARDINO COUNTY GENERAL PLAN

5.1-1 No mitigation measures are recommended.

SAN BERNARDINO COUNTY DEVELOPMENT CODE

5.1-2 No mitigation measures are recommended.

CUMULATIVE

5.1-3 No mitigation measures are recommended.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

No unavoidable significant impacts related to Land Use and Relevant Planning have been identified following compliance with the San Bernardino County General Plan and Development Code policies and standards.

5.2 RECREATION

This Section focuses primarily on potential impacts resulting from the loss of on-site trails and dirt roads, which are used for hiking and access, and the increased use of the Big Bear Lake facilities. Permit requirements are identified to reduce the significance of potential impacts. Impacts to other recreational facilities in the local area are also addressed.

EXISTING CONDITIONS

ON-SITE RECREATION

Existing on-site recreation activities include picnicking, bird watching, fishing, walking and bicycle riding. Walkers and outdoor enthusiasts (including photographers and hikers) utilizing the on-site trails/footpaths for exercise and/or recreational activities, enjoy views of the on-site Jeffrey pine trees and Big Bear Lake to the south, as well as observing on-site flora and fauna species (refer to Section 5.8, *Biological Resources*). A variety of waterfowl can be also observed along the lakefront, including Great Blue Herons and Ospreys. The site can be used to access fishing locations at the lakefront. The site also provides access to the San Bernardino National Forest to the north. Although the Project site provides numerous recreational opportunities, public access to the site and lake is not assured, since the Project site is private property.

OFF-SITE RECREATION

The Big Bear Lake area includes several unincorporated communities and the City of Big Bear Lake. The Lake area is considered a premier recreational and vacation resort area of Southern California. Traditional winter recreational activities in the area include skiing and snowboarding. The area is home to the Bear Mountain and Snow Summit ski resorts. During the summer, the Big Bear Lake area provides visitors and residents with numerous camping, picnicking, fishing, boating, bird watching, horseback riding and bicycling opportunities. Additionally, during the summer, the ski resorts open their trails for mountain biking.

The Moon Camp project site is located in the Community of Fawnskin. The Fawnskin area supports visitors and residents with the provisions of lodging, restaurants, boat docks, fishing, bicycling paths, campgrounds and picnic areas. The Serrano Campground is located southeast of the project site and the Lake provides various boating and fishing recreational opportunities for the Fawnskin area. The lake's waters are utilized by recreational boaters, as well as smaller recreational craft (jet skis, kayaks, etc.). Recreational activities occur daily on the lake, with greater use on weekends, and the highest use occurring on major spring and summer holiday weekends.

BIG BEAR LAKE

Regulatory Authority. The County of San Bernardino has jurisdiction over the entire bottom of the Lake. The Big Bear Municipal Water District owns and therefore has

jurisdiction that extends to the high water line of the Lake. The Big Bear Municipal Water District (MWD) has authority to regulate recreational activity on the Lake's surface.

Public Access to Lake. According to the Big Bear Municipal Water District Management Plan, dated August 3, 2000 (Revision), to ensure that public access to the Lake is preserved, the Big Bear MWD has constructed two public boat launch ramps and improvements at the Stanfield Marsh that includes a parking and viewing location and boardwalk for public access. Additional public access to the lake is provided on property along the north shore, which is owned by the Forest Service. Also, there are eleven commercial marinas providing access to the Lake. The Forest Service has constructed the Alpine Pedal Path Bike Trail along the north shore of the Lake, which extends from Stanfield Cutoff, through the MWD East Boat Ramp, to the Solar Observatory, which is immediately to the east of the Moon Camp site. The MWD also owns and operates a recreational vehicle park adjacent to their administrative offices. As previously stated, since the Project site is private property, public access to the lake is not assured.

Recreational Lake Activity. As previously stated, the MWD regulates recreational activities and facilities on the Lake. The MWD provides an annual review of Lake use data, including types of boating activity, shoreline use and parking at the public launch ramps, in order to determine if there is a need to expand or develop additional recreational facilities. When an analysis of data indicates that the Lake, ramp or shoreline use has reached a level where current facilities cannot meet the public demand, the District examines solutions to the problem.

As referenced in the MWD Management Plan, there is an average of 2,710 usable Lake acres between April and October, which is the peak boating season. In May of 1984, the District approved a lake carrying capacity of 1,000 boats. At that same time, it was also determined that the maximum number of dock slips which may be available on the Lake at full build-out is 5,200. The weekend use factor of those docks was determined to be nine percent. Based on that calculation, the maximum number of boats from docking facilities on a weekend is 468. This allows for an additional 632 boats to be launched from the public launch ramps or private marinas before the 1,000 boat maximum would be reached. As of August 2000, mooring availability on the Lake was less than 2,500, which if multiplied by the nine percent factor, equates to less than 255 boats using the docking facilities. In 1999, to ensure that the number of docks on the Lake would not eventually contribute to an exceedence of the number of allowable boats on the Lake, the District reduced the number of allowable moorings for lakefront businesses.

According to the MWD Water Management Plan, during the 1996 season, the average daily use of boats was 262 during the summer peak season. The 1997 average was 199 boats, the 1998 average number of boats was 208 and the 1999 average was 199. As of 2000, boat fishing accounts for approximately 50 percent of Lake boating use. Each summer, the three major holiday weekends (Memorial Day, July 4th and Labor Day) always results in increased lake usage. Although safety problems have not occurred as a result of the increased Lake usage on the holiday weekends, parking has been a problem on peak days at public launch ramps.

The MWD Water Management Plan states that shoreline use for picnicking, fishing and hiking averaged 616 people per day in the 1996 summer season, 511 people in 1997, 586 in 1998 and 493 in 1999. Shore fishing is most popular in April and May when the shallow areas are relatively free of aquatic plants. Due to aquatic plants, the most popular fishing areas in the summertime include the dam area, Windy Point, Fisher Point, Juniper Point and Dana Point. The two piers, at each of the District's public launch ramps have improved fishing access along the north shore of the Lake.

IMPACTS

SIGNIFICANCE CRITERIA

Appendix G, *Initial Study Checklist*, of the California Environmental Quality Act (CEQA) Guidelines includes checklist questions relating to recreation. A project would potentially create a significant impact if it caused one or more of the following to occur:

- 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 (refer to Section 10.0, *Effects Found Not To Be Significant*);

- Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment (refer to Impact Statement *5*.2-1).

Potential impacts are grouped below according to topic. The numbered mitigation measures at the end of this Section directly correspond with the numbered impact statement.

EXPANSION AND/OR CONSTRUCTION OF RECREATIONAL FACILITIES

5.2-1 *Implementation of the Moon Camp project involves the construction or expansion of recreational facilities which may have an adverse physical effect on the environment. Compliance with the Big Bear MWD standards and permit requirements would reduce impacts to a less than significant level.*

The Moon Camp Project proposes to construct approximately 100 boat docks (dependent upon demand) at the southwest corner of the project site, along the north shore of Big Bear Lake. The boat docks would be accessible through a gated entrance and available to residents of the Moon Camp tract.

Per an agreement executed in 1974, Big Bear Properties acquired the rights to certain commercial boat landing (marina) permits. The rights for two of these permits have yet to be exercised and were transferred to Forest Properties. According to the MWD, one of the two permit rights have been assigned to the Moon Camp

Development.[1] Since the Applicant wishes to operate a private dock club for the use of homeowners and their tenants and guests, the project would be required to exchange the marina permit for the right to obtain a "Yacht Club" dock license.[2] Dock privileges are normally granted only to lakefront properties, however, the yacht club license would allow a dock slip for each single-family dwelling parcel, plus additional slips equal to 10 percent of the total number of parcels. In this case that formula would restrict the dock system to a maximum of 101 slips (92 lots + (92 lots x 10%) = 101 slips). The number of lakefront homeowners who exercise their individual dock privileges could reduce this number. Thus, the proposed 100 dock slips would be consistent with the provisions set forth for Yacht Clubs by the District.

As stated in the existing conditions, 1,000 boats is the carrying capacity of Big Bear Lake and the maximum number of dock slips on the Lake would be 5,200. The 100 proposed dock slips would not surpass the total amount of dock slips allowed on the Lake. The 100 dock slips, if multiplied by the weekend use factor of nine percent, would add approximately nine boats per day to the daily average number of boats using the lake. This increase in boat usage on the lake would not surpass the 1,000 boat carrying capacity of the Lake. Furthermore, according to the Big Bear Municipal Water District Management Plan, current lake use statistics show that it is unlikely that in the foreseeable future, the District would need to consider any restriction on the number of boats on the Lake. In fact, as long as the parking facilities remain at the current level, use of the Lake is somewhat self-restricting.

The Big Bear Municipal Water District has identified three areas of concern with implementation of the proposed marina facilities associated with the Moon Camp project. First, a mooring plan for high and low water conditions must be submitted and reviewed to ensure that dock placement is consistent with District regulations. This would allow for a Dock System and License Agreement to be obtained. Second, any construction activity that may occur below the high water line (i.e., seawall, launch ramp, headwalk, dredging or slope modification, etc) would require a Shorezone Alteration Permit. Third, the District would need to receive a copy of the Storm Water Pollution Prevention Plan (SWPPP), approved by the Water Resources Control Board, to ensure that the Lake is adequately protected from pollutants before, during and after project construction (refer to Section 5.11, *Hydrology and Drainage*). This is especially critical as the District is currently involved with the Santa Ana Regional Water Quality Control Board in the Total Maximum Daily Load process for Big Bear Lake.

In conclusion, the proposed project would involve construction of marina facilities that may have an adverse impact on the physical environment. However, in consideration of the standards set forth by the Big Bear Municipal Water District, potential impacts to the physical environment created by the construction of recreational facilities are concluded to be less than significant.

[1] Source: Written Correspondence with Sheila Hamilton, General Manager, of the Big Bear Municipal Water District. February 28, 2002.

[2] Section 4.05, *Yacht Clubs*, of Resolution No. 2001-16 of the Big Bear Municipal Water District establishes regulations that govern yacht clubs.

PUBLIC ACCESS

5.2-2 *Implementation of the Moon Camp project would ~~not~~ affect public access along the north shore of Big Bear Lake. Mitigation requiring dedication of an easement along the south side of North Shore Drive has been incorporated. ~~The Project site is Private Property. Affects on public access are concluded as less than significant.~~*

The Moon Camp Project would include 31 residential/numbered lots south of the realignment of North Shore Drive. Additionally, the marina facilities, inclusive of Lot "C" would be located south of North Shore Drive. Lot "C", consisting of approximately 19,683 square feet (0.45 acres), would be the gated entrance to the marina facilities. Lot "C" would be situated between the "high water line" and the roadway improvements at the southwestern portion of the project site. The Lot "C" marina access ramp would affect public access from west to east along the shoreline of the Lake.

The County of San Bernardino General Plan Goal C-54 states the intention to "provide public access to all water bodies and water courses." Furthermore, Policy/Action OR-48 states that, "Because the County seeks to improve the ability of the public to enjoy water-related recreation, the County shall seek to improve public access to rivers, lakes, creeks, lakes and other bodies of water." Additionally, Policy/Action OR-49 states that "Because public access to water for recreational uses is important to the County, easements and dedications allowed in the Subdivision Map Act to acquire access to lakes, streams, public lands and other locally and regionally significant natural features shall be required for all new development." ~~However, since the Project site is private property, public access is not assured~~. As the project abuts existing homes to the east and the proposed Marina Point Development to the west, ~~P~~public access to the lakeshore would be maintained below the high water line of the lake.~~maintained at the eastern and western boundaries of the site~~. Public access to the lakeshore also continues to be maintained at other locations along the perimeter of the lake. However, since the Project site is private property, public access is not assured.

~~It is further noted that~~ Although the U.S. Forest Service has indicated that there are no current plans to extend the Alpine Pedal Path through the project area, as a result of redesign of portions of the project area, south of North Shore Drive, a pedal path easement could be established. Thus, mitigation incorporating an easement has been incorporated for the project, to be conditioned, prior to recordation of a map. ~~Thus, it is concluded that access is provided to the lakeshore in close proximity to the project site resulting in a conclusion of less than significant impact.~~

CUMULATIVE

5.2-3 *Cumulative development may result in increased use of existing recreational areas/facilities, thereby creating the potential for physical deterioration. Additionally, cumulative development may include recreational facilities (i.e., marina) that have the potential to result in physical impacts on the environment. Mitigation measures necessary for*

reducing impacts are addressed on a project-by-project basis to reduce impacts to a less than significant level.

The proposed Project would contribute to the cumulative need for more recreational park space and related facilities. Although, the proposed Project would increase the use of existing facilities, the proposed project would also create a new recreation facility (marina). Cumulative projects would be required to mitigate incremental impacts to Countywide recreational facilities, resulting in a less than significant impact.

Additionally, as stated in Impact Statement 5.2-1, Big Bear Lake has been identified as a primary recreational entity associated with the proposed project. According to the Big Bear Municipal Water District, the Lake has a maximum boat carrying capacity of 1,000 boats. The approximately 100 boat slips associated with the Moon Camp project and the approximately 175 boat slips at the Cluster Pines project would not surpass the boating capacity or the dock slips capacity of the Lake at full build-out.

MITIGATION MEASURES

The following mitigation measures directly correspond to the identified impact statements in the Impacts discussion.

EXPANSION AND/OR CONSTRUCTION OF RECREATIONAL FACILITIES

5.2-1 No mitigation measures are recommended.

PUBLIC ACCESS

5.2-2 ~~No mitigation measures are recommended.~~ The proposed project shall be conditioned to incorporate a pedal path easement along the south side of North Shore Drive, prior to map recordation.

CUMULATIVE

5.2-3 No mitigation measures are recommended.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

No significant impacts related to Recreational facilities have been identified in this Section.

5.3 PUBLIC SERVICES AND UTILITIES

This Section is based, in part, on correspondence from public service and utility agencies (refer to Appendix 15.12, *Correspondence*) and references which include a, the Geohydrologic Investigation of the Moon Camp Area (GSS 2000 report), prepared by Geoscience Support Services, Inc. (GSS) (July 2000), the Focused Geohydrologic Evaluation of the Maximum Perennial Yield of the North Shore and Grout Creek Hydrologic Subunit Tributary Subareas (GSS 2003 report), prepared by GSS (December 2003), the Moon Camp Water Feasibility Study prepared by So & Associates Engineers, Inc. (March, 2002), and the County Service Area 53 Sewer Study by So & Associates Engineers, Inc. (July, 2001) (refer to Appendix 15.12, *Correspondence*). Public services include fire protection, police protection, schools and libraries. Utilities and service systems include water, wastewater, solid waste, electricity and natural gas services. This Section includes an Existing Conditions discussion which provides background information necessary to understand potential impacts of the proposed Project. Mitigation measures are identified in an effort to reduce potential impacts to less than significant levels.

EXISTING CONDITIONS

FIRE PROTECTION

The County of San Bernardino Fire Department provides fire protection and emergency medical services to the Fawnskin area. The Project area is served by County Fire Station No. 49, located in Fawnskin, at 39188 Rim of the World Drive (approximately ¾ of a mile westerly of the site). Two permanent personnel (one of the two is a paramedic) and approximately eight to ten volunteer fire fighters serve Station 49. Mutual aid agreements exist with the City of Big Bear Lake and Big Bear City. These agreements provide first-response in the event additional equipment and manpower is necessary during a multi-alarm fire or in the event that these stations could provide first alarm response with the closest available equipment.

The Insurance Service Organization (ISO) is a private insurance research group that periodically assesses the degree to which fire threatens geographic areas. This rating is based on the type of vegetation or structures present, climate, and the availability of fire protection services. The ISO uses a scale of I (best protection or lowest threat) to 10 (least protection or higher threat). Presently, the Community of Fawnskin has an ISO rating of 9.

The Project site is located within a Fire Safety (F~~R~~S) ~~Overlay District~~ Area ~~2~~1 (F~~R2~~S1), as designated by the County of San Bernardino General Plan Hazard Maps. FS1 areas are subject to compliance with various requirements relative to construction, building separations, project design, and erosion and sediment control as specified in Section 85.020220, ~~Area FR1 and FR2 Requirements~~ *Building Standards for FS1*, of the County Development Code. The provisions of the F~~R2~~S1 District apply to all phases of development. Refer to Section 5.1, *Land Use and Relevant Planning*, for further discussion of Fire Safety Overlay District requirements.

POLICE PROTECTION

Police protection to the Community of Fawnskin for both crime and traffic services is provided by the San Bernardino County Sheriff's Department. The City of Big Bear Lake and Big Bear City also provide police protection services to the Community, as needed. The mountain communities in the area have volunteer support of law enforcement through an active Search and Rescue Team, Citizen's Patrol and Neighborhood Watch Programs.

The Big Bear Sheriff's Station is located at 477 Summit Boulevard in the City of Big Bear Lake, approximately 6.0 miles east of the Project site. The station serves as host to the City of Big Bear's contract law enforcement services, personnel, as well as staff to serve the unincorporated area. The station also houses a Type I jail facility within the County building. The Department has nine patrol duties, 24-hour coverage personnel assigned to unincorporated areas, one detective and support personnel.

The Big Bear Sheriff's Station provides police protection services to a population of approximately 15,800 persons in the unincorporated San Bernardino County areas of Big Bear Valley. The Community of Fawnskin is located within the jurisdiction of the Big Bear Sheriff's Station. The average response time for emergency calls ~~to the unincorporated county area~~ within the jurisdiction of the Big Bear Sheriff's Station is 6.97 minutes. The response times may vary, plus or minus, depending on the number of service calls received. According to the Sheriff's Crimes Analysis Unit, between January 1, 2000 and January 1, 2001, the Sheriff's Department handled 9,028 calls for service in the unincorporated area of Big Bear Valley.[1]

SCHOOLS

The Project site is situated within the Bear Valley Unified School District (BVUSD). The BVUSD provides education for grades Kindergarten through 12. Table 5.3-1, *Bear Valley Unified School District Facilities*, details the BVUSD schools serving the Project site and includes current enrollment and maximum capacity. As indicated in Table 5.3-1, all three schools within the BVUSD presently exceed maximum capacity. In order to meet the existing need, portable classrooms have been located on these school campuses. According to the "Developer Fee Justification and Impact Analysis," dated October 2000, the average student generation rate per dwelling unit (DU) is 0.21 students/DU. According to the District, based on State standards, these schools do not have adequate school housing capacity presently and replacement facilities are needed.[2]

[1] Source: Written correspondence from Bobby R. Phillips (Captain) at the County of San Bernardino Sheriff's Department. Letter dated June 18, 2002.

[2] Source: Written correspondence from Dr. John Niederkorn (Director of Business) at Bear Valley Unified School District. Letter dated June 18, 2003.

Table 5.3-1
Bear Valley Unified School District Facilities

School	Grade Level	Current Enrollment	Maximum Capacity	Distance to Project site (miles)
North Shore Elementary School 765 N. Stanfield Cutoff	K-6	614	588	3.0
Big Bear Middle School 41275 Big Bear Boulevard	7-8	575	408	4.5
Big Bear High School 351 N. Maple Lane	9-12	921	697	8.0

Senate Bill (SB) 50

The major source of school construction and modernization had been the State School Construction Program until the passage of Senate Bill 50 (SB 50), School Facility Program. SB 50 authorized a $9.2 billion K-12 school and higher education bond that was presented to the State's voters on November 3, 1998. In addition, SB 50 revised developer fee and mitigation procedures for school facility purposes and reformed the State program that distributes State bond funds to K-12 school districts. On November 3, 1998, State voters approved Proposition 1A, a $9.2 billion bond measure, which provides funding for higher education facilities, K-12 facilities, modernization of older schools, additional funding for districts in hardship situations, and funding for class size reduction. With the passage of Proposition 1A, the Mira powers[3] of local governments were suspended on November 4, 1998 until 2006, which is the length of time the State bond money would be available to local school districts. As a result of this, school districts would continue to levy a school fee under existing rules (Government Code Section 65995, 65995.5 and 65995.7), which is currently up to $1.93 per square foot for residential construction and $0.31 per square foot for commercial and industrial development. SB 50 also established three levels of school fees: Level One, Level Two, and Level Three Fees. Level One Fees are the statutory fees of $1.93 per square foot for residential projects and $0.31 per square foot for commercial and industrial projects, which can be adjusted for inflation every two years beginning in 2000. Level Two Fees allow school districts to impose fees beyond the base statutory cap, under specific circumstances. Level Three Fees take effect in the event the State runs out of bond funds after 2006, which would allow school districts to impose 100 percent of the cost of the school facility or mitigation minus any local dedicated school monies. The school fee amounts provided for in Government Code Sections 65995, 65995.5 and 65995.7 would constitute full and complete mitigation for school facilities.

[3] The *Mira, Hart and Murrieta* court cases held that the provisions of the 1986 School Facilities Act limiting developer school fees to an initial amount of $1.50 per square foot are only applicable to adjudicative or quasi-judicial acts (such as tentative tract maps or conditional use permit approvals) and do not apply to legislative acts (such as general plan amendments, specific plan adoption or amendment or zoning amendments). The Mira, Hart and Murrieta decisions provided school districts and local agencies the legal authority under CEQA to require new development to fully mitigate school impacts in connection with legislative approvals, and allowed a City Council or Board of Supervisors to deny or refuse to approve a project based upon impacts to school facilities.

LIBRARIES

The Project area is serviced by the Big Bear Lake Branch Library, a 9,543 square-foot building, located at 41930 Garstin Drive. The Library is one of 28 branch libraries within the San Bernardino County Library system and serves approximately 17,200 residents of the Big Bear Lake area and the unincorporated Bear Valley. Approximately 6,000 people visit the library per month. The Library's materials collection includes books, periodicals and audio-visual materials. Public services provided by the library include:

- Reference services for adults and children (either in person or by phone);
- Programs (Summer Reading Program, LITE Program, English improvement classes, story hours, literary and cultural programs, literacy services, etc.); and
- Electronic reference sources (electronic information databases, Internet, etc.).

The San Bernardino County Library Facility Master Plan identifies the need to expand the existing Library building from 9,543 square feet to 15,443 square feet, in response to population increases.[4] Currently, there are no planned expansion projects for the library. Current trends in library services for the Big Bear Lake/Bear Valley area reflect increased circulation of materials, major demand for more computers and data bases, and requests for more educational programs.

WASTEWATER

The project site is located within the Big Bear Area Regional Wastewater Agency (BBARWA) sanitary sewer service area. The service area for BBARWA includes the entire Big Bear Valley and is served by three separate collection systems: the City of Big Bear Lake (62 percent of total flow), the Big Bear City Community Services District (34 percent of total flow) and County of San Bernardino Service Area 53B (four percent of total flow). Each underlying agency maintains and operates its own wastewater collection system and delivers wastewater to the BBARWA interceptor system for transport to the BBARWA Regional Wastewater Treatment Plant. The Regional Plant is a 93.5-acre site, located adjacent to Baldwin Lake in unincorporated San Bernardino County. The dry weather capacity of the Regional Plant is 4.8 million gallons per day. The average daily influent flow to the Regional Plant for 2001 was 2.1 million gallons per day.

The Project site is located within the County Service Area 53B (CSA-53B) collection system. Sewage from CSA-53B is transported via the BBARWA North Shore Interceptor/Force Main system to the Regional Wastewater Treatment Plant.

[4] Source: E-mail correspondence from Patricia Laudisio (Facility Coordinator) at the San Bernardino County Library. December 10, 2002.

Currently, the BBARWA has a ten-inch sewer force main located within the shoulder along the south side of State Route 38 that traverses the Project site. This force main conveys raw sewage from CSA 53-B to the Regional Wastewater Treatment Plant.

WATER

The Project site lies within the service boundaries of County Service Area 53, Improvement Zone C (CSA 53-C), which was created in 1991 to provide water service to unserved areas within CSA 53. Currently, water service is not provided to the project site. Even though the site is immediately adjacent to the water service jurisdiction of the Department of Water and Power (DWP), City of Big Bear Lake, DWP cannot provide water service without first complying with the provisions of Government Code Section 56133. Section 56133 requires formal review and approval by the Local Agency Formation Commission (LAFCO). However, the County Special District Department has the ability to establish a joint powers agreement with DWP to provide water service. Due to the proximity of DWP facilities and the ability to provide more cost-effective service by contracting with DWP, this service delivery arrangement appears to be the preferred method for providing water service to the project. At this time, neither agency has committed to approving such an agreement.

DWP is a public agency that provides drinking water to approximately 14,200 customers in the City of Big Bear Lake and surrounding areas, which include Fawnskin, Moonridge, Sugarloaf, Lake Williams, the Rim Forest area, and parts of Erwin Lake. DWP is responsible for testing and monitoring the Water System to assure a safe water supply that meets all State and Federal regulations. Big Bear Valley is unique in that all of the drinking water is obtained from the snow and rain that percolates into the ground. No lake or imported water is available for drinking water in Big Bear Valley. DWP currently operates, maintains and monitors:

- 33 well sites;
- 13 booster stations;
- 17 reservoirs;
- 15 chlorination stations;
- 20 sample stations; and
- Hundreds of pressure reducing valves.

DWP installs, replaces and repairs hundreds of fire hydrants within the water system, as well as maintains, replaces and repairs 167 miles of mainlines, 14,200 meters, meter boxes and service lines and 3,000 mainline valves.

DWP's 2000 Consumer Confidence Report for the Fawnskin Water System states that six wells, two boosters and three reservoirs serve the Fawnskin area.[5] The total capacity of the reservoirs is 365,000 gallons. There are also three portable generators and two portable booster pumps in the Fawnskin area. In 2000, 41.2 million gallons of water were pumped into the Fawnskin Water System.

[5] Source: http://www.citybigbearlake.com/dwp/dwppage/Forms/WQ00FSp1.pdf .

According to the March 2002 Water Feasibility Study prepared for the Project, the Project site is located near the southeast side of Fawnskin, which, based on computer simulations receives water from Cline Miller Reservoir.[6] Exhibit 5.3-1, *Water Distribution System*, illustrates the existing distribution piping system near the proposed development, as well as the recommended extension pipeline layout.

The DWP Board of Commissioners has considered placing limitations on the number of new water connections within Big Bear Lake, Moonridge, Erwin Lake, Sugarloaf, and Lake Williams Services areas. To date, connection limitation discussions have not focused on the Fawnskin service area.

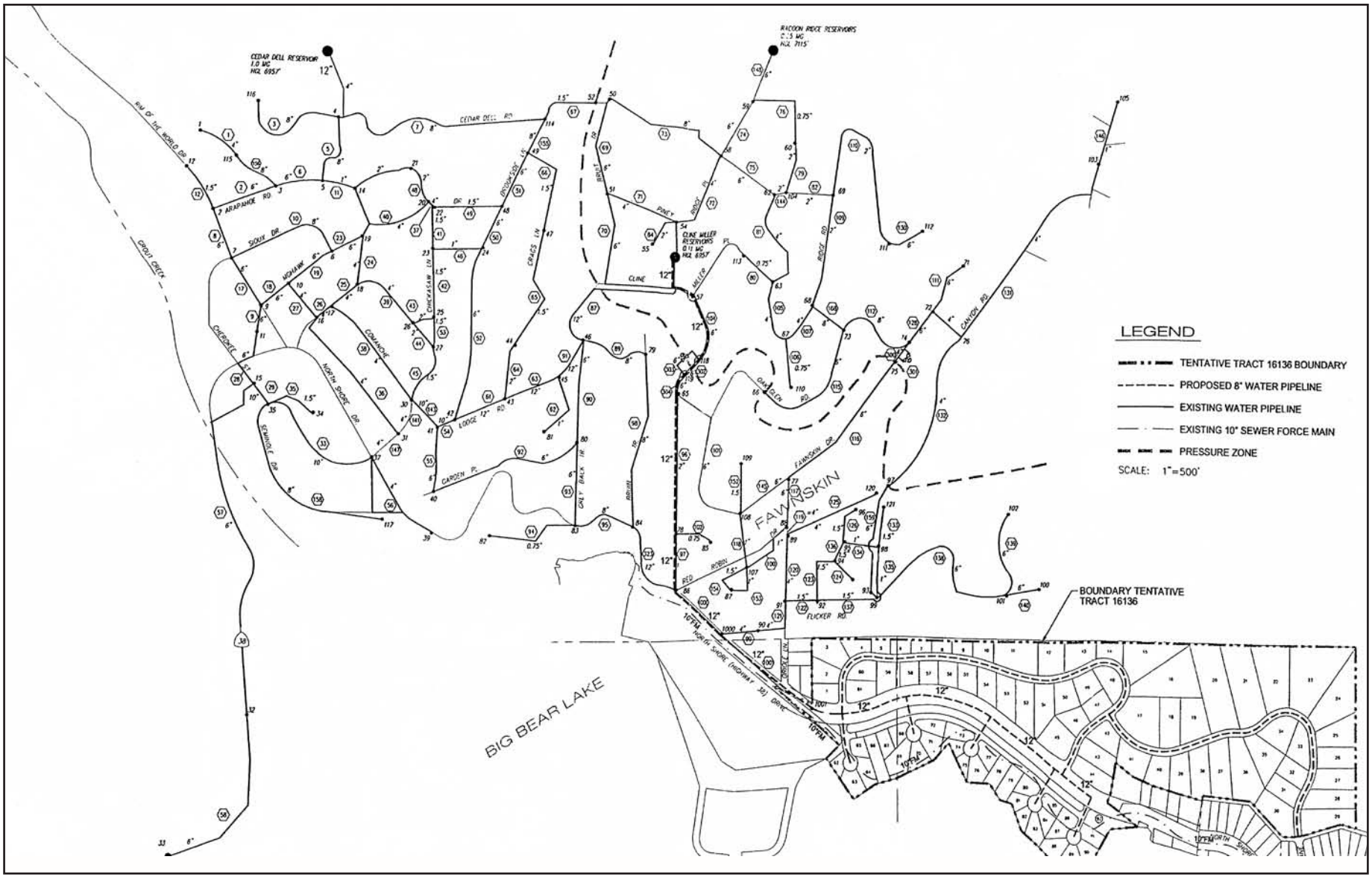
Senate Bills 221 and 610

Senate Bills 221 and 610 were signed into law by Governor Davis in 2001 and took effect January 1, 2002. The two senate bills amended State law to better link information on water supply availability to certain land use decisions by cities and counties. The two companion bills provide a regulatory forum that requires more collaborative planning between local water suppliers and cities and counties. All SB 610 and 221 reports are generated and adopted by the public water supplier.

Senate Bill (SB) 610 requires a detailed report regarding water availability and planning for additional water supplies that is included with the environmental document for specified projects. All "projects" that meet any of the following criteria require the assessment:

- A proposed residential development of more than 500 dwelling units;
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 ft^2 of floor space;
- A proposed commercial office building employing more than 1,000 persons or having more than 250,000 ft^2 of floor space;
- A proposed hotel or motel, or both, having more than 500 rooms;
- A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 ft^2 of floor area;
- A mixed-use project that includes one or more of the projects specified in this subdivision; or
- A project that would demand an amount of water equivalent to, or greater than the amount of water required by a 500 dwelling unit project.

[6] Source: Water Feasibility Study for Tentative Tract 16136, prepared by So & Associates Engineers, Inc. March 13, 2002.



Source: City of Big Bear Lake Department of Water and Power Feasibility Study TTM 16136.

Exhibit 5.3-1

RBF CONSULTING

PLANNING ■ DESIGN ■ CONSTRUCTION

12/05 JN 10-101901

MOON CAMP TT #16136
ENVIRONMENTAL IMPACT REPORT

Water Distribution System

While SB 610 primarily affects the Water Code, SB 221 principally applies to the Subdivision Map Act. The primary effect of this bill is to condition every tentative map for an applicable subdivision on the applicant by verifying that the public water supplier (PWS) has "sufficient water supply" available to serve it. Under SB 221, approval by a city or county of certain residential subdivisions requires a written verification of sufficient water supply. SB 221 applies to any "subdivision," defined as:

- A proposed residential development of more than 500 dwelling units, if the PWS has more than 5,000 service connections.

- Any proposed development that increases connections by 10 percent or more, if the PWS has fewer than 5,000 connections. Water Code 10912(7)(C) states that a "public water system" is defined as a system for the provision of piped water to the public for human consumption that has 3,000 or more service connections.

Based on the "Guidebook for Implementation of Senate Bill 610 and Senate Bill 221 of 2001" the following excerpt shows that 300 dwelling units are necessary to qualify as a "subdivision," and therefore be subject to SB 221.

> *"Code 66473.7(a) provides that a "subdivision" for a public water system with fewer than 5,000 service connections is a proposed development that would increase the number of service connection for a public water system by 10% or more, a "subdivision" could be as few as 300 dwelling units. For example, a water utility that has 3,000 service connections would experience an increase in the number of service connections by 10% if it were required to serve a proposed residential development with 300 units, thus making the 300-unit development a "subdivision" under 221."*

As stated above, Water Code 10912(7)(C) states that a "public water system" is defined as a system for the provision of piped water to the public for human consumption that has 3,000 or more service connections. Therefore, if Fawnskin has only 673 connections it does not qualify as a "public water system," but rather a piece of a larger "overall system." Whether the project is under the jurisdiction of the DWP or the County Special Districts Department, each of these agencies "overall system" has more than 3,000 connections qualifying them as public water systems. Thus, the proposed 92 dwelling units would not exceed 10 percent of the 3,000 connections or 300 dwelling unit minimum dwelling unit threshold to be subject to SB 221 reporting requirements.

~~The proposed meets neither of the above scenarios.~~

SOLID WASTE

Big Bear Disposal, Inc. would likely provide solid waste collection within the Project area. Waste would be transported to the Big Bear Transfer Station, located on Holcomb Valley Road in Big Bear City, approximately 1.5 miles north of Highway 18. The transfer station is owned and operated by the County of San Bernardino Waste Management Division. The station is permitted to receive 400 tons of solid waste per

day. Waste would be transferred from the Big Bear Transfer Station to the Barstow Landfill.

The Barstow Landfill is also owned and operated by the County of San Bernardino Waste Management Division. The landfill is permitted to receive 525 tons of waste per day. The remaining capacity is 218,492 cubic yards and the total permitted capacity is 3,580,000 cubic yards. The landfill is scheduled to close June 1, 2012.[7]

On average, each resident in unincorporated County areas disposes of 3.8 pounds of waste per day (1998). In comparison, each resident in the City of Big Bear Lake disposes of 6.2 pounds of waste per day, on average.

The California Integrated Waste Management Act, Assembly Bill 939 (AB 939), required jurisdictions to divert 50 percent of the wastestream away from land disposal by the year 2000. If the 50 percent goal were not met by the end of year 2000, the jurisdiction would be required to submit a petition for a goal extension to the Integrated Waste Management Board (IWMB). The San Bernardino County (unincorporated) IWMB-diversion rate in the 1999 reporting year was 38 percent (pending IWMB approval). The County's (unincorporated) diversion rate in the 2000 reporting year was 43 percent (pending IWMB approval). The City of Big Bear Lake diversion rate in the 2000 reporting year was 59 percent (pending IWMB approval).[8]

Currently, the County is in the process of revising and updating the Countywide Integrated Waste Management Plan for the County of San Bernardino. The intent of this Plan is to establish goals and policies for the County regarding source reduction, recycling and composting, and environmentally safe solid waste management alternatives to land disposal. The revised Plan would also help the County in striving towards meeting the diversion rate requirements specified by AB 939.

The California Integrated Waste Management Board is still focused on assisting local officials throughout the State in meeting the 50 percent diversion requirement set for 2000. As of May 2003, neither the California Integrated Waste Management Board nor the State Legislature have introduced new legislation to set diversion requirements beyond 2000.

NATURAL GAS

The Project site is located entirely within the Southwest Gas Corporation (SGC) utility service territory. Currently, a natural gas "main" pipeline is installed in the right-of-way of State Route 38. Since the site is vacant, no natural gas services are currently provided to the project site.

[7] Source: Integrated Waste Management Board website. Solid Waste Information System (SWIS), Facility/Site Summary Details for the Barstow Refuse Disposal Site. July 22, 2002. www.ciwmb.ca.gov/SWIS/

[8] Source: Integrated Waste Management Board website. Jurisdictional Diversion Rate Summary for San Bernardino – Unincorporated and Big Bear Lake. July 22, 2002. www.ciwmb.ca.gov/profiles/

ELECTRICITY

The Project site is located within the service territory of Bear Valley Electric Service (BVES). An overhead power line traverses the Project site in an east/west direction. The line is located adjacent to and along the existing State Route 38 roadway alignment. The existing line is 4160/2400 volts, and has #2 copper as its conductor. The distribution line is fed by a substation located west of Stanfield Cutoff, which in turn is fed by a 34Kv transmission line, whose source is the Goldhill Switching Center located off of State Route 18 and Holcomb Valley Road, approximately six miles east of the project site. The transmission line has a section of #2 copper that limits its capacity. Winter loads have reached the maximum capacity on this line. Substantial load additions may cause a need for facilities to be upgraded.

IMPACTS

SIGNIFICANCE CRITERIA

Pursuant to Appendix G, Environmental Checklist of the California Environmental Quality Act (CEQA) Guidelines, a Project would normally have a significant adverse impact on public services and utilities if it results in any of the following:

PUBLIC SERVICES

- If the Project would 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. (refer to Impact Statements 5.3-1, 5.3-2, 5.3-3, and 5.3-4).

UTILITIES AND SERVICE SYSTEMS

- If the Project exceeds wastewater treatment requirements of the applicable Regional Water Quality Control Board (refer to Impact Statement 5.3-5);

- If the Project requires or results in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects (refer to Impact Statements 5.3-5 and 5.3-6);

- If the Project requires or results in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects (refer to Section 5.8, *Hydrology and Drainage*);

- If the Project has insufficient water supplies available to serve the Project from existing entitlements and resources, or if new or expanded entitlements are needed (refer to Impact Statements 5.3-6 and 5.11-2);

- If the Project results in a determination by the wastewater treatment provider which serves or may serve the Project that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments (refer to Impact Statement 5.3-5);

- If the Project is served by a landfill with insufficient permitted capacity to accommodate the Project's solid waste disposal needs (refer to Impact Statement 5.3-7); and/or

- If the Project does not comply with federal, state, and local statutes and regulations related to solid waste (refer to Impact Statement 5.3-7).

Impacts to services and utilities are analyzed below according to topic. Mitigation measures at the end of this section directly correspond with the identified impact.

FIRE PROTECTION

5.3-1 *Project implementation could result in significant physical impacts with respect to fire protection. Analysis has concluded that impacts would be less than significant with the recommended mitigation measures.*

Project implementation would increase development beyond existing conditions, thus increasing the demand for fire protection in the form of additional calls for service. The Project site is located in a high fire hazard area and Fire Hazard Overlay District. Accordingly, Project development would be subject to compliance with various policies and standards for adequate services and facilities, including developmental regulation requirements for minimum road widths and clearance around structures. Additionally, the Project would be required to meet the Peakload Water Supply System Guidelines (Figure II-5 of the General Plan, *Peakload Water Supply System Guidelines*) or be adequately served by water supplies for domestic use and community fire protection in accordance with standards as determined by the County and the local fire protection agency/authority.

The San Bernardino County Fire Department has indicated that ~~the manpower demand as a result of the proposed project would need to be mitigated through increased fire flow~~ due to the size and scale of the proposed project, specific fire flow requirements would need to be met. Instead of 1,500 gpm at 2 hours (which is based on a maximum square foot house of 3,600 square feet), the fire flow requirement would be 1,750 gpm at 2 hours, based on homes in the range of 3,600 to 4,800 square feet, and 2,000 gpm at 2 hours, based on homes greater than 4,800 square feet. ~~Fire sprinklers would be required for each residence in lieu of additional manpower.~~ Homes above 5,000 square feet would have a larger sprinkler requirement.

A fuel modification area and plan program would be required ~~which would not terminate at a property line~~for the proposed project under the provisions of the FS1 Fire Safety Overlay District. ~~The 100 foot fuel modification requirement would extend beyond the property lines. Where such fuel modification zone extends on to U.S. Forest Service land, an easement or permit would be required. The 100 foot fuel modification zone may be greater in steeper areas (up to 300 feet), as determined by~~

~~the fire agency.~~Per the requirements of the FS1 Overlay District, the project would require a 30-foot setback from the National Forest. The project proposes 100-foot fuel modification zone adjacent to National Forest land, located to the north and east of the project area. As shown in Exhibit 3-4, *Site Plan*, the fuel modification zone would be located within the project boundaries on Lots 15 to 16 and 20 to 29. A Fuels Management Plan would be established for the project to implement the fire safety requirements of the FS1 Overlay District. The Fuels Management Plan would be subject to review and approval by the San Bernardino National Forest Service and the San Bernardino County Fire Department.

The fire flow requirements and ~~fuel modification~~Fuel Management Plan~~requirements~~ along with additional mitigation measures listed would reduce impacts to fire protection services to a less than significant level.

POLICE PROTECTION

5.3-2 *Project implementation could result in significant physical impacts with respect to police protection. Analysis has concluded that a less than significant impact would occur.*

Implementation of the proposed Project would increase the police service calls to the vicinity beyond existing conditions. This would be a direct result of the development of single-family residences and the resultant increase in population. At full build out of the 92 residential lots, the project has the potential to increase the Fawnskin population by approximately by 212 persons (92 housing units x 2.31 persons/ household) (refer to Section 6.3, *Growth Inducing Impacts*). The peak period population would increase from 1,428 persons to approximately 1,642 persons, or a 15 percent population increase. According to the San Bernardino Sheriff's Department, the Project may result in an increase in burglar alarm calls, general criminal investigations, missing or lost persons, emergency medical calls, thefts of boats and vandalism.[9] Although police protection services would need to be increased as a result of the Project, it is anticipated that Project implementation would not require any new police facilities or the alteration of existing facilities to maintain acceptable performance objectives.[10] The Projects increase in demand for police services would be offset through Project related fees and taxes. Thus, impacts are anticipated to be less than significant in this regard. No mitigation measures are recommended.

SCHOOLS

5.3-3 *Project implementation could result in significant physical impacts to existing school facilities. Potential impacts to school facilities are concluded as less than significant following payment of school impact fees and compliance with all applicable requirements, codes, and ordinances.*

[9] Source: Written correspondence from Bobby R. Phillips (Captain) at the County of San Bernardino Sheriff's Department. Letter dated June 18, 2002.

[10] Source: Telephone conversation with Bobby R. Phillips (Captain) at the County of San Bernardino County Sheriff's Department. August 12, 2002.

Development of the proposed Project could generate a student population increase of approximately 20 students (.21 students per unit x 92 units) within the BVUSD. Three existing schools would serve the proposed Project, one elementary school, one middle school, and one high school. As noted in Table 5.3-1, *Bear Valley Unified School District Facilities*, these schools are presently over capacity. The District has augmented existing school facilities with portable classrooms to accommodate the over-crowded conditions. Based on correspondence with the BVUSD, the District anticipates that the Project may result in the need for additional facilities, and may require modifications to schools of attendance.

Currently, the District collects Developer's Fees for new construction. The current residential rate is $0.82 per square foot. The Developer's fees are determined by a Developer Justification Study commissioned by the District every two years. The District has stated that it could serve the projected number of students that would be generated from the proposed Project. BVUSD is currently in year four of a modest enrollment decline. Currently, the District seeks modest enrollment growth and the proposed Project would contribute to modest enrollment growth.[11] Thus, payment of Developer Fees in accordance with the latest Developer Justification Study would reduce impacts to less than significant levels.

LIBRARIES

5.3-4 *Project implementation would increase the demand on library services. Analysis has concluded that that a less than significant impact would occur.*

Implementation of the proposed Project would increase the population of the service area for the Big bear Branch Library and would impact the size and services of the library facility. The increase in population would necessitate a proportionate increase in staffing, resources and materials. The increased demand is also anticipated to create a nominal demand for additional library space at existing library facilities.

Service needs of the library are determined by per capita for facility square footage, number of items in collection and program requirements. A standards reference book, *Minimum Standards for Public Library Systems*, is used as a base for determining per capita recommendations. The nationally accepted standard of 0.5 square feet per capita has been tempered in recent years due to the advances in electronic publishing and on-line catalogs which allow patrons to identify and retrieve materials from neighboring branches. These factors have allowed libraries to reduce the amount of book stack space needed to house library collections. However, they have not mitigated the spatial needs for other library functions, such as study tables, patron lounge areas, circulation services, children's sections, meeting space and program areas. The Division of Library Development Services of the State of California, which holds the responsibility for library facility planning and financing, would not recommend anything less than the current state average of 0.35 square feet per capita and would prefer the accepted standard of 0.5 square feet per capita.

[11] Source: E-mail correspondence from John Niederkorn (Director of Business) at the Bear Valley Unified School District. November 26, 2002.

Funding to improve and/or increase library facilities and resources would occur by two methods. One source of revenue would be based on a resolution established by the San Bernardino County Board of Supervisors that provides a tax rate of one and on-half cents per $100 of assessed valuation of property in the community. Second, libraries would receive funding from public libraries fund(s), administered by the State of California. Funding received from property taxes and/or State funds would reduce impacts to a less than significant level.

WASTEWATER

5.3-5 *Project implementation would generate additional wastewater beyond current conditions. Analysis has concluded that impacts would be less than significant with the recommended mitigation measures.*

The quantity of wastewater that is attributable to the Project site would increase with implementation of the proposed Project. A Sewer Feasibility Study was completed for the Project site by So & Associates Engineers, Inc. According to the Study, the sewer capacity requirement for the proposed Project is determined based on equivalent dwelling units (EDUs). For the Study, each subdivided lot was considered as one EDU and average wastewater flow per EDU in the CSA 53B was typically estimated at 215 gallons per day (gpd). Thus, with the Project's assigned maximum occupancy of 92 EDUs and an average flow at 215 gpd/EDU, the Project's average daily wastewater flow would be 19,780 gpd. This would represent an increase of approximately 25 percent over CSA 53B's current average daily dry weather flow of 80,000 gpd. According to the So Engineer's report for preliminary design purposes, a peaking factor of four was utilized. Thus, the estimated peak wastewater flow immediately downstream of the proposed development is anticipated to be 79,120 gpd (54.9 gallons per minute).

The BBARWA anticipates that the existing sewer system located to the east of the Project site is capable of handling the wastewater flow for the proposed development based on estimated flows, discussed above. The BBARWA has indicated that a computer model for capacity analysis of the North Shore Interceptor System would verify the capacity starting July 1, 2002.[12] To date, an internal collection sewer system design has not been proposed by the Project. Thus, the Project Applicant would be required to submit the proposed internal collection system to CSA-53B for review and approval. The Applicant would also be required to pay all applicable CSA 53-B and BBARWA collection fees, including on-site collector sewer and lift station(s) fees, off-site sewer extensions fees, local sewer connection fees, and regional collection fees, as determined by the San Bernardino County Special Districts. Further, standby fees may be required for unimproved parcels within 200 feet of the available sewer system.

On-Site Facilities. The proposed development would be entirely responsible for all costs of internal collection sewer facilities including manholes and connection to the CSA 53-B system at locations(s) approved by CSA 53-B. All on-site gravity systems would be required to be a minimum eight inches in diameter. All on-site plans would

[12] Source: Written correspondence from Jerry Rang (Plant Superintendent) at the Big Bear Area Regional Wastewater Agency. June 18, 2002.

be required to meet CSA 53-B design standards and specifications, and constructions plans would be submitted for plan check and approval to the Special Districts Department's engineer.

Off-Site Facilities. A grading plan and sewering layout plan of the proposed development were not available for the Sewer Feasibility Study. The proposed development may be able to convey some of the wastewater flow via gravity sewer to the existing Pump Station; and some of the subdivided lots may require additional on-site sewage lift-station(s). CSA 53-B staff and engineer would continue to monitor and upgrade the collection sewer system to ensure adequate capacity and reliable service to its customers.

If the project should involve an on-site wastewater treatment plant, rather than connecting to the public sewer system, the project would be subject to not only BBARWA's regulations, but also the Joint Powers Agreement and Operating Agreements with BBARWA's three member agencies (Collecting Agencies): the City of Big Bear Lake, the Big Bear Community Services District and the County of San Bernardino on behalf of County Service Area 53-B. Operating Agreement #1, Section 3.05, Other Treatment Plant Works, puts restrictions on the construction and operation of wastewater treatment works by the Collecting Agencies within Big Bear Valley. The section reads:

> *"…none of the Collecting Agencies shall construct, install, acquire, or operate any plant, enterprise, works or facilities, of any nature whatsoever for the treatment or disposal of any sewage or wastewater from any area whether within or without its service area, without the consent of BBARWA; nor shall any of the Collecting Agencies contract with any other agency other than BBARWA for such treatment or disposal. During the term of this agreement all sewage and wastewater collected by the sewage collection system of each of the Collecting Agencies shall be transported and delivered to the regional System for treatment and disposal therein."*

In summary and as stated in the Sewer Feasibility Report, the existing BBARWA sewer system located to the east of the project site would be capable of handling wastewater flow from the proposed Project. Thus, the proposed Project would not result in the need to construct new wastewater facilities or require the expansion of new wastewater facilities. The proposed Project would be required to comply with applicable BBARWA (and Collecting Agencies, if required) rules and regulations pertaining to construction and operation of facilities, in addition to required payment of all new and modified facility fees. To ensure that impacts remain at less than significant levels, mitigation measures are recommended. Mitigation for the Project includes installation/replacement of force main(s) to maintain adequate service performance standards and installation of air release valves and vaults at high elevation points on new force mains to minimize odors.

WATER

5.3-6 *Project implementation would increase the demand for water beyond existing conditions. Analysis has concluded that due to the inability of water providers to confirm service to the project, impacts are concluded as significant and adverse. This conclusion is further supported by the*

potentially significant groundwater overdraft conditions cited in Section 5.11 of the EIR.

As noted in the Existing Conditions section, the Project site lies within the service boundaries of County Service Area 53, Improvement Zone C (CSA 53-C), which was created in 1991 to provide water service to unserved areas within CSA 53. Currently, water service is not provided to the project site. Even though the site is immediately adjacent to the water service jurisdiction of the Department of Water and Power (DWP), City of Big Bear Lake, DWP cannot provide water service without first complying with the provisions of Government Code Section 56133. Section 56133 requires formal review and approval by the Local Agency Formation Commission (LAFCO). However, the County Special Districts Department has the ability to establish a joint powers agreement with DWP to provide water service. Due to the proximity of DWP facilities and the ability to provide more cost-effective service by contracting with DWP, this service delivery arrangement appears to be the preferred method for providing water service to the Project. At this time, neither agency has committed to approving such an agreement. Based upon the inability for providers to confirm services, coupled with potentially significant overdraft conditions cited in Section 5.11 of the EIR, impacts are concluded to be significant and adverse.

County Service Area 53-C could provide water to the Project site under two possible scenarios. CSA 53-C could accept water supply facilities that would be constructed by the applicant and dedicated to the County for management and operation by Special Districts Department. However, the most likely scenario would be for the County Special Districts Department to establish a joint powers agreement with the City of Big Bear Lake Department of Water and Power (DWP) to provide water service. The Big Bear City Community Services District (BBCSD) is not an option as a service provider since it does not have jurisdiction west of Division Drive, which is located approximately four miles to the east of the project site.

The analysis that follows below is based on an evaluation of the project's water service requirements, the existing conditions of the DWP system in the community of Fawnskin, and consideration of the conditions that would apply should CSA 53-C contract with DWP for water supply. The water service requirements discussed below would also apply in the situation under which CSA 53-C would operate and maintain a water system that was constructed and dedicated to the County.

According to the Water Feasibility Study completed for the proposed Project, each residential lot is considered as one equivalent dwelling unit (EDU).[13] The average day demand (ADD) and maximum day demand (MDD), based on the number of EDUs, was estimated to determine the impact on the existing water system.

Water Demand. The DWP has estimated the ADD for the Fawnskin area to be approximately ~~450~~ 250 gallons per day per EDU (gpd/EDU). [Note to Reviewer: The updated calculation is based upon further analysis by SO & Associates Engineers, dated September 7, 2004.] The letter report has been incorporated in to the EIR Appendix.] The MDD considers water usage over an 8 to 10-hour period each day. The Project's ADD and MDD are as follows:

[13] Source: Water Feasibility ~~Study~~ Update for Tentative Tract 16136, prepared by So & Associates Engineers, Inc. ~~March 13, 2002~~ September 7, 2004.

Average daily demand (ADD) = 92 EDU x 250 gpd/EDU
= 25.77 AF/year

Maximum day demand (MDD) = 2.5 x ADD/1,440 minutes per day
= 57,500 gpd (about 40 gpm)

Assuming the ADD calculated above, the project would require approximately 25.77 acre-feet of water per year to supply the proposed residential uses.

Fire Flow Requirements. The existing water distribution system was originally designed for approximately 750-gpm fire flow for two hours. The current requirement per the County Fire Department for the Fawnskin area is between 1,000 gpm and 1,500 gpm depending on the building square footage. The fire flow may be further increased in the future. As such, the water distribution system was analyzed to handle the maximum day demand of the proposed development plus fire flow up to 1,500 gpm.

Water Supply and Storage Requirements. The State Health Department requires storage to account for one peak day usage. The DWP typically experiences one peak day during a summer holiday when tourists and part-time residents become full-time users. The coefficient of ~~450~~ 250 gpd/EDU and corresponding MDD is representative of that day and is the basis for calculating the water demand and storage requirement for the proposed Project as presented in prior discussions and outlined below:

Domestic Water Supply requirement (max day) = 40.0 gallons per minute

Operational Storage = (0.3 x MDD)	=	17,250 gallons
Emergency Storage = (1.0 x MDD)	=	57,500 gallons
Subtotal (without fire storage)	=	74,750 gallons
Fire Storage (1,500 gpm x 2 hours)	=	180,000 gallons
Total Storage Requirement	=	255,000 gallons

Based on proposed development requirements (at MDD), ~~two new wells would be required~~ the project would need to have a water supply that~~to~~ could provide a minimum of ~~72.0~~ 40 gallons per minute. As discussed below and in Section 5.11, *Hydrology and Drainage*, two existing on-site wells could potentially supply a portion of the water demand to the project. The project site is located within tributary subarea A of the North Shore Hydrologic Subunit. The groundwater recharge for subarea A is estimated to be approximately 29 acre-feet per year. Since the project would require approximately 46 acre-feet per year, it is concluded that on-site wells alone could not supply the necessary water resources to support the proposed residential uses. If the on-site wells were utilized to supply a portion of the water supply to the project, ~~T~~the Project Applicant would be required to deposit funds with the DWP and/or BBCSD to equip the wells to meet the appropriate water agency's standards.~~for new well construction unless a proven source of supply is provided by the developer at locations satisfactory to DWP and not exceeding sub basin safe yields.~~ As stated in Section 5.11, ~~Hydrology and Drainage, the testing of overdraft conditions for~~ the groundwater basin associated with the North Shore Hydrologic Subunit ~~is inconclusive~~has the potential to be in an overdraft situation, thus, it has been concluded that impacts to groundwater resources are significant and

unavoidable. Therefore, additional studies and analysis will need to be provided by the Project Applicant to indicate a proven source of water supply for the project.

Potential Water Supply Wells FP-2 and FP-3. As stated above, the project site includes two existing on-site water wells located within the North Shore Hydrologic Subunit that could potentially supply water to the project. ~~The two wells referenced may have potential to meet the Moon Camp area demand requirements.~~ The wells, which were drilled in 1987, are located on the Moon Camp property and are not currently in operation. The most recent data available regarding the wells was collected in 1987 and is summarized in Table 5.3-2, *Summary of Data on Wells FP-2 and FP-3*.

Table 5.3-2
Summary of Data on Wells FP-2 and FP-3 (Year 1987)

State Well No.	Well Name	Date Drilled	Completed Depth (ft)	Screened Internal[1] (ft-ft)	Static Water Level (ft)	Date	Instantaneous Discharge Rate (gpm)	Drawdown (ft)	Specific Capacity (gpm/ft)
2N/1W-1383	FP-2	1987	405	60-370	6	1987	100	20	3
2N/1W-1302	FP-3	1987	304	66-238	45	1987	75	22	3
Sources of Data: California State DWR, Boyle Engineering Corp. (1987), Law Environmental (1987).									
[1] The screened interval is not continuous – values summarized represent top and bottom of well screen.									

Although the yields indicate that the wells show adequate potential to supply water to the project, the North Shore Hydrologic Subunit has been identified to likely be in a state of overdraft and more specifically, subarea A is estimated to have a recharge rate of approximately 29-acre feet per year, which is not enough to meet the 46 acre-feet per demand of the proposed project. ~~Although overdraft conditions have been noted for the groundwater basin, the yield of the wells (as tested in 1987), show adequate water supply potential. However, prior to use, video logs should be run on each well to examine the condition of the casing and screen. Based on review of the video logs, it can be determined if any modifications are necessary prior to use. Following the video inspection (and redevelopment if necessary), updated values of production rates and pumping levels should be obtained through step-drawdown and constant rate pumping tests. Water samples should also be taken during testing and analyzed in accordance with standard requirements for a potable water supply.~~

Water Distribution System Review. Based on its location and computer simulations, the proposed Project would receive water from the Cline Miller Reservoir. Exhibit 5.3-1, *Water Distribution System*, shows the existing distribution piping system in the vicinity of the Project site and the recommended extension pipeline layout. Referencing the hydraulic grade line of 6,957 feet elevation at Cline Miller Reservoir and the approximate ground elevation at the Project site from 6,780 to 6,800 feet, the minimum static pressure at the proposed parcel is approximately 68 psi.

Thus, under maximum day demands plus residential fire flow up to 1,500 gpm, the minimum residual pressure of 20 psi can be met, based on the existing hydraulic

pipeline model. However, the existing Cline Miller Reservoir is an old 100,000 gallon concrete reservoir which would not be sufficient to serve the proposed Project. The existing site has limited space for a new tank without demolishing the old tank and/or securing additional property. Therefore, the Water Feasibility Report recommends that the old concrete reservoir be replaced with a new 300,000 to 400,000 gallon storage reservoir. The Project Applicant would be required to advance fair share funds towards construction of the new reservoir and a 12-inch transmission pipeline. If other parcels of land can be benefited by the off-site improvements based on review by DWP's engineer, a "reimbursement agreement" would be considered by DWP. The developer would also be required to submit landscaping plans for review to the DWP. Landscape designs utilizing low water usage would be encouraged to achieve water conservation, which in turn may lower water supply demand.

All water plans (on-site) would be required to be submitted for review/approval by DWP to confirm that water mains do not conflict with the BBARWA 10-inch sewer force main (which would be relocated at developer's cost).

Since the proposed Project would result in the need to construct new water facilities and/or require the expansion of new wastewater facilities and the DWP's existing facilities do not have adequate capacity to serve the project's demand, impacts are considered potentially significant. With implementation of the recommended mitigation measures and compliance with all applicable regulations and payment of fees, impacts to the water distribution system would be reduced to less than significant levels.

Compliance with Senate Bill 221 and Senate Bill 610:
Adequacy of Water Supply

As stated in the *Existing Conditions* section, adequacy of water supplies for the proposed Project must be determined per the requirements of Senate Bills 221 and 610. SB 610 requires that a detailed report regarding water availability and planning for additional water supplies if the project is a proposed residential development of more than 500 dwelling units. The proposed Project consists of 92 residential lots, thus, the requirements of SB 610 do not apply to the Project. SB 221 applies to any "subdivision," defined as:

- A proposed residential development of more than 500 dwelling units, if the Public Water Supplier (PWS) has more than 5,000 service connections.

- Any proposed development that increases connections by 10% or more, if the PWS has fewer than 5,000 connections. Water Code 10912(7)(C) states that a "public water system" is defined as a system for the provision of piped water to the public for human consumption that has 3,000 or more service connections.

Based on the "Guidebook for Implementation of Senate Bill 610 and Senate Bill 221 of 2001" the following excerpt shows that 300 dwelling units are necessary to qualify as a "subdivision," and therefore be subject to SB 221.

"Code 66473.7(a) provides that a "subdivision" for a public water system with fewer than 5,000 service connections is a proposed development that would increase the number of service connection for a public water system by 10 percent or more, a "subdivision" could be as few as 300 dwelling units. For example, a water utility that has 3,000 service connections would experience an increase in the number of service connections by 10 percent if it were required to serve a proposed residential development with 300 units, thus making the 300-unit development a "subdivision" under 221."

As stated above, Water Code 10912(7)(C) states that a "public water system" is defined as a system for the provision of piped water to the public for human consumption that has 3,000 or more service connections. Therefore, if Fawnskin has only 673 connections it does not qualify as a "public water system," but rather a piece of a larger "overall system." Whether the project is under the jurisdiction of the DWP or the County Special Districts Department, each of these agencies "overall system" has more than 3,000 connections qualifying them as public water systems. Thus, the proposed 92 dwelling units would not exceed 10 percent of the 3,000 connections or 300 dwelling unit minimum dwelling unit threshold to be subject to SB 221 reporting requirements.

SOLID WASTE

5.3-7 *Development of the Project area would result in increased solid waste generation. Project compliance with the Integrated Waste Management Plan for the County of San Bernardino (currently being revised) would reduce the amount of solid waste which is ultimately disposed of at the Barstow Landfill and maintain potential impacts at a less than significant level.*

As stated in the *Existing Conditions* section, residents in the City of Big Bear Lake dispose of an average of 6.2 pounds of waste per day. The City of Big Bear Lake diversion rate in the 2000 reporting year was 59 percent (pending IWMB approval).[14] Based on the City of Big Bear Lake generation factors and a maximum occupancy scenario of 92 dwelling units, the proposed Project would generate an estimated 240 tons of solid waste per year or 0.6 tons of solid waste per day (2.31 persons/household x 6.2 pounds/day x 92 dwelling units x 365 days/year). This projected increase in solid waste generation would increase the demand to provide disposal service and would impact the capacity at the Barstow Landfill. Further, this increased solid waste generation would incrementally shorten the lifespan of the Landfill. Under existing State permits, the landfill has sufficient capacity to accommodate the disposal of solid waste at least to the year 2012.

It is anticipated that the Project's estimated volume of solid waste generation would be reduced through the storage and collection of recyclables. Although there are currently no curbside recycling programs in the project area, the County Solid Waste Management Division encourages waste reduction, recycling and reuse activities. The Division encourages the development of community drop-off station(s) in the

[14] Source: Integrated Waste Management Board website. Jurisdictional Diversion Rate Summary for San Bernardino-Unincorporated and Big Bear Lake. July 22, 2002. www.ciwmb.ca.gov/profiles/

Fawnskin area.[15] The Division's recycling efforts include providing residents and businesses with information regarding backyard composting, commercial green waste management, grasscycling, and waste prevention. Furthermore, the Division operates a Speakers Bureau that speaks to various groups on aspects of waste management. Additional solid waste recycling efforts in the County include sorting waste materials (e.g. cardboard and aluminum) at the Big Bear Transfer Station into mixed recycling bins and development of the Zero Waste Communities program. The Zero Waste Communities are 15 cities/towns that have partnered with the County of San Bernardino to educate their residents and businesses on ways of zero waste living.[16] One aspect of the Zero Waste Communities program is to provide residents with a directory of listings, including the name and phone number, to places that will accept various entities of solid waste (i.e., appliances, tires, televisions, etc.).

Additionally, it should be noted that the volume of the Project's solid waste, which would be disposed of at Barstow Landfill, would be further reduced due to the requirements of AB 939. Therefore, implementation of the proposed Project would result in a less than significant impact with respect to solid waste.

NATURAL GAS

5.3-8 *Project implementation would result in an increased demand for natural gas service beyond existing conditions and would require expansion of the existing gas system. Analysis has concluded that a less than significant impact would occur in this regard.*

The Southwest Gas Corporation has indicated that natural gas "main" pipelines are installed in the right-of-way of State Route 38. The Southwest Gas Corporation has conclude that there is sufficient capacity in their facilities to provide natural gas service to the Project area without any significant impact on the environment. As such, extensions to existing facilities would be required in order to provide service to the proposed development. Service would be provided in accordance with the Southwest Gas Corporation's policies and extension rules on file with the California Public Utilities Commission. Future natural gas service to the Project area would require coordination with the Gas Company's engineering department for a comprehensive plan as to levels of service required. Implementation of the proposed Project would result in a less than significant impact with respect to natural gas service.

ELECTRICITY

5.3-9 *Project implementation would result in an increased demand for electrical service beyond existing conditions and would require expansion of the existing electrical system. Analysis has concluded that impacts would be less than significant.*

[15] Source: Phone conversation with Rex Richardson at the San Bernardino County Solid Waste Management Division. December 3, 2002.

[16] Source: Zero Waste Communities website. www.zerowastecommunities.org

An increased demand for electrical service would occur at the Project site as a result of the proposed development. Other tracts with large lots, similar to the Project, have diversified loading demand estimates ranging from 4 to 5 Kw per lot (i.e., average instantaneous draw from electrical service system). Thus, according to Bear Valley Electric Service (BVES), it is anticipated that there would be a substantial loading increase upon build-out of the proposed Project.[17] Since the source transmission line to the Project area has reached its peak, any large load addition may be difficult to serve. BVES states that several alternatives would be evaluated to relive the load on the transmission line. One alternative would be to shift load to another transmission line, however, other lines are also operating near capacity. Another alternative would be to investigate a distributed generation option. Distributed generation involves placing a power source (i.e., reciprocating engine that uses natural gas to power generator) on the site that would generate power on an as needed basis, such as during peak load times (i.e., winter, holiday weekends, etc). The distributed generator would be owned by the Project Applicant and/or BVES, depending on future agreements between the Applicant and BVES.

According to BVES, the total length of the distribution line extending through the Project area would likely need to be relocated. From Stanfield Cutoff, the existing distribution feeder proceeds westerly for 2.6 miles underground, then traverses overhead. The current overhead line would need to be reconstructed as an underground line along the proposed realigned State Route 38 right-of-way. Undergrounding through the proposed tract would leave a short section of exiting line overhead. This overhead section would need to be investigated to determine if it would also need to be placed underground. The determination of whether this overhead section would be placed underground would be dependent upon the technical electrical transmission capabilities of the line to be determined by BVES, and compliance with Caltrans and County of San Bernardino regulations pertaining to electrical facilities along State Routes.

BVES anticipates that impacts related to short-term construction, such as possible disruption of service, would be minimal. Additionally, tap lines to serve individual lots would be made under BVES' tariff rules 15 and 16. Any relocation or addition of new electrical facilities and other related costs would be funded for by the Applicant. Since, BVES operates under tariff rules set by the CPUC, all Project-related costs would also fall under those tariff rules. All costs would be incurred by having to maintain the existing level of service to existing BVEC customers, while adding new load to the system. As mentioned above, a new distributed generation option could be required. If this is determined, placement of a generator would need to be placed on a parcel within the development or on a parcel provided by the developers.

Based on the above discussion, electrical service would potentially be impacted by the proposed Project and new facilities would be required. However, the Project Applicant would be required to pay all costs/fees for the expansion of existing facilities and/or construction of new facilities to maintain the existing level of service to existing BVEC customers, while adding new load to the system. Payment of BVES fees/costs would mitigate all potential impacts less than significant levels in this regard.

[17] Source: Written correspondence from Marc Abraham, Engineering Supervisor, at Bear Valley Electric Service. July 2, 2002.

CUMULATIVE

5.3-10 *Cumulative development could result in an increased demand for public services and an increase in the consumption rates for public utilities, potentially requiring expansions of the existing utility systems. The inability of water providers to confirm service on a project level would also result in significant and unavoidable cumulative impacts. Analysis has concluded that cumulative development for the remaining service and utility affects are subject to standards and requirements of reviewing agencies and no additional mitigation is recommended.*

In relation to the cumulative development outlined in Section 4.0, *Basis for Cumulative Analysis*, the proposed Project would cumulatively contribute to an increased demand for fire, police, schools, libraries, water, sewer, solid waste, and energy utilities. The proposed Project and related projects would add to the cumulative demand for such services through the introduction of new residents, tenants, and users of the proposed facilities. The site is located in an area that is served by utilities and other public services. With the exception of water services, existing facilities can be readily extended into the area to serve the proposed development. Water providers have not been able to confirm service to the project, thus, it is concluded that cumulative impacts would also be significant and unavoidable for water service.

No additional governmental services or activities would be cumulatively impacted by the proposed Project. With the exception of water service, since the respective providers of services and facilities have indicated that the Project's incremental impacts can be sufficiently mitigated, cumulative impacts on public services and utilities, other than water services, that are anticipated to result from this development are not considered to be significant.

MITIGATION MEASURES

This section directly corresponds to the identified Impact Statements in the impacts subsection.

FIRE PROTECTION

5.3-1a The fire flow requirement shall be 1750 gpm @ 2 hours based on homes in the range of 3,600 to 4,800 square feet, and 2,000 gpm @ 2 hours for homes greater than 4,800 square feet.

5.3-1b ~~Fire sprinklers for each residence shall be provided in lieu of additional manpower.~~ All residences less than 5,000 square feet shall be subject to the standard fire sprinkler requirement (NFPA 13D). Homes above 5,000 square feet shall be subject to the NFPA13R~~have a larger~~ sprinkler requirement ~~(FPA13R)~~.

5.3-1c A ~~f~~Fuels ~~modification program~~Management Plan, with specifications, shall be prepared and subject to approval by the County of San Bernardino Fire Department and San Bernardino National Forest Service. The Fuels

Management Plan shall implement the fire safety requirements of the FS1 Fire Safety Overlay District, including a 30-foot minimum setback requirement from the National Forest. The fuel modification zone shall be located entirely within the project's boundaries. ~~The 100 foot fuel modification requirement shall not terminate at a property line. The 100 foot fuel modification requirement shall extend beyond property lines. Where such fuel modification zone extends onto U.S. Forest Service land, an easement or permit shall be required to be obtained.~~ The minimum~~100 foot~~ fuel modification zone requirements may be greater in steeper areas (up to 300 ft.), as determined by the Fire ~~Agency~~ Department.

5.3-1d Cul-de-sac lengths shall be no longer than 350 feet.

5.3-1e A Homeowner's Association or a Special District shall be established to ~~assure~~ implement the Fuels Management Plan. The Fuels Management Plan shall specify any professional assistance, if necessary, to implement the action portion of the plan. The Plan shall determine if a Registered Professional Forrester is necessary for professional guidance to implement the Plan. ~~Long-term vegetation maintenance. An annual vegetation maintenance program shall be included.~~ The HOA or Special District is to be responsible for fuel modification in common areas.

~~5.3-1f Fire resistance/drought tolerant landscaping shall be required and referenced in the Homeowner's Association or Special District Standards.~~

POLICE PROTECTION

5.3-2 No mitigation measures are recommended.

SCHOOLS

5.3-3 No mitigation measures are recommended.

LIBRARIES

5.3-4 No mitigation measures are recommended.

WASTEWATER

5.3-5a Prior to issuance of building permits, the Project Applicant shall fund all on-site and off-site sewer improvements required to support development of the Project site. Such improvements shall be to the satisfaction of the BBARWA, and may include replacement of existing sewer lines rather than construction of parallel lines.

5.3-5b Prior to issuance of building permits, the Project Applicant shall provide evidence to the County of San Bernardino that the BBARWA has sufficient transmission and treatment plant capacity to accept sewage flows from the Project site.

5.3-5c The Project Applicant shall relocate the BBARWA 10" force main by installing new pipe (and/or bonding for the relocation) so that it is aligned within the south shoulder of the relocated State Route 38. The 10" force main shall be accessible for BBARWA to maintain and repair the sewer force main. The force main shall not pass through residential lots within the proposed tract.

5.3-5d The Project Applicant shall install air release valves and vaults at high elevation points on the new force main to minimize odors. Air release valves shall be large enough to enclose 55-gallon drum carbon filters to control odors.

WATER

5.3-6a ~~Prior to approval of building permits, a video inspection of water supply casings and screen shall be conducted in order to update~~ Values of production rates and pumping levels for on-site water supply wells shall be obtained through step-drawdown and constant rate pumping tests. Water samples shall be taken during the inspection for testing and analysis in accordance with standard requirements.

5.3-6b If either or both of the two existing on-site wells are utilized as a water source for the project, ~~T~~the Project Applicant shall equip the~~two existing on-site~~ wells to meet DWP and/or County Special Districts Department standards and dedicate these facilities and water rights to the appropriate water purveyor~~County of San Bernardino~~. Within the proposed tract, no individual private irrigation wells shall be permitted.

5.3-6c ~~If served by CSA 53-C through a contract with the City of Big Bear Lake Department of Water and Power, t~~ After a determination has been made regarding the water purveyor, the Project Applicant shall advance fair-share funds ~~or enter into a reimbursement agreement with the~~ to the appropriate water agency (CSA and/or DWP)~~(if required)~~ towards constructing a new reservoir and pipeline improvement at Cline-Miller Reservoir (with an estimated project cost at $481,100). These facilities would be dedicated to the appropriate water agency.

5.3-6d The following water conservation measures are the minimum measures that shall be complied with in conjunction with domestic water supply to the project. A Homeowners Association shall be responsible for enforcing the water conservation measures. Additional measures may be imposed as a result of a contract for water supply between CSA 53-C and the City of Big Bear Lake DWP:

- Landscape shall not be irrigated between the hours of 9:00 a.m. and 6:00 p.m.
- Residences, buildings and premises shall be limited to watering every other day.

- Landscape irrigation shall be limited to what is needed and shall not be excessive. Water from landscape irrigation shall not be allowed to run off into streets.

- Water shall not be allowed to leak from any waterline, faucet, or any other facility, either within or outside a private residence, business establishment or on private property. All such leaking waterlines, faucets, and other facilities shall be repaired immediately to prevent leakage.

- Sidewalks, paved driveways, and parkways shall not be washed off with hoses, except as required for sanitary purposes.

- Non-commercial washing of cars, and boats or any other vehicle shall only be done with an automatic shut-off nozzle on a hose, or with a bucket.

- New landscaping shall not exceed more than one-thousand square feet of turf on a parcel or lot or twenty-five percent of the available landscape area.

- A model landscaping and irrigation guide shall be prepared for the tract and required by homeowner association rules. The guide shall specify a plant palate that emphasizes native plants and cultivars that are suitable for the mountain climate. Plant materials shall be low water consuming and fire resistant. Irrigation shall emphasize drip and bubbler type emitters with limit aerial spray irrigation methods. The guide shall be reviewed and approved by the Land Use Services Department.

SOLID WASTE

5.3-7 No mitigation measures are recommended.

NATURAL GAS

5.3-8 No mitigation measures are recommended.

ELECTRICITY

5.3-9 No mitigation measures are recommended.

CUMULATIVE

5.3-10 No mitigation measures are recommended.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

Due to the inability of water providers to confirm service to the project, project as well as cumulative impacts are concluded as significant and unavoidable. This

conclusion is further supported by the significant and unavoidable conclusion cited in Section 5.11, *Hydrology and Drainage*, due to inconclusive testing of potential overdraft conditions for the groundwater basin associated with the North Shore Hydrologic Subunit.

If the County of San Bernardino approves the project, the County shall be required to adopt findings in accordance with Section 15091 of the CEQA Guidelines and prepare a Statement of Overriding Considerations in accordance with Section 15093 of the CEQA Guidelines.

No additional unavoidable significant impacts related to public services and utilities have been identified following implementation of the recommended mitigation measures and compliance with applicable County, service or utility provider requirements, County Codes and Ordinances.

5.4 AESTHETICS/LIGHT AND GLARE

Visual resources information for this Section was compiled from site photographs and site surveys conducted by RBF Consulting in February 2002. This analysis is based upon reference data from the County of San Bernardino and the Project Applicant. The purpose of this Section is to describe the existing aesthetic environment on-site and in the site vicinity and analyze potential project impacts to the aesthetic character of the site. Consideration of public scenic vistas and views, impacts to scenic resources and the introduction of new sources of light and glare are also included in this Section. Visual simulations are provided to assist in the analysis. Mitigation measures are recommended to reduce the significance of impacts.

EXISTING CONDITIONS

VISUAL SETTING/CHARACTER

ON-SITE

The Moon Camp project site is adjacent to the north shore of Big Bear Lake in the relatively undeveloped eastern portion of the Community of Fawnskin. Generally, the site slopes from the south (lakefront) to the north (north of State Route 38/North Shore Drive). Elevations and slope degrees significantly increase from the central portions of the site to the northern boundary. Elevations range from 6,747 feet at the lakefront to a high of 6,960 feet at the northeast boundary. Total relief is 483 feet and slopes range from 5 percent to 40 percent.[1] The estimated 2,772 Jeffrey pine trees on-site provide a forested nature for the site. A variety of flora and fauna exist on-site, including Jeffrey pine forest, pebble plain habitat, birds, mammals, reptiles, amphibians, etc. (refer to Section 5.8, *Biological Resources*). On-site conditions include the State Route 38 right-of-way; two non-operational water wells; dirt roads and numerous footpaths/trails. No rock outcroppings occur within the project area. According to the San Bernardino County General Plan, the site is within a Scenic Resources (SR) Overlay District (see discussion which follows). Exhibits 5.4-1a and 5.4-1b, *Existing Conditions Photos*, contain photographs of typical site conditions.

As referenced in the San Bernardino County General Plan, the County designates the segment of State Route 38 that traverses the site as a "Scenic Highway."[2] Scenic highways are subject to additional land use and aesthetic controls under the County's Scenic Highway Overlay (refer to discussion under *Scenic Corridors* below). Additionally, the U.S. Forest Service designates State Route 38 as a "Scenic Byway." State Route 38 traverses the southern portion of the site in an east/west direction. Generally, the highway meanders through the site in a winding fashion and parallels the lakefront. The location of the highway allows travelers to have ample views of the lake in some areas (refer to Exhibit 5.4-1a, *Existing Conditions Photos*, View No. D). The meandering nature of the highway causes reduced vehicle speeds; thus, allowing vehicle passengers increased viewing time of

[1] Source: *Geologic Feasibility Report*, RGS Geosciences, May 3, 2001.

[2] Source: San Bernardino County General Plan, Section II, C, 5, Policy OR-58.

the lake. It is further noted that the narrow shoulder along the highway provides limited parking areas to view the lake.

Views to the north of State Route 38 consist primarily of dense collections of Jeffrey pine trees and associated vegetation interspersed with vacant areas of land. The view depicted in Exhibit 5.4-1a, *Existing Conditions Photos*, View No. A, from State Route 38, looking north, shows existing vegetation and slope of the mountainside. Southerly views from State Route 38 include the lakefront and long-range views to the mountains south of Big Bear Lake. The Bear Mountain and Snow Summit ski resorts are visible to the south of Big Bear Lake. Exhibits 5.4-1a and 5.4-1b, View No. E and View No. K, show views of the lakefront and long-range views to the distant mountains from State Route 38. The lakefront in the vicinity of the site consists primarily of vacant land and sporadic Jeffrey pine trees and associated vegetation.

Single-family residences located along Flicker Road (approximately 12 residences), Oriole Drive (approximately three residences) and State Route 38 (approximately 15 residences), adjacent to the north, east and west of the property, respectively, can be observed from the segment of State Route 38 that traverses the project site (refer to Views Nos. A, G, and J in Exhibits 5.4-1a and 5.4-1b). Exhibit 5.4-1a, View No. C, shows the view looking southerly from north of State Route 38. View No. B depicts a typical view of Jeffrey pine trees and associated vegetation on the project site.

OFF-SITE

As previously stated, existing single-family residences are located along Flicker Road, Oriole Lane and State Route 38, adjacent to the north, east and west of the site, respectively. Views of the site from residences along Oriole Lane and State Route 38 consist primarily of dense collections of Jeffrey pine trees interspersed with vacant areas of land. Exhibit 5.4-1a, View No. F, show views of the project site from Oriole Lane. Residences to the north of the site, along Flicker Road, are located at elevations higher than the site. Long-range views from Flicker Road across the site consist of Big Bear Lake and mountain ranges to the south of the lake. The long-range views are at times limited by the size and location of existing Jeffrey pine trees. Exhibit 5.4-1b, View Nos. H and I, show views along Flicker Road to the site. Views from Polique Canyon Road, adjacent to the northeast corner of the site, are similar to those of the residents located along Flicker Road. It is noted that there are no residences along this portion of Polique Canyon Road. Exhibit 5.4-1b, View No. L, shows the view from Polique Canyon Road to the site.

Views from Big Bear Lake toward the project site consist primarily of limited Jeffrey pine trees and vacant undeveloped land on the lakefront and dense collections of Jeffrey pine trees interspersed with vacant land on the gently sloping mountainside.

A From State Route 38, looking north. Existing vegetation and slope of mountainside.

B View of Jeffrey Pine trees and associated vegetation on the project site.

C Looking southerly from north of State Route 38 across the project site.

D View to the east along State Route 38.

E Looking south westerly from State Route 38 across the lake.

F Views of the project site from Oriole Lane located to the west of the project site.

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Exhibit 5.4-1a

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G Looking westerly from State Route 38 to residences west of the project site along Oriole Lane.

H Look southerly across the site from Flicker Road.

I Looking southerly across the project site from Flicker Road.

J Looking easterly from State Route 38 to residences east of the project site along State Route 38.

K Looking easterly from State Route 38 across the lakefront.

L Looking southwesterly from Polique Canyon Road across the project site.

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SCENIC CORRIDORS

As previously stated, the County of San Bernardino General Plan identifies the Moon Camp site within a Scenic Resources (SR) Overlay District and State Route 38 as a Scenic Highway. State Route 38 is also designated by the U.S. Forest Service as a Scenic Byway. The intent of the SR Overlay District is "to provide development standards that will protect, preserve and enhance the aesthetic resources of the County."[3] The SR Overlay District also implements state and federal programs regarding scenic highway routes.

The provisions of the SR Overlay District apply to: (a) areas with unique views of the County's desert, mountain and valley areas or any other aesthetic natural land formations; and/or (b) an area extending two-hundred (200) feet on both sides of the ultimate right-of-way of State or County designated Scenic Highways as set forth in the County General Plan. The area covered may vary to reflect the changing topography and vegetation along the right-of-way.

Per the provisions of the SR Overlay District, the following development standards/ criteria are utilized to evaluate compliance with the intent of the SR Overlay District:

- Building and Structure Placement. The building and structure placement shall be compatible with and should not detract from the visual setting or obstruct significant views.

- Review Area. The proposed project shall be designed to blend into the natural landscape and maximize visual attributes of the natural vegetation and terrain. Project design should also provide for the maintenance of a natural open space parallel to and visible from the right-of-way.

- Access Drives. Right-of-way access drives should be minimized.

- Landscaping. The removal of native vegetation, especially timber, shall be minimized and replacement vegetation and landscaping shall be compatible with the local environment and, where practicable, capable of surviving with a minimum of maintenance and supplemental water. Landscaping and plantings should not obstruct significant views, either when installed or when they reach mature growth.

- Roads, Pedestrian Walkways, Parking and Storage Areas. Any large scale development should restrict the number of access points by providing common access roads. Parking and outside storage areas should be screened from view, to the maximum extent possible, from a Scenic Highway, by the placement of buildings and structures, or by landscaping and plantings which are compatible with the local environment, and, where practicable, are capable of surviving with a minimum of maintenance and supplemental water.

[3] County of San Bernardino Development Code, Title 8, Division 5, Chapter 3, Article 6, Section 85.030601. Page 5-69. July 1, 1989.

- Above Ground Utilities. Utilities shall be constructed and routed underground except in those situations where natural features prevent the underground siting or where safety considerations necessitate above ground construction and routing. Above ground utilities shall be constructed and routed to minimize detrimental effects on the visual setting of the designated area. Where it is practical, above ground utilities shall be screened from view of the Scenic Highway by existing topography, or by placement of buildings and structures.

- Grading. The alteration of the natural topography of the site shall be minimized and shall avoid detrimental effects to the visual setting of the designated area and the existing natural drainage system. Alterations of the natural topography should be screened from view from either the scenic highway or the adjacent scenic or recreational resource by landscaping and plantings which harmonize with the natural landscape of the designated area, and which are capable of surviving with a minimum of maintenance and supplemental water.

- Signs. Primary freestanding signs greater than eighteen (18) square feet are prohibited in the SR Overlay District.

LIGHT AND GLARE

Due to the undeveloped nature of the project site, no light or glare is currently generated on the project site. Headlight glare from vehicles traveling along State Route 38 may be visible from the project site.

IMPACTS

SIGNIFICANCE CRITERIA

Appendix G, *Initial Study Checklist*, of the California Environmental Quality Act (CEQA) Guidelines includes checklist questions relating to aesthetics. A project would potentially create a significant aesthetic impact if it caused one or more of the following to occur:

- Have a substantial adverse effect on a scenic vista (refer to Impact Statements 5.4-2 and 5.4-3);

- Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway (refer to Impact Statement 5.4-3);

- Substantially degrade the existing visual character or quality of the site and its surroundings (refer to Impact Statement 5.4-1 to 5.4-4); and/or

- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area (refer to Impact Statement 5.4-1 and 5.5-4).

The evaluation of aesthetic impacts can be termed a subjective exercise due to widely varying personal perceptions. Nevertheless, replacement of undeveloped land with residential uses and realignment of State Route 38 would permanently alter the appearance and character of the project area. Potential impacts are categorized below according to topic. Mitigation measures at the end of this Section directly correspond to the numbered impact statements below.

SHORT-TERM AESTHETIC/LIGHT AND GLARE IMPACTS

5.4-1 *Construction of the proposed project would temporarily alter the visual appearance of the site and introduce new short-term sources of light and glare. Analysis has concluded that impacts would be reduced to less than significant levels with implementation of the recommended mitigation measures.*

The proposed project would involve grading for new roads, including the realignment of State Route 38, and installation of utilities. Construction of the realigned portion of State Route 38 would take approximately 4 to 6 months. Future residences would be constructed on the site on a lot-by-lot basis. Project construction activities would disrupt views across the site from surrounding areas. Graded surfaces, construction debris, construction equipment and heavy truck traffic would be visible. Soil would be stockpiled and equipment for grading activities would be staged at locations throughout the site. Construction impacts would be relatively short-term and would cease upon project completion. With the implementation of the recommended mitigation pertaining to location of staging areas and screening, short-term impacts would be reduced to less than significant levels. In addition, construction activities would be required to be consistent with the permitted hours of construction as set forth by the County of San Bernardino (refer to Section 5.7, *Noise*, with regard to permitted hours of construction).

Short-term light and glare impacts are associated with construction activity and would likely be limited to night-time lighting necessary for security purposes. Relative to potential short-term construction impacts, there are three areas adjacent to the site upon which the proposed project may pose night-time lighting impacts. The residences located along State Route 38, near the southern portion of the site, the residences located along Oriole Lane, and the residences along Flicker Road could be impacted by night-time and security construction lighting. This is considered a short-term impact and would require mitigation. Mitigation measures pertaining to construction-related lighting would reduce these short-term impacts to less than significant levels.

LONG-TERM AESTHETIC IMPACTS

5.4-2 *Implementation of the Moon Camp project would adversely impact scenic resources, scenic vistas and the visual character of the site and its surroundings. Analysis has concluded that a significant and unavoidable impact to the visual character and viewshed from the project site and surrounding areas would occur which cannot be mitigated to a less than significant level.*

With development of the proposed project, the viewshed and visual characteristics of the area would be permanently modified. Currently, the project site consists primarily of forest lands, State Route 38 (North Shore Drive), two non-operational water wells and numerous dirt roads and trails. The heart of the Fawnskin Community is located to the west of the project site, which consists primarily of a variety of custom-built residences. With the introduction of 92 residential lots, local streets and associated infrastructure, current viewshed characteristics would be modified and in some cases dominate the visual features of the project area. Distant views of the mountain ranges and Big Bear Lake to the south would be affected by the proposed use. The project would also involve the removal of approximately 655 or 24 percent of the existing Jeffrey pine trees for roadway construction. Additional tree removal may occur during individual lot development and construction of custom homes; the design of which is not part of the proposed project.

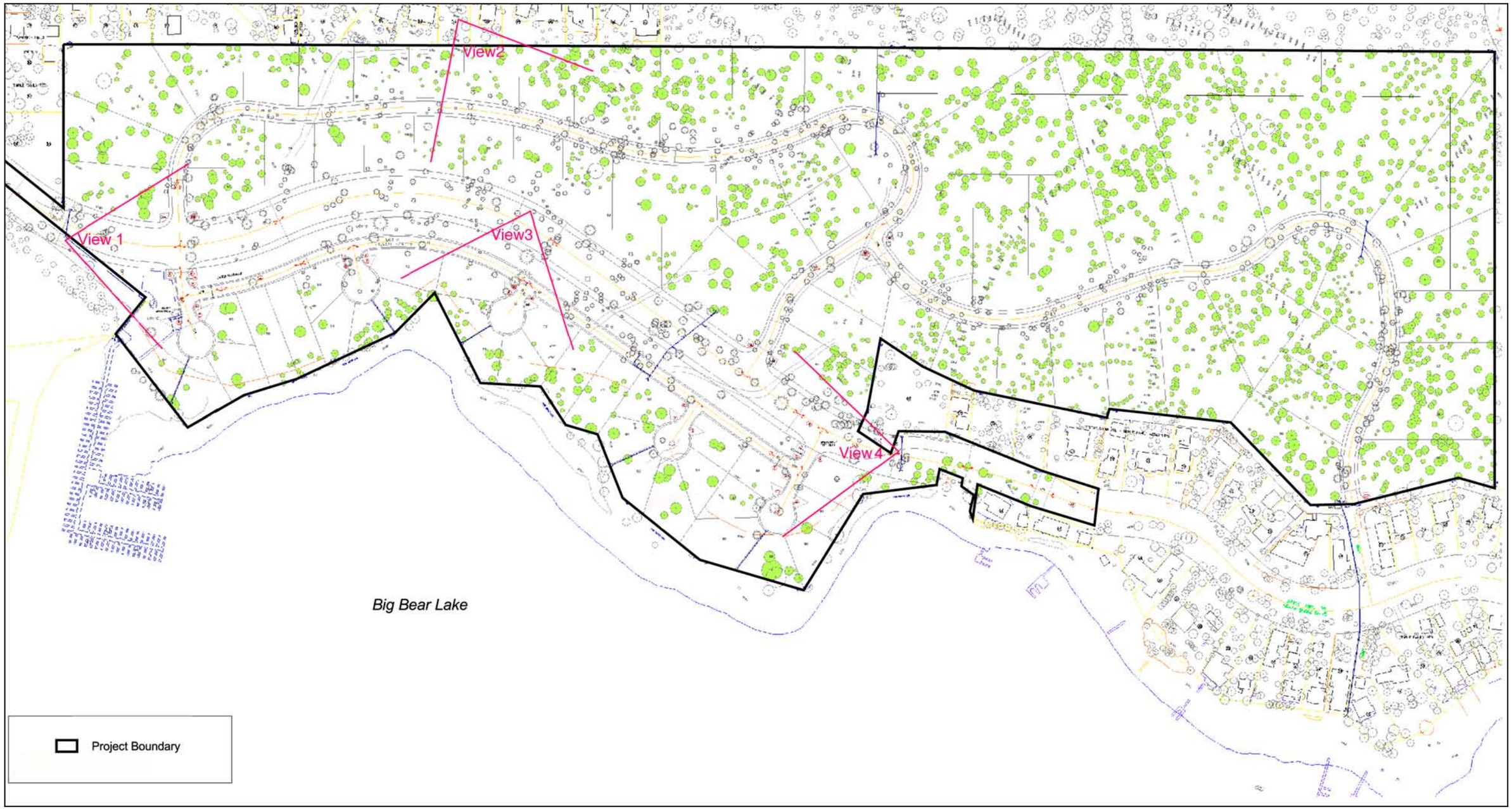
The alteration of the area would be permanent and would continue throughout the life of the project. As discussed below, based upon the density of the proposed residential uses south of the realigned State Route 38 and view simulation data, it is concluded that viewshed characteristic impacts from the interior of the project site and surrounding uses to the north, east and west of the project are significant and unavoidable, given the current characteristics of the area.

The following sections include a discussion of the views across the project site, views of Big Bear Lake and views of distant mountain ranges, with implementation of the Moon Camp development. Exhibits and simulations are provided that have been utilized to conduct the viewshed analysis which includes: Exhibit 5.4-2, *View Map* (showing the field of view for each simulation); Exhibit 5.4-3, *Plan View;* Exhibit 5.4-4, *View East of State Route 38;* Exhibit 5.4-5, *View South from Proposed Realignment of State Route 38;* Exhibit 5.4-6, *View West from State Route 38;* and Exhibit 5.4-7, *View South from Flicker Road*. The exhibits and simulations present an anticipated development scenario, thus, they are not representative of architectural design and final development plans for the placement of new residences. The analysis is based upon buildout of the 92 residential lots, the realignment of State Route 38 and construction of a 100 boat slip marina facility.

The aesthetic value can be subject to interpretation and can be debated to a certain extent. Nevertheless, based upon a defined threshold of change in visual character, the proceeding sections have concluded a significant and unavoidable impact that cannot be mitigated for view areas to the north, south, east and west of the site and from the south shore of Big Bear Lake.

VIEWS TO PROJECT SITE

Views from West. The heart of the Community of Fawnskin is located to the west of the project site. Single-family residential units are situated along Oriole Lane, immediately west of the project site. Long-range views from Oriole Lane and State Route 38, to the Lake and distant mountain ranges are currently partially obstructed by dense collections of Jeffrey Pine trees. Exhibit 5.4-1a, View No. F, indicates that



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View Map

Exhibit 5.4-2

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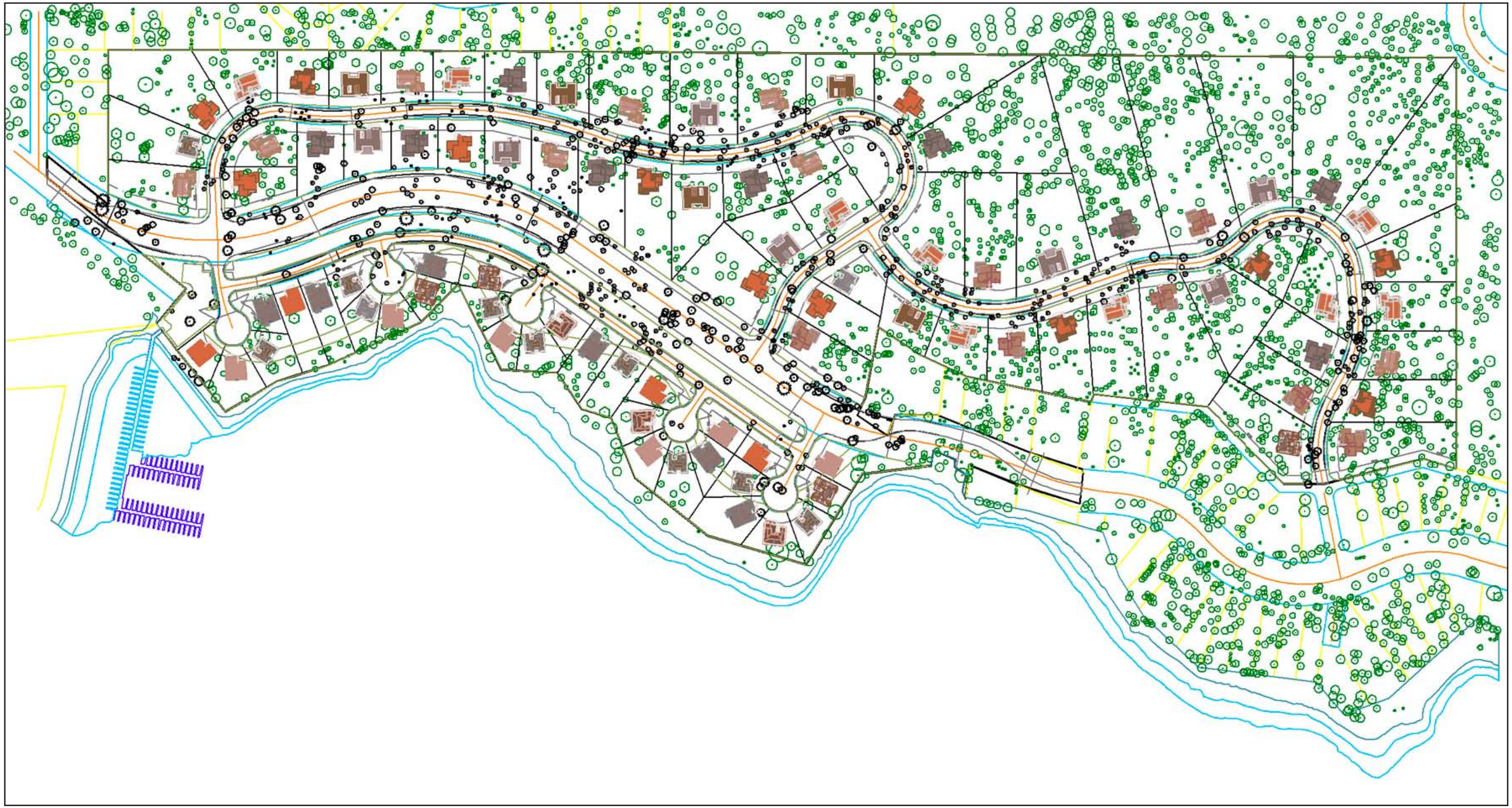

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Plan View

Exhibit 5.4-3

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Existing View

Simulated View

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View East from State Route 38

Exhibit 5.4-4

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Existing View

Simulated View

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View South from Proposed Realignment of State Route 38

Exhibit 5.4-5

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Existing View

Simulated View

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View West from State Route 38

Exhibit 5.4-6

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Existing View

Simulated View

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View South from Flicker Road

Exhibit 5.4-7

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View East from State Route 38, depicts a view of the project site from the eastern portion of the project site. The view simulation indicates a substantial change in the visual character of the site. It is evident that removal of trees associated with the roadway realignment would reduce the forested nature of the project site.

Furthermore, the introduction of residences along the lakefront would partially disrupt short- and long-range views of the Lake and the distant mountain ranges.

Implementation of the project would also involve the construction of a 100 boat slip marina facility. The marina facility would not alter long-range views of the distant mountain ranges, generally located in a southerly direction, but would alter the visual character of the Lake by introducing a man-made structure on the lakefront and removal of several trees for parking facilities. Since both long- and short-range views to the southeast would be altered with new residences on the lakefront and the visual character of the project site and Lake would be altered by a reduction in tree density, it is concluded that long-term aesthetic impacts to residents located west of the project site are significant and unavoidable.

Views from East. For purposes of this analysis, views in this subsection are considered for residences along State Route 38 to the east of the site. Implementation of the proposed project would not alter southerly views of the Lake for residences situated between the Lake and the south side of State Route 38, as short- and long-range views of the Lake and the distant mountain ranges would remain unobstructed. However, short- and long-range views of the lake and distant mountain ranges to the west would be altered with the construction of new lakefront residences. Exhibit 5.4-6, *View West from State Route 38*, indicates a view of the project site from the western portion of the project site. The view simulation indicates a substantial change in the visual character of the site. It is evident that removal of trees associated with the roadway realignment would reduce the forested nature of the project site. Additionally the new residences along the lakefront would obstruct the short- and long-range views to the lake and distant mountain ranges.

Currently, existing residents north of State Route 38 have views of the Lake and distant mountain ranges that are obstructed by the residences situated along the lakefront (south side of State Route 38). However, the residences on the north side of State Route 38 are at a higher elevation than the existing lakefront homes. Thus, partial views of the lake are available at various locations. These residents would maintain partial views of the Lake to the immediate south, with implementation of the Project. As indicated in Exhibit 5.4-6, views of the lake and distant mountain ranges to the southwest and west would be obstructed with the construction of new lakefront residences. Furthermore, the removal of trees associated with the roadway realignment would reduce the forested nature of the project site.

Since both long- and short-range views to the southwest would be obstructed with new residences on the lakefront and the visual character of the project site and Lake would be altered by a reduction in tree density, it is concluded that long-term aesthetic impacts to residents located east of the project site are significant and unavoidable.

Views from the South. Views across the Lake from the south shore and the Lake itself to the north shore consist primarily of mountainsides covered in dense forest vegetation, with small areas of sporadic developed areas, such as the Community of Fawnskin. As shown in Exhibit 5.4-3, *Plan View*, the majority of the existing Jeffrey pine trees located between the high-water line of the Lake and immediately adjacent to or on the southern boundary of the project would remain. The lakefront residences, and residences to the north, would be partially screened by the existing trees when viewed from the south. The potential size and massing of residential buildings and change in visual character of the lake from the proposed marina facility (marina facility discussed in "views from west") would constitute a significant and unavoidable impact for views across the lake, from the south shore, and the lake itself to the north.

Views from the North. Views in this subsection are considered for those residents located along Flicker Road to the north of the project site. Exhibit 5.4-7, *View 2 – View South from Flicker Road*, is a simulated view looking south across the project site. The view simulation shows the project site at full build-out. Flicker Road is located at a higher elevation than the project site, as the mountainside slopes considerably from Flicker Road to the lakefront. The simulated view indicates a substantial change to the visual character and views, as compared to the existing view. It should be noted that the simulation utilized large, two-story homes to present a worst-case scenario to determine obstruction of views. The construction of new residences to the south of Flicker Road would partially obstruct views from existing Flicker Road residences to the lake and distant mountains. Additionally, the relocation of State Route 38 would involve the removal of Jeffrey Pine trees located adjacent to the current roadway alignment and future home sites. The removal of such trees would diminish the forested nature of the site. However, the removal of the trees may also enhance views of the Lake for some residents along Flicker Road. Since the views to the south of the Lake and distant mountain ranges would be altered and viewshed characteristics would be permanently changed, impacts are concluded as significant and unavoidable.

LONG-TERM SCENIC HIGHWAY IMPACTS

5.4-3 *Implementation of the Moon Camp project would impact views of Big Bear Lake, the distant mountain ranges to the south and adjacent forest areas from North Shore Drive (State Route 38) which is a County and Federally recognized Scenic Highway/Byway. Analysis has concluded that significant and unavoidable impacts would occur as a result of project development.*

With development of the proposed project, viewshed and visual characteristics along State Route 38 would be permanently modified. Currently, State Route 38 is the only visible on-site improvement. With the introduction of 92 residential lots, local streets and associated infrastructure, and a 100 boat slip marina facility on Big Bear Lake, current viewshed characteristics would be modified and in some cases dominate the visual features along State Route 38. Distant views of the mountain ranges and Big Bear Lake to the south would be affected by the proposed uses.

The alteration of the area would be permanent and would continue throughout the life of the project. Based upon the density of the proposed residential uses south of the realigned State Route 38 and view simulation data depicted in Exhibits 5.4-4, *View East from State Route 38*, Exhibit, 5.4-5, *View South from Proposed Realignment of State Route 38*, and Exhibit 5.4-6, V*iew West from State Route 38*, it is concluded that viewshed characteristic impacts along State Route 38 looking south across the project site are significant and unavoidable, given the current characteristics of the area. Exhibit 5.4-2, *View* Map, indicates the field of view for each of the views presented in Exhibits 5.4-4, 5.4-5, 5.4-6 and 5.4-7. This analysis in based upon full build-out of the 95-lots (92 residences) associated with the project.

As stated in the Existing Conditions subsection, State Route 38 (North Shore Drive) is designated by the County of San Bernardino as a Scenic Highway. As such, the highway is subject to additional land use and aesthetic controls under the County's Scenic Highway Overlay District. The provisions of the Scenic Resources Overlay District are provided within the *Scenic Corridor* discussion above. The following describes the views across the project site from State Route 38 at various locations with buildout of the Moon Camp development. The discussion includes analysis that considers the provisions of the Scenic Resources Overlay District.

This portion of the analysis considers views for people utilizing State Route 38 and traversing the project site in an east/west direction. Exhibit 5.4-4, *View East from State Route 38*, is a simulated view from State Route looking east across the project site. Exhibit 5.4-6, *View West from State Route*, is a simulated view from State Route 38 looking west across the project site. As shown in the simulations, several Jeffrey Pine trees would be removed with realignment of State Route to the north. The building and structure placement of the homes on the northern side of the highway appear compatible with and do not substantially detract from the visual setting of the area or obstruct significant views, as the mountain slopes upward to the north.

The placement of homes was based on the regulations set forth in the County Development Code, including setback requirements, height limitations, lot coverage, etc. The homes shown in the simulations are at or near the maximum size allowed on each parcel. The design of the homes is reflective of the "newer" homes in the Fawnskin area.

The removal of native vegetation appears minimal and replacement vegetation would supplement the loss of natural vegetation. Utilities, parking and storage areas appear to be screened from view, to the maximum extent possible. Despite the necessary grading for construction of the local streets and custom-built homes, the site would maintain varying topography, which would maintain a mountain community setting.

Building and structure placement on the southern side of the Highway (lakefront properties), while appearing compatible with the visual setting on the north side of the Highway, results in obstructed views of the distant mountain ranges and immediate views of the Lake to the south. This is depicted in Exhibit 5.4-6, *View West from State Route 38*. As shown in Exhibit 5.4-6, upon entering the project area on State Route from the east, views of the Lake are obstructed.

In some cases, as shown in Exhibit 5.4-5, *View South from Proposed Realignment of State Route 38*, views of the Lake and distant mountains would be maintained. In Exhibit, 5.4-5, the existing view shows State Route 38, and is clearly evident that while traversing this section of the Highway, views of the Lake would be unobstructed. The location of the simulated view is from the north side of State Route 38, as realigned (refer to Exhibit 5.4-2, *View Map*). The simulated view shows that the realigned Highway would still provide views of the Lake, as the roadway would be located at a higher elevation compared to the existing alignment.

It is concluded that development on the north side of State Route 38 would not obstruct views of scenic vistas, nor would the construction of custom-built homes detract from the visual setting of the area. According to the provisions of the Scenic Resources Overlay District, the "Building and Placement" standard states that "the building and structure placement should be compatible with and should not detract from the visual setting or obstruct views." Since development on the south side of State Route 38 would disrupt Lake and distant mountain views to the south along State Route 38, the proposed project would not fulfill all of the Development Code standards such as building and structure placement not obstructing significant views, as outlined in the Scenic Resources Overlay District. Thus, significant and unavoidable impacts would occur as a result of the proposed project.

LONG-TERM LIGHT AND GLARE IMPACTS

5.4-4 *The proposed Moon Camp project would introduce additional light and glare on-site which may affect the surrounding residents. Analysis has concluded that potential impacts would be reduced to less than significant levels with implementation of the recommended mitigation measures.*

Long-term impacts are associated with the construction of new residences and street lighting, which may create nighttime light or daytime glare.

Night-time lighting impacts are significant when they interfere with or intrude into sensitive land use areas which include private residences and public access areas. Glare impacts can cause daytime interferences with activities at sensitive land use areas as defined above as well as public roadways where automobile drivers can be temporarily blinded by glare thus causing a safety concern. Residences to the east (along State Route 38) and west (along Oriole Lane) of the site would be partially shielded from new light sources by the existing Jeffrey Pine trees and associated vegetation. As indicated on Exhibit 5.4-3, *Plan View*, new residences located immediately south of Flicker Road would also be partially shielded from new sources of light by the existing Jeffrey pine trees. The *Plan* View presents an anticipated development scenario, thus, it is not representative of final development plans for the placement of new residences. The *Plan View* indicates that the new residences to the south of Flicker Road would likely be situated on the southernmost portions of the lots, thus, maximizing the distance to the existing residences located on Flicker Road. Implementation of the recommended mitigation measures would reduce potential impacts to less than significant levels.

Glare impacts are typically related to the use of modern, highly reflective surfaces such as gold, or silver glass, acrylic, and broad, flat surfaces that are painted with

highly reflective colors. A review of the visual simulations, renderings and the Site Plan indicates that the proposed residential subdivision would not cause significant glare impacts along State Route 38, Oriole Lane and Flicker Road. Although there are no proposed buildings or structures associated with the proposed project, the custom homes that would be built on the lots are not anticipated to incorporate highly reflective glass, or broad, flat surfaces. New residential development is anticipated to be consistent with existing residential structures in the local area and is subject to approval by the County of San Bernardino. The surrounding residences architectural theme consists of materials indicative of wood siding and traditional log homes. Future homes are anticipated to utilize similar architectural themes as seen in the existing Community of Fawnskin. Implementation of the recommended mitigation measures would reduce potential impacts to less than significant levels.

In addition, future residential development will be required to comply with the glare and outdoor lighting provision of the County of San Bernardino Development Code (i.e., Section 87.0921 et. seq.). The intention of this section is:

- To encourage effective, non-detrimental lighting;
- To maintain night time safety, utilizing security and productivity; and
- To encourage lighting practices and systems, which will minimize light pollution, glare and light trespass, conserve energy and resources and curtail the degradation of the night time visual environment.

CUMULATIVE

5.4-5 *Build-out of the Moon Camp development, together with cumulative projects, may alter the nature and appearance of the area and contribute to the loss of undeveloped areas. Analysis has concluded that no significant impacts beyond the analysis contained in the County of San Bernardino General Plan and General Plan EIR are anticipated.*

As development occurs throughout the Fawnskin area, residents and visitors in the area would notice the visual effects of development projects. However, the significance of these visual/aesthetic changes is difficult to determine, since aesthetic value is subjectively determined and potential impacts are site-specific. Construction of currently approved and pending projects in the vicinity would permanently alter the nature and appearance of the area through the loss of undeveloped areas. Security and street lighting would introduce light and glare potential to the area. Impacts are typically evaluated on a project-by-project basis. Cumulative impacts can be mitigated to less than significant levels with use of building materials that are consistent with the general character of the area, landscaping design, and proper lighting techniques to direct light on-site and away from adjacent properties.

MITIGATION MEASURES

The following mitigation measures directly correspond to the identified impact statements in the Impacts discussion.

SHORT-TERM AESTHETIC/LIGHT AND GLARE IMPACTS

5.4-1a Construction equipment staging areas shall be located away from existing residential uses. Appropriate screening (i.e., temporary fencing with opaque material) shall be used to buffer views of construction equipment and material, when feasible. Staging locations shall be indicated on project Grading Plans.

5.4-1b All construction-related lighting associated with the construction of new roadways, the realignment of State Route 38, and the installation of utilities shall be located and aimed away from adjacent residential areas. Lighting shall use the minimum wattage necessary to provide safety at the construction site. A construction safety lighting plan shall be submitted to the county for review concomitant with Grading Permit applications for the subdivision of the lots.

LONG-TERM AESTHETIC IMPACTS

5.4-2a Roof pitches shall not exceed 9/12 and no higher than two-story for any portion of the structure footprint for lots 62-92.

5.4-2b All homes shall provide a two-car garage with automatic garage doors.

5.4-2c A view envelope for each property shall be established by creating a line starting at 6 feet at each side lot line and moving up at a 30 degree angle until both lines meet at the middle of the property. The area located under these lines is the view envelope. Structures shall not protrude outside the view envelope. The view envelope orients the building ridgeline parallel to the view corridors on narrower lots providing views for residents located behind the property.

5.4-2d New development shall be subordinate to the natural setting and minimize reflective surfaces. Building materials including siding and roof materials shall be selected to blend in hue and brightness with the surroundings. Colors shall be earth tones, shades of grays, tans, browns, greens, pale yellows, and shall be consistent with the mountain character of the area.

5.4-2e Outside parking/storage areas associated with the boat dock activities shall be completely screened from view by the placement of landscaping and plantings which are compatible with the local environment and, where practicable, are capable of surviving with a minimum of maintenance and supplemental water.

5.4-2f Construction plans for each individual lot shall include the identification and placement of vegetation with the mature height of trees listed. Landscaping and plantings should not obstruct significant views, within or outside of the project, either when installed or when they reach mature growth. The removal of existing vegetation shall not be required to create views.

5.4-2g A Note shall be placed on the Composite Development Plan stating that during construction plans review and prior to issuance of building permits for each lot, the building inspector shall refer to the Mitigation Monitoring and Compliance Program regarding these aesthetic impact mitigation measures. The building inspector shall coordinate with the Advance Planning Division the review and approval of building plans in relation to these aesthetic impact mitigation measures, prior to approval and issuance of building permits.

LONG-TERM SCENIC HIGHWAY IMPACTS

5.4-3a Any entry sign for the development shall be a monument style sign compatible with the mountain character, preferably, rock or rock-appearance.

5.4-3b Prior to recordation of the tract map (and/or any ground disturbance, whichever occurs first), landscaping plans for lettered lots B and C shall be submitted to and approved by the San Bernardino County Planning Department.

LONG-TERM LIGHT AND GLARE IMPACTS

5.4-4a All exterior lighting shall be designed and located as to avoid intrusive effects on adjacent residential properties and undeveloped areas adjacent to the project site. Low-intensity street lighting and low-intensity exterior lighting shall be used throughout the development to the extent feasible. Lighting fixtures shall use shielding, if necessary to prevent spill lighting on adjacent off-site uses.

5.4-4b Lighting used for various components of the development plan shall be reviewed for light intensity levels, fixture height, fixture location and design by an independent engineer, and reviewed and approved by the County Building and Safety Division.

5.4-4c The project shall use minimally reflective glass. All other materials used on exterior buildings and structures shall be selected with attention to minimizing reflective glare.

5.4-4d Vegetated buffers shall be used along State Route 38 to reduce light intrusion on residential development and on forested areas located adjacent to the project site.

5.4-4e Mitigation Measures 5.4-4a through 5.4-4d shall be included within the Conditions, Covenants and Restrictions (CC&Rs) of the Home Owner's Association (HOA).

5.4-4f All outdoor light fixtures shall be cutoff luminaries and shall only use high- or low-pressure sodium lamps.

5.4-4g The Project Applicant/Developer shall install light colored, reflective roof products. Such roofs shall utilize light colored, reflective materials that meet the performance standards developed by the Energy Star Labeled Roof Program, as well as the American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) Standards 90.1 and 90.2 on energy efficient buildings. This condition shall be verified by the County of San Bernardino Building and Safety Division prior to issuance of building permits.

CUMULATIVE

5.4-5 No mitigation measures are recommended.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

Significant and unavoidable impacts related to Aesthetics/Light and Glare have been identified for viewshed alterations involving existing residents to the north, east and west of the project site. Additionally, significant and unavoidable impacts have been identified for views from State Route 38, a scenic highway, to the south and from the south shore of Big Bear Lake. If the County of San Bernardino approves the project, the County shall be required to cite their findings in accordance with Section 15091 of CEQA and prepare a Statement of Overriding Considerations in accordance with section 15093 of CEQA.

No additional significant impacts related to Aesthetic/Light and Glare have been identified following implementation of mitigation measures and/or compliance with applicable standards, requirements and/or policies by the County of San Bernardino.

5.5 TRAFFIC AND CIRCULATION

This Section is based upon the project Traffic Analysis prepared by Kunzman Associates, September 2003 (refer to Appendix 15.3, *Traffic Data*.) RBF Consulting conducted a peer review of the Kunzman Associates Study to confirm accuracy. The evaluation considers impacts to local roadways, intersections, regional transportation facilities and ingress/egress locations on-site. Mitigation measures are recommended to reduce impacts to less than significant levels.

EXISTING CONDITIONS

STUDY AREA STREET SYSTEM

Exhibit 5.5-1, *Highway Designations*, shows the common name, as well as the Highway number for each roadway in the study area. Roadways that would be utilized by the development include North Shore Drive, Stanfield Cutoff and Big Bear Boulevard. In the vicinity of the project site, the following roadway conditions exist:

- North Shore Drive. This east-west two-lane roadway, also referred to as State Route 38, currently has a peak monthly volume of 4,750 vehicles per day. North Shore Drive is the only on-site improvement. The roadway has a shoulder of varying widths that allows for emergency parking. There are no designated bike lanes on North Shore Drive, and there are no bus turnouts.

- Stanfield Cutoff. This north-south two-lane road currently has a peak monthly volume of 5,625 vehicles per day.

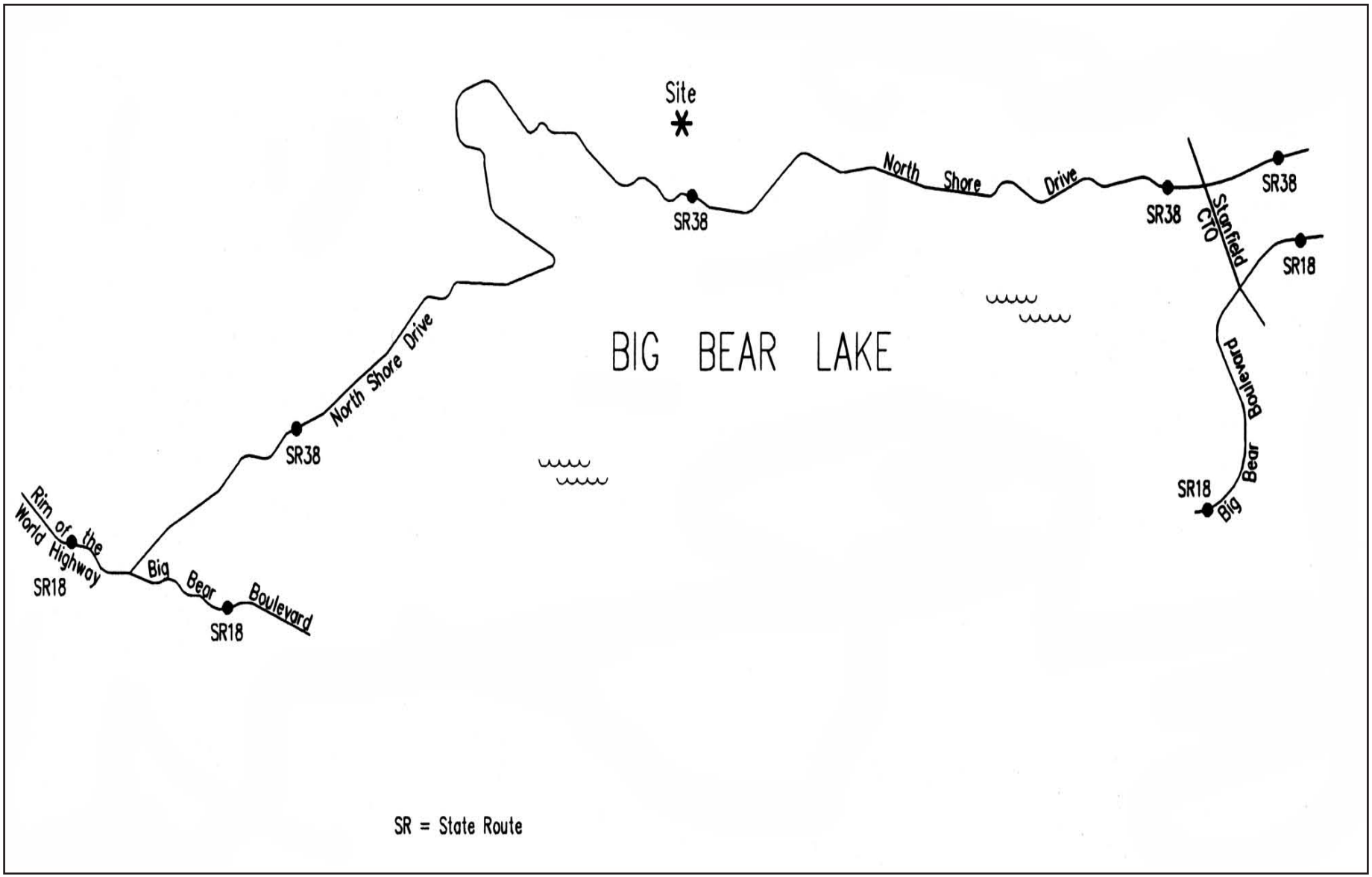
- Big Bear Boulevard. This east-west road, also referred to as State Route 18, consists of four lanes west of Stanfield Cutoff, and two lanes east of Stanfield Cutoff. It has a peak monthly volume of 20,500 vehicles per day, west of Stanfield Cutoff.

EXISTING TRAVEL LANES AND INTERSECTION CONTROLS

Exhibit 5.5-2, *Existing Through Travel Lanes and Intersection Control*, identifies the existing roadway conditions for highways near the site, the number of through lanes for existing roadways, and the existing intersection controls.

EXISTING DAILY TRAFFIC VOLUMES

Exhibit 5.5-3, *Existing Daily Traffic Volumes – Average Month*, and Exhibit 5.5-4, *Existing Daily Traffic Volumes – Peak Month*, depict the average and peak month daily two-way traffic volumes. Traffic volumes were obtained from the weekday peak hour intersection turning movement counts conducted by Kunzman Associates in March, 2001.



Source: Kunzman Associates, June 25, 2003.

Exhibit 5.5-1

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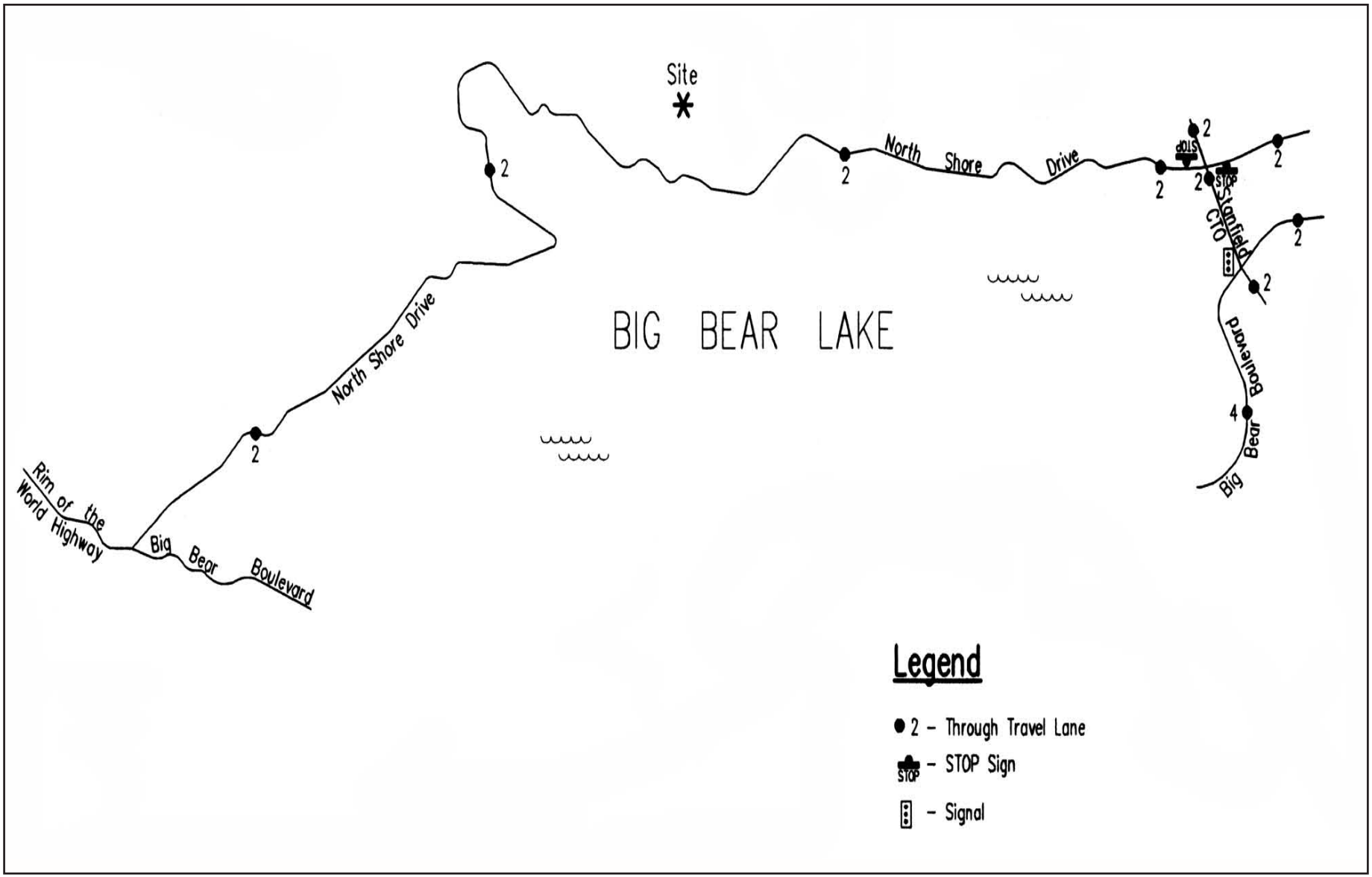
MOON CAMP TT #16136
ENVIRONMENTAL IMPACT REPORT

Highway Designations



Source: Kunzman Associates, June 25, 2003.

Exhibit 5.5-2

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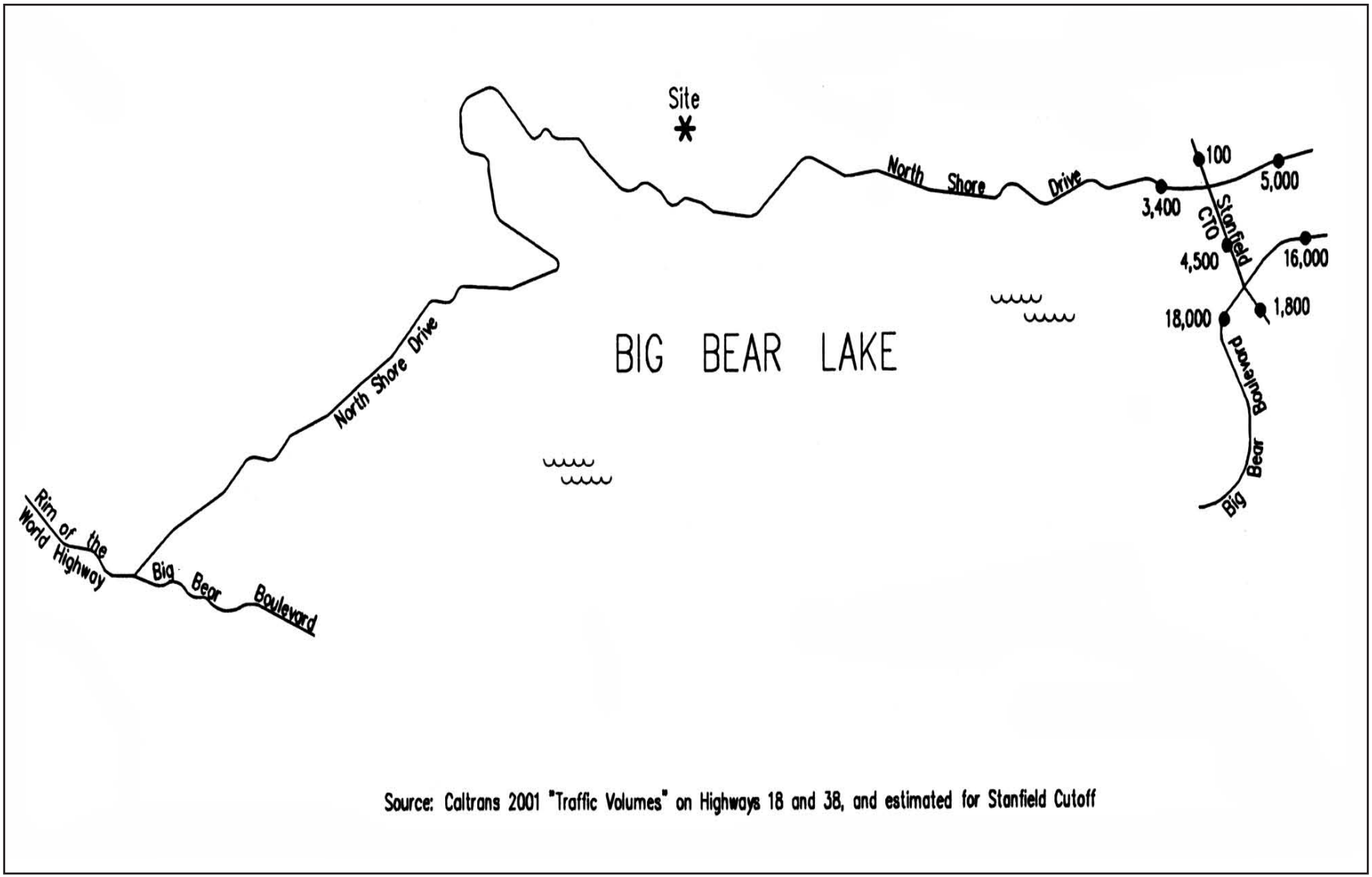
12/05 JN 10-101901

MOON CAMP TT #16136
ENVIRONMENTAL IMPACT REPORT

Existing Through Travel Lanes and Intersection Control



Source: Kunzman Associates, June 25, 2003.

Exhibit 5.5-3

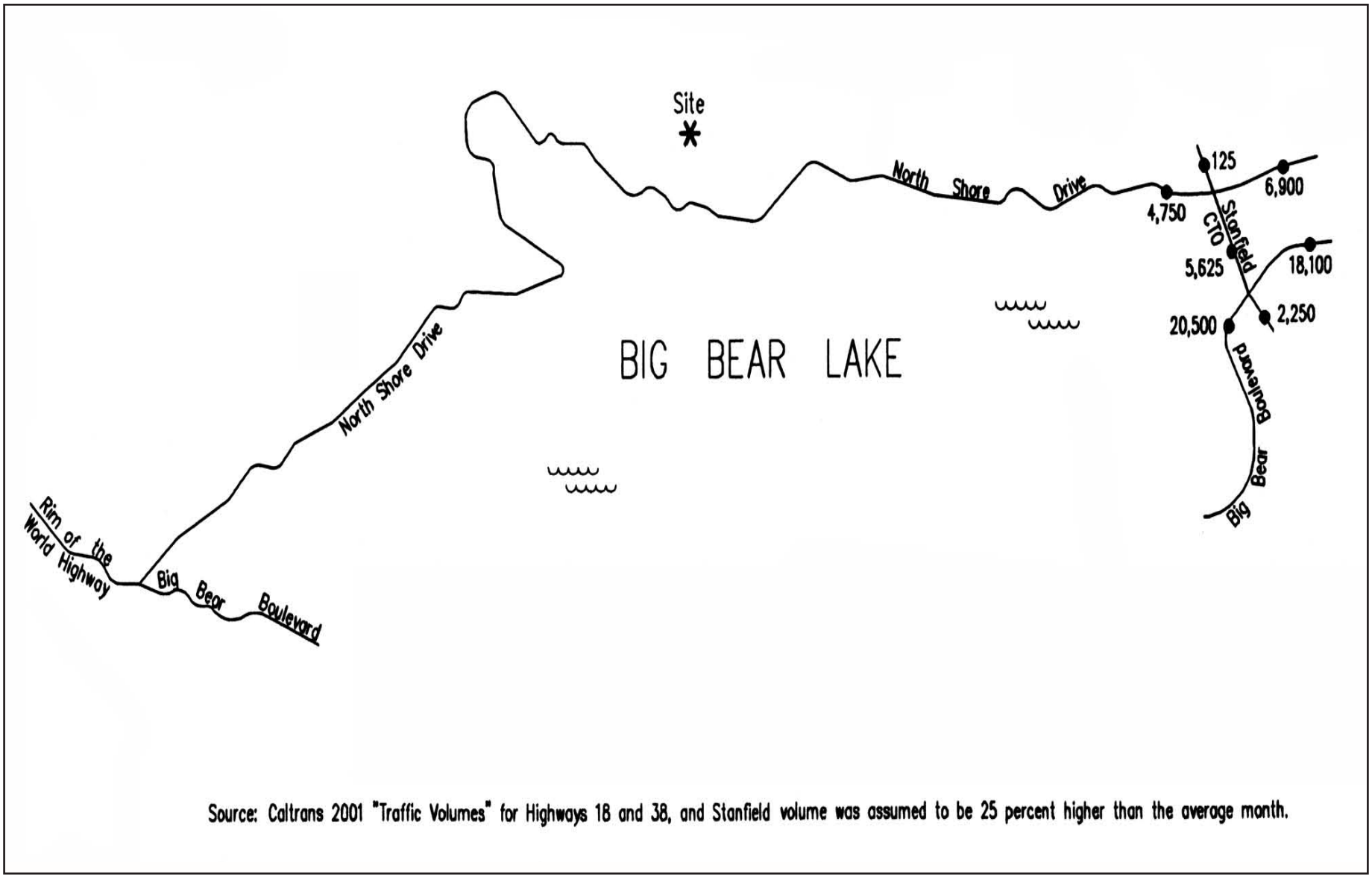
RBF CONSULTING

PLANNING ■ DESIGN ■ CONSTRUCTION

12/05 JN 10-101901

MOON CAMP TT #16136
ENVIRONMENTAL IMPACT REPORT

Existing Daily Traffic Volumes - Average Month



Source: Kunzman Associates, June 25, 2003.

Exhibit 5.5-4

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12/05 JN 10-101901

MOON CAMP TT #16136
ENVIRONMENTAL IMPACT REPORT

Existing Daily Traffic Volumes - Peak Month

Table 5.5-1, *Determining Annual Growth Rates and Peak Month Factors*, shows daily traffic volumes, as reported by Caltrans in traffic volumes for state highways in 1989 and 1999. From this data, it has been determined by Kunzman Associates that a reasonable factor to convert typical month volumes to peak month volumes is 1.25.

The County of San Bernardino recommends a growth rate of 1.0 percent per year for the Big Bear area based on a recent analysis by the County. Typically an annual growth rate approach is better than a cumulative projects approach because the cumulative projects approach typically leads to double counted trips thus there is a compounding of errors consideration. The double counting occurs for instance when homes are proposed and the cumulative projects list includes a retail commercial center. The trip added from the home that goes to the store is the same trip added a second time from the store to the home. The compounding of errors leads to erroneous results when for instance in the case of residential the density is over estimated, then the trip generation is overestimated (this is particularly problematic in Big Bear where most houses are not inhabited full time, and then the trip distribution is overestimated in that the local trips are under reported and the longer trips are over reported. The County of Los Angeles uses the compounded growth rate approach. Also, it should be noted that the County of Riverside formerly used the compounded growth rate approach, then switched to the cumulative projects approach, and is now reconsidering going back to the compounded growth rate approach.

Year 2001 traffic volume estimates were obtained by factoring the sum of the morning and evening peak hour volumes. A factor of 5.5 was used. According to the Kunzman Associates report, this method of estimating daily traffic volumes produces reasonable results. Refer to Appendix B of the *Traffic Analysis* report for more details.

EXISTING PEAK HOUR TURNING MOVEMENT VOLUMES

Existing manual peak hour turning movement counts were conducted by Kunzman Associates in March 2001. Appendix C of the *Traffic Analysis* report contains plots of the peak hour intersection turning movement volumes. Additionally, the same plots show the peak hour leg approach volumes and two-way peak hour leg volumes.

There are two peak hours in a weekday. The morning peak hour is between 7:00 a.m. and 9:00 a.m., and the evening peak hour is between 4:00 p.m. and 6:00 p.m. The actual peak hour within the two-hour interval is the four consecutive 15-minute periods with the highest total volume when all movements are added together. Thus, the evening peak hour at one intersection may be 4:45 p.m. to 5:45 p.m., if those four consecutive 15-minute periods have the highest combined volume.

EXISTING INTERSECTION LANES

Appendix B of the *Traffic Analysis* shows the number of existing through and turning movement lanes and peak hour turning movement volumes for each intersection. The lanes are also listed in Tables 1A and 1B, *Summary of Intersection Delay for the Unsignalized Intersection of North Shore and Stanfield Cutoff*, and *Summary of*

Intersection Delay and Level of Service (LOS) (Assumes North Shore and Stanfield Cutoff are Signalized), respectively, of the *Traffic Analysis* report.

Table 5.5-1
Determining Annual Growth Rates and Peak Month Factors

Road Location (See Figure 3 for Location References)	Year 1991			Year 2001			Growth Ratio	
	Annual Daily Traffic Volume	Peak Month Daily Traffic Volume	Peak Month Divided by Annual Daily Traffic Volume	Annual Daily Traffic Volume	Peak Month Daily Traffic Volume	Peak Month Divided by Annual Daily Traffic Volume	2001 Annual Volume Divided by 1991 Annual Volume	Annual Growth Rate (Percent)
1. Rim of the World Highway (SR-18) west of North Shore Drive (SR-38)	5,200	6,000	1.15	6,100	7,100	1.16	1.173	1.73%
2. Big Bear Boulevard (SR-18) east of North Shore Drive (SR-38)	6,900	8,000	1.16	6,300	7,300	1.16	0.913	-0.87%
3. Big Bear Boulevard (SR-18) west of Stanfield Cutoff	16,000	19,100	1.19	18,000	20,500	1.14	1.125	1.25%
4. Big Bear Boulevard (SR-18) east of Stanfield Cutoff	13,000	15,300	1.18	16,000	18,100	1.13	1.231	2.31%
5. North Shore Drive (SR-38) north of Big Bear Boulevard (SR-18) and Dam	2,000	2,350	1.18	1,600	2,300	1.44	0.800	-2.00%
6. North Shore Drive (SR-38) west of Stanfield Cutoff (SR-18)	3,000	3,450	1.15	3,400	4,750	1.40	1.133	1.33%
7. North Shore Drive (SR-38) east of Stanfield Cutoff	3,300	3,750	1.14	5,000	6,900	1.38	1.515	5.15%
Average			1.16			1.26		
Value Which Will Be Used for Traffic Study			1.25			1.25		

Note: SR = State Route

The peak month conditions are for a typical day in a peak month and do not necessarily include peak weekend conditions such as the Fourth of July.

EXISTING INTERSECTION DELAY

The technique used to assess the operation of an intersection is known as the Intersection Delay Method. To calculate the Intersection Delay value the volume of traffic using the intersection is compared with the capacity of the intersection. The Intersection Delay value is usually expressed as the average seconds of delay per vehicle using the intersection.

The Intersection Delay for the existing traffic conditions have been calculated and are shown in Table 5.5-2, *Summary of Intersection Delay and Level of Service for Unsignalized Intersection of North Shore and Stanfield Cutoff* and Table 5.5-3, *Summary of Intersection Delay and Level of Service (LOS) for Signalized Intersection of Big Bear Boulevard and Stanfield Cutoff*. Existing Intersection Delay values are based upon manual peak hour turning movement counts, factored up to represent peak month counts.

Table 5.5-2
Summary of Intersection Delay and Level of Service for the Unsignalized Intersection of Stanfield Cutoff and North Shore

Intersection	Land Use Scenario	Peak Hour	Lanes	Intersection Control	Two Way Stop Worst Level of Service (LOS)	
					Movement(s)	Level of Service
1. Stanfield Cutoff and North Shore – Average Month	Year 2001 Without Project	AM	Existing	2 Way Stop	All	A
1. Stanfield Cutoff and North Shore – Average Month	Year 2001 Without Project	PM	Existing	2 Way Stop	All	A
1. Stanfield Cutoff and North Shore – Average Month	Year 2001 With Project	AM	Existing	2 Way Stop	All	A
1. Stanfield Cutoff and North Shore – Average Month	Year 2001 With Project	PM	Existing	2 Way Stop	All	A
1. Stanfield Cutoff and North Shore – Peak Month	Year 2001 Without Project	AM	Existing	2 Way Stop	All	A
1. Stanfield Cutoff and North Shore – Peak Month	Year 2001 Without Project	PM	Existing	2 Way Stop	All	A
1. Stanfield Cutoff and North Shore – Peak Month	Year 2001 With Project	AM	Existing	2 Way Stop	NL, SL	B
1. Stanfield Cutoff and North Shore – Peak Month	Year 2001 With Project	PM	Existing	2 Way Stop	NL, SL	B
1. Stanfield Cutoff and North Shore – Average Month	Year 2006 Without Project	AM	Existing	2 Way Stop	All	A
1. Stanfield Cutoff and North Shore – Average Month	Year 2006 Without Project	PM	Existing	2 Way Stop	All	A
1. Stanfield Cutoff and North Shore – Average Month	Year 2006 With Project	AM	Existing	2 Way Stop	All	A
1. Stanfield Cutoff and North Shore – Average Month	Year 2006 With Project	PM	Existing	2 Way Stop	All	A
1. Stanfield Cutoff and North Shore – Peak Month	Year 2006 Without Project	AM	Existing	2 Way Stop	SL	B
1. Stanfield Cutoff and North Shore – Peak Month	Year 2006 Without Project	PM	Existing	2 Way Stop	SL	B
1. Stanfield Cutoff and North Shore – Peak Month	Year 2006 With Project	AM	Existing	2 Way Stop	NL, SL	B
1. Stanfield Cutoff and North Shore – Peak Month	Year 2006 With Project	PM	Existing	2 Way Stop	SL	B

Movement: NT = Northbound Through, NR = Northbound Right, NL = Northbound Left
ST = Southbound Through, SR = Southbound Right, SL = Southbound Left
ET = Eastbound Through, ER = Eastbound Right, EL = Eastbound Left
WT = Westbound Through, WR = Westbound Right, WL = Westbound Left

Table 5.5-3
Summary of Signalized Intersection Delay and Level of Service (LOS)

Intersection	Land Use Scenario	Peak Hour	Lanes												Delay in Seconds and Level of Service (LOS)	Inter-section Capacity Utiliza-tion (ICU) and LOS	Lanes
			Northbound			Southbound			Eastbound			Westbound					
			Thr	Rt	Lt	Thr	Rt	Lt	Thr	Rt	L	Thr	Rt	Li			
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2001 Average Month Without Project	AM	0.5	0.5	1	1	0	1	1	1	1	2	1	1	35.2 D+	0.813 D+	Existing
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2001 Average Month Without Project	PM	0.5	0.5	1	1	0	1	1	1	1	2	1	1	38.6 D+	0.913 E+	Existing
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2001 Average Month With Project	AM	0.5	0.5	1	1	0	1	1	1	1	2	1	1	36.5 D+	0.822 D+	Existing
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2001 Average Month With Project	PM	0.5	0.5	1	1	0	1	1	1	1	2	1	1	39.9 D+	0.918 E+	Existing
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2001 Average Month Without Project	AM	0.5	0.5	1	1	0	1	2	0	1	2	1	1	28.3 C	0.643 B	Widen
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2001 Average Month Without Project	PM	0.5	0.5	1	1	0	1	2	0	1	2	1	1	26.8 C	0.669 B	Widen
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2001 Average Month With Project	AM	0.5	0.5	1	1	0	1	2	0	1	2	1	1	29.2 C	0.654 B	Widen
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2001 Average Month With Project	PM	0.5	0.5	1	1	0	1	2	0	1	2	1	1	27.5 C	0.675 B	Widen
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2001 Peak Month Without Project	AM	0.5	0.5	1	1	0	1	1	1	1	2	1	1	49.3 D-	0.942 E	Existing
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2001 Peak Month Without Project	PM	0.5	0.5	1	1	0	1	1	1	1	2	1	1	64.3 E	1.067 F	Existing
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2001 Peak Month With Project	AM	0.5	0.5	1	1	0	1	1	1	1	2	1	1	51.7 D-	0.951 E	Existing
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2001 Peak Month With Project	PM	0.5	0.5	1	1	0	1	1	1	1	2	1	1	66.1 E	1.072 F	Existing
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2001 Peak Month Without Project	AM	0.5	0.5	1	1	0	1	2	0	1	2	1	1	31.7 C-	0.729 C+	Widen
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2001 Peak Month Without Project	PM	0.5	0.5	1	1	0	1	2	0	1	2	1	1	30.2 C-	0.762 C	Widen
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2001 Peak Month With Project	AM	0.5	0.5	1	1	0	1	2	0	1	2	1	1	32.7 C-	0.741 C	Widen
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2001 Peak Month With Project	PM	0.5	0.5	1	1	0	1	2	0	1	2	1	1	31.0 C-	0.768 C	Widen
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2006 Average Month Without Project	AM	0.5	0.5	1	1	0	1	1	1	1	2	1	1	37.0 D+	0.839 D	Existing
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2006 Average Month Without Project	PM	0.5	0.5	1	1	0	1	1	1	1	2	1	1	42.0 D	0.943 E	Existing
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2006 Average Month With Project	AM	0.5	0.5	1	1	0	1	1	1	1	2	1	1	38.4 D+	0.847 D	Existing
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2006 Average Month With Project	PM	0.5	0.5	1	1	0	1	1	1	1	2	1	1	43.4 D	0.949 E	Existing
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2006 Average Month Without Project	AM	0.5	0.5	1	1	0	1	2	0	1	2	1	1	28.8 C	0.660 B	Widen
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2006 Average Month Without Project	PM	0.5	0.5	1	1	0	1	2	0	1	2	1	1	27.3 C	0.687 B-	Widen
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2006 Average Month With Project	AM	0.5	0.5	1	1	0	1	2	0	1	2	1	1	29.9 C	0.671 B	Widen
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2006 Average Month With Project	PM	0.5	0.5	1	1	0	1	2	0	1	2	1	1	28.1 C	0.693 B-	Widen
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2006 Peak Month Without Project	AM	0.5	0.5	1	1	0	1	1	1	1	2	1	1	55.3 E+	0.975 E-	Existing
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2006 Peak Month Without Project	PM	0.5	0.5	1	1	0	1	1	1	1	2	1	1	73.6 E-	1.104 F-	Existing
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2006 Peak Month With Project	AM	0.5	0.5	1	1	0	1	1	1	1	2	1	1	57.8 E+	0.987 E-	Existing
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2006 Peak Month With Project	PM	0.5	0.5	1	1	0	1	1	1	1	2	1	1	75.5 E-	1.110 F-	Existing
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2006 Peak Month Without Project	AM	0.5	0.5	1	1	0	1	2	0	1	2	1	1	32.7 C-	0.752 C	Widen
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2006 Peak Month Without Project	PM	0.5	0.5	1	1	0	1	2	0	1	2	1	1	31.1 C-	0784 C-	Widen
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2006 Peak Month With Project	AM	0.5	0.5	1	1	0	1	2	0	1	2	1	1	33.8 C-	0766 C	Widen
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2006 Peak Month With Project	PM	0.5	0.5	1	1	0	1	2	0	1	2	1	1	31.9 C-	0.790 C-	Widen

Table continue on next page

NOTES
The Level of Service (LOS) for the Delay Method and Intersection Capacity Utilization Method differ because they are calculated entirely differently and LOS is defined differently. See Appendices for further discussion.

Table 5.5-3 - Continued
Summary of Signalized Intersection Delay and Level of Service (LOS)

Intersection	Land Use Scenario	Peak Hour	Lanes												Delay in Seconds and Level of Service (LOS)	Inter-section Capacity Utiliza-tion (ICU) and LOS	Lanes
			Northbound			Southbound			Eastbound			Westbound					
			Thr	Rt	Lt	Thr	Rt	Lt	Thr	Rt	L	Thr	Rt	L			
1. Stanfield Cutoff (NS) and North Shore	2025 Average Month Without Project	AM	1	1	0	1	1	0	1	1	0	1	0	0	12.0 B+	0.456 A+	Existing
1. Stanfield Cutoff (NS) and North Shore	2025 Average Month Without Project	PM	1	1	0	1	1	0	1	1	0	1	0	0	17.8 B-	0.359 A+	Existing
1. Stanfield Cutoff (NS) and North Shore	2025 Average Month With Project	AM	1	1	0	1	1	0	1	1	0	1	0	0	12.2 B+	0.456 A+	Existing
1. Stanfield Cutoff (NS) and North Shore	2025 Average Month With Project	PM	1	1	0	1	1	0	1	1	0	1	0	0	19.3 B-	0.359 A+	Existing
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2025 Average Month Without Project	AM	0.5	0.5	1	1	0	1	1	1	1	2	1	1	48.4 D-	0.937 E	Existing
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2025 Average Month Without Project	PM	0.5	0.5	1	1	0	1	1	1	1	2	1	1	62.5 E+	1.060 F	Existing
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2025 Average Month With Project	AM	0.5	0.5	1	1	0	1	1	1	1	2	1	1	50.8 D-	0.946 E	Existing
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2025 Average Month With Project	PM	0.5	0.5	1	1	0	1	1	1	1	2	1	1	64.3 E	1.065 F	Existing
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2025 Average Month Without Project	AM	0.5	0.5	1	1	0	1	2	0	1	2	1	1	31.5 C-	0.726 C+	Widen
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2025 Average Month Without Project	PM	0.5	0.5	1	1	0	1	2	0	1	2	1	1	30.0 C	0.757 C	Widen
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2025 Average Month With Project	AM	0.5	0.5	1	1	0	1	2	0	1	2	1	1	32.6 C-	0.737 C	Widen
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2025 Average Month With Project	PM	0.5	0.5	1	1	0	1	2	0	1	2	1	1	30.7 C-	0.763 C	Widen
1. Stanfield Cutoff (NS) and North Shore	2025 Peak Month Without Project	AM	1	1	0	1	1	0	1	1	0	1	0	0	12.0 B+	0.456 A+	Existing
1. Stanfield Cutoff (NS) and North Shore	2025 Peak Month Without Project	PM	1	1	0	1	1	0	1	1	0	1	0	0	17.8 B-	0.359 A+	Existing
1. Stanfield Cutoff (NS) and North Shore	2025 Peak Month With Project	AM	1	1	0	1	1	0	1	1	0	1	0	0	12.2 B+	0.456 A+	Existing
1. Stanfield Cutoff (NS) and North Shore	2025 Peak Month With Project	PM	1	1	0	1	1	0	1	1	0	1	0	0	19.3 B-	0.359 A+	Existing
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2025 Peak Month Without Project	AM	0.5	0.5	1	1	0	1	1	1	1	1	1	1	86.9 F+	1.110 F-	Existing
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2025 Peak Month Without Project	PM	0.5	0.5	1	1	0	1	1	1	1	1	1	1	119.0 F-	1.250 F-	Existing
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2025 Peak Month With Project	AM	0.5	0.5	1	1	0	1	1	1	1	1	1	1	90.4 F	1.122 F-	Existing
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2025 Peak Month With Project	PM	0.5	0.5	1	1	0	1	1	1	1	1	1	1	121.1 F-	1.255 F-	Existing
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2025 Peak Month Without Project	AM	0.5	0.5	1	1	0	1	2	0	1	2	0	1	37.9 D+	0.846 D	Widen
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2025 Peak Month Without Project	PM	0.5	0.5	1	1	0	1	2	0	1	2	0	1	36.1 D+	0.872 D	Widen
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2025 Peak Month With Project	AM	0.5	0.5	1	1	0	1	2	0	1	2	0	1	39.4 D+	0.860 D	Widen
2. Stanfield Cutoff (NS) and Big Bear Blvd. (EW)	2025 Peak Month With Project	PM	0.5	0.5	1	1	0	1	2	0	1	2	0	1	37.1 D+	0.877 D-	Widen

NOTES
The Level of Service (LOS) for the Delay Method and Intersection Capacity Utilization Method differ because they are calculated entirely differently and LOS is defined differently. See Appendices for further discussion.

Appendix B of the *Traffic Analysis* report contains the Intersection Delay calculations. An explanation of Intersection Delay and how it is calculated is also included in Appendix B.

PARKING

The portion of State Route 38 that traverses the project site contains a shoulder of varying widths, which allows for temporary and emergency parking.

BIKE ROUTES

The portion of State Route 38 that traverses the project site does not include any County designated bike routes.

TRANSIT

The portion of State Route 38 that traverses the project site does not include any public transit facilities (i.e., bus turnouts).

EXISTING LEVEL OF SERVICE

From the Intersection Delay analysis, the intersection Level of Service (LOS) can be determined. LOS is directly related to Intersection Delay. Table 5.5-4, *Level of Service Description For Delay Method (1997 Methodology)*, shows how LOS is related to Intersection Delay, and describes LOS. Existing intersections in the vicinity of the site currently operate a LOS D capacity or better based on delay. However, the intersection of Stanfield Cutoff and Big Bear Boulevard currently operates at an intersection capacity utilization (ICU) greater than 100 percent in the peak month weekday evening peak hour.

Table 5.5-4
Level of Service Description for Delay Method (1997 Methodology)

Level of Service	Description	Stopped Delay Per Vehicle (Seconds)
A	Level of Service A occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.	0 to 10.0
B	Level of Service B generally occurs with good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.	10.1 to 20.0
C	Level of Service generally results when there is fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear in this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.	20.1 to 35.0
D	Level of Service D generally results in noticeable congestion. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume to capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.	35.1 to 55.0
E	Level of Service E is considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high volume to capacity ratios. Individual cycle failures are frequent occurrences.	55.1 to 80.0
F	Level of Service F is considered to be unacceptable to most drivers. This condition often occurs with over-saturation, i.e., when arrival flow rates exceed the capacity of the intersection. It may also occur at high volume to capacity ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.	80.1 +
Source:	Highway Capacity Manual, Special Report 209, Transportation Research Board, National Research Council, Washington, D.C., 1997, pages 9-6 to 9-7.	

IMPACTS

SIGNIFICANCE CRITERIA

The traffic issues related to the proposed land use and development have been evaluated in the context of the California Environmental Quality Act (CEQA) and the San Bernardino County Congestion Management Program (CMP). The County of San Bernardino is the lead agency responsible for preparation of the traffic impact analysis, in accordance with both CEQA and CMP authorizing legislation.

Environmental impact thresholds as indicated in Appendix G, *Initial Study Checklist*, of the CEQA Guidelines were also used as significance thresholds in this analysis. As such, the project would create a significant impact if it would cause one or more of the following to occur:

- Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections) (refer to Impact Statements 5.5-1, 5.5-2 and 5.5-3);

- Exceed, either individually or cumulatively, a LOS standard established by the County CMP agency for designated roads or highways (refer to Impact Statements 5.5-1, 5.5-2 and 5.5-3);

- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks (refer to Section 10.0, *Effects Found Not To Be Significant*);

- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) (refer to Impact Statement 5.5-4);

- Result in inadequate emergency access (refer to Impact Statement 5.5-4);

- Result in inadequate parking capacity (refer to Impact Statement 10.0, *Effects Found Not To Be Significant*); and/or

- Conflict with adopted policies, plans or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks) (refer to Section 10.0, *Effects Found Not To Be Significant*).

CONGESTION MANAGEMENT PROGRAM (CMP) METHODOLOGY

California legislation requires that a Traffic Impact Analysis (TIA) be prepared for new development. The TIA is prepared to monitor and fix traffic problems anticipated by new development.

The general approach for conducting a TIA is to count existing weekday peak hour traffic and determine the percent of roadway capacity currently used. The percentage growth in traffic is accounted for and added to existing traffic and the percent of roadway capacity used is again determined. Then, the project traffic is added and the percent of roadway capacity used is again determined. If the new project adds traffic to an overcrowded facility, then the new project has to mitigate the traffic impact so that the facility operates at a level which is no worse than before the project traffic was added.

In San Bernardino County, a project requires a TIA if it generates more than 250 new peak hour trips. The Moon Camp project would generate 93 new peak hour trips (approximately). Although this project does not generate 250 new peak hour trips, the County of San Bernardino has requested that the SANBAG TIA requirements be met, with one exception. That exception is that engineering judgment can be used for determining the project's peak hour traffic distribution rather than determining the traffic distribution using the East Valley Traffic Model.

PRESCRIBED METHODOLOGY FOR A TRAFFIC IMPACT ANALYSIS (TIA)

A TIA must include all monitored intersections to which the project adds traffic above a certain minimum amount. In San Bernardino County, the monitored intersections are all arterial-to-arterial intersections. The CMP requires that all arterial links and their CMP intersections be included in the analysis when the anticipated project volume equals or exceeds 80 two-way trips in one peak hour. For freeways, it is 100 two-way trips in the peak hour. Based on this requirement and the distribution of project-generated trips, the project-generated arterial link volumes are less than 80 trips on all roadway links and their intersections. Thus, the intersections of Stanfield Cutoff and North Shore Drive, and Stanfield Cutoff and Big Bear Boulevard are not CMP intersections.

If a project adds more traffic than the minimum threshold amount to an intersection, then that intersection has to be analyzed for deficiencies. If the intersection has to be analyzed for deficiencies, then mitigation is required if the existing traffic plus anticipated traffic growth plus project traffic causes the Intersection Delay to go above a certain point.

In San Bernardino County, mitigation is required if the intersection operates at worse than Level of Service C (i.e., Level of Service D), which corresponds to a maximum acceptable delay of 35 seconds for signalized intersections. The TIA guidelines require Level of Service E.

In San Bernardino County, impacted intersections are analyzed using the Delay Methodology and the ICU Methodology. Although the Delay Method is required per TIA guidelines, the ICU Method is also used per TIA requirements to assure that there are no operational problems. An intersection mitigation measure shall either fix the deficiency, or reduce both the delay and ICU so that they are below the level which occurs without the project.

Project traffic is generated using rates and procedures contained in the Institute of Transportation Engineers, *Trip Generation* manual. Project traffic distribution is provided by the reviewing agency or is agreed to in advance of the TIA being prepared. The TIA has to be prepared by a licensed Traffic Engineer.

The traffic analysis has been prepared in accordance with the TIA requirements except as noted. The TIA not only examined the CMP system of roads and intersections, but also other roads and intersections. The project generated traffic was added to intersections, and a full intersection analysis was conducted, even when the project added traffic failed to meet the minimum thresholds that require an intersection analysis.

The *Traffic Analysis* report prepared by Kunzman Associates includes the following: project generated traffic added to intersections and a full intersection analysis, even when the project added traffic failed to meet the minimum thresholds that require an intersection analysis. As stated in the Traffic Analysis report, the County of San Bernardino has requested that the following intersections be analyzed:

- Stanfield Cutoff and North Shore Drive
- Stanfield Cutoff and Big Bear Boulevard

Impacts to traffic and circulation are analyzed below according to topic. Mitigation measures at the end of this Section directly correspond with the identified impact.

Summary of Findings

- For existing traffic conditions, the intersection of Stanfield Cutoff and North Shore Drive operates at Level of Service A capacity based on delay. The intersection of Stanfield Cutoff and Big Bear Boulevard operates at Level of Service E based on Delay, which is unacceptable. The solution is to convert the eastbound right turn lane to an eastbound through lane through the intersection. This may involve widening of the intersection and may involve the taking of right of way.

- For existing plus project traffic conditions, the intersection of Stanfield Cutoff and North Shore Drive operates at Level of Service B capacity based on delay. The intersection of Stanfield Cutoff and Big Bear Boulevard with the recommended mitigation measure operates at Level of Service D based on Delay, which is acceptable for a State Highway. Although based on established threshold of significance criteria, the project has an insignificant traffic impact on Stanfield Cutoff and Big Bear Boulevard, it nevertheless contributes to the utilization deficiency at the weekday evening peak hour.

- After project completion and in the year 2006, the intersection of Stanfield Cutoff and North Shore Drive operates at Level of Service B capacity based on delay. The intersection of Stanfield Cutoff and Big Bear Boulevard with the recommended mitigation measure operates at Level of Service D based on Delay, which is acceptable for a State Highway.

- Although the project does not have a significant impact on the intersection of Stanfield Cutoff and North Shore Drive, this intersection will require a traffic signal by 2025 because of background traffic growth.

- Project-related traffic would not warrant the installation of a traffic signal at any location.

EXISTING CONDITIONS WITH PROJECT TRAFFIC ANALYSIS

5.5-1 *The intersection of Stanfield Cutoff and Big Bear Boulevard currently operates above 100 percent utilization in the peak month weekday evening peak hour. Although the Project does not generate significant traffic volumes, it would contribute to the intersection utilization at the weekday evening peak hour. Pro-rata share payment for intersection improvements to the intersection would reduce project affects to less than significant levels.*

PROJECT TRAFFIC

To estimate project-related traffic volumes at various points on the street network, a three-step process is utilized. First, the traffic that would be generated by the proposed development is determined. Second, the traffic volumes are geographically distributed to major attractions of trips, such as employment centers, commercial centers, recreational areas or residential areas. Finally, the trips are assigned to specific roadways and the project-related traffic volumes are determined on a route-by-route basis.

Traffic Generation

The traffic generated by the project is determined by multiplying an appropriate trip generation rate by the quantity of land use. Trip generation rates are expressed in terms of trip ends per person, trip ends per employee, trip ends per acre, trip ends per dwelling, or trip ends per thousand square feet of floor space. For instance, if a particular land use generates six outbound trips per acre in the morning peak hour, then six vehicles are expected to leave the site in the morning peak hour for each acre of development.

Significant research efforts have been made by the Institute of Transportation Engineers and others to establish the correlation between trips and land use. From this body of information, trip generation rates have been estimated by Kunzman Associates with reasonable accuracy for various land uses.

Trip generation rates are predicated on the assumption that energy costs, the availability of roadway capacity, the availability of vehicles to drive, and our life styles remain similar to what we know today. A major change in these variables may affect trip generation rates.

Trip generation rates were determined for daily traffic, morning peak hour inbound and outbound traffic, and evening peak hour inbound and outbound traffic for the

proposed land uses. The trip generation rates are from Trip Generation, Sixth Edition, Institute of Transportation Engineers, 1997.

By multiplying the traffic generation rates by the land use quantities, traffic volumes are determined. Table 5.5-5, *Project Traffic Generation*, shows the traffic generation rates and the peak hour and daily traffic volumes.

Table 5.5-5
Project Traffic Generation

Descriptor	Trip Generation Rate	Trips Generated by 92 Dwellings
Units	Dwellings	Dwellings
Daily	9.57	880
Morning Peak Hour - In	0.19	17
Morning Peak Hour - Out	0.56	52
Total	0.75	69
Evening Peak Hour - In	0.65	60
Evening Peak Hour - Out	0.36	33
Total	1.01	93
Source: Trip Generation, 6th Edition, Institute of Transportation Engineers, 1997, Category 210.		

The project also includes 100 boat slips. The boat slips are to be used by residents who live there, and are not expected to generate additional external traffic.

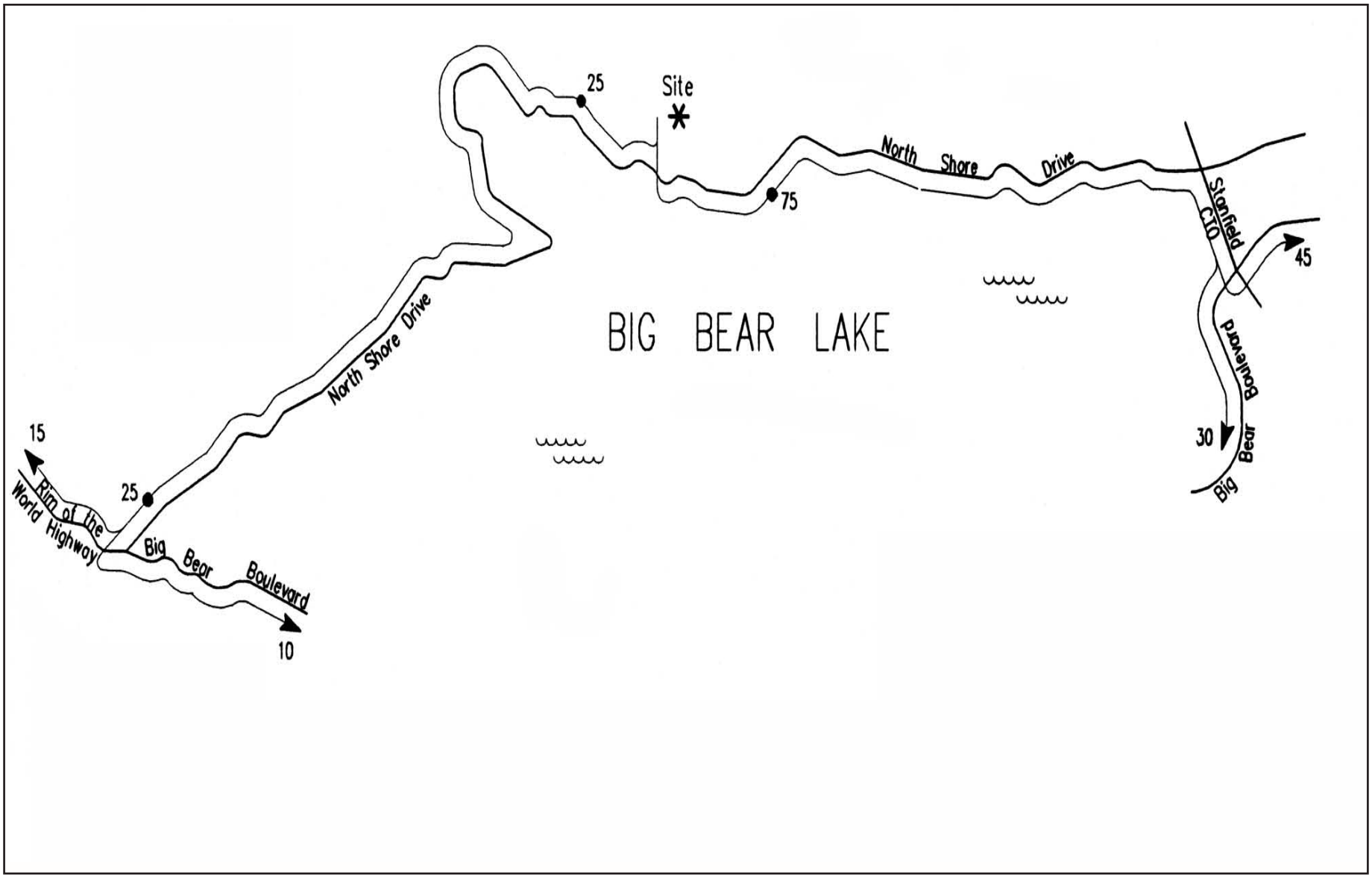
For the purposes of the traffic analysis, it is assumed that the homes are lived in year round by persons who commute to work. This is a maximum, or worst case, scenario. It is likely that some homes would be second homes and that those who do live there would tend to be retired, more than typically found in Southern California.

Traffic Distribution and Assignment

Traffic distribution is the determination of the directional orientation of traffic. It is based on the geographical location of employment centers, commercial centers, recreational areas, or residential area concentrations.

Traffic assignment is the determination of which specific route development traffic would use, once the generalized traffic distribution is determined. The basic factors affecting route selection are minimum time path and minimum distance path.

Exhibit 5.5-5, *Project Traffic Distribution (Weekday Peak Hours)*, contains the directional distribution and assignment of the project traffic for the proposed land uses. As shown on Exhibit 5.5-5, the majority of project traffic distribution (75%) would occur to the east of the project site, along State Route 38. All of the trips



Source: Kunzman Associates, June 25, 2003.

Exhibit 5.5-5

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Project Traffic Distribution (Weekday Peak Hours)

generated on State Route 38, east of the project site, are distributed to Stanfield Cutoff, then to Big Bear Boulevard. Big Bear Boulevard, east of Stanfield Cutoff, would receive 45 percent of the project-generated traffic, while Big Bear Boulevard, west of Stanfield Cutoff, would receive 30 percent of the project-generated traffic. State Route 38, west of the project site, would receive 25 percent of the project-generated traffic. Traffic from State Route 38, west of the project site would distribute on to Rim of the World Highway (15 percent) and Big Bear Boulevard (10 percent).

Project-Related Traffic

Based on the identified traffic generation and distributions, project related daily traffic volumes are shown in Exhibit 5.5-6, *Project Generated Daily Traffic Volumes*. As shown on Exhibit 5.5-6, the majority of project-generated traffic (660 trips) would be distributed to the east of the project site, along State Route 38. All of the trips generated on State Route 38, east of the project site, are distributed to Stanfield Cutoff, then to Big Bear Boulevard. Big Bear Boulevard, east of the project site, would receive 396 trips from Stanfield Cutoff, while Big Bear Boulevard, west of Stanfield Cutoff, would receive 264 trips from Stanfield Cutoff. State Route 38, west of the project site, would receive 220 project-generated trips. Trips from State Route 38, west of the project site would be distributed to Rim of the World Highway (132 trips) and Big Bear Boulevard (88 trips).

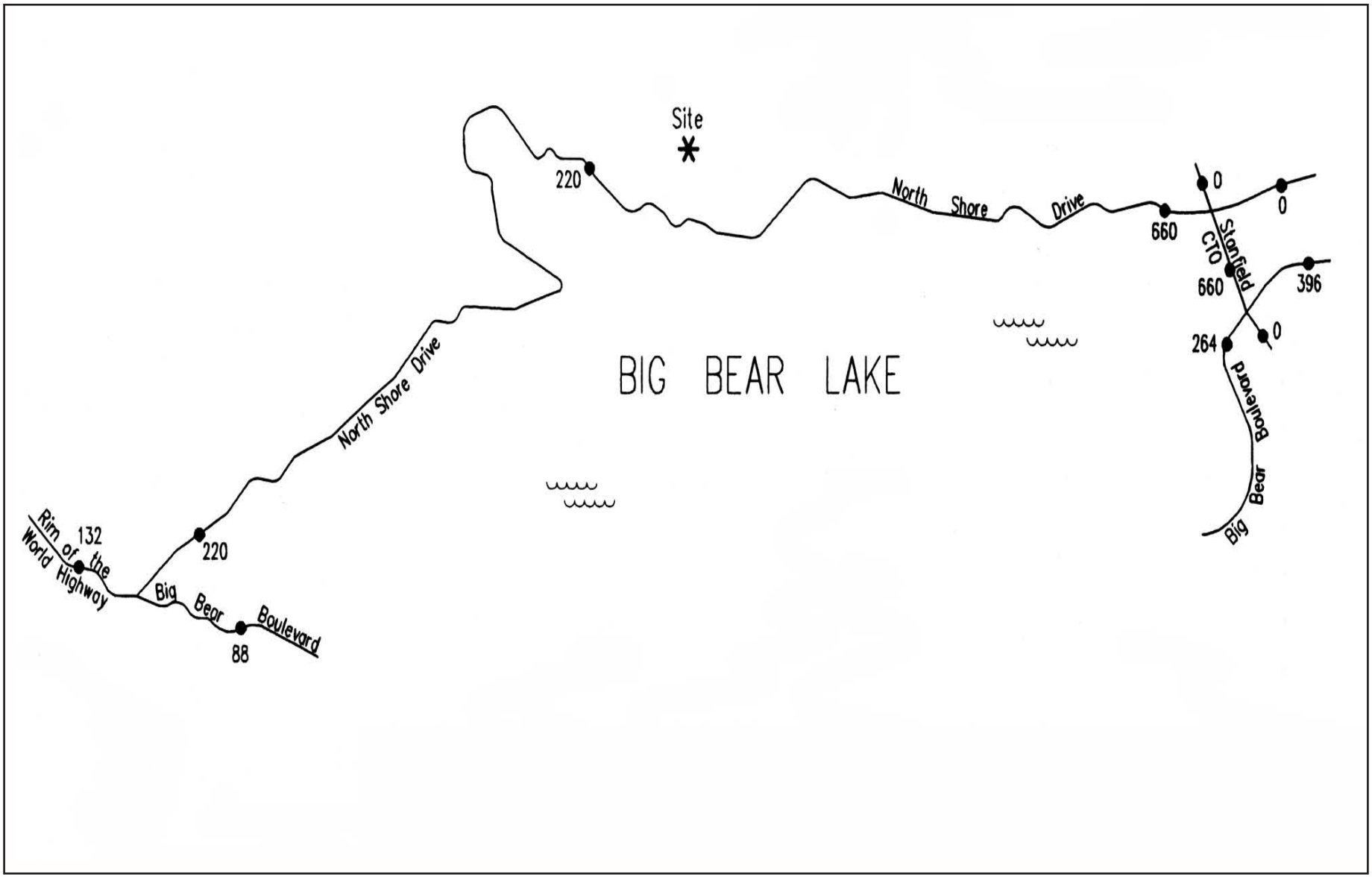
EXISTING PLUS PROJECT TRAFFIC CONDITIONS

Once the project-related traffic is assigned to the existing street network and added to existing volumes, the traffic impact can be assessed. Exhibit 5.5-7, *Existing Plus Project Daily Traffic Volumes – Peak Month*, illustrates the existing plus project traffic conditions for the peak month. As shown on Exhibit 5.5-7, the traffic volume on State Route 38, east of the project site and west of Stanfield Cutoff, is 5,417. The traffic volume on Stanfield Cutoff is 6,292, which includes traffic distributed from State Route 38 and Big Bear Boulevard. The highest traffic volumes occur on Big Bear Boulevard, with volumes of 20,767 west of Stanfield Cutoff, and volumes of 18,500 east of Stanfield Cutoff. Traffic volumes along State Route 38 (east of Stanfield Cutoff) and Stanfield Cutoff (north of State Route 38 and south of Big Bear Boulevard) would not be impacted by project generated traffic (refer to Exhibit 5.5-6).

The *Traffic Analysis* report prepared by Kunzman Associates contains plots of the existing plus project peak hour intersection turning movement volumes and number of intersection through and turning movement lanes. Additionally, the same plots show the peak hour leg approach volumes and two-way peak hour leg volumes.

Traffic Signal Warrants

Traffic signal warrants have been adopted by the Federal Highway Administration and Caltrans. These warrants are based upon the eight highest hour volumes in a day. It is assumed by Caltrans that the eighth highest hour is 62.5 percent of the



Source: Kunzman Associates, June 25, 2003.

Exhibit 5.5-6

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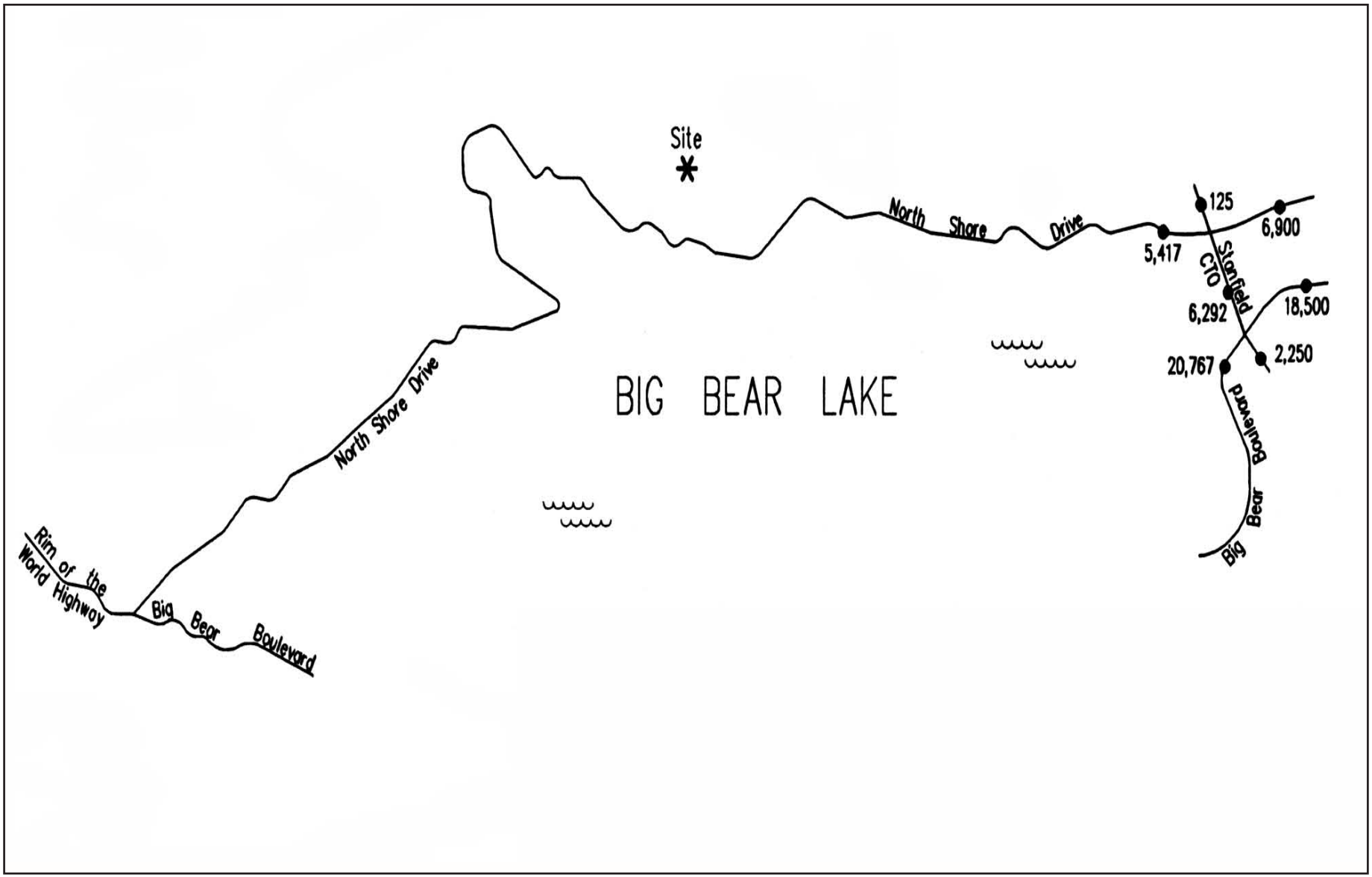
Project Generated Daily Traffic Volumes



Source: Kunzman Associates, June 25, 2003.

Exhibit 5.5-7

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Existing Plus Project Daily Traffic Volumes - Peak Month

peak hour, and the peak hour is generally 10 percent of the daily traffic. Thus, the signal warrants can also be expressed in terms of daily traffic volumes. Rural traffic volume warrants are utilized when the 85th percentile speed of the major street traffic exceeds 40 miles per hour or when the intersection lies within the built up area of an isolated community having a population of less than 10,000. Table 5.5-6, *Traffic Signal Warrants (Based on Estimated Average Daily Traffic)*, shows the signal warrants in terms of daily traffic volumes.

When calculating signal volume warrants, the volumes of both the major and minor street must meet or exceed those listed in Table 5.5-6. Determining the major street daily signal warrant volume involves calculating the number of daily vehicles approaching the intersection on both major street legs; usually the daily approach volume is 50 percent of the street's daily two-way volume on each leg. Finding the minor street daily signal warrant volume involves calculating the number of daily vehicles approaching the intersection on only the highest volume leg; usually the daily approach volume is 50 percent of the street's two-way daily volume. If the minor street forms a tee intersection with the major street, then the minor street volume is the highest volume because there is no other volume.

A traffic signal would not be warranted at the intersection of Stanfield Cutoff and North Shore Drive based on rural warrants. Rural warrants are applicable for rural areas and urban roadways with speeds over 40 miles per hour.

Existing Plus Project Intersection Delay and Level of Service

The Intersection Delay for the existing plus project traffic conditions have been calculated and are shown in Table 5.5-3. The Kunzman traffic report contains the Intersection Delay calculations. From the Intersection Delay analysis, the intersection Level of Service (LOS) can be determined. Table 5.5-4 shows how LOS is related to Intersection Delay, and describes LOS.

From Table 5.5-2 and 5.5-3, it can be seen that all intersections in the vicinity of the site operate at a LOS D or better for existing plus project peak hour traffic conditions, based on Delay. However, it should be noted that the intersection of Stanfield Cutoff and Big Bear Boulevard currently operates at an intersection capacity utilization greater than 100 percent in the peak month weekday evening peak hour. The solution is to convert the eastbound right turn lane to an eastbound through lane through the intersection. Although the project itself does not have a significant impact on this intersection it does contribute to an existing deficiency at the intersection. Pro-rata share payment for improvements to the intersection would reduce project affects to less than significant. It therefore is not required to mitigate this deficiency.

The Kunzman Associates traffic study references the need for the eastbound right turn lane to be converted to a through lane, which may require widening and an additional take of right of way. The widening and additional right of way may be needed before or after the intersection, or both. Whether widening and a take of right of way is required depends on lane widths and taper lengths required by Caltrans.

Table 5.5-6
Traffic Signal Warrants
(Based on Estimated Average Daily Traffic)

Signal Warrant	Minimum Requirements Estimated Average Daily Traffic (EADT)	
Urban . . . . . Rural . . . . . Use Rural if critical speed equals or exceed 40 MPH		
1. Minimum Vehicular Satisfied _____ Not Satisfied _____	Vehicles per day on major street (total of both approaches)	Vehicles per day on higher-volume minor-street approach (one direction only)
Number of lanes for moving traffic on each approach		
Major Street / Minor Street	Urban / Rural	Urban / Rural
1 . . . . . 1	8,000 / 5,600 < < <	2,400 / 1,680 < < <
2 or more . . . . . 2 or more	9,600 / 6,720	2,400 / 1,680
2 or more . . . . . 2 or more	9,600 / 6,720	3,200 / 2,240
1 . . . . . 1	8,000 / 5,600	3,200 / 2,240
2. Interruption of Continuous Traffic Satisfied _____ Not Satisfied _____	Vehicles per day on major street (total of both approaches)	Vehicles per day on higher-volume minor-street approach (one direction only)
Number of lanes for moving traffic on each approach		
Major Street / Minor Street	Urban / Rural	Urban / Rural
1 . . . . . 1	12,000 / 8,400 < < <	1,200 / 850 < < <
2 or more . . . . . 2 or more	14,400 / 10,080	1,200 / 850
2 or more . . . . . 2 or more	14,400 / 10,080	1,600 / 1,120
1 . . . . . 1	12,000 / 8,400	1,600 / 1,120
3. Combination Satisfied _____ Not Satisfied _____ No one warrant satisfied but following warrants fulfilled 80% or more . . . . . _____ (1) _____ (2)	2 Warrants	2 Warrants

NOTES:

1. Heavier left turn movement from the major street may be included with minor street volume if a separate signal phase is to be provided for the left-turn movement.
2. To be used only for new intersections or other locations where actual traffic volumes cannot be counted.

<<<< These are the warrant volumes that apply to Stanfield Cutoff and North Shore Drive.

Source: Caltrans, Traffic Manual, page 9-8.

The available right-of-way in the mountains is restricted, the topography is difficult, and in many situations there are large pine trees in a location that may preclude the use of typical design criteria. There needs to be flexibility in design requirements in the mountains. Whatever design is accepted needs to meet minimum acceptable criteria which may be less than normal criteria.

The geometrics required is a Caltrans decision, and is subject to agreement by the County of San Bernardino.

YEAR 2006 TRAFFIC ANALYSIS

5.5-2 *Project implementation, with year 2006 traffic conditions, would result in an increase in traffic volumes. Analysis has concluded that implementation of recommended mitigation measures would reduce impacts to the intersection of Stanfield Cutoff and Big Bear Boulevard to a less than significant level.*

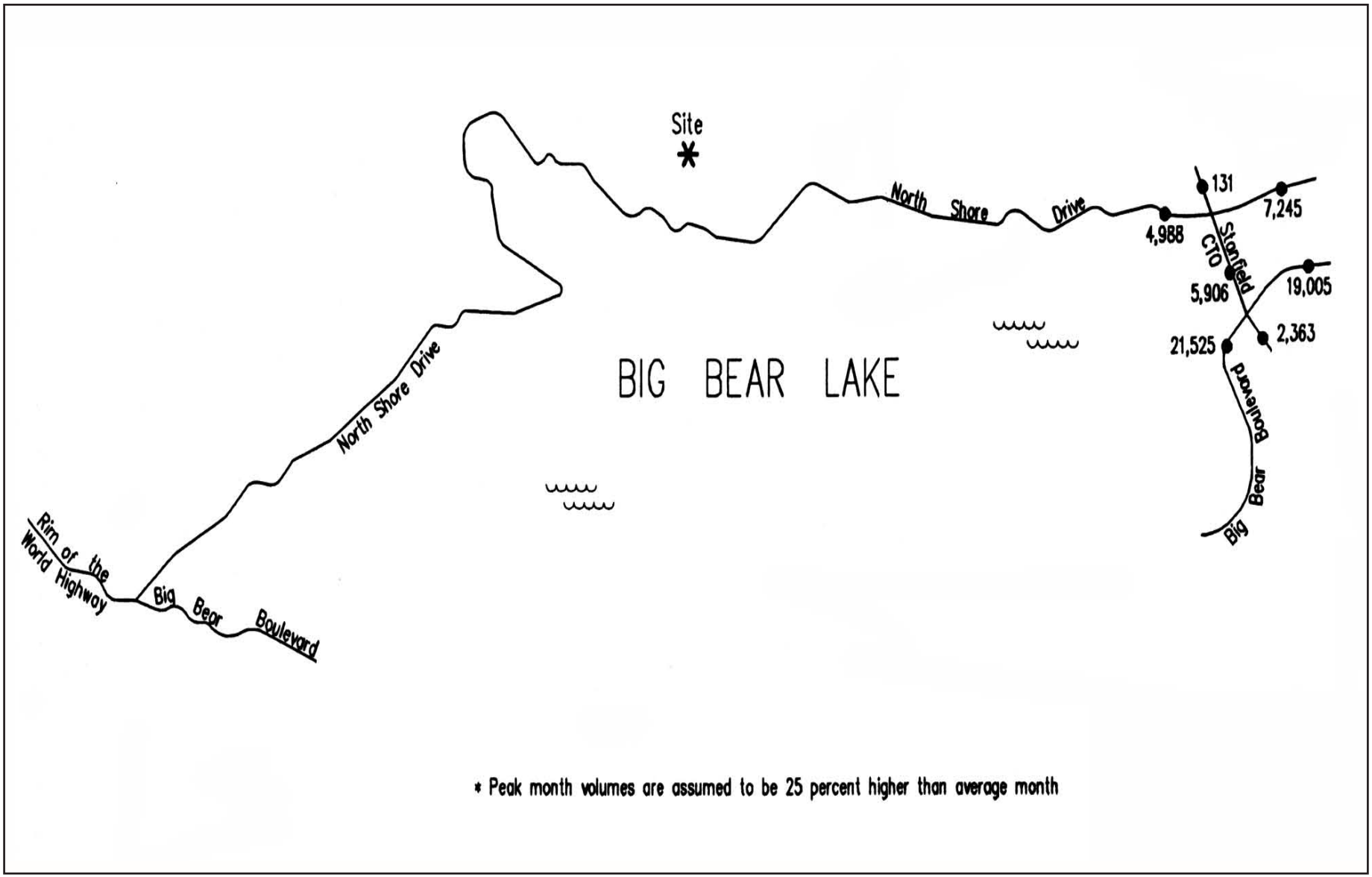
To assess future traffic conditions, project traffic is combined with existing traffic and traffic from other surrounding development. The *Traffic Analysis* report contains analysis on the "existing plus other development traffic conditions" in 2006 (refer to Section 7 of the *Traffic Analysis* report). Exhibit 5.5-8, *Year 2006 Daily Traffic Volumes - Peak Month*, illustrates traffic conditions including other anticipated development with the project. Table 5.5-7, *Daily Leg Volume Calculations*, shows the calculations of intersection leg daily traffic volumes. To account for growth which can be expected in the area, a growth rate of 1 percent per year compounded annually for five years is assumed. The total compounded growth over 5 years is 5 percent. The basis of this growth rate assumption is the County of San Bernardino.

As shown on Exhibit 5.5-8, the daily traffic volumes on State Route 38, east of the project site and west of Stanfield Cutoff, is 4,988. The volumes on Stanfield Cutoff are 5,906, which include traffic distributed from State Route 38 and Big Bear Boulevard. The highest traffic volumes are on Big Bear Boulevard, with volumes of 21,525 west of Stanfield Cutoff and volumes east of Stanfield Cutoff of 19,005.

The Kunzman traffic report contains plots of the cumulative conditions peak hour intersection turning movement volumes and number of intersection through and turning movement lanes. Additionally, the same plots show the peak hour leg approach volumes and two-way peak hour leg volumes.

Traffic Signal Warrants - Year 2006

Traffic signals would not be warranted at the intersection of Stanfield Cutoff and North Shore Drive based on Rural Warrants. Refer to discussion under "Traffic Signal Warrants" under Impact Statement 5.5-1 for the applicability of Rural Warrants.



Source: Kunzman Associates, June 25, 2003.

Exhibit 5.5-8

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Year 2006 Daily Traffic Volumes - Peak Month

Table 5.5-7
Daily LEG Volume Calculations

Intersection	Intersection Leg	Project Added Daily Leg Volume	Existing Year 2001		Year 2006		Year 2025	
			Existing Daily Volumes	With Project Volumes	Existing Plus Background Growth Daily Volumes	With Project Volumes	Existing Plus Background Growth Daily Volumes	With Project Volumes
1. Stanfield Cutoff (NS) and	North	0	100	100	105	105	124	124
North Shore Drive (EW)	South	667	4,500	5,167	4,725	5,392	5,580	6,247
	East	0	4,500	4,500	4,725	4,725	5,580	5,580
Average Month	West	667	2,100	2,767	2,205	2,872	2,604	3,271
2. Stanfield Cutoff (NS) and Big	North	667	4,500	5,167	4,725	5,392	5,580	6,247
Bear Boulevard (EW)	South	0	1,800	1,800	1,890	1,890	2,232	2,232
	East	400	13,800	14,200	14,490	14,890	17,112	17,512
Average Month	West	267	16,900	17,167	17,745	18,012	20,956	21,223
1. Stanfield Cutoff (NS) and	North	0	125	125	131	131	155	155
North Shore Drive (EW)	South	667	6,000	6,667	6,300	6,967	7,440	8,107
	East	0	6,000	6,000	6,300	6,300	7,440	7,440
Peak Month	West	667	2,700	3,367	2,835	3,502	3,348	4,015
2. Stanfield Cutoff (NS) and Big	North	667	6,000	6,667	6,300	6,967	7,440	8,107
Bear Boulevard (EW)	South	0	2,200	2,200	2,310	2,310	2,728	2,728
	East	400	17,300	17,700	18,165	18,565	21,452	21,852
Peak Month	West	267	21,100	21,367	22,155	22,422	26,164	26,431

NOTE: Background Growth Rate is assumed to be as follows in percent: 1.000

From Year 2001 to Year 2006 is 5 years. the calculated simple growth factor is : 1.050

From Year 2001 to Year 2025 is 24 years. The calculated simple growth factor is: 1.240

It should be noted that signals should be installed only when warranted and that installation of unwarranted signals can increase accident potential, energy consumption, and air pollutant emissions, while costing governmental jurisdictions approximately $500 per month for maintenance and utilities.

Existing Plus Other Development Level of Service – Year 2006

From the Intersection Delay analysis, the intersection Level of Service (LOS) can be determined. LOS is directly related to Intersection Delay. Table 5.5-2 shows how LOS is related to Intersection Delay, and describes LOS.

From Table 5.5-1, it can be seen that all intersections in the vicinity of the site operate at a LOS E or better for existing plus other development peak hour traffic conditions based on delay. However, as previously noted, the intersection of Stanfield Cutoff and Big Bear Boulevard currently operates at an intersection capacity utilization greater than 100 percent in the peak month weekday evening peak hour. As stated under the existing plus project impact analysis, the solution is to convert the eastbound right turn lane to an eastbound through lane through the intersection.

Existing Plus Project Plus Other Development Traffic Conditions – Year 2006

Additional development is presently planned in the vicinity of the site. To assess future traffic conditions, project traffic is combined with existing traffic and traffic from other surrounding development. Exhibit 5.9-9, *Year 2006 Plus Project Daily Traffic Volumes – Peak Month*, illustrates traffic conditions including other planned development with the project.

As shown on Exhibit 5.5-9, *Year 2006 Plus Project Daily Traffic Volumes*, on State Route 38, east of the project site and west of Stanfield Cutoff, is 5655. The volumes on Stanfield Cutoff are 6573 which include traffic distributed from State Route 38 and Big Bear Boulevard. The highest traffic volumes are on Big Bear Boulevard with volumes of 21,792 west of Stanfield Cutoff and volumes east of Stanfield Cutoff of west of Stanfield Cutoff and volumes east of Stanfield Cutoff of 19,405.

Cumulative Conditions Level of Service – Year 2006

From the Intersection Delay analysis, the intersection Level of Service (LOS) can be determined. LOS is directly related to Intersection Delay. Table 5.5-4 shows how LOS is related to Intersection Delay, and describes LOS.

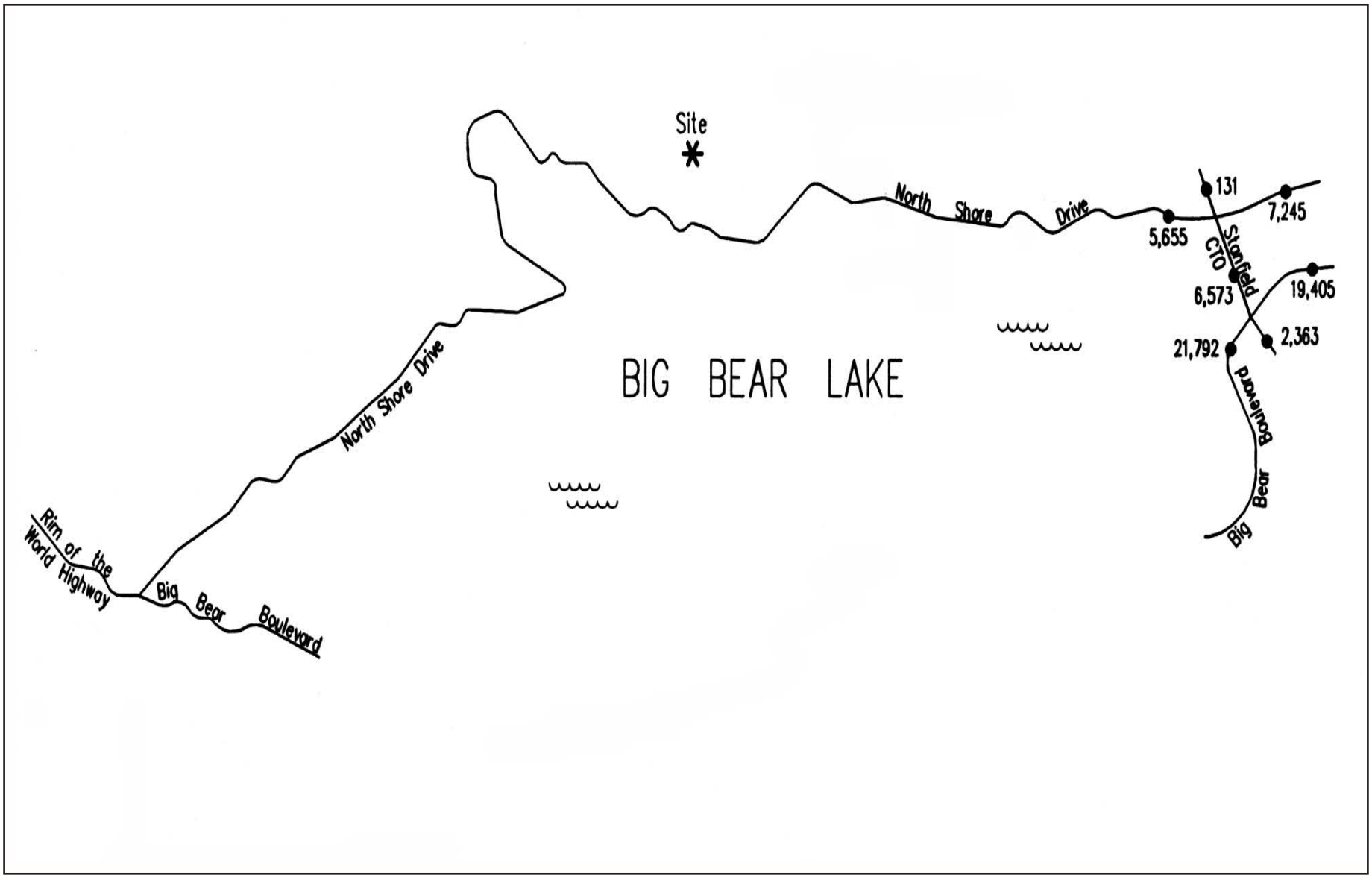
From Table 5.5-1, it can be seen that all intersections in the vicinity of the site operate at LOS F or better for cumulative peak hour traffic conditions based on delay. However, as noted, the intersection of Stanfield Cutoff and Big Bear Boulevard currently operates at an intersection capacity utilization greater than 100 percent in the peak month weekday evening peak hour. The solution is to convert the eastbound right turn lane to an eastbound through lane through the intersection.

YEAR 2025 TRAFFIC ANALYSIS

5.5-3 *Project implementation, with year 2025 traffic conditions, would result in an increase in traffic volumes. Analysis has concluded that implementation of recommended mitigation measures would reduce impacts to the intersection of Stanfield Cutoff/Big Bear Boulevard and Stanfield Cutoff/North Shore Drive to a less than significant level.*

To assess future traffic conditions, project traffic is combined with existing traffic and traffic from other surrounding development. Exhibit 5.5-10, *Year 2025 Plus Project Daily Traffic Volumes - Peak Month*, illustrates traffic conditions including other anticipated development with the project. Table 5.5-8 shows the calculations of intersection leg daily traffic volumes. To account for growth which can be expected in the area, a growth rate of one percent per year compounded annually for 24 years has been assumed. The total compounded growth over 24 years is 24 percent. The basis of this growth rate assumption can be found in Table 5.5-1. To note, the *Traffic Analysis* report contains analysis on the "existing plus other development traffic conditions" in 2025 (refer to Section 9 of the *Traffic Analysis* report).

As shown on Exhibit 5.5-10, the traffic volume on State Route 38, east of the project site and west of Stanfield Cutoff, is 5,890. The traffic volume on Stanfield Cutoff is 6,975, which includes traffic distributed from State Route 38 and Big Bear Boulevard.



Source: Kunzman Associates, June 25, 2003.

Exhibit 5.5-9

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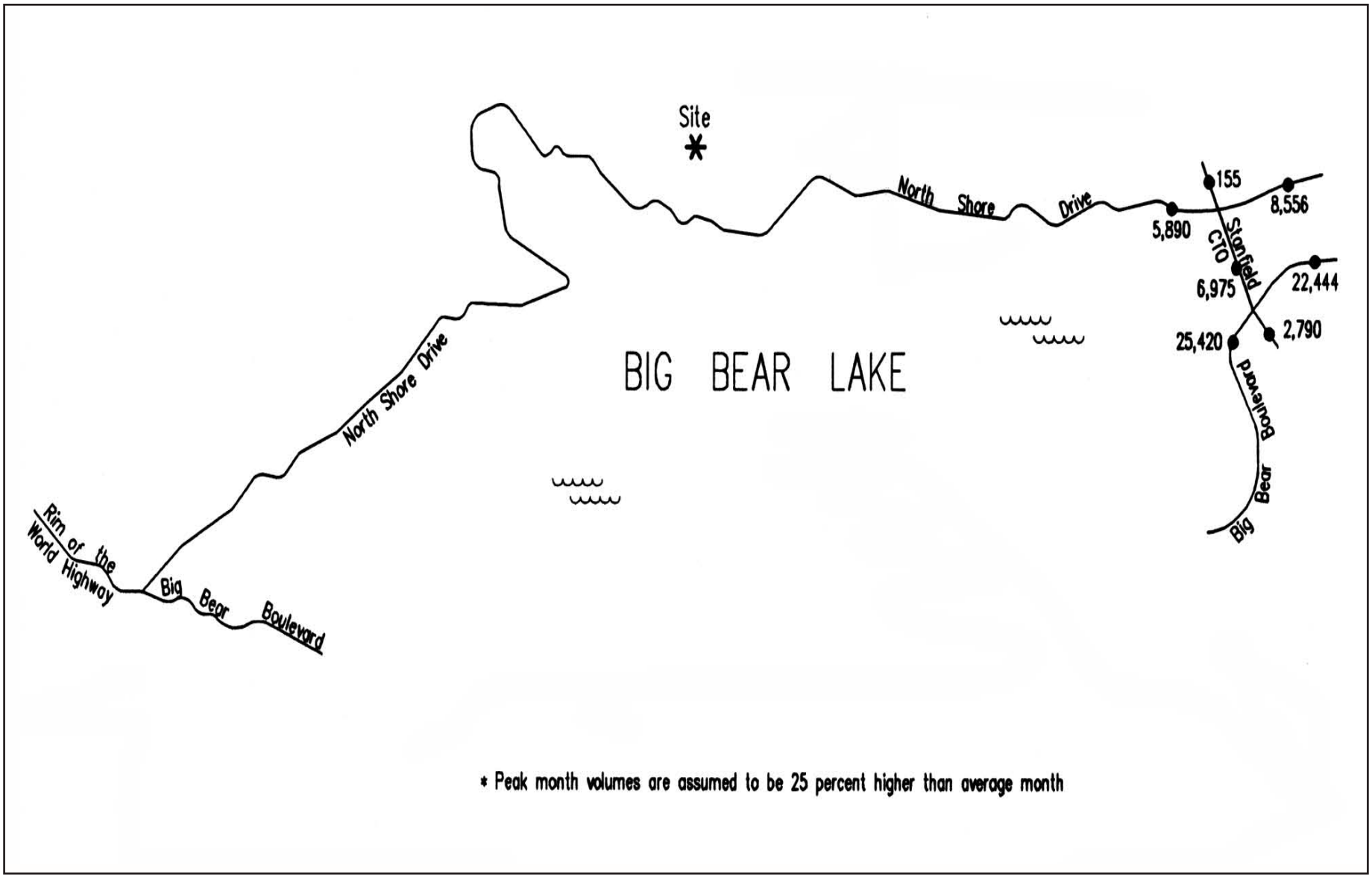
ENVIRONMENTAL IMPACT REPORT

Year 2006 Plus Project Daily Traffic Volumes - Peak Month



Source: Kunzman Associates, June 25, 2003.

Exhibit 5.5-10

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12/05 JN 10-101901

MOON CAMP TT #16136
ENVIRONMENTAL IMPACT REPORT

Year 2025 Daily Traffic Volumes - Peak Month

The highest traffic volumes are contained on Big Bear Boulevard, with a traffic volume of 25,420 west of Stanfield Cutoff, and a traffic volume of 22,444 east of Stanfield Cutoff.

The Kunzman traffic report contains plots of the cumulative conditions peak hour intersection turning movement volumes and number of intersection through and turning movement lanes. Additionally, the same plots show the peak hour leg approach volumes and two-way peak hour leg volumes.

Traffic Signal Warrants - Year 2025

Traffic signals would be required at the intersection of Stanfield Cutoff and North Shore Drive based on Rural Warrants. The applicability of Rural Warrants was previously discussed. Refer to discussion under "Traffic Signal Warrants" under Impact Statement 5.5-2 for the applicability of Urban Warrants.

Cumulative Conditions Intersection Delay and Level of Service - Year 2025

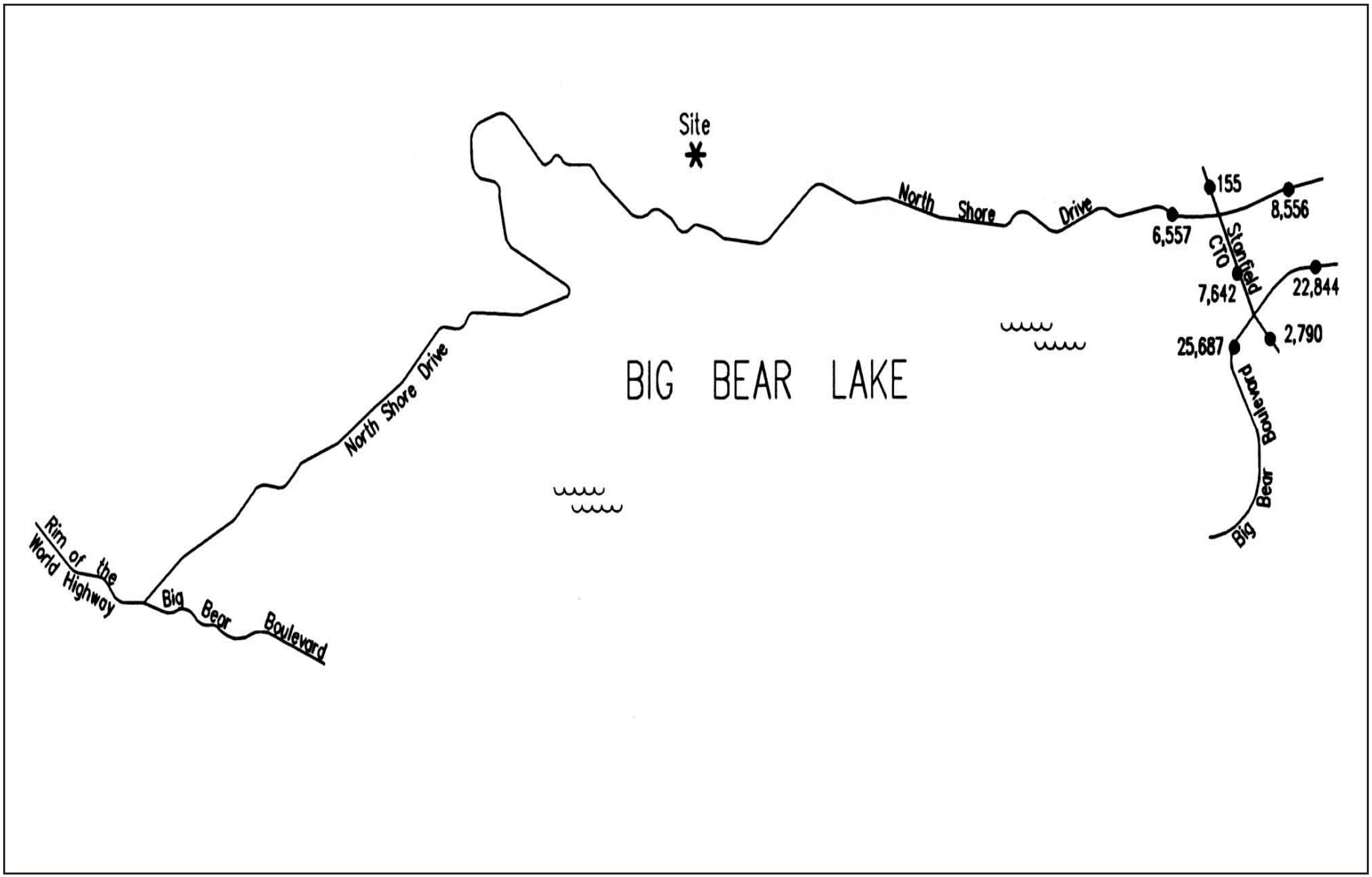
Table 5.5-3 shows the Intersection Delay for cumulative traffic conditions in 2025. Appendix B of the *Traffic Analysis* report contains the Intersection Delay calculations. From the Intersection Delay analysis, the intersection Level of Service (LOS) can be determined. Table 5.5-4 shows how LOS is related to Intersection Delay, and describes LOS. As shown in Table 5.5-3, the analysis for Year 2025 "Peak Month With Project" traffic conditions evaluates the intersection of Stanfield Cutoff/Big Bear Boulevard under four different scenarios. The four scenarios are as follows:

- AM Peak Hour - Existing Lane Configuration
- PM Peak Hour – Restriped Lane Configuration
- AM Peak Hour – Existing Lane Configuration
- PM Peak Hour – Restriped Lane Configuration

As shown in Table 5.5-2 and 5.5-3, the intersection of Stanfield Cutoff/Big Bear Boulevard would operate at a LOS E or better for existing plus other development peak hour traffic conditions based on delay. However, as previously noted, the intersection of Stanfield Cutoff and Big Bear Boulevard currently operates at an intersection capacity utilization greater than 100 percent in the peak month weekday evening peak hour. The solution is to convert the eastbound right turn lane to an eastbound through lane through the intersection.

Existing Plus Project Plus Other Development Traffic Conditions – Year 2005

Additional development is presently planned in the vicinity of the site. To assess future traffic conditions, project traffic is combined with existing traffic and traffic from other surrounding development. Exhibit 5.5-11, *Year 2025 Plus Project Daily Traffic Volumes – Peak Month*, illustrates traffic conditions including other planned development with the project.



Source: Kunzman Associates, June 25, 2003.

Exhibit 5.5-11

RBF CONSULTING

PLANNING ■ DESIGN ■ CONSTRUCTION

12/05 JN 10-101901

MOON CAMP TT #16136
ENVIRONMENTAL IMPACT REPORT

Year 2025 Plus Project Daily Traffic Volumes - Peak Month

As shown on Exhibit 5.5-11, Year 2025 Plus Project Daily Traffic Volumes on State Route 38, east of the Project site and west of Stanfield Cutoff is 6,557. The volumes on Stanfield Cutoff are 7,642 which include traffic distributed from State Route 38 and Big Bear Boulevard with volumes of 25,687 west of Stanfield Cutoff and volumes east of Stanfield Cutoff of 22,844.

Appendix B contains the Intersection Delay calculations. An explanation of Intersection Delay and how it is calculated is also included in Appendix B.

Cumulative Conditions Levels of Service – 2025

From the Intersection Delay analysis, the intersection Level of Service (LOS) can be determined. LOS is directly related to Intersection Delay. Table 5.5-4 shows how LOS is related to Intersection Delay, and describes LOS.

From Table 5.5-3, it can be seen that the intersection of Stanfield Cutoff and Big Bear Boulevard operates at LOS F, with or without the project, without mitigation measures, whether using the Delay method or the ICU method. To accommodate year 2006 traffic, it is recommended that the eastbound right turn lane be converted to an eastbound through lane through the intersection. This mitigation measure also solves the 2025 traffic conditions.

The project does not have a significant impact on this intersection based on the thresholds of significance described. It therefore is not required to help mitigate this deficiency.

Traffic Signal Warrants – Year 2025

Traffic signals will be warranted with or without the project at the intersection of Stanfield Cutoff and North Shore Drive based on Rural Warrants. The applicability of Rural Warrants was previously discussed.

Pro Rata Share of Off-Site Improvement Costs

Although the project does not significantly impact the intersection of Stanfield Cutoff and North Shore Drive, nor the intersection of Stanfield Cutoff and Big Bear Boulevard per the thresholds discussed, the County of San Bernardino has requested that a pro-rata share of the cost of offsite mitigation measures be calculated.

Specifically, for Stanfield Cutoff and North Shore Drive, the traffic signal is estimated by the County to cost $250,000. The sum of the peak month leg volumes today is 17,400. The sum of the leg volumes in 2025 without the project is 21,576. The project adds 1220 vehicles per day to the intersection leg volumes. The project's pro rata share is calculated as follows: 1220/(21,576+1220-17,400), or 22.61 percent of $250,000. The project's pro-rata share of the off-site improvement cost is $56,523.

Specifically, for Stanfield Cutoff and Big Bear Boulevard, the eastbound right turn lane needs to be converted to an eastbound through lane. This will involve adding pavement on the north side of the west leg of the intersection. It is estimated the

amount of pavement needed is 12 feet wide by 300 feet long, plus a 600 foot 50 to 1 transition from the 12 feet added width back to zero feet added. This will involve 7,200 square feet of pavement at an estimated cost of $10 per square foot, or $72,000. The $10.00 per square foot is equivalent to $1.27 million for one lane mile in each direction. The sum of the peak month leg volumes today is 46,475. The sum of the leg volumes in 2025 without the project is 57,629. The project adds 1220 vehicles per day to the intersection leg volumes. The project's pro rata share is calculated as follows: 1220/(57,629+1220-46,475), or 9.86 percent of $180,000. The project's pro-rata share of the offsite improvement cost is $17,748.

SAFETY HAZARDS AND EMERGENCY ACCESS

5.5-4 *Project implementation may increase hazards to vehicles, pedestrians and bicyclists due to the proposed project. Analysis has concluded that with implementation of the recommended mitigation measures, impacts would be less than significant.*

The project would have access from State Route 38, which is the primary roadway serving the north shore area. The project includes the realignment of this Highway. The realignment would occur in two phases, with construction of the new alignment completed before the existing alignment is demolished in order to eliminate the potential for hampering emergency response activity or evacuation plans. The project would include two interior roads, accessible from State Route 38. Per the analysis contained in the *Traffic Analysis* report, the following conclusions have been made regarding internal circulation and potential safety hazards:

- Site Access. To assure smooth traffic operations for vehicles entering and exiting the site, a 150 foot left turn pocket on is recommended on North Shore Drive at each project access location. The County of San Bernardino has suggested that it should be a continuous left turn pocket across the frontage of the property. Because it is a State Highway, Caltrans would need to decide which they prefer.

  A STOP sign should be installed to control outbound traffic on all site access roadways to North Shore Drive. With more than one driveway, good emergency access is assured because there are two ways of reaching any point within the site. Maintain a high level of service along arterials by restricting parking and controlling roadway access.

  Landscape plantings and signs should be limited to 36 inches in height within 25 feet of project driveways to assure good visibility.

  As is the case for any roadway design, the County should periodically review traffic operations in the vicinity of the project once the project is constructed to assure that the traffic operations are satisfactory.

- Internal Roadway Sizing. To identify future internal circulation needs to the project, future traffic volumes for internal roadways of the project have been determined. The maximum volume is approximately 400 vehicles per day, for which is a two-lane road is satisfactory.

- Internal Circulation. The traffic circulation internal to the proposed project has been reviewed from a traffic engineering viewpoint, and the findings are as follows:

  - Cul-de-sac Lengths: None of the cul-de-sacs have excessive length, which is important for emergency equipment access.

  - Four-Legged Intersections: On arterials, four legged intersections are desirable to reduce turning movements, and expedite traffic movement. On local streets, four legged intersections are undesirable. The proposed project has no four legged intersections on local streets.

  - Distance Between Intersections: It is desirable to place intersections at least two hundred feet apart. All intersections are at least 200 feet apart.

  - Grades: All grades are 10 percent or less, which is satisfactory.

  - Intersection Angle: Intersections at other than 90 degrees are undesirable. All intersecting streets are perpendicular to one another.

  - Visibility: All intersections are designed to afford adequate visibility.

It is concluded that the internal circulation is satisfactory in all aspects.

The *Traffic Analysis* report recommends mitigation measures to assure satisfactory traffic operations and good visibility. Implementation of the recommended mitigation measures would reduce potentially significant impacts to less than significant levels.

MITIGATION MEASURES

This section directly corresponds to the identified Impact Statements in the impacts subsection.

EXISTING CONDITIONS WITH PROJECT TRAFFIC ANALYSIS

5.5-1 For existing traffic conditions, the intersection of Stanfield Cutoff and Big Bear Boulevard currently requires the eastbound right turn lane to be converted to an eastbound through lane, through the intersection. The eastbound right turn lane is restricted to an eastbound through lane, and involves roadway widening. The project's pro rata share of these off-site road improvements is estimated to be $17,748.

YEAR 2006 TRAFFIC ANALYSIS

5.5-2 Refer to Mitigation Measure 5.5-1. No additional mitigation measures are recommended.

YEAR 2025 TRAFFIC ANALYSIS

5.5-3 For future traffic conditions, the intersection of Stanfield Cutoff and North Shore Drive shall require a traffic signal. The project's pro rata share of the signal is $56,523.

SAFETY HAZARDS AND EMERGENCY ACCESS

5.5-4a Parking shall be restricted on State Route 38.

5.5-4b A 150-foot eastbound left turn pocket shall be striped for traffic on North Shore Drive turning left into the project entry locations.

5.5-4c For future traffic conditions, intersection geometrics as recommended in Table 1b of the Kunzman Associates June 2003 *Traffic Analysis* report, shall be implemented.

5.5-4d All streets internal to the project shall be constructed to full ultimate cross-sections. ~~as adjacent development occurs.~~

5.5-4e A STOP sign shall be installed to control outbound traffic on all site access roadways onto North Shore Drive.

5.5-4f The County of San Bernardino shall periodically review traffic operations in the vicinity of the site once the project is constructed in order to assure that the traffic operations are satisfactory.

5.5-4g Landscape plantings and signs shall be limited to 36 inches in height within 25 feet of project driveways to assure good visibility.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

Following implementation of recommended mitigation measures, Traffic and Circulation impacts would be reduced to a less than significant level.

5.6 AIR QUALITY

This Section evaluates air quality impacts associated with short construction and long-term buildout of the Moon Camp Project. Information in this Section is based primarily on the *CEQA Air Quality Handbook*, prepared by the South Coast Air Quality Management District (SCAQMD), April 1993 (as revised through November 1993), Air Quality Data (SCAQMD 1999 through 2003); the *Final Air Quality Management Plan*, prepared by the South Coast Air Quality Management District (August 2003); and the *Fawnskin 92-Dwellings Traffic Analysis*, prepared by Kunzman Associates, September 2003.

EXISTING CONDITIONS

SOUTH COAST AIR BASIN

The South Coast Air Basin (Basin), in which the Community of Fawnskin is located, is characterized as having a "Mediterranean" climate (a semi-arid environment with mild winters, warm summers and moderate rainfall). The Basin is a 6,600-square mile area bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the San Gorgonio Pass area in Riverside County. Its terrain and geographical location determine the distinctive climate of the Basin, as the Basin is a coastal plain with connecting broad valleys and low hills.

The general region lies in the semi-permanent high-pressure zone of the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. The usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. The extent and severity of the air pollution problem in the Basin is a function of the area's natural physical characteristics (weather and topography), as well as man-made influences (development patterns and lifestyle). Factors such as wind, sunlight, temperature, humidity, rainfall and topography all affect the accumulation and/or dispersion of pollutants throughout the Basin.

CLIMATE

The climate in the basin is characterized by moderate temperatures and comfortable humidities with precipitation limited to a few storms during the winter season (November through April). The average annual temperature varies little throughout the Basin, averaging 75 degrees Fahrenheit. However, with a less pronounced oceanic influence, the eastern inland portions of the Basin show greater variability in annual minimum and maximum temperatures. All portions of the Basin have had recorded temperatures over 100 degrees in recent years. January is usually the coldest month at all locations while July and August are usually the hottest months of the year. Although the Basin has a semi-arid climate, the air near the surface is moist because of the presence of a shallow marine layer. Except for infrequent periods when dry, continental air is brought into the Basin by off-shore winds, the ocean effect is dominant. Periods with heavy fog are frequent; and low stratus

clouds, occasionally referred to as “high fog” are a characteristic climate feature. Annual average relative humidity is 70 percent at the coast and 57 percent in the eastern part of the Basin. Precipitation is typically 9 to 14 inches annually in the Basin and is rarely in the form of snow or hail due to typically warm weather. The frequency and amount of rainfall is greater in the coastal areas of the Basin.

More specifically, the Community of Fawnskin enjoys an Alpine climate. The community is located in an area that intercepts water-laden clouds which can result in rainfall and/or snow of up to 35 to 45 inches. Precipitation at Big Bear Lake’s National Weather Service station from 1960 to 1995 averaged about 18 inches for each six-month period from October to March. The areas watershed is mountainous with steep upper slopes leading to a mildly sloping valley. The coolest month of the year is January with a mean monthly temperature of 32.4°F. The warmest month is July with a mean monthly temperature of 63.8°F.

SUNLIGHT

The presence and intensity of sunlight are necessary prerequisites for the formation of photochemical smog. Under the influence of the ultraviolet radiation of sunlight, certain original, or “primary” pollutants (mainly reactive hydrocarbons and oxides of nitrogen) react to form “secondary” pollutants (primarily oxidants). Since this process is time dependent, secondary pollutants can be formed many miles downwind from the emission sources. Because of the prevailing daytime winds and time-delayed nature of photochemical smog, oxidant concentrations are highest in the inland areas of Southern California. However, a majority of the smog in the Big Bear Valley is created by the transport of pollutants from Los Angeles, Riverside and San Bernardino Counties as opposed to local sources.

TEMPERATURE INVERSIONS

Under ideal meteorological conditions and irrespective of topography, pollutants emitted into the air would be mixed and dispersed into the upper atmosphere. However, the Southern California region frequently experiences temperature inversions in which pollutants are trapped and accumulate close to the ground. The inversion, a layer of warm, dry air overlaying cool, moist marine air, is a normal condition in the southland. The cool, damp and hazy sea air capped by coastal clouds is heavier than the warm, clear air that acts as a lid through which the marine layer cannot rise. The height of the inversion is important in determining pollutant concentration. When the inversion is approximately 2,500 feet above sea level, the sea breezes carry the pollutants inland to escape over the mountain slopes or through the passes. At a height of 1,200 feet, the terrain prevents the pollutants from entering the upper atmosphere, resulting in a settlement in the foothill communities. Below 1,200 feet, the inversion puts a tight lid on pollutants, concentrating them in a shallow layer over the entire coastal basin. Usually, inversions are lower before sunrise than during the daylight hours. Mixing heights for inversions are lower in the summer and more persistent, being partly responsible for the high levels of ozone observed during summer months in the Basin. Smog in Southern California is generally the result of these temperature inversions combining with coastal day winds and local mountains to contain the pollutants for long periods of time, allowing

them to form secondary pollutants by reacting with sunlight. The Basin has a limited ability to disperse these pollutants due to typically low wind speeds.

The area in which the Community of Fawnskin is located offers approximately 300 days/year of clear skies and sunshine, however, it is still susceptible to air inversions. This traps a layer of stagnant air near the ground where it is further loaded with pollutants. These inversions cause haziness, which is caused by moisture, suspended dust, and a variety of chemical aerosols emitted by trucks, automobiles, furnaces and other sources.

AMBIENT AIR QUALITY STANDARDS

National air quality policies are regulated through the Federal Clean Air Act (FCAA) of 1970 and its 1977 and 1990 amendments. Pursuant to the CAA, the United States Environmental Protection Agency (EPA) has established National Ambient Air Quality Standards (NAAQS) for six air pollutants: carbon monoxide (CO), ozone (O_3), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter (PM_{10}) and lead (Pb). These pollutants are referred to as criteria pollutants because numerical criteria have been established for each pollutant, which define acceptable levels of exposure. The EPA has revised the NAAQS several times since their original implementation and will continue to do so as the health effects of exposure to air pollution are better understood. The federal 1-hour ozone standard will remain in effect until the EPA formally implements the 8-hour standard.

Under the 1977 amendments to the FCAA, states with air quality that did not achieve the NAAQS were required to develop and maintain State Implementation Plans (SIPs). These plans constitute a federally enforceable definition of the states approach (or "plan") and schedule for the attainment of the NAAQS. Air quality management areas were designated as "attainment," "non-attainment" or "unclassified" for individual pollutants depending on whether or not they achieve the applicable NAAQS and CAAQS for each pollutant. In addition, California can designate areas as transitional. It is important to note that because the NAAQS and CAAQS differ in many cases, it is possible for an area to be designated attainment by the EPA (meets NAAQS) and non-attainment by the California Air Resources Board (CARB) (does not meet CAAQS) for the same pollutant.

Areas that were designated as non-attainment in the past, but have since achieved the NAAQS, are further classified as attainment-maintenance. The maintenance classification remains in effect for 20 years from the date that the area is determined by the EPA to meet the NAAQS. There are numerous classifications of the non-attainment designation, depending on the severity of non-attainment. For example, the O_3 non-attainment designation has seven subclasses: transitional, marginal, moderate, serious, severe-15, severe-17, and extreme. Areas that lack monitoring data are designated as unclassified areas. Unclassified areas are treated as attainment areas for regulatory purposes.

Table 5.6-1
Local Air Quality Levels

Pollutant	California Standard	Federal Primary Standard	Year	Maximum[3] Concentration	# of Days State Std. Exceeded	# of Days Federal Std. Exceeded
Carbon Monoxide[2]	9.0 ppm for 8 hour	9.0 ppm for 8 hour	1999 2000 2001 2002 2003	4.1 ppm 4.1 3.3 3.2 4.5	0 0 0 0 0	0 0 0 0 0
Ozone[1] (8 Hours)	NA	0.08 ppm for 8 hours	1999 2000 2001 2002 2003	0.14 ppm 0.15 0.14 0.14 0.14	NA NA NA NA NA	82 64 74 82 71
Ozone[1] (Hourly)	0.09 ppm for 1 hour	0.12 ppm for 1 hour	1999 2000 2001 2002 2003	0.17 ppm 0.18 0.17 0.16 0.16	93 85 18 91 84	30 18 26 22 34
Nitrogen Dioxide[2]	0.25 ppm for 1 hour	NA	1999 2000 2001 2002 2003	0.14 ppm 0.11 0.11 0.11 0.10	0 0 0 0 0	0 0 0 0 0
Particulate Matter (PM_{10})[1, 4, 5]	50 $\mu g/m^3$ for 24 hours	150 $\mu g/m^3$ for 24 hours	1999 2000 2001 2002 2003	47.0 $\mu g/m^3$ 49.0 74.0 52.0 47.0	0 0 2 5 0	0 0 0 0 0
Fine Particulate Matter ($PM_{2.5}$)[2,5]	65 $\mu g/m^3$ for 24 hours	65 $\mu g/m^3$ for 24 hours	1999 2000 2001 2002 2003	121.4 $\mu g/m^3$ 89.8 78.5 82.1 58.4	NA NA NA NA NA	4 2 5 3 0

ppm = parts per million
$\mu g/m^3$ = micrograms per cubic meter
NA = not applicable
PM_{10} = particulate matter 10 microns in diameter or less
$PM_{2.5}$ = particulate matter 2.5 microns in diameter or less
NM = not measured

NOTES:
1. Crestline Station, 24171 Lake Drive, Crestline, California. Located approximately 19 miles west of the project site.
2. San Bernardino Station, 24302 East 4th Street, San Bernardino, California. Located approximately 18 miles southwest of the project site.
3. Maximum concentration is measured over the same period as the California Standard.
4. PM_{10} exceedances are based on state thresholds established prior to amendments adopted on June 20, 2002.
5. PM_{10} and $PM_{2.5}$ exceedances are derived from the number of samples exceeded, not days.

Source: *ADAM Air Quality data Statistics*, California Air Resources Board, http://www.arb.ca.gov/adam/welcome.html

Despite implementing many strict controls, the SCAB still fails to meet the Federal air quality standards for three of the criteria pollutants: O_3, CO and PM_{10}. For State standards, the SCAB is designated as non-attainment for O_3 and PM_{10}.[1] Atmospheric concentrations of the other criteria pollutants do not exceed State or Federal standards.

[1] California Air Resources Board, *Proposed Amendments to the Area Designation Criteria and Area designations for State Ambient Air Quality Standards*, December 5, 2003.

ATTAINMENT STATUS

LOCAL AMBIENT AIR QUALITY

The SCAQMD operates several air quality monitoring stations within the Basin. The following air quality information briefly describes the various types of pollutants that are found within the South Coast Air Basin. Additionally, Table 5.6-2, *Air Pollution Sources, Effects and Standards,* provides information on the primary health related effects of the criteria pollutants.

Carbon Monoxide (CO)

CO is an odorless, colorless toxic gas that is formed by the incomplete combustion of fuels. Motor vehicles are by far the largest source of CO in the Basin. At high concentrations, CO can reduce the oxygen-carrying capacity of the blood and cause headaches, dizziness, unconsciousness, and even death. CO also aggravates cardiovascular disease. For CO, the subject portion of the Basin is designated as an attainment area for State standards, however, as a non-attainment area for Federal standards.

Ozone (O_3)

Ground-level ozone, often referred to as smog, is not emitted directly, but is formed in the atmosphere through complex chemical reactions between NO_X and reactive organic gases (ROG) in the presence of sunlight. The principal sources of NO_X and ROG, often termed ozone precursors, are combustion processes (including motor vehicle engines) and evaporation of solvents, paints and fuels. Motor vehicles are the single largest source of O_3 precursor emissions in the SCAQMD. Exposure to O_3 can cause eye irritation, aggravate respiratory diseases and damage lung tissue, as well as damage vegetation and reduce visibility. The entire Basin is designated as a non-attainment area for State and Federal O_3 standards.

Oxides of Nitrogen (NO_X or Nitrogen Dioxide (NO_2))

NO_2, often used interchangeably with NO_X, is a reddish-brown gas that can cause breathing difficulties at high levels. Peak readings of NO_2 occur in areas that have a high concentration of combustion sources (e.g., motor vehicle engines, power plants, refineries, and other industrial operations) in the vicinity. The entire Basin is designated as an attainment area for State and Federal NO_2 standards.

Oxides of Sulfur (SO_X or Sulfur Dioxide (SO_2))

Sulfur Dioxide (SO_2) is a colorless, irritating gas with a “rotten egg” smell formed primarily by the combustion of sulfur-containing fossil fuels. Lead is a metal that is a natural constituent of air, water and the biosphere. Lead is neither created nor destroyed in the environment, so it essentially persists forever. Sulfur dioxide is often used interchangeably with sulfur oxides (SO_X) and lead (Pb). Sulfur dioxide levels in all areas of the Basin do not exceed Federal or State standards. The Basin is designated as attainment for both State and Federal SO_2 standards. Since

ambient concentrations of lead have decreased in the Basin, the SCAQMD no longer monitors the presence of lead in ambient air.

Table 5.6-2
Air Pollution Sources, Effects and Standards

Air Pollutant	State Standard	Federal Primary Standard	Sources	Primary Effects
Ozone (O_3)	0.09 ppm, 1-hour average	0.08 ppm, 8-hour average	Atmospheric reaction of organic gases with nitrogen oxides in sunlight	Aggravation of respiratory and cardiovascular diseases, irritation of eyes, impairment of cardiopulmonary function, plant leaf injury
Carbon Monoxide (CO)	9.0 ppm, 8-hour average 20 ppm, 1-hour average	9.5 ppm, 8-hour average 35 ppm, 1-hour average	Incomplete combustion of fuels and other carbon-containing substances such as motor vehicle exhaust, natural events, such as decomposition of organic matter	Reduced tolerance for exercise, impairment of mental function, impairment of fetal development, death at high levels of exposure, aggravation of some heart diseases (angina)
Nitrogen Dioxide (NO_2)	0.25 ppm, 1-hour average	0.0534 ppm, annual avg.	Motor vehicle exhaust, high-temperature stationary combustion, atmospheric reactions	Aggravation of respiratory illness, reduced visibility, reduced plant growth, formation of acid rain
Sulfur Dioxide (SO_2)	0.25 ppm, 1-hr. avg. 0.04 ppm, 24-hr. avg. with ozone > = 0.10 ppm, 1 hr. avg. or TSP > = 100 μg/m^3, 24-hr. avg.	0.03 ppm, annual arithmetic mean 0.14 ppm, 24-hour average	Combustion of sulfur-containing fossil fuels, smelting of sulfur-bearing metal ores, industrial processes	Aggravation of respiratory diseases (asthma, emphysema), reduced lung function, irritation of eyes, reduced visibility, plant injury, deterioration of metals, textiles, leather finishes, coatings, etc.
Fine Particulate Matter (PM10)	20 μg/m^3, annual geometric mean > 50 μg/m^3, 24-hr. avg.	PM_{10}: 50 μg/m^3, annual arithmetic mean 150 μg/m^3, 24-hr. avg.	Stationary combustion of solid fuels, construction activities, industrial processes, industrial chemical reactions	Reduced lung function, aggravation of the effects of gaseous pollutants, aggravation of respiratory and cardio-respiratory diseases, increased coughing and chest discomfort, soiling, reduced visibility
	$PM_{2.5}$: 12 μg/m^3, annual geometric mean 65 μg/m^3, 24-hr. avg.	$PM_{2.5}$: 15 μg/m^3, annual geometric mean 65 μg/m^3, 24-hr. avg.		
Lead	1.5 μg/m^3, 30-day average	1.5 μg/m^3, calendar quarter	Contaminated soil	Increased body burden, impairment of blood formation and nerve conduction
Visibility Reducing Particles	Reduces visual range to less than 10 miles at relative humidity less than 70%, 8-hour avg (9am - 5pm).			Visibility impairment on days when relative humidity is less than 70 percent

Source: *CEQA Air Quality Handbook*, South Coast Air Quality Management District, 1993, and updated with current Federal ozone and $PM_{2.5}$ standards.

Particulate Matter (PM_{10})

PM_{10} refers to suspended particulate matter which is smaller than 10 microns or ten one-millionths of a meter. PM_{10} arises from sources such as road dust, diesel soot, combustion products, construction operations and dust storms. PM_{10} scatters light and significantly reduces visibility. In addition, these particulates penetrate into lungs and can potentially damage the respiratory tract. On June 19, 2003 the CARB adopted amendments to the statewide 24-hour particulate matter standards based upon requirements set forth in the Children's Environmental Health Protection Act (Senate Bill 25). The Federal 24-hour standard of 150 $\mu g/m^3$ was retained.

Fine Particulate Matter ($PM_{2.5}$)

Due to recent increased concerns over health impacts related to fine particulate matter (particulate matter 2.5 microns in diameter or less), both State and Federal $PM_{2.5}$ standards have been created. Particulate matter impacts primarily affect infants, children, the elderly and those with pre-existing cardiopulmonary disease. In 1997, the EPA announced new $PM_{2.5}$ standards. Industry groups challenged the new standard in court and the implementation of the standard was blocked. However, upon appeal by the EPA, the U.S. Supreme Court reversed this decision and upheld the EPA's new standards. The Federal Standard is 65 $\mu g/m^3$ over an average of 24 hours.

On June 20, 2002, CARB adopted amendments for statewide annual ambient particulate matter air quality standards. These standards were revised/established due to increasing concerns by

CARB that previous standards were inadequate, as almost everyone in California is exposed to levels at or above the current State standards during some parts of the year, and the statewide potential for significant health impacts associated with particulate matter exposure was determined to be large and wide-ranging.[2] Based upon a desire to set clean air goals throughout the State, the CARB created a new annual average standard for $PM_{2.5}$ at 12 $\mu g/m^3$. Currently, the CARB has issued a staff report, which recommends that the South Coast Air Basin be designated as non-attainment for State and Federal $PM_{2.5}$ standards[3].

Volatile Organic Compounds (VOCs or Reactive Organic Gasses (ROG))

Hydrocarbon compounds are any compounds containing various combinations of hydrogen and carbon atoms that exist in the ambient air. VOCs contribute to the formation of smog and/or may themselves be toxic. VOCs often have an odor and some examples include gasoline, alcohol and the solvents used in paints. There are no specific State or Federal VOC thresholds as they are regulated by individual air districts as O_3 precursors.

[2] California Environmental Protection Agency, Air Resources Board, *Staff Report: Public Hearing to Consider Amendments to the Ambient Air Quality Standards for Particulate Matter and Sulfates,* May 3, 2002.

[3] Ibid, page 4.8-3.

Visibility

Visibility can be defined as the distance that atmospheric conditions permit a person to see at any given time. Technically, visibility is defined as the farthest distance an observer can distinguish a large black object against the horizon. Reduced visibility causes aesthetic impairment of surroundings and also interferes with aircraft operations. Visibility may be impaired by natural or man-made sources, including natural aerosols such as precipitation, fog, soil particles, volcanic emissions, vegetation, sea spray and organic decomposition products; and man-made sources such as sulfates and nitrates. The greatest contribution to visibility reduction in the Basin is from light scattering by "fine particle" aerosols with the size range of 0.1 to 2 microns (a micron is one-millionth of a meter). Based on review of available technical data provided by CARB, visibility was not measured at SCAQMD Monitoring Stations between 1999 and 2003.

Total Suspended Particulates (TSP)

Total Suspended Particulates (TSP) is the name given to the solid matter suspended in the atmosphere. Approximately 9.5 percent of TSP is generated by stationary sources. This complicated mixture of natural and man-made materials includes soils particles, biological materials, sulfates, nitrates, organic (or carbon-containing compounds) and lead. A high volume sampler is used to determine TSP concentration by passing a measured column of air through a glass fiber filter. The filter then is weighed to determine the concentration of TSP, after which it is analyzed for lead, sulfate, and nitrate by an SCAQMD laboratory. TSP tends to be at higher concentrations in the day and has an unclear seasonal pattern. High dust levels result from strong winds and loose, arid soil. Larger dust particles pose a less serious health threat than small particles produced by fossil fuel combustion. TSP monitoring was discontinued in 1991.

Lead (Pb)

In the Basin, atmospheric lead is generated almost entirely by the combustion of leaded gasoline and contributes less than one percent of the material collected as TSP in 1982. Atmospheric lead concentrations have been reduced substantially in recent years due to the lowering of average lead content in gasoline. Exceedances of the State air quality standard for lead (monthly average concentration of 1.50 ug/m^3) now are confined to the densely populated portions of San Bernardino County where vehicle traffic is greatest.

REGULATORY FRAMEWORK

FEDERAL CLEAN AIR ACT

The FCAA (1977 amendments) 42 USC 7401 *et. seq*.) state that the federal government is prohibited from engaging in, supporting, providing financial assistance for, licensing, permitting or approving any activity that does not conform to an applicable SIP. Federal actions relating to transportation plans, programs and projects developed, funded, or approved under 23 USC of the Federal Transit Act

(40 USC 1601 *et. seq*.) are covered under separate regulations for transportation conformity.

In the 1990 FCAA amendments (FCAAA), the EPA included provisions requiring federal agencies to ensure that actions undertaken in non-attainment or attainment-maintenance areas are consistent with applicable SIPs. The process of determining whether or not a Federal action is consistent with an applicable SIP is called conformity.

The EPA General Conformity Rule applies only to federal actions that result in emissions of "non-attainment or maintenance pollutants", or their precursors, in federally designated non-attainment or maintenance areas. The EPA General Conformity Rule establishes a process to demonstrate that federal actions would be consistent with applicable SIPs and would not cause or contribute to new violations of the NAAQS, increase the frequency or severity of existing violations of the NAAQS, or delay the timely attainment of the NAAQS. The emissions thresholds that trigger requirements of the conformity rule for federal actions emitting nonattainment or maintenance pollutants, or their precursors, are called *de minimus* levels. The general conformity *de minimus* thresholds are defined in 40 CFR 93.153(b). The federal General Conformity Rule does not apply to federal actions in areas designated as non-attainment of only the CAAQS.

CALIFORNIA CLEAN AIR ACT

CARB administers the air quality policy in California. The CAAQS were established in 1969 pursuant to the Mulford-Carrell Act. These standards, included with the NAAQS in Table 4.8-1, are generally more stringent and apply to more pollutants than the NAAQS. In addition to the criteria pollutants, CAAQS have been established for visibility reducing particulates, hydrogen sulfide, and sulfates. The CCAA, which was approved in 1988, requires that each local air district prepare and maintain an air quality management plan (AQMP) to achieve compliance with CAAQS. These AQMP's also serve as the basis for preparation of the SIP for the State of California.

CARB establishes policy and statewide standards and administers the State's mobile source emissions control program. In addition CARB oversees air quality programs established by State statute, such as Assembly Bill (AB) 2588, the Air Toxics "Hot Spots" Information and Assessment Act of 1987.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT (SCAQMD)

The SCAQMD is one out of 35 air quality management districts that have prepared Air Quality Management Plans (AQMPs) to accomplish the five percent annual reduction goal. The most recent AQMP was adopted in 2003. To accomplish its task, the AQMP relies on a multi-level partnership of governmental agencies at the federal, state, regional and local level.

The 2003 AQMP relies on a multi-level partnership of governmental agencies at the federal, state, regional and local level. These agencies (EPA, CARB, local governments, Southern California Association of Governments (SCAG) and the

SCAQMD are the primary agencies that implement the AQMP programs. The 2003 AQMP proposes policies and measures to achieve federal and state standards for improved air quality in the SCAB and those portions of the Salton Sea Air Basin (formerly named the Southeast Desert Air Basin) that are under SCAQMD jurisdiction.

The 2003 AQMP also addresses several state and federal planning requirements and incorporates significant new scientific data, primarily in the form of updated emissions inventories, ambient measurements, new meteorological episodes and new air quality modeling tools. The 2003 AQMP is consistent with and builds upon the approaches taken in the 1997 AQMP and the 1999 Amendments to the Ozone State Implementation Plan (SIP) for the SCAB for the attainment of the federal ozone air quality standard. However, the 2003 AQMP points to the urgent need for additional emission reductions (beyond those incorporated in the 1997/99 Plan) to offset increased emission estimates from mobile sources and meet all federal criteria pollutant standards within the time frames allowed under the Federal Clean Air Act (FCAA).

SCAG is responsible under the FCAA for determining conformity of projects, plans and programs with the SCAQMD AQMP. As indicated in the *AQMD Air Quality Analysis Guidance Handbook*, there are two main indicators of consistency:

- Whether the project would not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP; and

- Whether the project would exceed the AQMP's assumptions for 2020 or increments based on the year of project build-out and phase.

TOXIC AIR CONTAMINANTS (TACS)

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern in Southern California. There are hundreds of different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Public exposure to TACs can result from emissions from normal operations, as well as accidental releases of hazardous materials during upset conditions. Health effects of TACs include cancer, birth defects, neurological damage, and death.

California regulates toxic air contaminants through its air toxics program, mandated in Chapter 3.5 (Toxic Air Contaminants) of the Health and Safety Code (H&SC Section 39660 et. seq.) and Part 6 (Air Toxics "Hot Spots" Information and Assessment) (H&SC Section 44300 et. seq.).

The CARB, working in conjunction with the Office of Environmental Health Hazard Assessment (OEHHA), identifies toxic air contaminants. Air toxic control measures may then be adopted to reduce ambient concentrations of the identified toxic air

contaminant below a specific threshold based on its effects on health, or to the lowest concentration achievable through use of best available control technology for toxics (T-BACT). The program is administered by the CARB. Air quality control agencies, including the SCAQMD, must incorporate air toxic control measures into their regulatory programs or adopt equally stringent control measures as rules within six months of adoption by the CARB.

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

Diesel exhaust is a growing concern in the Basin area and throughout California. The CARB in 1998 identified diesel engine particulate matter as a TAC. The exhaust from diesel engines includes hundreds of different gaseous and particulate components, many of which are toxic. Many of these toxic compounds adhere to the particles, and because diesel particles are very small, they penetrate deeply into the lungs. Diesel engine particulate matter has been identified as a human carcinogen. Mobile sources (including trucks, buses, automobiles, trains, ships and farm equipment) are by far the largest source of diesel emissions. Studies show that diesel particulate matter concentrations are much higher near heavily traveled highways and intersections.

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

SENSITIVE RECEPTORS

Certain land uses are particularly sensitive to air emissions, including schools, hospitals, rest homes, long-term medical and mental care facilities and parks and recreation areas.

Existing sensitive receptors within the vicinity of the project site include residential uses to the east along Highway 38, to the west along Oriole Lane and to the north along Flicker Road. Other sensitive receptors include the following:

Schools
- North Shore Elementary School (765 N. Stanfield Cutoff)
- Big Bear Middle School (41275 Big Bear Boulevard)

Library
- Big Bear Lake Branch Library (41930 Garstin Drive)

Hospitals
- Big Bear Valley Community Hospital (41870 Garstin Road)

EMISSIONS ESTIMATION PROCEDURE

Emissions are estimated using the Urban Emissions (URBEMIS) 2002 Model developed and tested by CARB and approved for use by the SCAQMD. The URBEMIS2002 model is an emissions estimation tool for land use and development projects. The model has been modified and enhanced to estimate construction and area source emissions for various air districts in California. Specific emission factors for each air basin, including the Basin, have been incorporated into the model that account for compliance with air basin specific requirements. Various default parameters specific to each region have been verified and approved by local regulatory agencies and are also included into the model. Additionally, the model includes the ability to selectively identify and account for various mitigation measures.

The SCAQMD, along with other air pollution agencies in California, is actively involved in maintaining and updating the model. The URBEMIS2002 model includes the following updates compared to URBEMIS2001: on-road mobile source emission factors from CARB's EMFAC2002 model have been incorporated into the URBEMIS model to calculate on-road source emissions for both construction and operation; emission factors for off-road mobile sources derived from CARB's off-road model have been incorporated into URBEMIS to estimate emissions from off-road construction equipment; the construction module has been substantially revised to correct problems identified in URBEMIS2001 and provide flexibility by allowing the user to allocate construction emissions by construction phase.

IMPACTS

SIGNIFICANCE CRITERIA

In accordance with CEQA, the effects of a project are evaluated to determine if they will result in a significant impact on the environment. An Environmental Impact Report (EIR) is required to focus on these effects and offer mitigation measures to reduce or avoid any significant impacts that are identified. The criteria, or standards, used to determine the significance of impacts may vary depending on the nature of the project. Air quality impacts resulting from the implementation of the proposed project could be considered significant if they cause any of the following to occur:

- Conflict with or obstruct implementation of the applicable air quality plan (refer to Impact Statement 5.6-3);

- Violate any air quality standard or contribute substantially to an existing or projected air quality violation (refer to Impact Statements 5.6-1 and 5.6-2);

- 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) (refer to Impact Statement 5.6-4);

- Exposes sensitive receptors to substantial pollutant concentrations (refer to Impact Statement 5.6-2); and/or

- Create objectionable odors affecting a substantial number of people (refer to Section 10.0, *Effects Found Not To Be Significant*).

The SCAQMD *CEQA Air Quality Handbook* establishes thresholds for pollutant emissions generated both during and following construction. Buildout of the proposed project would be required to implement control measures during construction activities in order to reduce the amount of emissions to below the significance thresholds, when possible. SCAQMD construction and operation thresholds are indicated in Table 5.6-3, *SCAQMD Thresholds of Significant Contribution to Regional Air Pollution*. As previously stated, the Basin is designated non-attainment for State standards for O_3 and PM_{10} and for CO under Federal standards. Any increase in these pollutants would create a significant and unavoidable air quality impact.[4]

Table 5.6-3
SCAQMD Thresholds of Significant Contribution to Regional Air Pollution

Pollutant	Threshold of Significant Effect	
	Construction Emissions	Operational Emissions
Reactive Organic Gases (ROG)	75 lbs/day	55 lbs/day
Oxides of Nitrogen (NOx)	100 lbs/day	55 lbs/day
Carbon Monoxide (CO)	550 lbs/day	550 lbs/day
Particulate Matter (PM10)	150 lbs/day	150 lbs/day
Source: *CEQA Air Quality Handbook*, South Coast Air Quality Management District, 1997.		

SHORT-TERM AIR QUALITY IMPACTS

5.6-1 *Significant short-term air quality impacts would occur during site preparation and project construction. These impacts are considered significant before and after mitigation for ROG and NO_X emissions from construction equipment exhaust. Impacts would be less than significant*

[4] The SCAQMD is in the process of revising the *CEQA Air Quality Handbook*. Three chapters have been revised to date including Chapters 2 - Improving Air Quality, 3 – Basin Air Quality Information, and 4 – Early Consultation and Sensitive Receptor Siting Criteria.

for other pollutants. (Mitigation in this instance refers to applicable County Development Code Sections and SCAQMD Rules.)

Short-term air quality impacts would occur during grading and construction operations associated with implementation of the proposed project. The short-term air quality analysis considers cumulative construction emissions combined with the proposed project. The temporary impacts include:

- Particulate (fugitive dust) emissions from clearing and grading activities on-site;
- Exhaust emissions and potential odors from the construction equipment used on-site as well as the vehicles used to transport materials to and from the site;
- Off-site air pollutant emissions at the power plant serving the site, while temporary power lines are needed to operate construction equipment and provide lighting; and
- Exhaust emissions from the motor vehicles of the construction crew.

The above described power plant and vehicle emissions are generated during construction activities. Project-related power plant and motor vehicle emissions are further analyzed in the long-term impacts portion of this Section. Potential odors generated during construction operations are temporary in nature and are not considered to be an impact (refer to Section 10.0, *Effects Found Not To Be Significant*).

It should be noted that emissions produced during grading and construction activities are "short-term" in nature as they endure only for the duration of construction.

Fugitive Dust Emissions

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

Fugitive dust from grading and construction is expected to be short-term and would cease following project completion. Additionally, most of this material is inert silicates, rather than the complex organic particulates released from combustion sources, which are more harmful to health. Dust (larger than 10 microns) generated by such activities usually becomes more of a local nuisance than a serious health problem. Of particular health concern is the amount of PM_{10} (particulate matter smaller than 10 microns) generated as a part of fugitive dust emissions. As previously discussed, PM_{10} poses a serious health hazard; alone or in combination with other pollutants. The URBEMIS2002 computer model (adapted from the

URBEMIS7G model by the SCAQMD) calculates PM_{10} fugitive dust as part of the site grading emissions (refer to Table 5.6-4, below). Even with implementation of standard construction practices regarding dust control techniques (i.e., daily watering), limitations on construction hours, and adherence to SCAQMD Rule 403 (requires watering for inactive and perimeter areas, track out requirements, etc.), impacts from PM_{10} fugitive dust would be less than significant.

Table 5.6-4
Construction Emissions

Emissions Source	Pollutant (pounds/day)[1]			
	ROG	NOx	CO	PM_{10}
Unmitigated Emissions[2]	400.3	162.5	192.6	52.1
SCAQMD Threshold	75	100	550	150
Is Threshold Exceeded Before Mitigation?	***Yes***	***Yes***	***No***	***No***
Mitigated Emissions[4]	400.3	162.5	192.6	20.4
Is Threshold Exceeded After Mitigation?	***Yes***	***Yes***	***No***	***No***

ROG = reactive organic gases NOx = nitrogen oxides CO = carbon monoxide PM_{10} = fine particulate matter

NOTES:
[1] Emissions calculated using the URBEMIS2002 Computer Model as recommended by the SCAQMD and project specific construction data provided by the project applicant.
[2] Calculations include emissions from numerous sources including: site grading, construction worker trips, stationary equipment, diesel and gas mobile equipment, and asphalt off-gassing using a maximum amount of grading per day of 2.5 acres and 260 working days per year. For future lot development, air quality modeling assumes a conservative scenaric that roadway surfaces will be graded, and that rough grading will occur for the proposed pad foundations. Results are based on the maximum amount of site grading, construction and asphalt activity that would occur in one day. Due to the uncertainty of future pad foundations and the relatively small amounts of pollutants generated, fine grading has not been included in this analysis.
[3] Refer to Appendix 15.4, *Air Quality Data*, for assumptions used in this analysis, including quantified emissions reduction by mitigation measures. Emissions would exceed the SCAQMD quarterly construction emissions for NOx and ROG.
[4] The reduction/credits for construction emission mitigations are based on mitigations included in the URBEMIS2002 computer model and as typically required by the SCAQMD. The mitigations include the following: proper maintenance of mobile and other construction equipment and speed limitation on unpaved roads to 15 miles per hour.

Construction Equipment and Worker Vehicle Exhaust
(Significant after mitigation for NO_x emissions)

Exhaust emissions from construction activities include emissions associated with the transport of equipment, worker trips, emissions produced on-site as the equipment is used, and emissions from trucks to/from the site. Emitted pollutants would include CO, ROG, NO_x, and PM_{10}.

Table 5.6-4, *Construction Emissions*, presents exhaust emission factors for typical diesel-powered heavy equipment. Refer to Appendix 15.4, *Air Quality Data*, for a listing of mobile and stationary construction equipment included in these calculations. Computer model results are also included in Appendix 15.4. The maximum area estimated to be disturbed per day would total 2.5 acres. The modeling input assumes that a maximum amount of grading took place five days per week throughout the year (260 days). These assumptions are based upon a worst case scenario, based upon the rugged site conditions.

As indicated in Table 5.6-4, emissions associated with construction equipment within the project area are anticipated to exceed SCAQMD construction thresholds for NO_x and ROG. Feasible mitigation measures are not available to reduce the significance of short-term construction NO_x and ROG emissions to less than significant levels.

As such, short-term air emissions for this pollutant would be considered significant and unavoidable.

LONG-TERM OPERATIONAL IMPACTS

5.6-2 *The project would result in an overall increase in the local and regional pollutant load due to direct impacts from vehicle emissions and indirect impacts from electricity and natural gas consumption. Combined mobile and area source emissions would exceed SCAQMD thresholds for ROG, CO and PM_{10}. These exceedances are considered significant and cannot be mitigated to a less than significant level.*

The calculations for the following analysis are based upon the Traffic Study (refer to Section 5.5, *Traffic and Circulation*). Buildout of Moon Camp would occur incrementally over time beginning with the realignment/construction of North Shore Drive. The County of San Bernardino on a project-by-project basis would evaluate the exact details of each individual lot construction. However, for the purposes of this air quality emissions analysis, it was assumed that all of the residential lots would be built in one phase.

Long-term air quality impacts would consist of mobile source emissions generated from project-related traffic and from stationary source emissions generated directly from the natural gas consumed and indirectly from the power plant providing electricity to the project site. Emissions associated with each of these sources are discussed and calculated below.

Mobile Source Emissions Only: Regional Impacts

Mobile sources refer to emissions from motor vehicles, including tailpipe and evaporative emissions. Depending upon the pollutant being discussed, the potential air quality impact may be of either regional or local concern. For example, ROG, NO_X, SO_X, and PM_{10} are all pollutants of regional concern. (NO_X and ROG react with sunlight to form O_3 or photochemical smog, and SO_X and PM_{10} are readily transported by wind currents). However, CO tends to be a localized pollutant, dispersing rapidly at the source. Long-term impacts to regional air quality levels are analyzed below.

As previously discussed, the Basin is a non-attainment area for Federal and State air quality standards for O_3 and PM_{10} and for CO (Federal standard only). Nitrogen oxides and ROG are regulated O_3 precursors. (A precursor is defined as a directly emitted air contaminant that, when released into the atmosphere, forms or causes to be formed or contributes to the formation of a secondary air contaminant for which an ambient air quality standard has been adopted). Project-generated vehicle emissions have been estimated using the URBEMIS2002 computer model (published by the SCAQMD and based on the URBEMIS7G model). This model predicts ROG, CO, NO_X, and PM_{10} emissions from motor vehicle traffic associated with new or modified land uses (refer to Appendix 15.4, *Air Quality Data*, for model input values used for this project with the model output). Project trip generation rates were based on the Project Traffic Study (refer to Section 5.5, *Traffic and Circulation*,

and Appendix 15.3, *Traffic Data*). Table 5.6-5, *Long-Term Project Emissions*, presents anticipated regional mobile emissions.

Area Source Emissions

The proposed project would generate electrical demand and heating demands resulting in natural gas and wood burning combustion. Electrical demand would result in electrical generation emissions from local power plants. As shown in Table 5.6-5, *Long-Term Project Emissions*, stationary source emissions generated directly from the natural gas consumed and wood burning, and indirectly from the power plant providing electricity to the project site would exceed SCAQMD thresholds with operation (ROG, CO and PM_{10}).

Residential Wood Burning Fireplaces

All burning creates harmful by-products of combustion, resulting in air pollution. Materials on the low end of the energy scale such as wood and charcoal create the most pollution. Sources on the high end of the energy scale or ladder, such as natural gas and propane burn very cleanly resulting in very little air pollution. The basic constituents of wood smoke pollutants are:[5]

- Particulates.[6] PM_{10}, $PM_{2.5}$, and Nanoparticulate particulates are tiny particles suspended in the air that are too small to be filtered out, and thus become embedded deep within the lungs. The most injurious are particles classified as PM_{10}, 10 microns in diameter or less. Wood smoke PM_{10} contains creosote, soot, and ash. Most smoke particles average less than one micron (one millionth of a meter), allowing them to remain airborne for 3 weeks. The particles are efficient vehicles for transporting toxic gases, bacteria and viruses deep into the lungs where they pass into the blood stream. Inhalation of PM_{10} causes coughing, irritation and permanent scarring and damage to the lungs resulting in decreased lung function and increases in respiratory illness. These effects become significant at averages less than 40 micrograms per cubic meter. Smoke from just one fireplace burning has been found to cause particulate levels to exceed 200 ug/m^3 in the outdoor air surrounding the neighboring property.

- Carcinogens. Polycyclic Aromatic Hydrocarbons (PAH): Residential wood burning is the source of 50 percent of airborne Polynuclear Organic Material (POM) in the U.S. POMs contain a group of compounds known as PAHs which include many Class A carcinogens. The U.S. EPA estimates the cancer risk from wood smoke is twelve times greater than that from equal amounts of tobacco smoke. Wood burning also creates dioxins (refer to Footnote 5).

[5] A Summary of the Emissions Characterization and Noncancer Respiratory Effects of Wood Smoke, 1993 EPA Report, EPA-453/R-93-036.

[6] Particulate pollution in the past decade has been measured as PM_{10}, that is particulate matter 10 microns in diameter or less, which is talcum powder size. Recently the focus has shifted to smaller diameter particles, $PM_{2.5}$, which denotes all particles 2.5 microns and smaller (bacteria sized). These small sizes are thought to be more injurious because they are deeply respirable, becoming lodged in the farthest recesses of the lungs. Smoke from wood combustion is almost entirely in this range.

- Dioxin. Carbon Monoxide: An odorless gas resulting from all burning but produced in large amounts when burning takes place with reduced oxygen, such as in wood stoves. Even small amounts in the air reduce the body's ability to transport oxygen, constrict muscles and blood vessels, stress the heart, and result in feeling cold, fatigued and nauseated. High CO levels are found indoors where wood is burned.

- Respiratory Irritants and Toxins. There are over 100 different chemicals and compound groups in emissions from burning wood. In addition to those noted above there are chemicals known to be toxic such as formaldehyde, propionaldehyde, acetaldehyde, isobutyraldehyde, phenol, cresols. Nitrogen dioxide released from burning wood impairs the respiratory system and reduces its ability to fight infection. This combines with the organic compounds to form ozone which makes breathing difficult. High levels of Volatile Organic Compounds are found in the emissions of lawn equipment, charcoal grills and many personal care and cleaning products.

The project proposes 92 single-family residential lots, which are assumed for the purposes of this analysis to have wood burning fireplaces. The URBEMIS2002 computer model generates worst-case particulate quantities based upon 8 hours of use per day during the winter months. Additionally, URBEMIS2002 predicts wood burning quantities for Carbon Monoxide (CO) and Reactive Organic Gases (ROG). However, these pollutants can be reduced through the installation of an Environmental Protection Agency (EPA) certified fireplace. If properly operated, the cleaner EPA certified fireplaces built after 1992 can decrease the level of polluting emissions by up to 85 percent and create the same amount of heat during the winter using 30 percent less wood. Additionally, the installation of a ceramic coating on the honeycomb inside a catalytic combustor has been proven to help the gases and particles in smoke burn faster and at lower temperatures. Alternatively, the installation of a natural gas burning fireplace with ceramic logs eliminates particulate emissions.

Recreational Boating Activities

Lot "C" is a gated entrance to the project, including a proposed boat dock, consisting of 100 boat slips, which would be available for use by residents of the tract and accessible by Lot "C". The types of vessels, which would be docked at the boat slips, would be comprised of outboard and personal watercraft. These boat engines, which have typically used simple two-stroke technology, contribute about 12 percent of hydrocarbon (HC) emissions from mobile sources. Emission standards for outboard and personal watercraft engines call for manufacturers to meet increasingly stringent HC levels over a nine-year phase-in period starting in 1998. By 2006 all manufacturers will produce engines with 75 percent lower HC emissions. The gradually decreasing emission standard allows manufacturers to determine the best approach for achieving the targeted reductions over time by allowing them to phase in the types of control technologies in the most sensible way, while minimizing the cost impact to the consumer.[7] With the Environmental Protection Agency's new regulation over outboard and personal watercraft (EPA420-F-96-012), marine

[7] United States Environmental Protection Agency, *Reducing Air Pollution from Nonroad Engines*, Office of Transportation and Air Quality, November 2000.

engines will be over 75 percent cleaner in 2006, as compared to marine engine technology in 1998. Since the reduction of HC emissions depends on sales of these newer technology engines, the EPA expects to achieve this reduction in HC emissions from marine engines by the year 2025. EPA expects a 50 percent reduction to occur by the year 2020.[8]

Total Project Operational Emissions: Area and Mobile Sources
(Significant for ROG, CO and PM_{10} emissions)

As shown in Table 5.6-5, the mobile source and area emissions associated with the proposed project would generate pollutant emissions in excess of SCAQMD thresholds. Thus, implementation of the proposed project would create a significant and unavoidable individual project impact from ROG, CO and PM_{10} emissions. The ROG emissions are primarily from the combustion of wood in the fireplaces. As the proposed project would exceed established ROG, CO and PM_{10} thresholds, the project would create a significant and unavoidable impact to regional levels of these pollutants.

Table 5.6-5
Long-Term Project Emissions[1]

Project	Pollutant (Pounds/Day)			
	ROG	NO_X	CO	PM_{10}
(unmitigated)				
• Area Source Emissions[2]	1,035.1	14.5	1,137.3	155.8
• Vehicle Emissions	10.1	17.4	127.8	14.3
Total Unmitigated Emissions	1,045.2	31.9	1,265.1	170.1
SCAQMD Threshold	55	55	550	150
Is Threshold Exceeded? (Significant Impact?)	**Yes**	**No**	**Yes**	**Yes**

ROG = reactive organic gases NO_X = nitrogen oxides CO = carbon monoxide PM_{10} = fine particulate matter

NOTES:
1 – Based on URBEMIS2002 modeling results, worst-case seasonal emissions for area and mobile emissions, and trip rate data provided in the project Traffic Study.
2 – Operational scenario assumes 25 percent utilization of outdoor wood burning stoves and 100% utilization of fireplaces.

Localized CO Emissions

The SCAQMD recommends performing a carbon monoxide hotspots analysis when a project increases the intersection capacity utilization (ICU) by 0.02 (2 percent) for any intersection with a Level of Service (LOS) rating of D or worse. Carbon monoxide is the pollutant of major concern along roadways since the most notable source of carbon monoxide is vehicles. For this reason carbon monoxide concentrations are usually indicative of the local air quality generated by the roadway network, and are used as an indicator of its impacts upon local air quality. CO is an odorless, colorless toxic gas that is formed by the incomplete combustion of fuels

[8] *National Management Measures Guidance to Control Nonpoint Source Pollution from Marinas and Recreational Boating*, United States Environmental Protection Agency, November 2001.

that at high concentrations can lead to a localized plumes commonly referred to as "Carbon Monoxide Hotspots". A screening level analysis was performed per SCAQMD protocol for Year 2006 and Year 2025 peak month conditions for the following intersections:

- Stanfield Cutoff/Big Bear Boulevard
- Stanfield Cutoff/North Shore Drive

In order to simulate a worst-case conservative scenario, the intersections were screened in existing configuration without improvements. The carbon monoxide screening utilized the intersection analysis as contained within the Project traffic report. Based upon the Traffic Report, the project would generate 880 daily trips, 69 of which would occur during the morning peak hour and 93 of which would occur during the evening peak hour. As illustrated in Table 5.6-6 – *Carbon Monoxide Screening Analysis*, the maximum intersection delay increase due to the Project is 1.5 percent at Stanfield Cutoff and Big Bear Boulevard. Therefore, there would be a less than significant impact in regards to Carbon Monoxide Hotspots.

Table 5.6-6
Carbon Monoxide Screening Analysis

Intersection	Scenario					
	Year 2006 No Project ICU (LOS)	Year 2006 With Project ICU (LOS)	Intersection Delay Increase	Year 2025 No Project ICU (LOS)	Year 2025 With Project ICU (LOS)	Intersection Delay Increase
Stanfield Cutoff/Big Bear Blvd.						
AM Peak Hour	0.861 (D)	0.876 (D-)	0.015 (1.5%)	0.827 (D+)	0.839 (D)	0.012 (1.2%)
PM Peak Hour	1.097 (F-)	1.102 (F-)	0.005 (0.5%)	1.250 (F-)	1.255 (D+)	0.005 (0.5%)
Stanfield Cutoff/North Shore Dr.						
AM Peak Hour	- (B)	- (B)	-	- (A+)	- (A+)	-
PM Peak Hour	- (B)	- (B)	-	- (A+)	- (A+)	-

ICU = Intersection Capacity Utilization LOS = Level of Service
Notes:
1 – ICU and LOS derived from the Project Traffic Report Dated September 2003.
2 – Values reflect existing unimproved roadway conditions for peak month traffic data.

CONSISTENCY WITH AIR QUALITY MANAGEMENT PLAN

5.6-3 *The project would not conflict with the Air Quality Management Plan (AQMP). Analysis has concluded that the proposed project is consistent with the AQMP criteria.*

As noted under the Significance Criteria discussion, a potentially significant impact to air quality would occur if the project would conflict with or obstruct the implementation of the applicable air quality plan. Although the project would represent an incremental negative impact to air quality in the Basin, of primary concern is that project-related impacts have been properly anticipated in the regional

air quality planning process and reduced whenever feasible. Therefore, it is necessary to assess the project's consistency with the AQMP.

According to the SCAQMD *CEQA Air Quality Handbook*, the purpose of the consistency finding is to determine if a project is inconsistent with the assumptions and objectives of the regional air quality plans, and thus if it would interfere with the region's ability to comply with federal and State air quality standards. If the project is inconsistent, local governments need to consider project modifications or inclusion of mitigation to eliminate the inconsistency. It is important to note that even if a project is found consistent it could still have a significant impact on air quality under CEQA. Consistency with the AQMP means that a project is consistent with the goals, objectives, and assumptions in the respective plan to achieve the federal and State air quality standards.

As indicated in SCAQMD's *CEQA Air Quality Handbook*, there are two main indicators of consistency:

- Whether the project would not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP; and

- Whether the project would exceed the AQMP's assumptions for 2010 or increments based on the year of project build-out and phase.

Since the project would only create an additional 880 trips, the AQMP's assumptions would not be exceeded. Additionally, the Applicant will pay its fair share contribution to implement necessary improvements to improve the level of service. Therefore, the project would be considered consistent with the AQMP in this regard.

The project would result in an increase in the severity of existing air quality violations. The Basin is presently in non-attainment for O_3 and PM_{10} air quality standards (both State and Federal standards) and CO (Federal standards). As indicated in Table 5.6-5, the mobile source and area emissions associated with the proposed project would generate pollutant emissions in excess of SCAQMD thresholds. This increase in the severity of the existing violations would make the proposed development inconsistent with one of the two indicators of consistency. Project implementation would result in a significant unavoidable impact with respect to consistency with the AQMP.

CUMULATIVE

5.6-4 *Cumulative impacts to regional air quality resulting from development of the proposed Project would be less than significant.*

The annual short-term and long-term emissions associated with the proposed Project and cumulative projects indicated in Section 4.0, *Basis for Cumulative Analysis*, would be dependent on the internal phasing. Adherence to SCAQMD rules and regulations would help to alleviate potential impacts related to cumulative conditions. However, the build-out, sale and occupancy of the proposed residences would be

controlled by market demand. The primary post-construction air quality impacts from the development of the Project would result from operational emissions from area and mobile sources. A comparison of the projected emissions for the Basin in the 2003 AQMP and the emission estimates from development of the Project help determine the extent of the air quality impacts that the Project would have on the environment and surrounding air quality. Projected Basin emission estimates have been determined based on the 2003 AQMP estimates for years 2000, 2006 and 2010. Projected emissions for each pollutant were extrapolated from the 2003 AQMP based on the trend of each pollutant from 2000 to 2010. Table 5.6-7, *Projected Emission Estimates for Basin from the 2003 AQMP Compared to Project Emissions*, lists the percent comparison of the Project estimates with the projected Basin estimates. From the emissions presented, it is evident that emissions from the Project are less than 0.01 percent of the total projected Basin emissions. Therefore buildout of Moon Camp would have a less than significant impact on the overall air quality within the Basin.

Table 5.6-7
Projected Emission Estimates for Basin
from the 2003 AQMP Compared to Project Emissions

Pollutant	Year 2020 Emissions Estimates (lbs/day)		
	Projected AQMP Emissions	Moon Camp	Percent Change
ROG	1,182,000	1,045.2	0.088
NO_X	839,000	31.9	0.004
CO	3,490,000	1,265.1	0.036
PM_{10}	992,000	170.1	0.017

NOTE: Year 2020 AQMP emissions are linearly extrapolated based on 2000 to 2010 emission trends in the 2003 AQMP.

MITIGATION MEASURES

The following mitigation measures directly correspond to the identified impact statements provided in the impacts Subsection for the proposed project:

SHORT-TERM AIR QUALITY IMPACTS

5.6-1 In accordance with the County Development Code and SCAQMD Rules, the Project Applicant shall incorporate the following measures during the construction phase of the Project to the satisfaction of the SCAQMD and County of San Bernardino. Compliance with this measure is subject to periodic field inspections by the SCAQMD and County of San Bernardino.

Grading:

Apply non-toxic soil stabilizers according to manufacturer's specifications to all inactive construction areas (previously graded for ten days or more);

- Replace ground cover in disturbed areas as quickly as possible;
- Enclose, cover, water two times daily or apply non-toxic soil binders in accordance to manufacturer's specifications to exposed piles (i.e., gravel, sand, dirt) with 5% or greater silt content;
- Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 mph; and
- All trucks hauling dirt, sand, soil, or other loose materials shall be covered and shall maintain at least two feet of freeboard (i.e., minimum vertical distance between top of the load and the top of the trailer).

Paved Roads:

- Sweep streets at the end of the day if visible soil material is carried onto adjacent public paved roads.

LONG-TERM OPERATIONAL IMPACTS

5.6-2 To the extent feasible, the project shall incorporate the installation of EPA-certified wood burning stoves or fireplaces. If this is not feasible, then the installation of a ceramic coating on the honeycomb inside a catalytic combustor shall be investigated as a feasible alternative. Alternatively, the use of natural gas fireplaces may be used as a feasible alternative.

CONSISTENCY WITH AIR QUALITY MANAGEMENT PLAN

5.6-3 No mitigation measures are recommended.

CUMULATIVE

5.6-4 No mitigation measures are recommended.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

The following air quality impacts would remain significant and unavoidable following mitigation:

- ROG and NO_X from construction activities;
- Project Operations: Exceedance of State and/or Federal emission levels (ROG, CO and PM_{10}) from project operations; and

- Project implementation would result in a significant unavoidable impact with respect to consistency with the AQMP.

If the County of San Bernardino approves the project, the County shall be required to cite their findings in accordance with Section 15091 of CEQA and prepare a Statement of Overriding Considerations in accordance with Section 15093 of CEQA.

5.7 NOISE

The purpose of this Section is to analyze Project-related noise source impacts on-site and to surrounding land uses. Mitigation measures are also recommended to minimize the noise impacts of the Project. This Section evaluates short-term construction related impacts as well as long-term buildout conditions. Information in this Section was obtained from the County of San Bernardino General Plan and Development Code and traffic information contained in the *Traffic Analysis* report (refer to Section 5.5, *Traffic and Circulation*, and Appendix 15.3, *Traffic Data*). Noise impacts to biological resources are addressed in Section 5.8, *Biological Resources*. Refer to Appendix 15.5, *Noise Data*, for additional information.

EXISTING CONDITIONS

DEFINITIONS

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

Decibels are based on the logarithmic scale. The logarithmic scale compresses the wide range in sound pressure levels to a more usable range of numbers in a manner similar to the Richter scale used to measure earthquakes. In general, a 1 dBA change in the sound pressure levels of a given sound is detectable only under laboratory conditions. A 3 dBA change in sound pressure level is considered a “just detectable” difference in most situations. A 5 dBA change is readily noticeable and a 10 dBA change is considered a doubling (or halving) of the subjective loudness. It should be noted that, generally speaking, a 3 dBA increase or decrease in the average traffic noise level is realized by a doubling or halving of the traffic volume; or by about a 7 mile per hour (mph) increase or decrease in speed.

In terms of human response to noise, a sound 10 dBA higher than another is judged to be twice as loud; 20 dBA higher four times as loud; and so forth. Everyday sounds normally range from 30 dBA (very quiet) to 100 dBA (very loud). Examples of various sound levels in different environments are shown in Table 5.7-1, *Sound Levels and Human Response.* There are three general methods used to measure sound over a period of time: the Community Noise Equivalent Level (CNEL), the equivalent energy level (Leq), and the Day/Night Average Sound Level (Ldn), as defined below.

Table 5.7-1
Sound Levels and Human Response

Noise Source	dBA Noise Level	Response
	150	
Carrier Jet Operation	**140**	Harmfully Loud
	130	Pain Threshold
Jet Takeoff *(200 ft.)* Discotheque	**120**	
Unmuffled Motorcycle Auto Horn *(3 ft.)* Rock'n Roll Band Riveting Machine	**110**	Maximum Vocal Effort Physical Discomfort
Loud Power Mower Jet Takeoff *(2000 ft.)* Garbage Truck	**100**	Very Annoying Hearing Damage (Steady 8-Hour Exposure)
Heavy Truck *(50 ft.)* Pneumatic Drill *(50 ft.)*	**90**	
Alarm Clock Freight Train *(50 ft.)* Vacuum Cleaner *(10 ft.)*	**80**	Annoying
Freeway Traffic *(50 ft.)*	**70**	Telephone Use Difficult
Dishwashers Air Conditioning Unit *(20 ft.)*	**60**	Intrusive
Light Auto Traffic *(100 ft.)*	**50**	Quiet
Living Room Bedroom	**40**	
Library Soft Whisper *(15 ft.)*	**30**	Very Quiet
Broadcasting Studio	**20**	Just Audible
	10	Threshold of Hearing

Source: Outdoor Noise in the Metropolitan Environment, Melville C. Branch and R. Dale Beland, 1970 (p. 2).

CNEL. The predominant community noise rating scale used in California for land use compatibility assessment is the Community Noise Equivalent Level (CNEL). The CNEL reading represents the average of 24 hourly readings of equivalent levels, known as Leq's, based on an A-weighted decibel with upward adjustments added to account for increased noise sensitivity in the evening and night periods. These adjustments are +5 dBA for the evening (7 p.m. to 10 p.m.), and +10 dBA for the night (10 p.m. to 7 a.m.). CNEL may be indicated by "dBA CNEL" or just "CNEL."

Leq. The Leq is the sound level containing the same total energy over a given sample time period. The Leq can be thought of as the steady (average) sound level which, in a stated period of time, would contain the same acoustic energy as the time-varying sound level during the same period. Leq is typically computed over 1, 8 and 24-hour sample periods.

Ldn. Another commonly used method is the day/night average level or Ldn. The Ldn is a measure of the 24-hour average noise level at a given location. It was adopted by the United States Environmental Protection Agency (EPA) for developing criteria for the evaluation of community noise exposure. It is based on a measure of the average noise level over a given time period called the Leq. The Ldn is calculated by averaging the Leqs for each hour of the day at a given location after penalizing the "sleeping hours" (defined as 10 p.m. to 7 a.m.), by a 10 dBA to account for the increased sensitivity of people to noises that occur at night. The maximum noise level recorded during a noise event is typically expressed as Lmax. The sound level exceeded over a specified time frame can be expressed as Ln (i.e., L90, L50, L10, etc.). L50 equals the level exceeded 50 percent of the time.

HUMAN RESPONSES TO SOUND

Human response to sound is highly individualized. Annoyance is the most common issue regarding community noise. The percentage of people claiming to be annoyed by noise will generally increase with the environmental sound level. However, many factors will also influence people's response to noise. Thee factors can include the character of the noise, the variability of the sound level, the presence of tones or impulses, and the time of day of the occurrence. Additionally, non-acoustical factors, such as the person's opinion of the noise source, the ability to adapt to the noise, the attitude towards the source and those associated with it, and the predictability of the noise, will all influence people's response. As such, response to noise varies widely from one person to another and with any particular noise, individual responses will range from "highly annoyed" to "not annoyed".

LAWS, ORDINANCES, REGULATIONS AND STANDARDS

This section describes the laws, ordinances, regulations and standards that are applicable to mixed land use developments and the proposed Project. Regulatory requirements related to environmental noise are typically promulgated at the local level. However, federal and state agencies provide standards and guidelines to the local jurisdictions.

STATE OF CALIFORNIA GUIDELINES

California Environmental Quality Act. CEQA was enacted in 1970 and requires that all known environmental effects of a project be analyzed, including environmental noise impacts. Under CEQA, a project has a potentially significant impact if the project exposes people to noise levels in excess of standards established in the local general plan or noise ordinance. Additionally, under CEQA, a project has a potentially significant impact if the project creates a substantial increase in the ambient noise levels in the project vicinity above levels existing without the project. If a project has a potentially significant impact, mitigation measures must be considered. If mitigation measures to reduce the impact to less than significant are not feasible due to economic, social, environmental, legal, or other conditions, the most feasible mitigation measures must be considered.

California Government Code. California Government Code Section 65302 (f) mandates that the legislative body of each county and city adopt a noise element as part of their comprehensive general plan. The local noise element must recognize the land use compatibility guidelines established by the State Department of Health Services as shown in Table 5.7-2, *Land Use Compatibility for Community Noise Environments.* The guidelines rank noise land use compatibility in terms of "normally acceptable", "conditionally acceptable" and "clearly unacceptable" noise levels for various land use types. Single-family homes are "normally acceptable" in exterior noise environments up to 60 CNEL and "conditionally acceptable" up to 70 CNEL. Multiple-family residential uses are "normally acceptable" up to 65 CNEL and "conditionally acceptable" up to 70 CNEL. Schools, libraries and churches are "normally acceptable" up to 70 CNEL, as are office buildings and business, commercial and professional uses.

COUNTY OF SAN BERNARDINO NOISE STANDARDS

According to the San Bernardino County General Plan, areas within San Bernardino County will be designated as "noise impacted" if exposed to existing or projected future exterior noise levels from mobile or stationary sources exceeding the standards listed in the Tables 5.7-3, *Interior/Exterior Noise Level Standards – Mobile Noise Sources*, and Table 5-7-4, *Hourly Noise Level Performance Standards – Locally Regulated Sources*.[1]

LOCATION OF SENSITIVE RECEPTORS

Certain land uses are particularly sensitive to noise, including schools, hospitals, rest homes, long-term medical and mental care facilities and parks and recreation areas. Residential areas are also considered noise sensitive, especially during the nighttime hours.

Existing sensitive receptors within the vicinity of the project site include residential uses to the east along Highway 38, to the west along Oriole Lane and to the north along Flicker Road. Other sensitive receptors include the following:

[1] Source: San Bernardino County General Plan, Section II Planning Issues, Man-Made Hazards – Noise, page II-B1-7.

Schools
- North Shore Elementary School (765 N. Stanfield Cutoff)
- Big Bear Middle School (41275 Big Bear Boulevard)

Library
- Big Bear Lake Branch Library (41930 Garstin Drive)

Hospitals

- Big Bear Valley Community Hospital (41870 Garstin Road)

Table 5.7-2
Land Use Compatibility for Community Noise Environments

Land Use Category	Community Noise Exposure			
	Ldn or CNEL, dBA			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential - Low Density, Single-Family, Duplex, Mobile Homes	50 - 60	55 - 70	70-75	75-85
Residential - Multiple Family	50 - 65	60 - 70	70 - 75	70 - 85
Transient Lodging - Motel, Hotels	50 - 65	60 - 70	70 - 80	80 - 85
Schools, Libraries, Churches, Hospitals, Nursing Homes	50 – 70	60 - 70	70 - 80	80 - 85
Auditoriums, Concert Halls, Amphitheaters	NA	50 - 70	NA	65 - 85
Sports Arenas, Outdoor Spectator Sports	NA	50 - 75	NA	70 - 85
Playgrounds, Neighborhood Parks	50 – 70	NA	67.5 - 75	72.5 - 85
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50 – 70	NA	70 - 80	80 - 85
Office Buildings, Business Commercial and Professional	50 – 70	67.5 - 77.5	75 - 85	NA
Industrial, Manufacturing, Utilities, Agriculture	50 – 75	70 - 80	75 - 85	NA

Source: General Plan Guidelines, Office of Planning and Research, California, November 1998, page 187.

Notes:
NORMALLY ACCEPTABLE - Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
CONDITIONALLY ACCEPTABLE - New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
NORMALLY UNACCEPTABLE - New Construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
CLEARLY UNACCEPTABLE - New construction or development should generally not be undertaken.
NA: Not Applicable

Table 5.7-3
Interior/Exterior Noise Level Standards – Mobile Noise Sources

Land Use		Ldn (or CNEL), dB	
Categories	**Uses**	**Interior***	**Exterior****
Residential	Single and multi-family, duplex, mobile homes	45	60***
Commercial	Hotel, motel, transient lodging Commercial retail, bank, restaurant Office building, research and development, professional offices Amphitheater, concert hall, auditorium, movie theater	45 50 45 45	60*** N/A 65 N/A
Institution/Public	Hospital, nursing home, school classroom, church library	45	65
Open Space	Park	N/A	65

* Indoor Environment excluding: bathrooms, kitchen, toilets, closets and corridors

** Outdoor environment limited to:
Private yard of single family dwellings
Multi-family private patios or balconies
Mobile home parks
Hospital/office building patios
Park scenic areas
School playgrounds
Hotel and motel recreation areas

*** An exterior noise level up to 65 dB (or CNEL) will be allowed provided exterior noise levels have been substantially mitigated through a reasonable application of the best available noise reduction technology, and interior noise exposure does not exceed 45 dB (or CNEL) with windows and doors closed. Requiring that windows and doors remain closed to achieve an acceptable interior noise level will necessitate the use of air conditioning or mechanical ventilation.

Source: San Bernardino County General Plan, Section II – Planning Issues, Man-Made Hazards – Noise, Figure II-8. pg II-B1-6.

Table 5.7-4
Hourly Noise Level Performance Standards – Locally-Regulated Sources*

Land Use Category	7:00 a.m.– 10:00 PM		10:00 p.m. – 7:00 AM	
	Leq	**Lmax**	**Leq**	**Lmax**
Residential or other noise-sensitive receivers	55 dBA	75 dBA	45 dBA	65 dBA

* Noise sources which are stationary and not pre-empted from local noise control. Pre-empted sources include vehicles operated on public roadways, railroad line operations and aircraft in flight.

Source: San Bernardino County General Plan, Section II – Planning Issues, Man-Made Hazards – Noise, Figure II-9. pg II-B1-7.

Churches [2]

- Seventh Day Adventist (340 E. North Shore Drive)
- St. Joseph's Catholic Church of Big Bear (42242 North Shore Drive)
- Church of Jesus Christ of Latter-Day Saints (400 E. North Shore Drive)
- St. Columba's Episcopal Church (42324 North Shore Drive)
- Shepherd in the Pines Lutheran Church (42450 North Shore Drive)
- Center for Creative Living (816 W. Big Bear Boulevard)
- First Baptist Church of Big Bear Valley (41960 Big Bear Boulevard)
- Church of Christ (41035 Big Bear Boulevard)
- Bear Valley Community Church (40946 Big Bear Boulevard)
- Assembly of God (41965 Garstin Road)
- Big Bear Believer's Chapel (42180 Moonridge Road)
- First Church of Christ Scientist (547 Cottage Lane)
- Big Bear Foursquare Church (101 E. Mojave)
- Big Bear Christian Center (800 Greenspot)
- Jehovah's Witnesses (255 Catalina Street)
- United Methodist Church) (1001 Holden Avenue)
- Calvary Chapel of Big Bear (713 Stocker Road)
- Presbyterian Church (575 Prairie Lane)

Parks and Recreational Areas

- Grout Bay Park (located at southwestern corner of Grout Bay);
- Grout Bay Recreation Area (located west of Grout Bay);
- Dana Point Park (located at northern side of Grout Bay);
- Serrano Campgrounds (located southwest of the intersection of Holcomb Valley Road and Highway 38);
- Meadows Edge Park (Located to the east of Bluebird Lane and adjacent to the northern side of Big Bear Lake);
- San Bernardino National Forest Lands (refer to Section 5.8, *Biological Resources*); and
- Big Bear Lake (also refer to Section 5.8, *Biological Resources*).

EXISTING NOISE ENVIRONMENTS

COMPUTER MODELING

The existing and future roadway noise levels within the vicinity of the proposed Project were projected using the Federal Highway Administration's Highway Noise Prediction Model (FHWA RD-77-108) together with several roadway and site parameters. These parameters determine the projected impact of vehicular traffic noise and include the roadway cross-section (e.g., number of lanes), the roadway width, the average daily traffic (ADT), the vehicle travel speed, the percentages of auto and truck traffic, the roadway grade, the angle-of-view, the site conditions ("hard" or "soft"), and the percent of total ADT which flows each hour throughout a 24-hour period. The model does not account for ambient noise levels (i.e., noise from adjacent land uses) or topographical differences between the roadway and

[2] Source: Big Bear Chamber of Commerce website. July 2002. http://www.bigbearchamber.com/church.htm

adjacent land uses. Noise projections are based on modeled vehicular traffic as derived from the Project Traffic Study.

A 35 to 45 mile per hour (mph) average vehicle speed was assumed for existing conditions (varies depending on roadway) based on empirical observations and posted maximum speeds along the adjacent roadways. ADT estimates were obtained from the Project traffic report (refer to Appendix 15.3, *Traffic Data*).

EXISTING NOISE LEVELS

Table 5.7-5, *Existing Traffic Noise Levels*, indicates the location of the 60, 65, and 70 CNEL noise contours associated with vehicular traffic along local roadways as modeled with the aforementioned FHWA computer model. Traffic noise along three major roadways was modeled to estimate existing noise levels from mobile traffic. These roadways include North Shore Drive, Stanfield Cutoff, and Big Bear Boulevard, as described in Table 5.7-5.

Table 5.7-5
Existing Traffic Noise Levels
(Based on Peak Month Traffic Volumes)

Roadway Segment	Average Daily Traffic	dBA @ 100 Feet from Roadway Centerline[1]	Distance from Roadway Centerline to: (Feet)		
			70 CNEL Noise Contour	65 CNEL Noise Contour	60 CNEL Noise Contour
North Shore Drive:					
West of Stanfield Cutoff	4,750	57.17	15	19	69
East of Stanfield Cutoff	6,900	58.79	19	41	88
Stanfield Cutoff:					
North of North Shore Dr.	125	32.22	0	1	2
North Shore Dr. to Big Bear Blvd.	5,625	57.90	17	36	77
South of Big Bear Blvd.	2,250	49.15	4	9	20
Big Bear Boulevard:					
West of Stanfield Cutoff	20,500	62.87	39	85	183
East of Stanfield Cutoff	18,100	62.32	36	78	168

Traffic data obtained from the *Traffic Analysis* report (refer to Appendix 15.3, *Traffic Data*).
Note:
[1] = 100 feet is the assumed distance to the midpoint of a receptor rear yard.

EXISTING WATERCRAFT NOISE LEVELS

Watercraft, including boats, jet skis, etc., constitute a periodic noise around the perimeter of Big Bear Lake. According to the Big Bear Municipal Water District, during the 1999 boating season, the average daily use of boats on the Lake was approximately 199 (refer to Section 5.2, *Recreation*).

Per the requirements of the Big Bear Municipal Water District, lake activities and boating operations must comply with the following general regulations:

- Speed Limit. 35 MPH maximum; 10 MPH from sunset to 7:00 AM; 5 MPH between buoys indicating same and the shoreline; 3 MPH in Papoose Bay, Canvasback Cove and Mallard Lagoon.

- Mufflers. No boat shall operate with excessive noise, per the requirements of Harbor and Navigation Code 654.

- Launching. Boats requiring trailers may be launched only from designated launch ramps. All other boats may be carried and launched at designated recreational or public access points around the Lake after obtaining a permit.

- Mooring. Mooring or tying to navigational markers is prohibited. Overnight mooring or beaching of boats along the shoreline is prohibited.

- Water-skiing. Hours of water-skiing are between 7:00 a.m. and sunset.

Harbor and Navigational Code 654 states that:

"Muffler requirements: The exhaust of every internal combustion engine used on any motorboat shall be effectively muffled at all times to prevent any excessive or unusual noise and as may be necessary to comply with the provisions of Section 654.05.

The provisions of this section shall not apply to motorboats competing under a local public entity or United States Coast Guard permit in a regatta, in a boat race, while on trial runs, or while on official trials for speed records during the time and in the designated area authorized by the permit. In addition, this section shall not apply to motorboats preparing for a race or regatta if authorized by a permit issued by the local entity having jurisdiction over the area where the preparations will occur."

Harbor and Navigational Code 654.05 states that:

"Motorboat noise: No person shall operate any motorboat in or upon the inland waters of this state in such a manner as to exceed the following noise levels:

(a) For engines manufactured before January 1, 1976, a noise level of 86 dBA measured at a distance of 50 feet from the motorboat.

(b) For engines manufactured on or after January 1, 1976, and before January 1, 1978, a noise level of 84 dBA measured at a distance of 50 feet from the motorboat.

(c) For engines manufactured on or after January 1, 1978, a noise level of 82 dBA measured at a distance of 50 feet from the motorboat.

(d) *Testing procedures employed to determine such noise levels shall be in accordance with the exterior noise level measurement procedure for pleasure motorboats recommended by the society of Automotive*

Engineers in its recommended practice designated SAEJ34. The department may, by regulation, amend such testing procedures when deemed necessary to adjust to advances in technology.

The provisions of this section shall not apply to motorboats competing under a local public entity or United States Coast Guard permit in a regatta, in a boat race, while on trial runs, or while on official trials for speed records during the time and in the designated area authorized by the permit. In addition, addition, this section shall not apply to motorboats preparing for a race or regatta if authorized by a permit issued by the local entity having jurisdiction over the area where the preparations will occur."

IMPACTS

SIGNIFICANCE CRITERIA

Appendix G, Initial Study Checklist, of the CEQA Guidelines contains analysis guidelines related to the assessment of noise impacts. These guidelines have been utilized as thresholds of significance for this analysis. As stated in Appendix G, a project may create a significant environmental impact if one or more of the following occurs:

- 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 (refer to Impact Statements 5.7-1 to 5.7-5);
- Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels (refer to Impact Statements 5.7-1);
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project (refer to Impact Statements 5.7-2, 5.7-3, and 5.7-4);
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project (refer to Impact Statements 5.7-1, 5.7-3, and 5.7-4);
- 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 (refer to Section 10.0, *Effects Found Not To Be Significant*); and
- 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 (refer to Section 10.0, *Effects Found Not To Be Significant*).

Based on these standards, the effects of the proposed project have been categorized as either a "less than significant impact" or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If

a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant and unavoidable impact. The standards used to evaluate the significance of impacts are often qualitative rather than quantitative because appropriate quantitative standards are either not available for many types of impacts or are not applicable for some types of projects.

SIGNIFICANCE OF CHANGES IN AMBIENT NOISE LEVELS

A project is considered to have a significant noise impact where it causes an adopted noise standard to be exceeded for the project site or for adjacent sensitive receptors. In addition to being concerned about the absolute noise level that might occur when a new source is introduced into an area, it is also important to consider the existing noise environment. If the existing noise environment is quiet and the new noise source greatly increases the noise exposure, even though a criterion level might not be exceeded, an impact may occur. Lacking adopted standards for evaluating such impacts, general considerations for community noise environments are that a change of over 5 dBA is readily noticeable and, therefore, is considered a significant impact (refer to Table 5.7-6, *Significance of Changes in Cumulative Noise Exposure*).[3] Changes from 3 to 5 dBA may be noticed by some individuals and are, therefore considered an adverse environmental impact, since under these conditions sporadic complaints may occur. Changes in community noise levels of less than 3 dBA are normally not noticeable and are therefore considered less than significant.[4] Adverse impacts would result if increases in noise levels are audible (increases equal to, or greater than 3 dBA), although the noise level may not exceed the significant impact criteria specified above.

Table 5.7-6
Significance of Changes in Cumulative Noise Exposure

Ambient Noise Level Without Project (Ldn or CNEL)	Significant Impact Assumed to Occur if the Project Increases Ambient Noise Levels by:
< 60 dBA	+ 5.0 dBA or more
60-65 dBA	+3.0 dBA or more
> 65 dBA	+1.0 dBA or more
Sources: FICON, FHWA, and Caltrans as applied by Brown-Buntin Associates, Inc., 1997.	

Potential impacts are grouped below according to topic. The numbered mitigation measures at the end of this Section directly correspond with the numbered impact statements.

[3] *Assessment of Noise with Respect to Community Response*, ISDR 1996, International Standardization, Switzerland.

[4] *Fundamentals and Abatement of Highway Traffic Noise*, Bolt, Beranek and Newman, 1973.

SHORT-TERM CONSTRUCTION NOISE AND VIBRATION IMPACTS

5.7-1 *Grading and construction within the Project area would result in temporary noise and/or vibration impacts to nearby noise sensitive receptors. Analysis has concluded that construction noise and vibration impacts would be less than significant following compliance with the County requirements.*

Construction activities are generally of relatively short duration, lasting from a few days to a period of months. Groundborne vibration, groundborne noise, and other types of construction related noise impacts would typically occur during the initial site preparation, which can create the highest levels of groundborne vibration and noise. Generally, site preparation has the shortest duration of all construction phases. Activities that occur during this phase include earthmoving, removal of existing roadways and compacting of soils. High groundborne noise levels, ground vibration and other miscellaneous noise levels can be created during this phase due to the operation of heavy-duty trucks, backhoes, and front-end loaders.

Noise levels typically range from 73 to 96 dBA at 50 feet from individual pieces of equipment.[5] The figures indicated in Table 5.7-7, *Typical Construction Equipment Noise Levels*, below, represents the "worst-case" day in which all equipment used during a given phase is operating. Because all equipment would not be operating on most days during construction, actual noise levels would, on many days, be lower than presented in Table 5.7-7.

Table 5.7-7
Typical Construction Equipment Noise Levels

Type of Equipment	Maximum Level, dB (50 feet; thence)
Scrapers	88
Bulldozers	87
Heavy Trucks	88
Backhoe	85
Pneumatic Tools	85

In addition to construction noise from the project site, the construction periods would also cause traffic noise along access routes to the site due to movement of equipment and workers on the site. The primary heavy equipment construction tools/vehicles are expected to be moved on to the site once during the initial grading/ construction period and would have a less than significant short-term effect on noise levels. Daily transportation of construction workers is not expected to cause a significant effect since this traffic would not be a substantial percentage of current daily volumes in the area, and would not be anticipated to increase traffic noise levels by more than 1 dBA.

As stated in Table 5.7-3, the maximum permitted noise exposure to residential uses from mobile noise sources is 60 dB (Ldn or CNEL). However, an exterior noise level

[5] United States EPA, 1971.

up to 65 dB (or CNEL) would be allowed provided exterior noise levels have been substantially mitigated through a reasonable application of best available noise reduction technology and interior noise exposure does not exceed 45 dB (or CNEL) with windows and doors closed. According to Table 5.7-4, the maximum permitted noise exposure to residential uses from "locally-regulated sources" is 55 dBA Leq or 75 dBA Lmax from 7:00 a.m. to 10:00 p.m., and 45 dBA Leq or 65 dBA Lmax from 10:00 p.m. to 7:00 a.m. Locally regulated sources are stationary and not pre-empted from local noise control. Pre-empted sources include vehicles operated on public roadways, railroad line operations and aircraft in flight.

Project construction activities would temporarily increase local noise and vibration levels in the project study area and may temporarily exceed County standards. However, the County of San Bernardino Development Code exempts construction activities from adhering to County noise/vibration standards as long as construction is limited to the hours of 7:00 a.m. to 7:00 p.m. Monday to Saturday and prohibited on Sundays or Federal Holidays.

With adherence to the County Development Code and the noise-related policies in the County General Plan, and due to the relatively short period of construction, noise and vibration impacts are anticipated to be less than significant. Implementation of the recommended mitigation measure would ensure that impacts remain at or below less than significant levels.

LONG-TERM NOISE IMPACTS

5.7-2 *Implementation of the Moon Camp Project would generate additional vehicular travel on the surrounding roadway network, thereby resulting in noise level increases. Analysis has concluded that long-term noise impacts would be less than significant for all analyzed roadway segments in Year 2006 and Year 2025 traffic scenarios. No mitigation measures are recommended.*

Project implementation would result in additional traffic on adjacent roadways, thereby increasing vehicular generated noise in the vicinity of existing and proposed residential uses. As discussed in Section 5.3, *Traffic and Circulation*, traffic conditions were analyzed utilizing existing, Year 2006 and Year 2025 traffic volumes. For purposes of analyzing noise impacts associated with project-related traffic volumes, this section compares the following scenarios: 1) Existing Plus Other Development Traffic Conditions (Year 2006) versus Existing Plus Project Plus Other Development Traffic Conditions (Year 2006) and; 2) Existing Plus Other Development Traffic Conditions (Year 2025) versus Existing Plus Project Plus Other Development Traffic Conditions (Year 2025). Thus, in accordance with the project traffic study, with and without the proposed project scenarios were modeled for Year 2006 and Year 2025 traffic conditions.

According to the *Traffic Analysis* report, twenty-five percent (25%) of the project traffic distribution would be distributed to the west of the project site. The following roadways segments to the west of the project site would receive traffic from the Project site:

- North Shore Drive: North of Big Bear Boulevard and Dam (Existing ADT = 2,300)
- Rim of the World Highway: West of North Shore Drive (Existing ADT = 7,100)
- Big Bear Boulevard: East of North Shore Drive (Existing ADT = 7,300)

Assuming a worst-case scenario of 220 trips (25 percent of 880 trips) along North Shore Drive, north of Big Bear Boulevard and Dam, under existing conditions, the vehicular noise level along this roadway segment would increase by 0.42 dBA. Thus, noise impacts along this roadway segment would be less than significant based on the significance criteria as stated within Table 5.7-6.

Therefore, since the roadway segments along Rim of the World Highway (west of North Shore Drive) and Big Bear Boulevard (East of North Shore Drive), would receive fifteen percent (15%) and ten percent (10%) of the project traffic, respectively, coupled with the fact that traffic volumes are greater on these segments than on North Shore Drive, noise level increases along these segments as a result of project generated traffic would be less than 0.42 dBA. Thus, according to the significance criteria as stated within Table 5.7-6, noise impacts along these roadway segments would be les than significant under existing and future traffic scenarios.

YEAR 2006 TRAFFIC CONDITIONS

Noise levels within the vicinity of the proposed project area were modeled for with and without project scenarios for 2006 traffic conditions to determine the location and extent of future vehicular generated noise conditions. Table 5.7-8, *Exterior Noise Exposure Adjacent to Nearby Roadways, 2006*, indicates the noise increase and/or decrease for the analyzed roadways within the County of San Bernardino and City of Big Bear Lake. According to Table 5.7-8, under the "2006 Without Project" scenario, noise levels at a distance of 100 feet from centerline would range from approximately 32 to 63 dBA. The highest noise levels would occur on Big Bear Boulevard, west of Stanfield Cutoff. The lowest noise levels would occur along Stanfield Cutoff (north of North Shore Drive).

As stated in Table 5.7-8, under the "2006 With Project" scenario, noise levels at a distance of 100 feet from centerline would range from approximately 32 to 63 dBA. Similar to the "2006 Without Project" scenario, the highest and lowest noise levels would occur along Big Bear Boulevard (west of Stanfield Cutoff) and Stanfield Cutoff (north of North Shore Drive), respectively.

Table 5.7-8 also compares noise levels under the "2006 Without Project" scenario with the "2006 With Project" scenario. Based on the information cited in Table 5.7-8, all roadway segments comparatively analyzed would experience a noise increase of less than 1 dBA at 100 feet from the roadway centerline. Thus, noise impacts along all the roadway segments would be less than significant based on the significance criteria as stated within Table 5.7-6, *Significance of Changes in Cumulative Noise Exposure*.

Table 5.7-8
Exterior Noise Exposure Adjacent to Nearby Roadways, 2006
(Based on Peak Month Traffic Volumes)

Roadway Segment	2006 Without Project					2006 With Project					Difference in dBA @100 Feet from Roadway
	Average Daily Traffic	dBA @ 100 Feet from Roadway Centerline[1]	Distance from Roadway Centerline to: (Feet)			Average Daily Traffic	dBA @ 100 feet from Roadway Centerline	Distance from Roadway Centerline to: (Feet)			
			70 CNEL Noise Contour	65 CNEL Noise Contour	60 CNEL Noise Contour			70 CNEL Noise Contour	65 CNEL Noise Contour	60 CNEL Noise Contour	
North Shore Drive:											
West of Stanfield Cutoff	4,988	57.38	15	33	71	5,655	57.92	17	20	77	0.54
East of Stanfield Cutoff	7,245	59.00	20	42	91	7,245	59.00	20	42	91	0.00
Stanfield Cutoff:											
North of N. Shore Dr	131	32.42	0	1	2	131	32.42	0	1	2	0.00
N. Shore Dr. to Big Bear Blvd	5,906	58.11	17	37	80	6,573	58.58	18	40	86	0.47
South of Big Bear Blvd	2,363	49.36	4	10	21	2,363	49.36	4	10	21	0.00
Big Bear Boulevard:											
West of Stanfield Cutoff	21,525	63.08	41	88	188	21,792	63.13	41	88	190	0.05
East of Stanfield Cutoff	19,005	62.54	37	81	173	19,405	62.63	38	82	176	0.09

Traffic data obtained from the *Traffic Analysis* report (refer to Appendix 15.3, *Traffic Data*).
Note:
[1] = 100 feet is the assumed distance to the midpoint of a receptor rear yard.
- Noise level models computed for 2006 scenarios utilized existing 2002 roadway cross-section data.

In summary, based on the significance criteria established in Table 5.7-6, the proposed Moon Camp Project would not create significant vehicular related noise impacts along the analyzed roadway segments based on 2006 traffic conditions.

YEAR 2025 TRAFFIC CONDITIONS

Noise levels within the vicinity of the proposed project area were modeled for with and without project scenarios for 2025 traffic conditions to determine the location and extent of future vehicular generated noise conditions. Table 5.7-9, *Exterior Noise Exposure Adjacent to Nearby Roadways, 2025*, indicates the noise increase and/or decrease for the analyzed roadways within the County of San Bernardino and City of Big Bear Lake. According to Table 5.7-9, under the "2025 Without Project" scenario, noise levels at a distance of 100 feet from centerline would range from approximately 33 to 64 dBA. The highest noise levels would occur on Big Bear Boulevard, west of Stanfield Cutoff. The lowest noise levels would occur along Stanfield Cutoff (north of North Shore Drive).

As stated in Table 5.7-9, under the "2025 With Project" scenario, noise levels at a distance of 100 feet from centerline would range from approximately 33 to 64 dBA. Similar to the "2025 Without Project" scenario, the highest and lowest noise levels

would occur along Big Bear Boulevard (west of Stanfield Cutoff) and Stanfield Cutoff (north of North Shore Drive), respectively.

Table 5.7-9
Exterior Noise Exposure Adjacent to Nearby Roadways, 2025
(Based on Peak Month Traffic Volumes)

2025 Without Project						2025 With Project					Difference in dBA @100 Feet from Roadway
Roadway Segment	Average Daily Traffic	dBA @ 100 Feet from Roadway Centerline[1]	Distance from Roadway Centerline to: (Feet)			Average Daily Traffic	dBA @ 100 feet from Roadway Centerline	Distance from Roadway Centerline to: (Feet)			
			70 CNEL Noise Contour	65 CNEL Noise Contour	60 CNEL Noise Contour			70 CNEL Noise Contour	65 CNEL Noise Contour	60 CNEL Noise Contour	
North Shore Drive:											
West of Stanfield Cutoff	5,890	58.10	17	37	79	6,557	58.57	18	40	85	0.47
East of Stanfield Cutoff	8,556	59.72	22	47	102	8,556	59.72	22	47	102	0.00
Stanfield Cutoff:											
North of N. Shore Dr	155	33.16	0	1	2	155	33.16	0	1	2	0.00
N. Shore Dr. to Big Bear Blvd	6,975	58.83	19	41	89	7,642	59.23	20	44	94	0.40
South of Big Bear Blvd	2,790	50.09	5	11	23	2,790	50.09	5	11	23	0.00
Big Bear Boulevard:											
West of Stanfield Cutoff	25,420	63.80	45	98	211	25,687	63.85	46	98	212	0.05
East of Stanfield Cutoff	22,444	63.26	42	90	194	22,844	63.34	42	91	196	0.08

Traffic data obtained from the *Traffic Analysis* report (refer to Appendix 15.3, *Traffic Data*).
Note:
[1] = 100 feet is the assumed distance to the midpoint of a receptor rear yard.
- Noise level models computed for 2006 scenarios utilized existing 2002 roadway cross-section data.

Table 5.7-9 also compares noise levels under the "2025 Without Project" scenario with the "2025 With Project" scenario. Based on the information cited in Table 5.7-9, all roadway segments comparatively analyzed would experience a noise increase of less than 1 dBA at 100 feet from the roadway centerline. Thus, noise impacts along all the roadway segments would be less than significant based on the significance criteria as stated within Table 5.7-6, *Significance of Changes in Cumulative Noise Exposure*.

In summary, based on the significance criteria established in Table 5.7-6, the proposed Moon Camp Project would not create significant vehicular related noise impacts along the analyzed roadway segments based on 2025 traffic conditions.

STATIONARY NOISE

5.7-3 *Implementation of the Moon Camp project would result in on-site noise associated with residential and parking lot activities and boat loading/unloading activities at the marina. Analysis has concluded that stationary source impacts would be reduced to less than significant levels*

with adherence to the County of San Bernardino General Plan policies relating to noise level standards and recommended mitigation measures.

Project implementation would result in stationary noise source impacts on-site.[6] These sources would include the typical residential noise sources and marina activities, including the adjacent parking lot. The potential impact from these sources were analyzed in terms of their proximity to the nearest off-site sensitive receptors.

Residential Areas

Development of the residential lots adjacent to residences located to the north (along Flicker Road), west (along Oriole Lane) and east (along North Shore Drive) would create new stationary noise typical of any residential development. Noise that is typical of residential areas includes such things as children playing, pet noise, amplified music, car repair, pool and spa equipment, woodworking and home repair. Noise typically associated with residential land uses does not produce noise levels greater than 60dBA. Noise from residential stationary sources would primarily occur during the "daytime" hours of 7:00 a.m. to 10:00 p.m. Furthermore, the residence would be required to comply with the noise standards set forth in the County General Plan. It is stated in the County's General Plan that exterior noise levels in residential property shall not exceed the basic noise standard of 55 dBA between the hours of 7:00 a.m. and 10:00 p.m. and shall not exceed 45 dBA between the hours of 10:00 p.m. and 7:00 a.m. (refer to Table 5.7-4). Thus, noise impacts from the residential uses are anticipated to be less than significant in this regard.

Marina Facilities

The project proposes to construct a marina on Big Bear Lake and an associated parking lot at the southwest corner of the site. Surface parking lots generate instantaneous maximum sound levels from tire squeals, trash pick-up, delivery trucks, lot sweeping, door slamming, back-up alarms, and engine start-ups (refer to Table 5.7-10, *Maximum Noise Levels Generated by Parking Lots*). Noise would primarily remain on-site and would be temporary (during peak-events). Parking lot noise can also be considered a "stationary" noise source and may occur after 10 p.m. Typical noise levels generated by parking areas are an estimated 70 dBA at 50 feet during peak events (this is an "instantaneous" or peak noise level). Parking lot noise would also be partially masked by background noise from adjacent roads and typical community noise sources. Since the nearest existing residential areas are located some 500 feet from the proposed marina parking lot, noise levels would not exceed 55 dBA during the daytime or 45 dBA at nighttime. Therefore, typical parking lot noise generated at the project site would be below both the daytime and nighttime noise standards at the nearest existing residential uses. Thus, impacts are considered to be less than significant in this regard.

[6] Stationary noise levels diminish at the rate of 6 dBA per doubling of distance, in comparison to mobile noise sources that diminish at the rate of 4.5 dBA per doubling.

Table 5.7-10
Maximum Noise Levels Generated by Parking Lots

Event	Maximum Noise Level (dBA AT 50 FEET)
Door Slam	60 to 70
Engine Start-Up	60 to 70
Car Pass-by	55 to 70
Source: Mestre Greve Associates.	

WATERCRAFT NOISE

5.7-4 *Implementation of the Moon Camp project would result in increased watercraft activities on Big Bear Lake. Analysis has concluded that watercraft noise impacts would be reduced to less than significant levels with adherence to Rules and Regulations established by the Big Bear Municipal Water District for Big Bear Lake.*

The Moon Camp Project proposes to construct approximately 100 boat docks (dependent upon demand) on the southwest corner of the project site, located on the north shore of Big Bear Lake. As stated in Section 5.2, *Recreation*, the 100 dock slips, if multiplied by the weekend use factor of 9 percent, would add approximately 9 boats per day to the daily average number of boats using the lake.

All boating activities would be responsible for complying with rules and regulations established by the Big Bear Municipal Water District. Boating operation requirements that include speed limits, mooring and launching restrictions, and muffler requirements would serve to reduce noise impacts generated by watercraft activities. As previously stated, the proposed project would add approximately 9 boats to the average daily use of the Lake. Not only is this considered a nominal increase in daily boating numbers, adherence to the Water District's rules and regulations, including Harbor and Navigational Code 654 (refer to page 5.7-11), would reduce noise impacts from watercrafts to a less than significant level. It is noted that during peak holiday and summer periods, the daily use of watercraft would significantly increase. However, compliance with the Water District's rules and regulations would reduce impacts to less than significant levels.

CUMULATIVE

5.7-5 *Implementation of the Moon Camp Project, combined with cumulative projects, would increase the ambient noise levels in the site vicinity. Impact analysis and mitigation of impacts are determined on a project-by-project basis.*

Implementation of the proposed project, combined with development of cumulative projects, would increase ambient noise levels in the site vicinity. This increase would be due to both vehicular traffic noise along local roadways and stationary noise

sources associated with development. The evaluation of noise impacts is typically determined on a project-by-project basis in order to focus mitigation on a particular noise source. As such, future development proposals within the County would require separate discretionary approval and CEQA assessment which would address potential noise impacts and identify appropriate attenuation measures where appropriate. As previously stated above, the proposed project, as well as cumulative development projects, would be individually required to reduce noise impacts to below County noise standards and demonstrate adherence to Development Code and General Plan requirements.

MITIGATION MEASURES

This section directly corresponds to the identified Impact Statements in the impacts subsection.

SHORT-TERM CONSTRUCTION NOISE AND VIBRATION IMPACTS

5.7-1a Construction activities shall be limited to the hours of 7:00 a.m. ~~and~~ to 7:00 p.m. Monday to Saturday and prohibited on Sundays and Federal Holidays.

5.7-1b All construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers, to the satisfaction of the County Engineer.

5.7-1c Stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receptors, to the satisfaction of the County Engineer.

5.7-1d Stockpiling and staging areas shall be located as far as practical from noise sensitive receptors during construction activities, to the satisfaction of the County Engineer.

LONG-TERM NOISE IMPACTS

5.7-2 No mitigation measures are recommended.

STATIONARY NOISE

5.7-3 No mitigation measures are recommended.

WATERCRAFT

5.7-4 No mitigation measures are recommended.

CUMULATIVE

5.7-5 No mitigation measures are recommended.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

No unavoidable significant impacts related to noise have been identified following implementation of recommended mitigation measures and compliance with applicable requirements set forth by the County of San Bernardino and the Big Bear Municipal Water District.

5.8 BIOLOGICAL RESOURCES

The purpose of this Section is to identify existing biological resources on-site and in the vicinity, analyze potential Project-related impacts to these resources (including sensitive species) and recommend mitigation measures to reduce the significance of impacts that are identified. This Section describes the biological character of the site in terms of plants, wildlife, and wildlife habitats and analyzes the biological significance of the site in view of federal, state and local laws and policies. Information in this Section is based on the *Biological Resources Assessment* and Focused Surveys conducted by BonTerra Consulting (July 2003). The Biological Technical Report was prepared in accordance with accepted scientific and technical standards that are consistent with the requirements of the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG). This Section is also based on the Delineation of Jurisdictional Waters conducted by RBF Consulting (March 2002). Information is included in Appendix 15.6, *Biological Resources Information*.

EXISTING CONDITIONS

SURVEY METHODOLOGIES

This section describes the methodologies used to conduct the biological field surveys for the proposed Project. The results of these survey efforts are discussed in the *Existing Biological Resources* Section.

VEGETATION MAPPING AND GENERAL PLANT SURVEYS

A general reconnaissance field survey was conducted in December, 2001 to evaluate the potential of the Project site to support special status plants and animals and determine the need for further focused biological surveys. Additional field survey were conducted in May and June, 2002 to identify the vegetation types and plant species present on the Project site. All plant species observed were recorded in field notes. Plant species were identified in the field or collected for later identification. Plants were identified using taxonomic keys in Hickman, Munz, and Abrams. Taxonomy follows Hickman for scientific and common names. Plant community classifications follow Holland.

GENERAL WILDLIFE SURVEYS

Wildlife species observed during the general reconnaissance field survey were recorded in field notes. The Project site was also evaluated for its potential to support special status wildlife species that are known or are expected to occur in the region. Additionally, all wildlife species observed during focused surveys were recorded in field notes. Active searches for reptiles and amphibians included lifting, overturning, and carefully replacing rocks and logs. Birds were identified by visual and auditory recognition. Mammals were identified by visual recognition and by identifying diagnostic sign, including scat, footprints, scratch-outs, burrows, and trails. Taxonomy and nomenclature for wildlife generally follow American

Ornithologist's Union (AOU) for birds and Laudenslayer et al. for all other terrestrial vertebrates.

FOCUSED SURVEYS

Special Status Plant Species. Special status plant surveys were conducted in the spring and summer of 2002. All areas of the Project site containing native habitats potentially suitable for special status species were sampled using meandering transects. For a detailed discussion of survey methods refer to Appendix 15.6, *Biological Resources Information*.

Rubber Boa. Focused surveys for the rubber boa (*Charina bottae*) were conducted in the spring and summer of 2002. The survey effort consisted of three-drift fence and pitfall trapping periods, and five visual encounter surveys. For a detailed discussion of survey methods refer to Appendix 15.6, *Biological Resources Information*.

Southwestern Willow Flycatcher. Five focused surveys for the southwestern willow flycatcher (*Empidonax trailii*) were conducted during the spring and summer of 2002 per the guidelines of the U.S. Fish and Wildlife Service (USFWS). For a detailed discussion of survey methods refer to Appendix 15.6, *Biological Resources Information*.

California Spotted Owl. Focused surveys for the California spotted owl (*Strix occidentalis*) were conducted from April through June 2002. Six nighttime surveys and one roost location survey were performed on the Project site. Adjacent areas in the vicinity of the Project site were also surveyed to determine if off-site individuals or pairs were foraging on the Project site. For a detailed discussion of survey methods refer to Appendix 15.6, *Biological Resources Information*.

Bald Eagle. Focused surveys for the bald eagle (*Haliaeetus leucocephalus*) were conducted in February 2002. Four surveys were conducted to identify which trees on the Project site were used most frequently by the bald eagle for perching and/or roosting. In addition, a records search was conducted to characterize historic bald eagle wintering activity and tree use on the Project site and in the vicinity of Big Bear Lake. For a detailed discussion of survey methods refer to Appendix 15.6, *Biological Resources Information*.

Tree Surveys. A Forester Report was prepared in July 2001 to provide information on timber stand composition, condition, site quality, soil classification and characteristics, and impact of construction and development on the Project site. The report also provides guidelines for the protection of trees and prevention of insect infestation during the construction process. A complete copy of the report is included in Appendix 15.6, *Biological Resources Information*.

EXISTING BIOLOGICAL RESOURCES

This section describes the biological resources that either occur or potentially occur within the Project site or in the immediate vicinity. Vegetation types, wildlife populations and movement patterns, special status vegetation types, and special

status plant and wildlife species either known or potentially occurring are discussed below.

VEGETATION TYPES

Four vegetation types occur within the Project site. Exhibit 5.8-1, *Biological Resources*, illustrates their distribution and Table 5.8-1, *Existing Vegetation Types on the Project Site*, summarizes the extent of vegetation types present within the Project site. Each of the vegetation types observed during field surveys are described below.

Table 5.8-1
Existing Vegetation Types on the Project Site

Vegetation Type	Acreage
Jeffrey Pine Forest	54.91
Pebble Plain	0.69
Lake Shoreline	4.14
Developed	2.82
Total	**62.56**

Jeffrey Pine Forest. Jeffrey pine forest occurs on 54.91 acres of the eastern half of the Project site. This area is dominated by Jeffrey pine (*Pinus jeffreyi*) with white fir (*Abies concolor*), incense cedar (*Calocedrus decurrens*), western juniper (*Juniperus occidentalis*), singleleaf pinyon pine (*Pinus monophylla*), and black oak (*Quercus kellogii*) occurring at lower densities. The understory is sparse, consisting of scattered chaparral shrubs including greenleaf manzanita (*Arctostaphylos patula*), mountain whitethorn (*Ceanothus cordulatus*), Greg's ceanothus (*Ceanothus greggii*), deer brush (*Ceanothus integerrimus*), California mountain mahogany (*Cercocarpus betuloides*), and curl-leaf mountain mahogany (*Cercocarpus ledifolius*). Herbaceous cover is generally low, consisting of grasses and forbs in scattered patches. Jeffrey pine forest occurs at elevations ranging from 3,200 to 7,800 feet above msl in southern California.

Portions of the Jeffrey pine forest on the Project site provide suitable habitat for listed Threatened and Endangered plant species. In particular, approximately 17.38 acres containing few trees and fairly open canopy where Wright's matting buckwheat (*Eriogonum wrightii* ssp. *subscaposum*) occurs are suitable habitat for the federally-listed Threatened ash-gray Indian paintbrush, CNPS 1B listed Parish's rock-cress (*Arabis parishii*), and CNPS 1B listed silver-haired ivesia. For this reason, open Jeffrey pine forest is shown as a separate vegetation type on Exhibit 5.8-1. Additionally, areas within the Jeffrey pine forest where herbaceous cover is dominated by Wright's matting buckwheat are identified on Exhibit 5.8-1.

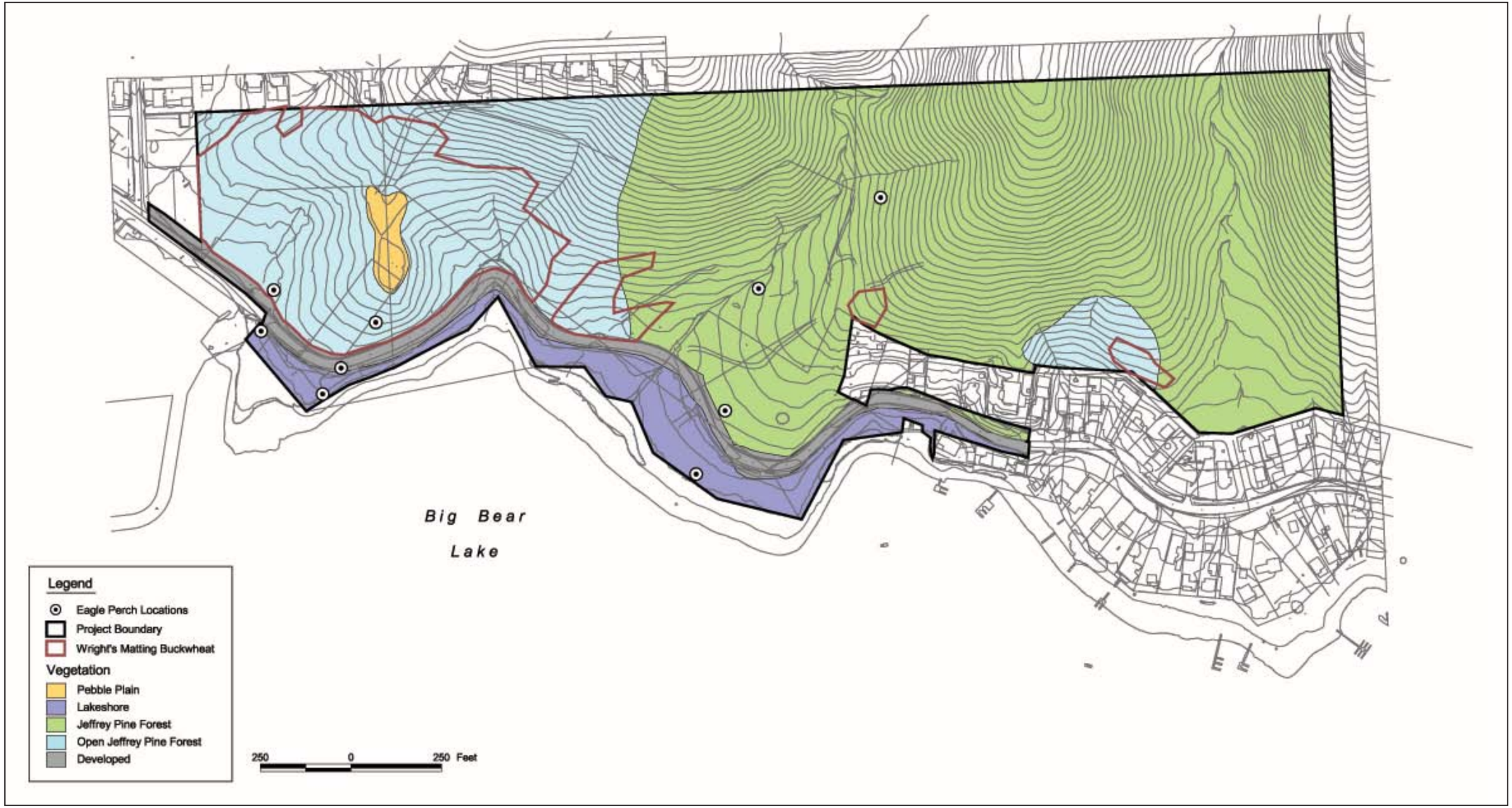
Within the Jeffrey pine forest onsite, tree resources consist of unevenly aged, pine stands composed of approximately 85 percent Jeffrey pine, eight percent western juniper, six percent singleleaf pinyon pine, and less than 1 percent of scattered white fir and black oak. Site quality has been rated medium Class 4 according to the criteria in the Forester's Handbook. The medium Class 4 rating describes the site as having 40 to 59 percent tree cover (medium cover) with small trees of conifer crown diameter 12 to 24 feet, and trunk diameter at breast height (dbh) of 11 to 24 inches. A total of 2,772 trees six inches in diameter or larger was calculated from aerial photographs. These trees grow on soils classified as 2/3 Morical-Hecker in the southern portion and 1/3 Pacifico-Wapi in the northern portion. Morical-Hecker soils are very deep with an effective rooting depth of 40 inches, and have high moisture retention capability, moderate erosion hazard, and a good timber productivity rating. Pacifico-Wapi soils are shallow, with a 10-20 inch effective root depth, low moisture holding capacity, high erosion hazard, and a poor capacity for tree seedling survival and growth without supplemental irrigation.

The overall condition of trees on the property is classified as fair. Scattered groups of large Jeffrey pine and juniper are host to moderate amounts of dwarf mistletoe (*Phorodendron* sp.) and several saplings and small pole pines under these trees have become heavily infested. Although a large number of dead trees were observed on the site, only one tree was observed to have been recently killed by bark beetles. Given the current drought situation and beetle population, there is a high potential for additional tree mortality from insect attack.

Pebble Plain. Pebble plain occurs on 0.69 acre of the Project site north of State Route 38. It appears as a distinct open patch within open Jeffrey pine forest in the western portion of the Project site. The substrate in this area consists of clay soil mixed with quartzite pebbles and gravel that are continually pushed to the surface through frost action. This substrate supports a high floristic diversity consisting of small cushion-forming plants, tiny annuals, grasses, and succulents that are well spaced, low growing, and sun tolerant. Several rare and special status plants are associated with pebble plain habitat, including federally-listed Threatened and Endangered species.

Portions of the pebble plain habitat on the Project site have been subjected to disturbance by off-road vehicles. The Pebble Plain Habitat Management Guide and Action Plan was developed by the San Bernardino National Forest to provide management direction for long-term conservation of pebble plains and the rare plants associated with them. Closure of unauthorized vehicle routes through pebble plain habitat, signage, increased patrol, habitat acquisition, removal of non-native grasses, and public education are actions being taken to protect and enhance the habitat.

Lake Shoreline. Approximately 4.14 acres of the southern boundary of the Project site is formed by the shore of Big Bear Lake. Plant species along the shore itself consisted primarily of herbaceous native and non-native species of periodically saturated soils, including willowherb (*Epilobium* sp.), wire-grass (*Juncus mexicanus*), cursed buttercup (*Ranunculus sceleratus*), and several cinquefoil species (*Potentilla* spp.). Several seedling cottonwood trees (*Populus balsamifera* spp. *trichocarpa*)



Source: BonTerra Consulting, July 2003.

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also occur in this vegetation type. Small patches of meadow transitioning into upland grassland occur along the lakeshore south of State Route 38. The extent of the meadows could not be determined or mapped in 2002 due to dry conditions. The lake was well below its maximum level in 2001 to 2002 due to acute drought conditions. Vegetation is patchy above the high-water level where small areas of Jeffrey pine forest are interspersed among open meadows and grasslands and scattered patches of arroyo willow (*Salix lasiolepis*) and red willow (*Salix laviegata*).

Developed. Developed areas occur on 2.82 acres along the shoreline of the site. Plants found in this vegetation type consist of native and non-native ornamental species which offer very little habitat value for native wildlife species. Paved areas such as State Route 38 and existing turnouts are included in this vegetation type.

Jurisdictional Waters. A Delineation of Jurisdictional Waters was prepared in order to delineate U.S. Army Corps of Engineers' and California Department of Fish and Game's (CDFG) jurisdictional authority for unnamed drainages located within the Project site.

Prior to visiting the site, RBF conducted a review of USGS topographic maps (Quadrangle *Fawnskin, California*, dated 1996) and aerial photographs to identify areas that *may* fall under an agency's jurisdiction. Corps jurisdictional wetlands are delineated using the methods outlined in the Corps of Engineers *Wetland Delineation Manual* (1987) based on hydrologic and edaphic features of the site, and on the vegetation composition of the site. Non-wetland waters of the U.S. are delineated based on the limits of the ordinary high water mark (OHWM) as determined by erosion, the deposition of vegetation or debris, and changes in the vegetation. Generally, California Department of Fish and Game (CDFG) takes jurisdiction to the bank of the stream/channels or to the limit of the adjacent riparian vegetation, whichever is greater. Analysis of the Project site consists of field surveys and verification of current conditions conducted in March 2002.

Vegetation within the drainages of the Project site consisted of upland habitat, dominated by Jeffery pines. Soils within the drainage were documented to be silty-sand (large grain). Soil samples taken on-site were generally dry and lacked characteristics of hydric soils (i.e., odor, streaking, mottling). ~~No flow within the on site drainages was observed during the March 15, 2002 field visit. However, evidence of an OHWM was observed within the drainages, primarily indicated by sediment deposits.~~ No flow within the on-site drainages was observed during the March 15, 2002 field visit. However, evidence of an OHWM was observed within the drainages, primarily indicated by sediment deposits. It should also be noted that Big Bear Lake adjoins the project site to the south. Based on discussions with the Big Bear Municipal Water District, the current water level of Big Bear Lake (as of June 28, 2004) is 6,727.8-feet above mean sea level (msl). The high water mark is reported to be 6,743.2 feet above msl.

There are three key agencies that regulate activities within inland streams, wetlands and riparian areas in California. The U.S. Army Corps of Engineers (Corps) Regulatory Program regulates activities pursuant to Section 404 of the Federal Clean Water Act, and Section 10 of the Rivers and Harbors Act. The California Department of Fish and Game (CDFG) regulates activities under the Fish and Game Code

Section 1600-1616, and the Regional Water Quality Control Board (RWQCB) under Section 401 of the Federal Clean Water Act and the California Porter-Cologne Act.

Waters of the U.S. (Wetland) Determination. The Corps and the EPA jointly define wetlands as: *Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas* (33 CFR Section 328.3(b)).

In order to be considered a wetland, an area must exhibit all three of the wetland parameters (i.e., vegetation, soil, and hydrology) per the evaluation criteria in the Wetland Delineation Manual. Based on the results of the field investigations, it was determined that all three parameters were not present within the drainages (hydric soils nor riparian vegetation were present). As a result, RBF identified no Corps wetlands on the Project site.

Waters of the U.S. (Non-Wetland) Determination. The unnamed drainages within the Project site exhibited evidence of flow (i.e., sediment/silt deposition) sufficient to document the OHWM (i.e., channel bed and bank lines), thus meeting the criteria for jurisdictional waters. Refer to Exhibit 5.8-2, *Jurisdictional Map*, for an illustration of jurisdictional boundaries.

Based on the results of the field observations and data collection, 0.15-acre of Corps jurisdictional "waters of the U.S." were identified within the Project site. ~~The drainages are ephemeral.~~ In addition to on-site ephemeral drainages, the Corps considers Big Bear Lake jurisdictional. The Corps' jurisdictional limits are delineated at the high water line, which is reported to be at 6,743.2-foot elevation (and below).

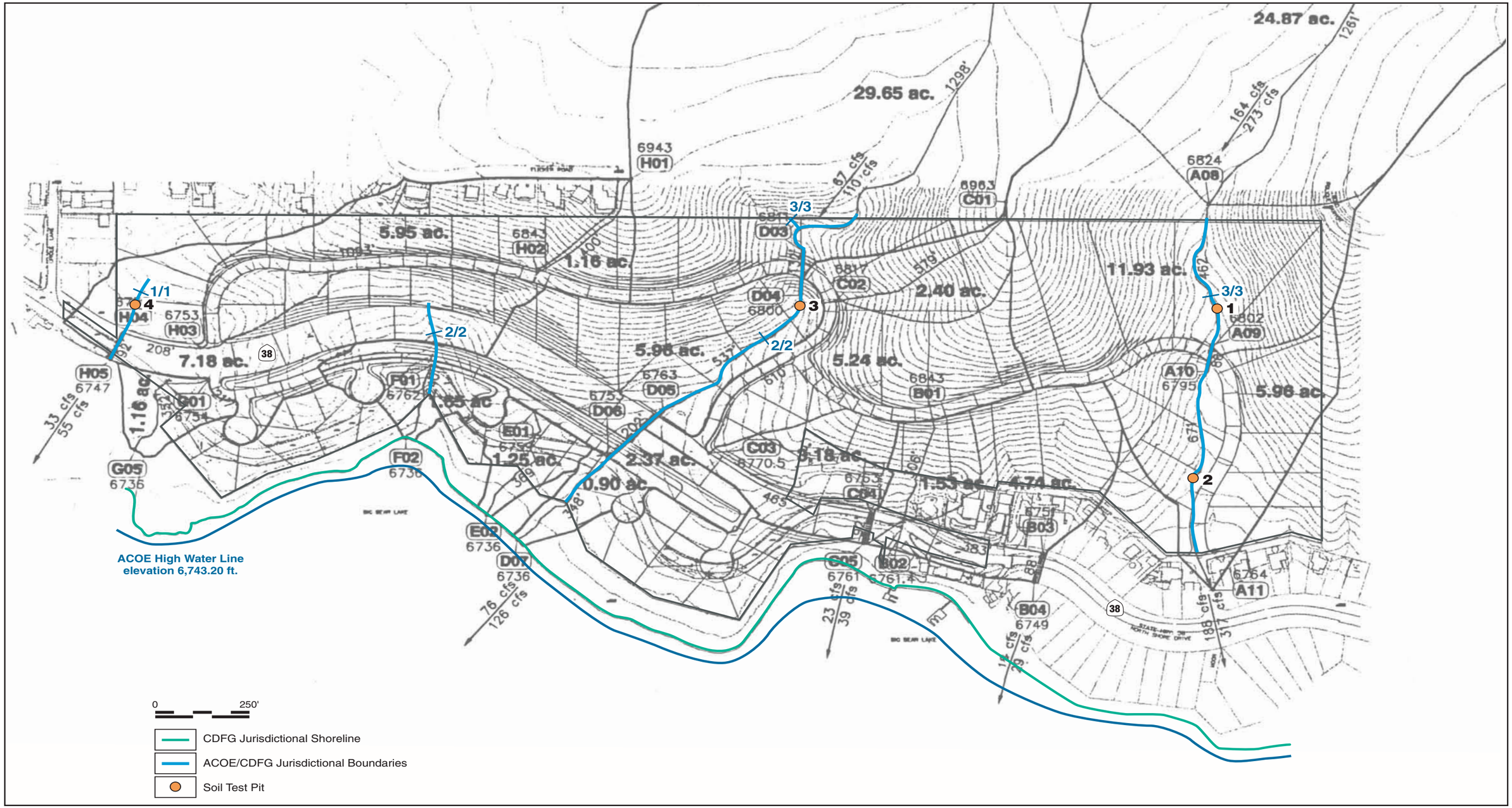
California Department of Fish and Game (1602) Jurisdiction. Based on the results of the field observations and data collection, 0.15-acre of CDFG jurisdictional streambed~~waters~~ was~~were~~ identified within the Project site. As with the Corps, Big Bear Lake would be considered jurisdictional by the CDFG, including the approximate 4.14-acre lake shoreline.

WILDLIFE INVENTORY

WILDLIFE

Amphibians

Amphibians require moisture for at least a portion of their life cycle and many require standing or flowing water for reproduction. Although more typical in mesic conditions, there are a number of amphibians species that occur or potentially occur even in the more xeric habitats. Terrestrial species may or may not require standing water for reproduction. These species are able to survive in dry areas by remaining beneath the soil in burrows, under logs or leaf litter, and emerging only when temperatures are low and humidity is high. Many of these species' habitats are associated with water, and they emerge to breed once the rainy season begins. Soil moisture conditions can remain high throughout the year within some habitat types, depending on factors such as amount of vegetation cover, elevation, and slope aspect.



Source: Delineation of Jurisdictional Waters, Moon Camp TT #16136, prepared by RBF, July 2004.

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12/05 JN 10-101901

MOON CAMP TT #16136
ENVIRONMENTAL IMPACT REPORT

Jurisdictional Map

Exhibit 5.8-2

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No amphibians were detected during the field surveys; however, leaf litter and rotting logs on the Project site provide potential habitat for the Pacific slender salamander (*Batrachoseps pacificus*). The western toad (*Bufo boreas*) would also be expected to occur on the Project site.

Reptiles

Reptilian diversity and abundance typically vary with vegetation type and character. Many species prefer only one or two vegetation types; however, most will forage in a variety of habitats. Most species occurring in open areas use rodent burrows for cover, and protection from predators and extreme weather conditions. Those species discussed below, which were not observed during surveys, are expected to occur based on the presence of suitable habitat (substrate and vegetation) within the Project site.

Reptile species observed during the surveys include the western fence lizard (*Scleroporus occidentalis*), sagebrush lizard (*Sceloperus graciosus*), western skink (*Eumeces skiltonianus*), southern alligator lizard (*Elgaria multicarinatus*), and southern Pacific rattlesnake (*Crotalus viridis helleri*). Common reptile species expected to occur on the Project site include the side-blotched lizard (*Uta stansburiana*) and gopher snake (*Pituophis melanoleucus*).

Birds

Montane conifer forests in the San Bernardino Mountains can experience severe winter conditions during the winter months. Nonetheless, several resident bird species are expected to occur on the Project site, using the habitats throughout the year. Other species are present only during certain seasons. For example, the Anna's hummingbird (*Calypte anna*), which was observed on the Project site, is expected to occur during the breeding season (i.e., spring and summer) and will then migrate south for the winter.

Common resident bird species observed on the Project site during surveys include the following:

- wild turkey (*Meleagris gallopavo*)
- band-tailed pigeon (*Columba fasciata*), great-horned owl (*Bubo virginianus*)
- acorn woodpecker (*Melanerpes formicivorus*)
- red-breasted sapsucker (*Sphyrapicus ruber*)
- hairy woodpecker (*Picoides villosus*)
- Nuttall's woodpecker (*Picoides nuttallii*)
- northern flicker (*Colaptes auratus*)
- black phoebe (*Sayornis nigricans*)
- Stellar's jay (*Cyanocitta stelleri*)
- common raven (*Corvus corax*)
- mountain chickadee (*Poecile gambeli*)
- bushtit (*Psaltriparus minimus*)
- red-breasted nuthatch (*Sitta canadensis*)
- white-breasted nuthatch (*Sitta carolinensis*)
- house wren (*Troglodytes aedon*)

- western bluebird (*Sialia mexicana*)
- northern mockingbird (*Mimus polyglottos*)
- European starling (*Sturnus vulgaris*)
- spotted towhee (*Pipilo maculatus*)
- dark-eyed junco (*Junco hyemalis*)
- Brewer's blackbird (*Euphagus cyanocephalus*)
- brown-headed cowbird (*Molothrus ater*)
- house finch (*Carpodacus mexicanus*)
- red crossbill (*Loxia curvirostra*)

Other resident species expected to occur on the Project site include the following:

- pied-billed grebe (*Podilymbus podiceps*)
- great blue heron (*Ardea herodias*)
- mallard (*Anas platarynchos*)
- gadwall (*anas strepera*)
- ruddy duck (*Oxyura jamaicensis*)
- red shouldered hawk (*Buteo lineatus*)
- red-tailed hawk (*Buteo jamaicensis*)
- American kestrel (*Falco sparverius*)
- American coot (*Fulica americana*)
- killdeer (*Charadrius vociferus*)
- rock dove (*Columbia livia*)
- mourning dove (*Zenaida macroura*)
- pygmy nuthatch (*Sitta pygmaea*)
- brown creeper (*Certhia americana*)
- Bewick's wren (*Thryomanes bewickii*)
- American robin (*Turdus migratorius*)
- pine siskin (*Carduelis pinus*)

Montane conifer habitats in the San Bernardino Mountains typically experience mild, warm summer months. Given the mild climate and abundance of nesting habitat, several bird species are expected to occur on the Project site during the breeding season. Common breeding bird species observed on the Project site during surveys include Ana's hummingbird and western wood-peewee (*Contopus sordidulus*). Other common breeding species expected to occur on the Project site include the spotted sandpiper (*Actitis macularia*), violet green swallow (*Tachycineta thalassina*), and yellow-rumped warbler (*Dendroica coronata*).

Mammals

The ornate shrew (*Sorex ornatus*), brush mouse (*Peromyscus boylii*), western grey squirrel (*Sciurus griseus*), California ground squirrel (*Spermophilus beecheyi*), dusky-footed woodrat (*Neotoma fuscipes*), California vole (*Microtus californicus*), and coyote (*Canis latrans*) were observed on the Project site during the surveys. Other mammals expected to occur on the Project site include the following:

- dusky shrew (*Sorex monticolus*)
- broad-footed mole (*Scapanus latimanus*)
- Merriam's chipmunk (*Tamias merriami*)

- lodgepole chipmunk (*Tamias speciosus*)
- golden-mantled ground squirrel (*Spermophilus lateralis*)
- deer mouse (*Peromyscus maniculatus*)
- western harvest mouse (*Reithrodontomys megalotis*)
- Botta's pocket gopher (*Thomomys bottae*)
- house mouse (*Mus musculus*)

Easily detectable mammals that are expected to occur on the site include the following:

- Virginia opossum (*Didelphis virginiana*)
- porcupine (*Erethizon dorsatum*)
- long-tailed weasel (*Mustela frenata*)
- striped skunk (*Mephitis mephitis*)
- raccoon (*Procyon lotor*)
- mule deer (*Odocoileus hemionus*)
- bobcat (*Felis rufus*)

Larger mammals that may occur on the Project site include the gray fox (*Urocyon cinereoargenteus*), black bear (*Ursus americanus*), badger (*Taxidea taxus*), and mountain lion (*Felis concolor*).

Bats occur throughout most of southern California and may use any portion of the Project site as foraging habitat. Most of the bats that could potentially occur onsite are inactive during the winter and either hibernate or migrate, depending on the species. The California myotis (*Myotis californicus*) and big brown bat (*Eptesicus fuscus*) may occur on the Project site. Gaps in peeling bark and hollow snags or limbs provide potential roosting and maternal colony opportunities for these and other bat species.

WILDLIFE MOVEMENT

Wildlife movement activities usually fall into one of three movement categories: (1) dispersal (e.g., juvenile animals from natal areas, individuals extending range distributions); (2) seasonal migration; and (3) movements related to home range activities (e.g., foraging for food or water, defending territories, searching for mates, accessing breeding areas, or securing cover). A number of terms have been used in various wildlife movement studies, such as "travel route", "wildlife corridor", and "wildlife crossing" to refer to areas in which wildlife move from one area to another.

To clarify the meaning of these terms and to facilitate the discussion on wildlife movement in this analysis, these terms are briefly defined as follows:

- *Travel Route* – a landscape feature such as a ridgeline, drainage, canyon, or riparian strip within a larger natural habitat area that is used frequently by animals to facilitate movement and provide access to necessary resources (e.g., water, food, cover, den sites).

- *Wildlife Corridor* – a piece of habitat, usually linear in nature, that connects two or more habitat patches that would otherwise be fragmented or isolated from one another.

- *Wildlife Crossing* – a small, narrow area, relatively short in length and generally constricted in nature, that allows wildlife to pass under or through an obstacle or barrier that otherwise hinders or prevents movement.

As defined above, the Project site does not contain wildlife crossings or corridors. Nonetheless, the Project site could be used as a travel route connecting forest habitat to the north with Big Bear Lake. However, direct connection to open space areas north and east of the Project site are obstructed by State Route 38. The importance of this travel route may be diminished by the vehicle traffic hazard associated with crossing State Route 38 as well as the availability of similar habitat immediately adjacent to the east of the Project site.

SPECIAL STATUS BIOLOGICAL RESOURCES

The following discussion addresses special status biological resources observed, reported, or having the potential to occur on the Project site. These resources include plant and wildlife species that have been afforded special status and/or recognition by federal and state resource agencies, as well as the California Native Plant Society (CNPS). In general, the principal reason an individual taxon (i.e., species, subspecies, or variety) is given such recognition is the documented or perceived decline or limitations of its population size, geographic range, and/or distribution resulting in most cases from habitat loss. Table 5.8-2, *Special Status Plant Species*, and Table 5.8-3, *Special Status Wildlife Species*, provide a summary of special status plant and wildlife species known to occur in the Project region including information on the status, potential for occurrence, and definitions for the various status designations. In addition, special status biological resources include vegetation types and habitats that are either unique, of relatively limited distribution in the region, or of particularly high wildlife value. Federal, state, and local government conservation programs have defined these resources. Sources used to determine the special status of biological resources are as follows:

- Plants – *Electronic Inventory of Rare and Endangered Vascular Plants of California.* (California Native Plant Society [CNPS] [2000]). California Natural Diversity Database (CNDDB) *List of Special Plants* (CDFG [1998]). Various Federal Register notices from the USFWS regarding listing status of plant species.

- Wildlife – California Wildlife Habitat Relationships Database System (CDFG 1991); CNDDB (CDFG 2000), Various Federal Register notices from the USFWS regarding listing status of wildlife species.

- Habitats – CNDDB (CDFG 2000).

Table 5.8-2
Special Status Plant Species Potentially Occurring Within the Project Region

Species	Status[1]			Likelihood for Occurrence
	USFWS	CDFG	CNPS	
Abronia nana ssp. *covillei* Coville's dwarf abronia	—	—	4	Low; marginally suitable habitat
Allium parishii Parish's onion	—	—	4	Low; above known elevation range
Antennaria marginata White-margined everlasting	—	—	2	None; outside of known geographic range (only local occurrences in Barton Flats area)
Arabis breweri var. *pecuniaria* San Bernardino rock-cress	—	—	1B	None; far below known elevation range
Arabis dispar Pinyon rock-cress	—	—	2	None; outside known geographic range (only occurs on desert-facing slopes)
Arabis parishii Parish's rock-cress	—	—	1B	Observed
Arabis shockleyi Shockley's rock-cress	—	—	2	None; outside known geographic range (only local occurrences on desert-facing slopes)
Arenaria lanuginosa ssp. *saxosa* Rock sandwort	—	—	2	Moderate; marginally suitable habitat
Arenaria ursina Big Bear Valley sandwort	FT	—	1B	High; suitable habitat
Astragalus albens Cushenbury milk-vetch	FE	—	1B	None; no suitable habitat (carbonate soils)
Astragalus bicristatus Crested milk-vetch	—	—	4	High; suitable habitat
Astragalus lentiginosus var. *sierrae* Big Bear Valley milk-vetch	—	—	1B	High; suitable habitat
Astragalus leucolobus Big Bear Valley woollypod	—	—	1B	Observed
Atriplex parishii Parish's smallscale	—	—	1B	None; no suitable habitat (alkali sink)
Berberis fremontii Fremont's barberry	—	—	3	None; no suitable habitat (presumed extinct in Cushionbury area)
Botrychium crenulatum Scalloped moonwort	—	—	2	None; no suitable habitat (marshes, bogs)
Calochortus palmeri var. *palmeri* Palmer's mariposa lily	—	—	1B	Moderate; marginally suitable habitat
Calochortus plummerae Plummer's mariposa lily	—	—	1B	None; above known elevation range
Castilleja cinerea Ash-gray Indian paintbrush	FT	—	1B	Observed
Castilleja lasiorhyncha San Bernardino Mountain owl's clover	—	—	1B	High; suitable habitat
Dryopteris filix-mas Male fern	—	—	2	Low; local rarity; outside known range

Table 5.8-2 – Continued
Special Status Plant Species Potentially Occurring Within the Project Region

Species	Status[1]			Likelihood for Occurrence
	USFWS	CDFG	CNPS	
Dudleya abramsii ssp. *affinis* San Bernardino Mountains dudleya	—	—	1B	Moderate; marginally suitable habitat
Erigeron breweri var. *jacinteus* San Jacinto Mountains daisy	—	—	4	None; below known elevation range
Erigeron parishii Parish's daisy	FT	—	1B	None; no suitable habitat (carbonate soils)
Erigeron unicaulis Limestone daisy	—	—	2	None; outside known geographic range (local reports erroneous)
Eriogonum foliosum Leafy buckwheat	—	—	1B	High; suitable habitat
Eriogonum kennedyi var. *austromontanum* Southern mountain buckwheat	FT	—	1B	Low; suitable habitat (see text)
Eriogonum ovalifolium var. *vineum* Cushenbury buckwheat	FE	—	1B	None; no suitable habitat (carbonate soils)
Eriophyllum lanatum var. obovatum Southern Sierra wooly sunflower	—	—	4	Low; margin of known geographic range
Fimbristylis thermalis Hot springs fimbristylis	—	—	4	None; no suitable habitat (alkaline meadows, hot springs)
Galium jepsonii Jepson's bedstraw	—	—	4	High; suitable habitat
Galium johnsttonii Johnston's bedstraw	—	—	4	High; suitable habitat
Gentiana fremontii Moss gentian	—	—	2	None; below known elevation range
Gilia leptantha ssp. *leptantha* San Bernardino Mountains gilia	—	—	1B	Low (see text)
Helianthus nuttalli ssp. *parishii* Los Angeles sunflower	—	—	1A	None; presumed extinct, above known elevation range
Heuchura hirsutissima Shaggy-haired alum root	—	—	1B	Low; limited suitable habitat
Heuchura parishii Parish's alumroot	—	—	1B	Low; limited suitable habitat
Horkelia wilderae Barton Flats horkelia	—	—	1B	None; outside known geographic range, endemic to Barton Flats area
Hulsea vestita ssp. *parryi* Parry's sunflower	—	—	4	None; outside known geographic range (only occurs on desert-facing slopes)
Hulsea vestita ssp. *pygmaea* Pygmy hulsea	—	—	1B	None; below elevation range
Ivesia argyrocoma Silver-haired ivesia	—	—	1B	Observed
Juncus duranii Duran's rush	—	—	4	High; suitable habitat
Lesquerella kingii var. *bernardina* San Bernardino Mountains bladderpod	FE	—	1B	None; no suitable habitat (carbonate soils)

Table 5.8-2 – Continued
Special Status Plant Species Potentially Occurring Within the Project Region

Species	Status[1]			Likelihood for Occurrence
	USFWS	CDFG	CNPS	
Lewisia brachycalyx Short-sepaled lewisia	—	—	2	Moderate; limited suitable habitat
Lilium humbodtii ssp. *ocellatum* *Ocellated Humboldt lily*	—	—	4	None; above known elevation range
Lillium parryi Lemon lily	—	—	1B	Low; limited suitable habitat
Linanthus killipii Baldwin Lake linanthus	—	—	1B	High; suitable habitat
Malaxiis monohyllos ssp. *brachypoda* Adder's mouth	—	—	2	None; below known elevation range
Mimulus exiguus San Bernardino Mountain monkeyflower	—	—	1B	High; suitable habitat
Mimulus purpureus var. *purpureus* Purple monkeyflower	—	—	2	High; suitable habitat
Monardella macrantha ssp. *hallii* Hall's monardella	—	—	1B	None; outside known geographic range
Navarretia peninsularis Baja navarretia	—	—	1B	Low; limited suitable habitat
Oxytheca caryophylloides Chickweed oxytheca	—	—	4	High; suitable habitat
Oxytheca parishii var. *cienegensis* Cienega seca oxytheca	—	—	1B	None; outside known geographic range
Oxytheca parishii var. *goodmaniana* Cushenbury oxytheca	FE	—	1B	None; no suitable habitat (carbonate soils)
Oxytropis oreophila Mountain oxytrope	—	—	2	None; below known elevation range
Perideridia parishii ssp. *parishii* Parish's yampah	—	—	2	High; suitable habitat
Phacelia exilis Transverse Range phacelia	—	—	4	High; suitable habitat
Phacelia mohavensis Mojave phacelia	—	—	4	High; suitable habitat
Phlox dolichantha Bear Valley phlox	—	—	1B	High; suitable habitat
Poa atropurpurea San Bernardino bluegrass	FE	—	1B	High; suitable habitat
Poliomintha incana Frosted mint	—	—	1A	None; no suitable habitat (dunes and sandy flats), above known elevation range
Polystichum kruckebergii Krukeberg's sword fern	—	—	4	None; limited suitable habitat, outside known geographic distribution
Populus angustifolia Narrow-leaved cottonwood	—	—	2	None; outside known geographic range

Table 5.8-2 – Continued
Special Status Plant Species Potentially Occurring Within the Project Region

Species	Status[1]			Likelihood for Occurrence
	USFWS	CDFG	CNPS	
Pyrrocoma uniflora ssp. *gossypina* Bear Valley pyrrocoma	—	—	1B	High; suitable habitat
Rupertia rigida Parish's rupertia	—	—	4	High; suitable habitat
Scutellaria bolanderi ssp. *austromntanum* Southern mountain skullcap	—	—	1B	None, outside known geographic range, above known elevation range
Sedum niveum Davidson's stonecrop	—	—	4	None; no suitable habitat (rock ledges and cliffs)
Selaginella asprella Bluish spike-moss	—	—	4	Low; limited suitable habitat
Senecio bernardinus San Bernardino butterweed	—	—	1B	Low; limited suitable habitat
Senecio ionophyllus Tehachapi ragwort	—	—	4	Low; limited suitable habitat
Sidalcea hickmanii ssp. *parishii* Parish's checkerbloom	C	R	1B	Low; limited suitable habitat
Sidalcea pedata Bird's foot checkerbloom	FE	SE	1B	Low to moderate (see text); suitable habitat
Sphenopholis obtusata Prairie wedge grass	—	—	2	High; suitable habitat
Streptanthus bernardinus Laguna Mountains jewelflower	—	—	4	High; suitable habitat
Streptanthus campestris Southern jewelflower	—	—	1B	High; suitable habitat
Swertia neglecta Pine green-gentian	—	—	4	High; suitable habitat
Taraxacum californicum California dandelion	FE	—	1B	Low to moderate (see text); suitable habitat
Thelypodium stenopetalum Slender-petaled thelypodium	FE	—	1B	None; no suitable habitat (alkaline meadows)
Trichostema micranthum Small-flowered bluecurls	—	—	4	High; suitable habitat
Viola pinetorum ssp. *grisea* Grey-leaved violet	—	—	1B	Low; outside known geographic range

STATUS DEFINITIONS

USFWS

FE: Species designated as endangered under the federal Endangered Species Act. Endangered = "any species in danger of extinction throughout all or a significant portion of its range."

FT: Species designated as threatened under the Federal Endangered Species Act. Threatened = "species likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range."

FPE: Proposed for federal listing as Endangered.

FPT: Proposed for federal listing as Threatened.

C: Candidate for federal listing as Threatened or Endangered.

SOC: Species of Concern

CDFG

ST: Threatened = "a species that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this Act" (California Endangered Species Act).

SE: Endangered = "a species is endangered when its prospects of survival and reproduction are in immediate jeopardy from one or more causes."

R: Rare

CNPS

1A Plants Presumed Extinct in California

1B Plants Rare, Threatened, or Endangered in California and Elsewhere

2 Plants Rare, Threatened, or Endangered in California But More Common Elsewhere

3 Plants About Which We Need More Information- A Review List

4 Plants of Limited Distribution - A Watch List

Table 5.8-3
Special Status Wildlife Species Potentially Occurring Within the Project Region

Species	Status[1]		Likelihood for Occurrence
	USFWS	CDFG	
Invertebrates			
Euchloe hyantis ssp. *andrewsi* Andrews' marble butterfly	SOC	—	Low; above known elevation range, limited suitable habitat
Amphibians			
Ensatina escholtzii croceater Yellow-blotched salamander	SOC	SSC	Low; limited marginally suitable habitat
Ensatina escholtzii klauberi Large-blotched salamander	SOC	SSC	None; above known elevation range, outside known geographic range
Rana muscosa Mountain yellow-legged frog	FPE	SSC	None; no suitable habitat
Scaphiopus hamondii Western spadefoot toad	SOC	SSC	None; above known elevation range
Taricha torosa torosa Coast range newt	SOC	SSC	None; no suitable habitat, above known elevation range
Reptiles			
Anniella pulchra pulchra Silvery legless lizard	SOC	SSC	Low; above known elevation range
Charina bottae umbricata Southern rubber boa	SOC	ST	Low; limited suitable habitat
Cnemidophorus tigris multiscutatus Coastal western whiptail	SOC	—	Moderate; suitable habitat
Coleonyx variegatus abbotti San Diego banded gecko	SOC	—	None; above known elevation range, no suitable habitat
Diadophis punctatus modestus San Bernardino ringneck snake	SOC	—	Low; limited suitable habitat
Lampropeltis zonata parvirubra San Bernardino Mountain kingsnake	SOC	—	Moderate; marginally suitable habitat
Lichanura trivirgata roseofusca Coastal rosy boa	SOC	—	None; above known elevation range
Phrynosoma coronatum ssp. *blainvillei* San Diego coast horned lizard	SOC	SSC/P	None; above known elevation, lack of suitable habitat
Sceloporus graciosus vendenbergianus Southern sagebrush lizard	SOC	—	Observed

Table 5.8-3 – Continued
Special Status Wildlife Species Potentially Occurring Within the Project Region

Species	Status[1]		Likelihood for Occurrence
	USFWS	CDFG	
Salvadora hexalepis virgultea Coast patch-nosed snake	SOC	SSC	None; lack of suitable habitat, above known elevation
Thamnophis hammondii hammondii Two-striped garter snake	—	SSC	None; no suitable habitat
Birds			
Accipiter cooperii Cooper's hawk	—	SSC	Nesting: Moderate Foraging: High
Accipiter gentilis Northern goshawk	SOC	SSC	Nesting: None Foraging: Moderate
Accipiter striatus Sharp-shinned hawk	—	SSC	Nesting: None Foraging: High in winter
Aimophila ruficeps canescens Southern California rufous-crowned sparrow	SOC	SSC	Nesting: None Foraging: None; above known elevation range
Amphispiza belli belli Bell's sage sparrow	SOC	SSC	Nesting: None Foraging: None; above known elevation range
Aquila chrysaetos Golden eagle	—	SSC	Nesting: None Foraging: High
Asio otus Long-eared owl	—	SSC	Nesting: Low Foraging: Moderate
Buteo regalis Ferruginous hawk	SOC	SSC	Nesting: None Foraging: Low in winter
Circus cyaneus Northern harrier	—	SSC	Nesting: None Foraging: Low
Cypseloides niger Black swift	—	SSC	Nesting: None Foraging: Moderate
Dendroica petechia Yellow warbler	—	SSC	Nesting: None Foraging: Moderate
Elanus leucereus White-tailed kite	—	FP	Nesting: Low Foraging: Low
Empidonax traillii extimus Southwestern willow flycatcher	FE	SE	Nesting: Low Foraging: Moderate; rare migrant
Eremophila alpestris actia California horned lark	—	SSC	Nesting: None Foraging: None; above known elevation range

Table 5.8-3 – Continued
Special Status Wildlife Species Potentially Occurring Within the Project Region

Species	Status[1]		Likelihood for Occurrence
	USFWS	CDFG	
Falco columbaris Merlin	—	SSC	Nesting: None Foraging: Low
Falco mexicanus Prairie falcon	—	SSC	Nesting: None Foraging: Low
Falco peregrinus anatum American Peregrine falcon	—	FE	Nesting: None Foraging : Low
Haliaeetus leucocephalus Bald eagle	FE	SE	Nesting: None Foraging: Observed in winter
Lanius ludovicianus Loggerhead shrike	SOC	SSC	Nesting: None Foraging: None; above known elevation range
Piranga flava Hepatic tanager	—	SSC	Nesting: Low Foraging: Low
Progne subis Purple martin	—	SSC	Nesting: Low Foraging: Low; local rarity
Strix occidentalis occidentalis California spotted owl	SOC	SSC	Nesting: Low/None observed during focused surveys Foraging: High/Observed in close proximity to Project site
Vireo vicinior Gray vireo	—	SSC	Nesting: None Foraging: Low
Mammals			
Antrozus pallidus Pallid bat	—	SSC	Roosting: Low Foraging: Low
Euderma maculatum Spotted bat	SOC	SSC	Roosting: None Foraging: Moderate
Eumops perotis californicus California mastiff bat	SOC	SSC	Roosting: None Foraging: Low
Glaucomys sabrinus californicus San Bernardino Mountain flying squirrel	SOC	SSC	Breeding: Low Foraging: High
Myotis ciliolabrum Small-footed myotis	SOC	—	Roosting: Low Foraging: High
Myotis evotis Long-eared myotis	SOC	—	Roosting: High Foraging: High
Myotis lucifugus Occult little brown bat	SOC	SSC	Roosting: High Foraging: High

Table 5.8-3 – Continued
Special Status Wildlife Species Potentially Occurring Within the Project Region

Species	Status[1]		Likelihood for Occurrence
	USFWS	CDFG	
Myotis thysanodes Fringed myotis	SOC	—	Roosting: Low Foraging: Moderate
Myotis volans Long-legged myotis	SOC	—	Roosting: Moderate Foraging: Moderate
Myotis yumanensis Yuma myotis	SOC	—	Roosting: Low Foraging: Moderate
Onychomys torridus ramona Southern grasshopper mouse	SOC	SSC	None; no suitable habitat
Perognathus alticola alticola White-eared pocket mouse	SOC	SSC	None; presumed extinct locally
Plecotus townsendii townsendii Pacific western big-eared bat	SOC	SSC	Roosting: None Foraging: Moderate

Status Definitions1
USFWS

FE: Species designated as Endangered under the Federal Endangered Species Act. Endangered = "any species in danger of extinction throughout all or a significant portion of its range."
FT: Species designated as Threatened under the Federal Endangered Species Act. Threatened = "species likely to become an Endangered species within the foreseeable future throughout all or a significant portion of its range."
FPE: Proposed for federal listing as Endangered.
FPT: Proposed for federal listing as Threatened.
SOC: Species of Concern

CDFG

SR: Rare = "a species is rare when, although not presently Threatened with extinction, it is in such small numbers throughout its range that it may become Endangered if its present environment worsens."
ST: Threatened = "a species that, although not presently Threatened with extinction, is likely to become an Endangered species in the foreseeable future in the absence of the special protection and management efforts required by this Act (California Endangered Species Act)."
SE: Endangered = "a species is endangered when its prospects of survival and reproduction are in immediate jeopardy from one or more causes."
SSC: Species of Special Concern.

FP: Fully Protected species are protected by special legislation and cannot be taken at any time.
P: Protected species are also protected by special legislation and can only be taken with a permit issued by the CDFG.

DEFINITIONS OF SPECIAL STATUS BIOLOGICAL RESOURCES

Special status habitats are vegetation communities, associations, or subassociations that support concentrations of special status plant or wildlife species, are of relatively limited distribution, or are of particular value to wildlife. Although special status habitats are not afforded legal protection unless they support protected species, potential impacts on them may increase concerns and mitigation suggestions by resources agencies.

A Federally Endangered species is one facing extinction throughout all or a significant portion of its geographic range. A Federally Threatened species is one likely to become endangered within the foreseeable future throughout all or a significant portion of its range. The presence of any federally Threatened or Endangered species on a Project site generally imposes severe constraints on development, particularly if development would result in "take" of the species or its habitat. The term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct. Harm in this sense can include any disturbance to habitats used by the species during any portion of its life history.

The reference to "proposed species" are those officially proposed by the USFWS for addition to the Federal Threatened and Endangered species list. Because proposed species may become listed as Threatened or Endangered prior to or during implementation of a proposed development project, they are treated in this EIR as though they are listed species.

The State of California considers an Endangered species as one whose prospects of survival and reproduction are in immediate jeopardy. Threatened species is a species in such small numbers throughout its range that it is likely to become an Endangered species in the near future in the absence of special protection or management. A rare species is one present in such small numbers throughout its range that it may become Endangered if its present environment worsens. Rare species applies to California native plants listed prior to the State Endangered Species Act. State Threatened and Endangered species are fully protected against take unless an incidental take permit is obtained from the wildlife agencies.

Federal Species of Concern are species (a "term of art" for former Category 2 candidates) with an informal designation by the USFWS for some declining species that are not federal candidates for listing at this time, but are noted in the CNDDB (CDFG 2002a). This list of species is not actively maintained by the USFWS.

California Species of Special Concern is an informal designation used by the CDFG for some declining wildlife species that are not state candidates. This designation does not provide legal protection, but signifies that these species are recognized as special status by the CDFG.

Species that are California Fully Protected and Protected include those protected by special legislation for various reasons, such as the mountain lion and white-tailed kite. Fully protected species may not be taken or possessed at any time. California Protected Species include those species that may not be taken or possessed at any

time except under special permit from the department issued pursuant to Sections 650 and 670.7 of the California Code of Regulations, or Section 2081 of the Fish and Game Code.

Special Plant and Special Animal are general terms that refer to all of the species the CNDDB is interested in tracking, regardless of their legal or protection status. This term includes species designated as any of the above terms but also includes species that may be considered biologically rare, restricted in distribution, declining throughout their range, are on the periphery of their range and are threatened with extirpation in California, are associated with special status habitats, or are considered by other state or federal agencies or private organizations to be sensitive or declining. Species of Local Concern are those that have no official status with the resource agencies, but are being watched because either there is a unique population in the region or the species is declining in the region.

The California Native Plant Society is a private organization that has developed an inventory of California's special status plant species. This inventory summarizes the distribution, rarity, and endangerment of California's vascular plants. This rare plant inventory is comprised of four lists. CNPS presumes that List 1A plant species are extinct in California because they have not been seen in the wild for many years. CNPS considers List 1B plants as rare, threatened, or endangered throughout their range. List 2 plant species are considered rare, threatened, or endangered in California but more common elsewhere. Plant species for which CNPS needs additional information are included on List 3. List 4 plant species are those of limited distribution in California whose susceptibility to threat appears low at this time.

SPECIAL STATUS VEGETATION TYPES

Pebble Plain

The pebble plain community found on the Project site is recognized as a special status vegetation type by local, state, and federal resources agencies. Pebble plain (also called pavement plain) is endemic to a 92-square-mile area in the San Bernardino Mountains at elevations between 6,000 and 7,500 feet above msl. Vegetation structure of pebble plain habitat is similar to the mat-forming structure of alpine sites at much higher elevations. Vegetation consists largely of well-spaced cushion-forming perennials and a variety of tiny annuals. Bunchgrasses and some succulents may also occur. Several special status plants, including Threatened or Endangered species, are known to occur on pebble plain and are discussed in the *Special Status Plants* section.

Pebble plain on the Project site occurs as a distinct open patch within the surrounding open Jeffrey pine forest. Much of the pebble plain habitat on the Project site has been subjected to disturbance by unauthorized off-road vehicle use. The disturbance has reduced vegetation cover, disturbed the natural hydrologic pattern, and perhaps reduced habitat quality for special status plants. However, based on National Forest management efforts at other sites, vehicle disturbance apparently does not permanently alter habitat suitability of this vegetation type.

Montane Meadow

Small patches of meadow transitioning into upland grassland occur along the lakeshore south of State Route 38. The extent of the meadows could not be determined or mapped in 2002 due to dry conditions. Meadows in the Big Bear Valley may be perennially saturated (i.e., wet meadows) or may have seasonally saturated soils during wet years (i.e., vernal meadows). This vegetation type is generally dominated by sedges (*Carex* spp.), rushes (*Juncus* spp.), and grasses (*Poa* spp., *Elymus* spp.). Dry meadows and the margins of wet meadows may also support big sagebrush (*Artemisia tridentata*) and timberline sagebrush (*Artemisia rothrockii*).

Meadow habitat in the San Bernardino Mountains is not officially recognized as a special status vegetation type by the CDFG but it is known to support several locally endemic plants [e.g., bird's foot checkerbloom (*Sidalcea pedata*), San Bernardino bluegrass (*Poa atropurpurea*), and California dandelion (*Taraxacum californicum*)] and is therefore considered to be of local concern. Additionally, the San Bernardino National Forest recognizes montane meadow habitat as a rare ecological community of concern.

SPECIAL STATUS PLANTS

Eighty-one special status plant species are known to occur in the Project region, 50 of which occur or have the potential to occur on the Project site. A brief description of the special status plant species that were determined to have potential to occur on the Project site are outlined below and summarized in Table 5.8-2. As indicated in Table 5.8-2, four special status plant species have been observed on the Project site.

Coville's Dwarf Abronia (*Abronia nana* ssp. *covillei*). Coville's dwarf abronia is a CNPS List 4 species that typically blooms from May to August. This perennial herb occurs in carbonate, sandy soils in Joshua tree woodland, pinyon-juniper woodland, subalpine coniferous forest, and upper montane coniferous forest between 5,200 and 9,200 feet above msl. This species occurs in the Inyo, Mono, and San Bernardino counties. The Project site provides marginally suitable habitat for this species and the potential for occurrence is considered to be low.

Parish's Onion (*Allium parishii*). Parish's onion is a CNPS List 4 species that typically blooms from April to May. This perennial, bulbiferous herb occurs in rocky soils of Joshua tree woodland, Mojavean desert scrub, and pinyon-juniper woodland between 3,000 and 6,000 feet above msl. This species occurs in the Imperial, Riverside, and San Bernardino counties. The Project site provides suitable habitat for this species but is above the known elevation range for this species and the potential for occurrence is considered to be low.

Parish's Rock-Cress (*Arabis parishii*). Parish's rock cress is a CNPS List 1B species that typically blooms from April to May. This perennial herb occurs in rocky, quartzite and clay, or sometimes carbonate soils in pebble plains, pinyon-juniper woodlands, and upper montane coniferous forests from approximately 3,900 to 8,000 feet above msl. It is endemic to the San Bernardino Mountains. This species was observed

uncommonly in scattered patches throughout pebble plain and open Jeffrey pine forest on the Project site during botanical surveys conducted in 2002.

Rock Sandwort (*Arenaria lanuginosa* ssp. *saxosa*). Rock sandwort is a CNPS List 2 species that typically blooms from July to August. This perennial herb occurs in mesic, sandy soils of subalpine, coniferous forests, and upper montane coniferous forests from approximately 5,900 to 9,000 feet above msl. It is found only in the San Bernardino Mountains in the state of California but also occurs in Arizona, Baja California, and elsewhere. The Project site provides marginally suitable habitat for this species and the potential for occurrence is considered to be moderate.

Big Bear Valley Sandwort (*Arenaria ursina*). Big Bear Valley sandwort is a federally-listed Threatened and CNPS List 1B species that typically blooms from May to August. This perennial herb occurs in mesic, rocky soils of pebble plain, and pinyon-juniper woodland from approximately 6,400 to 6,900 feet above msl. This species is endemic to the San Bernardino Mountains. The Project site provides suitable habitat for this species and the potential for occurrence is considered to be high.

Crested Milk-Vetch (*Astragalus bicristatus*). Crested milk-vetch is a CNPS List 4 species that typically blooms from May to August. This perennial herb occurs in sandy or rocky soils of lower and upper montane coniferous forests from approximately 5,500 to 8,200 feet above msl. This species is found in the San Bernardino, San Gabriel, and San Jacinto mountains. The Project site provides suitable habitat for this species and the potential for occurrence is considered to be high.

Big Bear Valley Milk-Vetch (*Astragalus lentiginosus* var. *sierrae*). Big Bear Valley milk-vetch is a CNPS List 1B species that typically blooms from April to August. This perennial herb occurs in gravelly or rocky soils of desert scrub, meadows and seeps, pinyon-juniper woodland, and upper montane coniferous forest from approximately 5,800 to 8,500 feet above msl. It is found in the San Bernardino, San Gabriel, San Jacinto, and Santa Rosa mountains. The Project site provides suitable habitat for this species and the potential for occurrence is considered to be high.

Big Bear Valley Woollypod (*Astragalus leucolobus*). Big Bear Valley woollypod is a CNPS List 1B species that typically blooms from May to July. This perennial herb occurs in rocky soils of lower montane coniferous forest, pebble plain, pinyon-juniper woodland, and upper montane coniferous forests from approximately 5,600 to 8,000 feet above msl. It is found in the San Bernardino, San Gabriel, San Jacinto, and Santa Rosa mountains. This species was observed throughout the Project site during botanical surveys conducted in 2002.

Palmer's Mariposa Lily (*Calochortus palmeri* var. *palmeri*). Palmer's mariposa lily is a CNPS List 1B species that typically blooms between May and July. This perennial, bulbiferous herb occurs in mesic chaparral, lower montane coniferous forest, meadows, and seeps from approximately 3,200 to 7,200 feet above msl. It is a California endemic found in the South Coast and Transverse ranges in Kern, Los Angeles, Riverside, Santa Barbara, San Bernardino, San Luis Obispo, and Ventura counties. This species was not observed during the 2002 botanical surveys.

However, it has a moderate potential to occur on the project site given the availability of marginally suitable habitat in mesic portions of Jeffrey pine forest.

Ash-Gray Indian Paintbrush (*Castilleja cinerea*). Ash-gray Indian paintbrush is a federally-listed Threatened and CNPS List 1B species. It is a root parasite on other plants, often parasitizing the Federally-listed Threatened southern mountain buckwheat and Wright's matting buckwheat. It is a perennial herb, and typically blooms between May and August. It occurs in pebble plains, meadows, seeps, and open pinyon or Jeffrey pine forest from approximately 5,900 to 9,300 feet above msl and is endemic to the eastern San Bernardino Mountains (Big Bear Valley, Holcolmb Valley, Onyx Summit, Snow Valley, and Sugarloaf Ridge). This species was reported and mapped on the project site by Michael Brandman Associates (MBA) (MBA 2000) and the California Natural Diversity Data Base (CDFG 2001). Botanical surveys in 2002 identified populations of this species throughout approximately 11.8 acres of pebble plain and open Jeffrey pine forest in the western half of the project site where it appears to be parasitizing Wright's matting buckwheat (see Exhibit 3). Populations of this species were found to be more widespread than reported previously and would be expected to occur in higher concentrations within the mapped Wright's matting buckwheat areas during normal rainfall years.

San Bernardino Mountain Owl's Clover (*Castilleja applegateii* ssp. *martinii*). San Bernardino Mountain owl's clover is a CNPS List 1B species that typically blooms between June and August. This hemiparasitic, annual herb occurs in mesic chaparral, meadows and seeps, pebble plain, and upper montane coniferous forests from approximately 4,200 to 7,850 feet above msl. It is a California endemic found in Riverside and San Bernardino counties. This species was not observed during the 2002 botanical surveys. However, it has a high potential to occur on the project site given the availability of suitable habitat throughout the project site, especially within pebble plains and open Jeffrey pine forest where Wright's matting buckwheat occurs.

Male Fern (*Dryopteris filix-mas*). Male fern is a CNPS List 2 species that is typically fertile from July to September. This rhizomatous, perennial herb occurs in granitic, rocky soils of upper montane coniferous forests from approximately 7,800 to 10,200 feet above msl. This species is known from only two locations in the White Mountains and Holcomb Valley in Inyo and San Bernardino counties respectively. The project site provides suitable habitat; however, the project site is outside the known range of this local rarity and the potential for occurrence is considered to be low.

San Bernardino Mountains Dudleya (*Dudleya abramsii* ssp. *affinis*). The San Bernardino Mountains dudleya is a CNPS List 1B species that typically blooms from April to June. This perennial herb occurs in granitic, quartzite, or carbonate soils of pebble plain, pinyon-juniper woodland, and upper montane coniferous forest from approximately 5,800 to 8,500 feet above msl. This species is endemic to the San Bernardino Mountains. The project site provides marginally suitable habitat for this species and the potential for occurrence is considered to be moderate.

Leafy Buckwheat (*Eriogonum foliosum*). Leafy buckwheat is a CNPS List 1B species that typically blooms from July to October. This annual herb occurs in sandy soils of chaparral, lower montane coniferous forest, and pinyon-juniper woodland from

approximately 3,900 to 7,200 feet above msl. This species is found in scattered locations from Big Bear Valley south to Baja California. The project site provides suitable habitat for this species and the potential for occurrence is considered to be high.

Southern Mountain Buckwheat (*Eriogonum kennedyi* var. *austromontanum*). Southern mountain buckwheat is a Federally-listed Threatened and CNPS List 1B species that typically blooms between June and August. It is a mat-forming, woody perennial endemic to pebble plain habitats in Big Bear and Holcomb valleys in the San Bernardino Mountains from approximately 5,800 to 7,500 feet above msl. This species often serves as a host plant for the hemi-parasitic ash-gray Indian paintbrush and is also a food plant for the recently described, locally-endemic San Bernardino blue butterfly (*Euphilotes bernardino bernardino*). It is very similar to the more common Wright's matting buckwheat that is common on the project site. Southern mountain buckwheat was not seen during the 2002 botanical surveys and it has not been reported on the project site by other botanists (MBA 2000; CDFG 2001). However, it is considered to have a low potential to occur given that suitable habitat occurs within pebble plains on the project site.

Southern Sierra Woolly Sunflower (*Eriophyllum lanatum* var. *obovatum*). Southern Sierra woolly sunflower is a CNPS List 4 species that typically blooms from June to July. This perennial herb occurs in lower and upper montane coniferous forest from approximately 4,200 to 8,100 feet above msl. This species is found in the southern Sierra Nevada and western San Bernardino mountains. The project site provides suitable habitat for this species; however, the project site is on the margin of this species geographic range and the potential for occurrence is considered to be low.

Jepson's Bedstraw (*Galium jepsonii*). Jepson's bedstraw is a CNPS List 4 species that typically blooms from July to August. This rhizomatous, perennial herb occurs in granitic, rocky or gravelly soils in lower and upper montane coniferous forests from approximately 6,500 to 8,100 feet above msl. This species is found in the San Gabriel and San Bernardino mountains. The project site provides suitable habitat for this species and the potential for occurrence is considered to be high.

Johnston's Bedstraw (*Galium johnstonii*). Johnston's bedstraw is a CNPS List 4 species that typically blooms from June to July. This perennial herb occurs in chaparral, lower montane coniferous forest, pinyon-juniper woodland, and riparian woodland from approximately 5,300 to 7,500 feet above msl. This species is found in the San Gabriel and San Bernardino mountains. The project site provides suitable habitat for this species and the potential for occurrence is considered to be high.

San Bernardino Mountains Gilia (*Gilia leptantha* ssp. *leptantha*). San Bernardino Mountains gilia is a List 1B species that typically blooms from June to August. This annual herb occurs in sandy or gravelly soils of lower montane coniferous forests from approximately 5,000 to 7,700 feet above msl. This species is endemic to the upper Santa Ana River watershed in the San Bernardino Mountains. The project site provides suitable habitat for this species; however, it has not been recorded in the Big Bear valley and the potential for occurrence is considered to be low.

Shaggy-Haired Alumroot (*Heuchera hirsutissima*). Shaggy-haired alumroot is a CNPS List 1B species that typically blooms from May to July. This rhizomatous, perennial herb occurs in rocky soils of subalpine coniferous forest, and upper montane coniferous forest above approximately 7,200 feet above msl. This species is endemic to the San Jacinto and Santa Rosa mountains with one uncomfirmed record for the San Bernardino Mountains. The project site provides limited suitable habitat for this species and the potential for occurrence is considered to be low.

Parish's Alumroot (*Heuchera parishii*). Parish's alumroot is a CNPS List 1B species that typically blooms from June to July. It is a rhizomatous perennial herb that occurs in rocky soils of alpine boulder and rock fields, lower montane coniferous forest, subalpine coniferous forest, and upper montane coniferous forest above approximately 4,800 feet above msl. This species is endemic to the San Bernardino Mountains. The project site provides limited suitable habitat for this species and the potential for occurrence is considered to be low.

Silver-Haired Ivesia (*Ivesia argyrocoma*). Silver-haired ivesia is a CNPS List 1B species that typically blooms between June and August. This perennial herb occurs in alkaline meadows and seeps, pebble plains, and upper montane coniferous forest from approximately 4,900 to 8,800 feet above msl. It occurs in the San Bernardino Mountains and a disjunct population occurs in the mountains of Baja California. This species was reported on the project site by MBA (MBA 2000) and was observed throughout mapped pebble plain habitat on the project site during the 2002 botanical surveys.

Duran's Rush (*Juncus duranii*). Duran's rush is a CNPS List 4 species that typically blooms from July to August. It is a rhizomatous, perennial herb that occurs in mexic soils of lower montane coniferous forest, meadows and seeps, and upper montane coniferous forest from approximately 5,800 feet to 9,000 feet above msl. This species is found in the San Bernardino, San Gabriel, and San Jacinto mountains. The project site provides suitable habitat for this species and the potential for occurrence is considered to be high.

Short-Sepaled Lewisia (*Lewisia brachycalyx*). Short-sepaled lewisia is a CNPS List 2 species that typically blooms from May to June. It is a perennial herb that occurs in mesic meadows and seeps, and lower montane coniferous forest from 4,500 to 7,500 feet above msl. This species is endemic to the San Bernardino Mountains. The project site provides limited suitable habitat for this species and the potential for occurrence is considered to be moderate.

Lemon Lily (*Lilium parryi*). Lemon lily is CNPS List 1B species that typically blooms from July to August. It is a bulbiferous, perennial herb that occurs in lower and upper montane coniferous forests, meadows and seeps, and riparian scrub above approximately 4,000 feet above msl. This species is found in the mountain ranges of southern California and southeastern Arizona. The project site provides marginally suitable habitat for this species and the potential for occurrence is considered to be low.

Baldwin Lake Linanthus (*Linanthus killipii*). The Baldwin Lake linanthus is a CNPS List 1B species that blooms from May to July. It is an annual herb that occurs in

alkaline meadows and seeps, pebble plain, pinyon-juniper woodland, and upper montane coniferous forest from approximately 5,500 to 7,800 feet above msl. This species is endemic to the San Bernardino Mountains. The project site provides suitable habitat for this species and the potential for occurrence is considered to be high.

San Bernardino Mountain Monkeyflower (*Mimulus exiguus*). The San Bernardino Mountain monkeyflower is a CNPS List 1B species that typically blooms from June to July. It is an annual herb that occurs in mesic, clay soils of meadows and seeps, pebble plain, and upper montane coniferous forest between approximately 5,800 and 7,500 feet above msl. This species is found in the San Bernardino Mountains and high mountains of Baja California. The project site provides suitable habitat for this species and the potential for occurrence is considered to be high.

Purple Monkeyflower (*Mimulus purpureus* var. *purpureus*). Purple monkeyflower is a CNPS List 2 species that typically blooms from May to July. It is an annual herb that occurs in meadows and seeps, pebble plain, and upper montane coniferous forest from approximately 6,100 to 7,500 feet above msl. This species is found in the San Bernardino Mountains and high mountains of Baja California. The project site provides suitable habitat for this species and the potential for occurrence is considered to be high.

Baja Navarretia (*Navarretia peninsularis*). Baja navarretia is a CNPS List 1B species that blooms from July to September. It is an annual herb that occurs in mesic, sandy soils in chaparral and lower montane coniferous forests between approximately 4,800 and 7,500 feet above msl. This species is found in the mountains of central and southern California and north Baja California. The project site provides limited suitable habitat for this species and the potential for occurrence is considered to be low.

Chickweed Oxytheca (*Oxytheca caryophylloides*). Chickweed oxytheca is a CNPS List 4 species that typically blooms from July to September. It is an annual herb that occurs in sandy soils of lower montane coniferous forest from approximately 3,900 to 8,500 feet above msl. This species is found in the southern Sierra Nevada, Transverse Ranges, and San Jacinto Mountains. The project site provides suitable habitat for this species and the potential for occurrence is considered to be high.

Cienega Seca Oxytheca (*Oxytheca parishii* var. *cienegensis*). The cienega seca oxytheca is a CNPS List 1B species that typically blooms from June to September. It is an annual herb that occurs in sandy, granitic soils in upper montane coniferous forest from approximately 7,000 to 8,000 feet above msl. This species is found along Coon Creek and Cienega Seca Creek in San Bernardino County. The project site provides suitable habitat for this species; however, the project site is well outside the known geographic range for this species and the potential for occurrence is considered to be low.

Parish's Yampah (*Perideridia parishii* ssp. *parishii*). Parish's yampah is a CNPS List 2 species that typically blooms from June to August. It is a perennial herb that occurs in lower and upper montane coniferous forests, and meadows and seeps above approximately 6,500 feet above msl. This species is found in the San

Bernardino Mountains and in disjunct populations in Arizona and New Mexico. The project site provides suitable habitat for this species and the potential to occur is considered to be high.

Transverse Range Phacelia (*Phacelia exilis*). The Transverse Range phacelia is a CNPS List 4 species that typically blooms from May to August. It is an annual herb that occurs in sandy or gravelly soils in lower and upper montane coniferous forests, and meadows and seeps from approximately 3,500 to 8,500 feet above msl. This species is found in the southern Sierra Nevada and Transverse Ranges. The project site provides suitable habitat for this species and the potential to occur is considered to be high.

Mojave Phacelia (*Phacelia mohavensis*). The Mojave phacelia is a CNPS List 4 species that typically blooms from April to August. It is an annual herb that occurs in sandy or gravelly soils of cismontane woodland, lower montane coniferous forest, meadows and seeps, and pinyon-juniper woodland from approximately 4,500 to 8,100 feet above msl. This species is found in the San Gabriel and San Bernardino mountains. The project site provides suitable habitat for this species and the potential to occur is considered to be high.

Bear Valley Phlox (*Phlox dolichantha*). The Bear Valley phlox is a CNPS List 1B species that blooms from June to July. It is a perennial herb that occurs in pebble plain, and upper montane coniferous forest from approximately 6,500 to 8,800 feet above msl. This species is endemic to the San Bernardino Mountains. The project site provides suitable habitat for this species and the potential to occur is considered to be high.

San Bernardino Bluegrass (*Poa atropurpurea*). San Bernardino bluegrass is a Federally-listed Endangered and CNPS List 1B species that typically blooms from May to June. It is a rhizomatous, perennial herb that occurs in mesic meadows and seeps between approximately 4,800 and 7,200 feet above msl. This species is found in the San Bernardino and Laguna mountains (San Diego). The project site provides suitable habitat for this species and the potential to occur is considered to be high.

Bear Valley Pyrrocoma (*Pyrrocoma uniflora* ssp. *gosssypina*). Bear Valley pyrrocoma is a CNPS List 1B species that typically blooms from July to August. It is a perennial herb that occurs in meadows and seeps, and pebble plain from approximately 5,200 to 7,600 feet above msl. This species is endemic to the San Bernardino Mountains. The project site provides suitable habitat for this species and the potential to occur is considered to be high.

Parish's Rupertia (*Rupertia rigida*). Parish's rupertia is a CNPS List 4 species that typically blooms from June to July. It is a perennial herb that occurs in chaparral, cismontane woodland, and lower montane coniferous forest below approximately 8,100 feet above msl. This species is found in the San Bernardino Mountains, Peninsular Ranges, and Baja California. The project site provides suitable habitat for this species and the potential to occur is considered to be high.

Bluish Spike-Moss (*Selaginella asprella*). Bluish spike-moss is a CNPS List 4 species that typically blooms in July. It is a rhizomatous, perennial herb that occurs in granitic, rocky soils of cismontane woodland, lower and upper montane coniferous forests, pinyon-juniper woodland, and subalpine coniferous forest between approximately 5,200 to 8,800 feet above msl. This species occurs throughout southern California mountain ranges and Baja California. The project site provides limited suitable habitat for this species and the potential for occurrence is considered to be low.

San Bernardino Butterweed (*Senecio bernardinus*). San Bernardino butterweed is a CNPS List 1B species that typically blooms from May to July. It is a perennial herb that occurs in meadows and seeps, pebble plain, and upper montane coniferous forest between approximately 5,800 to 7,500 feet above msl. This species is endemic to the San Bernardino Mountains and is known from fewer than twenty occurrences. The project site provides limited suitable habitat for this species and the potential for occurrence is considered to be low.

Parish's Checkerbloom (*Sidalcea hickmanii* ssp. *parishii*). Parish's checkerbloom is a Federal Candidate for listing as Threatened or Endangered, State Rare, and CNPS List 1B species that typically blooms from June to July. It is a perennial herb that occurs in chaparral, cismontane woodland, and lower montane coniferous forest between 3,200 and 8,200 feet above msl. This species is found mainly in the San Bernardino Mountains and in a few localities in the Santa Ynez Mountains. The project site provides limited suitable habitat for this species and potential for occurrence is considered to be low.

Bird's Foot Checkerbloom (*Sidalcea pedata*). Bird's foot checkerbloom is a Federally- and State-listed Endangered and CNPS 1B species that typically blooms from May to July. It is a perennial herb that occurs in meadows and seeps, and pebble plain between approximately 5,200 and 8,100 feet above msl. This species is endemic to the San Bernardino Mountains. The project site provides marginally suitable habitat for this species and the potential to occur is considered to be low to moderate.

Prairie Wedge Grass (*Sphenopholis obtusata*). Prairie wedge grass is a CNPS List 2 species that typically blooms from April to July. It is a perennial herb that occurs in mesic soils of cismontane woodland, meadows and seeps between approximately 1,000 and 6,550 feet above msl. This species is found in a few widely scattered locations in Amador, Fresno, Inyo, Mono, Riverside, and San Bernardino counties in California. The project site provides suitable habitat for this species and the potential to occur is considered to be high.

Laguna Mountains Jewelflower (*Streptanthus bernardinus*). The Laguna Mountains jewelflower is a CNPS List 4 species that typically blooms from June to July. It is a perennial herb that occurs in chaparral, and lower montane coniferous forest between approximately 3,900 and 8,100 feet above msl. This species is found in the Transverse and Peninsular ranges and Baja California. The project site provides suitable habitat for this species and the potential to occur is considered to be high.

Southern Jewelflower (*Streptanthus campestris*). The southern jewelflower is CNPS List 1B species that typically blooms from May to July. It is a perennial herb that occurs in rocky soils of chaparral, lower montane coniferous forest, and pinyon-juniper woodland from approximately 2,900 to 7,500 feet above msl. This species is known from fewer than twenty occurrences in Riverside, San Bernardino, and San Diego counties, and Baja California. The project site provides suitable habitat for this species and the potential to occur is considered to be high.

Pine Green-Gentian (*Swertia neglecta*). Pine green-gentian is a CNPS List 4 species that typically blooms from May to July. It is a perennial herb that occurs in lower and upper montane coniferous forests, and pinyon-juniper woodlands from approximately 4,500 to 8,100 feet above msl. This species is found in the South Coastal and Transverse ranges within Los Angeles, San Bernardino, and Ventura counties. The project site provides suitable habitat for this species and the potential to occur is considered to be high.

California Dandelion (*Taraxacum californicum*). The California dandelion is a Federally-listed Endangered and CNPS List 1B species that typically blooms from May to July. It is a perennial herb that occurs in mesic meadows and seeps from approximately 6,300 to 7,800 feet above msl. This species is endemic to the San Bernardino Mountains. The project site provides suitable habitat for this species and the potential to occur is considered to be low to moderate.

Slender-Petaled Thelypodium (*Thelypodium stenopetalum*). Slender-petaled thelypodium is a Federally- and State-listed Endangered and CNPS List 1B species that typically blooms from June to July. It is a perennial herb that occurs in mesic, alkaline meadows and seeps from approximately 6,200 to 7,200 feet above msl. This species is endemic to the San Bernardino Mountains with less than eight known populations in the Big Bear and Holcomb valleys. The project site contains marginally suitable habitat for this species and the potential to occur is considered to be low.

Small-Flowered Bluecurls (*Trichostema micranthum*). Small-flowered bluecurls is a CNPS List 4 species that typically blooms from July to September. It is an annual herb that occurs mesic soils in lower montane coniferous forest, and meadows and seeps from 6,500 to 7,500 feet above msl. This species is found in the San Bernardino Mountains and Baja California. The project site provides suitable habitat for this species and the potential to occur is considered to be high.

Grey-Leaved Violet (*Viola pinetorum* ssp. *grisea*). Grey-leaved violet is a CNPS List 1B species that typically blooms in April. It is a perennial herb that occurs in meadows and seeps, subalpine coniferous forest, and upper montane coniferous forest from approximately 4,800 to 11,100 feet above msl. This species is known from ten occurrences in Fresno, Kern, San Bernardino, and Tulare counties. There is disagreement about the range of this species. The project site provides suitable habitat for this species; however, the project site is outside the known geographic range for this species and the potential to occur is considered to be low.

SPECIAL STATUS WILDLIFE

Fifty-three special status wildlife species are known to occur within the region, 39 of which have the potential to occur within the Project site. Focused surveys for the bald eagle, California spotted owl, southwestern willow flycatcher, and southern rubber boa were conducted in the winter, spring, summer and fall of 2002. A brief description of the special status wildlife species that were determined to have the potential to occur on the Project site is provided below and summarized in Table 5.8-3. As indicated in Table 5.8-3, one special status wildlife species (Southern sagebrush lizard) has been observed on the Project site.

Invertebrates

Andrew's Marble Butterfly (*Euchloe hyantis* ssp. *andrewsi*). Andrew's marble butterfly is a Federal Species of Concern. This species is found at elevations above 5,000 feet above msl near Lake Arrowhead and Big Bear Lake, and in other locations across the San Bernardino Mountains crest and north slopes. It is found primarily in pine and mixed conifer forests. The larval host plants for this subspecies are the Laguna Mountains jewelflower and *Arabis holboellii*. The Project site provides limited suitable habitat for this species; however, the Project site is above the known elevation range. The potential for this butterfly species to occur is considered to be low.

Amphibians

Yellow-Blotched Salamander (*Ensatina escholtziii croceater*). The yellow-blotched salamander is a Federal Species of Concern and State Species of Special Concern. This species is found at elevations up to 8,000 feet above msl among rotting logs and leaf litter in mixed stands of oaks and conifers. The Project site provides limited, marginally suitable habitat and the potential for it to occur is considered to be low.

Reptiles

Silvery Legless Lizard (*Anniella pulchra pulchra)*. The silvery legless lizard is a Federal Species of Concern and a State Species of Special Concern. The silvery legless lizard inhabits areas with moist sandy soil, including dry washes, woodlands, riparian, and scrub communities at elevations ranging from sea level to about 5,000 feet above msl. The Project site provides a limited amount of potentially suitable habitat for this species; however, the Project site is above the known elevation range for this species and its potential to occur is considered to be low.

Southern Rubber Boa (*Charina bottae umbbricata*). The southern rubber boa is a Federal Species of Concern and State-listed Threatened species found in the San Bernardino and San Jacinto mountains at elevations between 4,900 and 7,900 feet above msl. The majority of the localities for this species are in a 10-mile long strip of the San Bernardino Mountains between Twin Peaks in the west to Green Valley in the east. Known locations for this species occur on the north-facing slopes immediately south of Big Bear Lake. This species usually occurs in moist woodlands and coniferous forests with deep, well developed soils. It is a burrower and also commonly makes use of rock out crops for hibernation. Large downed logs and a

well-developed litter layer are considered important for cover and for maintaining soil moisture. Surveys for this species were conducted in the spring and summer of 2002. No southern rubber boas were encountered during surveys. Given the lack of historical records in the immediate vicinity of the Project site, and the negative results of two independent focused survey techniques, the southern rubber boa is not expected to occur on the Project site.

Coastal Western Whiptail (*Cnemidophorus tigris multiscutatus*). The coastal western whiptail is a Federal Species of Concern. It is a moderately large, slender lizard typically found in open scrub, chaparral, and woodland communities in semi-arid areas or where vegetation is sparse, from below sea level to 7,000 feet above msl. This species is restricted to the western coast of North America from Ventura County south through the northern two-thirds of the Baja California peninsula. The Project site provides suitable habitat for this species; however, it is at the maximum elevation for this species and its potential to occur is considered to be moderate.

San Bernardino Ringneck Snake *(Diadophis punctatus modestus*). The San Bernardino ringneck snake is a Federal Species of Concern and is considered locally rare in southwestern California. It inhabits scrub, chaparral, native grassland, and woodland communities. This species is difficult to detect due to its secretive behavior. It occurs in elevations from sea level to 7,000 feet above msl (Stebbins 1985). The Project site provides limited suitable habitat for this species and its potential to occur is considered to be low.

San Bernardino Mountain Kingsnake (*Lampropeltis zonata parvirubra*). The San Bernardino mountain kingsnake is a Federal Species of Concern that occurs in the San Jacinto, San Bernardino, and San Gabriel mountains. This species typically occurs in open stands of ponderosa pine, Jeffrey pine, Coulter pine, and/or black oak at elevations ranging from 4,500 to 6,500 feet above msl. This species occurs at higher elevations, but is less common. Partially shaded rock outcrops appear to be an important microhabitat element for refugia and basking sites. The Project site provides marginally suitable habitat for this species and its potential to occur is considered to be moderate.

Southern Sagebrush Lizard (*Sceloporus graciosus vandenbergianus*). The southern sagebrush lizard is a Federal Species of Concern that occurs in open coniferous forests and shrubland above 3,000 feet above msl. Its known range extends from Mount Pinos south to Baja California. This species inhabits mixed conifer forest, black oak woodlands, montane chaparral, and pinyon-juniper woodlands. This species was observed frequently on the Project site.

Birds

Cooper's Hawk (*Accipiter cooperii*). The Cooper's hawk is a State Species of Special Concern. Both resident and migratory populations exist in San Bernardino County. Wintering Cooper's hawks are often seen in wooded urban areas and native woodland communities. Preferred nesting habitats include riparian forests, mountain canyons, and oak woodlands. Cooper's hawks in the region prey on small birds and rodents that live in woodland and, occasionally, scrub and chaparral communities.

Breeding residents have been observed in the vicinity of Big Bear Lake. The Project site provides suitable foraging habitat, but a limited amount of nesting habitat for this raptor. Therefore, its overall potential to occur is considered to be high, although the potential for nesting is moderate.

Northern Goshawk (*Accipiter gentilis*). The northern goshawk is a Federal Species of Concern and State Species of Special Concern. Rare in southern California, goshawks have been observed during the breeding season only on Mount Abel, Mount Pinos, and in the San Bernardino and San Jacinto mountains. Breeding has not been documented in the San Bernardino Mountains, although goshawks have been observed near Big Bear Lake. Goshawks occur in a variety of coniferous forest communities, including ponderosa and Jeffrey pine, mixed conifer, white fire and lodgepole pine. Large snags and downed logs are believed to be important habitat elements because they increase the abundance of small- to medium sized birds and mammals composing this species prey base. Limited suitable foraging habitat is present on the Project site and the potential for this species is considered moderate for foraging, but no potential for nesting.

Sharp-shinned Hawk (*Accipiter striatus*). The sharp-shinned hawk is a State Species of Special Concern. This raptor is a fairly common winter visitor throughout southern California. It prefers woodland communities, but can also be found in virtually any habitat as it passes through the area during migration. The sharp-shinned hawk is a fairly common winter visitor in the Big Bear Lake vicinity, and its potential to occur for foraging is considered to be high. However, the Project site provides no nesting habitat for this raptor.

Golden Eagle (*Aquila chryysaetos*). The golden eagle is a State Species of Special Concern. This raptor is uncommon, but widely distributed throughout foothill, lower montane, and desert montane habitats in southern California. Golden eagles nest primarily on cliffs and hunt for rabbits and other small mammals in open habitats such as grasslands, oak savannas, and open shrublands. No nesting habitat is present on the Project site; however, the potential for foraging on the Project site is considered high.

Long-eared Owl (*Asio otus)*. The long-eared owl is a State Species of Special Concern. It breeds and roosts in riparian forests and woodlands or other dense forest habitats. This owl forages at night in open habitats including marshes, grasslands, and agricultural fields. It occurs throughout North America but is an increasingly rare breeder in southern California. The Project site provides moderate suitable foraging habitat and limited nesting habitat, for this species.

Ferruginous Hawk (*Buteo regalis*). The ferruginous hawk is a Federal Species of Concern and a State Species of Special Concern. Ferruginous hawks occur from mid-fall through early spring in coastal southern California. They forage over grasslands and the ecotone between scrub and grasslands. The Project site provides a limited amount of suitable foraging habitat, but no nesting habitat, for this species. Therefore, its potential to occur on the Project site is considered to be low for foraging, with no potential for nesting.

Northern Harrier (*Circus cyaneus*). The northern harrier is a State Species of Special Concern. It is a regular winter migrant that occasionally breeds along the coast of southern California. Foraging habitat consists of marsh, grassland, and scrub habitats. The Project site provides limited suitable foraging habitat, but no nesting habitat, for this raptor. Therefore, its potential to forage on the Project site is considered to be low.

Black Swift (*Cypseloides niger*). The black swift is a State Species of Special Concern. It is known to breed in the San Gabriel Mountains, Mill Creek Canyon in the San Bernardino Mountains, and the San Jacinto Mountains. This species occurs in mountain and foothill canyons where it nests in rocky cliffs behind waterfalls. No suitable nesting habitat is present on the Project site; however, this Project site could provide suitable foraging habitat and the potential for this species to forage on the Project site is considered moderate.

Yellow Warbler (*Dendroica petechia*). The western yellow-warbler is a California Species of Special Concern. This subspecies of yellow warbler that breeds in southern California is the western yellow warbler (*D.p. brewsteri*). This subspecies occurs in coastal areas from northwestern Washington south to western Baja California. In southern California, yellow warblers breed locally in riparian woodlands. The yellow warbler is an abundant migrant and would be expected to occur in spring and fall during migration. No suitable nesting habitat is present on the Project site; however, the potential for foraging migrants on the Project site is considered moderate.

White-Tailed Kite (*Elanus leucereus*). The white-tailed kite is a California Fully Protected species. This raptor typically nests in oaks, willows, and sycamores, and forages within adjacent grassland and scrub habitats. White-tailed kites show strong site fidelity to nest groves and trees. The most abundant prey species for this raptor includes the California vole, western harvest mouse, and house mouse. The project site provides limited suitable foraging and nesting habitat for this raptor. Therefore, its potential to occur on the Project site is considered to be low for nesting and foraging.

Southwestern Willow Flycatcher (*Empidonax traillii extimus*). The southwestern willow flycatcher is a Federally- and State-listed Endangered species. This subspecies has declined drastically due to a loss of breeding habitat and nest parasitism by brown-headed cowbirds. This species occurs in riparian habitats along rivers, streams, or other wetlands where dense growths of willows (*Salix* sp.), baccharis (*Baccharis* sp.), arrowweed (*Pluchea* sp.), tamarisk (*Tamarix* sp.), or other plants are present, often with a scattered overstory of cottonwood (*Populus* sp.). The potential for this species to occur on the Project site as a foraging migrant is considered to be high, but its potential to nest on the Project site is considered low. Surveys for this species were conducted in the spring and summer of 2002. No breeding or individual southwestern willow flycatchers were detected during the surveys. Willows along the shoreline are patchy and lack the dense growth or willow thicket favored by this species as territorial or breeding habitat. Therefore, breeding southwestern willow flycatchers are not expected to occur on the Project site.

Merlin (*Falco columbaris*). The merlin is a State Species of Special Concern. In California, the merlin prefers vast open space areas such as estuaries, grasslands, and deserts where it hunts small flocking birds such as sandpipers, larks, sparrows, and pipits. The merlin is a very rare winter visitor to the Big Bear Lake area. The Project site provides suitable foraging habitat and perching locations, but no nesting habitat, for this raptor. Therefore, its potential to occur for foraging is considered to be low, and there is no potential for nesting.

Prairie Falcon (*Falco mexicanus*). The prairie falcon is a State Species of Special Concern. It is now a rare visitor to the coastal plain of southern California. Foraging habitat for this species consists of open habitats such as deserts, grasslands, rangelands, and marshes. For nesting, this large falcon uses ledges of cliff faces. The Project site provides suitable foraging habitat for this raptor, but no potentially suitable nesting habitat. Therefore, its potential to occur is considered to be low for foraging only.

American Peregrine Falcon (*Falco peregrinus*). The peregrine falcon is a State-listed Endangered species that, due to recent population gains, has been recently delisted as Endangered by the USFWS. No such delisting has been proposed by the state. Peregrine falcons prey almost exclusively on birds and use a variety of habitats, particularly wetlands and coastal areas, and nest on cliffs or building ledges. The Project site provides limited suitable foraging habitat for the peregrine falcon, but no potentially suitable nesting habitat. Therefore, its potential to occur on the Project site is considered to be low for foraging only.

Osprey (*Pandion haliaetus*). The osprey is a California Species of Special Concern. It is an uncommon winter visitor in southern California, but nesting has been documented at Lake Casitas near Ventura and Lake San Antonio in Monterey County (Garrett and Dunn 1981) and may occur elsewhere. The osprey would be expected to occur on the project site during spring migration or post-breeding wandering. The Project site provides roosting and foraging habitat for the osprey, but no potentially suitable nesting habitat. Therefore, its potential to occur on the Project site is considered to be low for foraging only.

Bald Eagle (*Haliaeetus leucocephalus*). The bald eagle is a State- and Federally-listed Endangered species. This raptor typically overwinters in small numbers in southern California near lakes and reservoirs where they feed on fish, coots, and waterfowl. The largest known wintering population in southern California is at Big Bear Lake in the San Bernardino Mountains, where twenty to thirty eagles typically congregate from November to March. This species is known to be present on the Project site in winter but is not expected to nest on the Project site. Surveys and records searches were conducted on the Project site in the winter of 2002 to determine bald eagle use of perch trees and favored roosting locations (refer to Appendix 15.6, *Biological Resources Information*). The surveys found that the site is used extensively by bald eagles. Bald eagle perch and roost locations were recorded and individual trees were marked with numbered tags. Tree locations are shown on Exhibit 5.8-1. The records search confirmed extensive use of the Project site by bald eagles and found that the most commonly recorded use of a single tree was also on the Project site.

Hepatic Tanager (*Piranga flava*). The hepatic tanager is a State Species of Special Concern. In southern California, this species is known to breed only in the San Bernardino Mountains. Breeding habitat consists of mature pinyon pine woodland with a mixture of taller conifers such as white fir or Jeffrey pine. Johnson and Garrett suggest this species may also occur in pine and deciduous oak woodlands on warm, arid slopes. The Project site provides limited suitable foraging and nesting habitat for this species and potential for occurrence is considered to be low for foraging and nesting.

Purple Martin (*Progne subis*). The purple martin is a State Species of Special Concern that historically occurred throughout all of the major mountain ranges in southern California. Many historic localities are no longer occupied and there are no known active localities in the San Bernardino Mountains. This species is a secondary cavity nester of hardwood and conifer forests. The Project site provides suitable habitat for this species; however, given the lack of records in the vicinity, the potential for occurrence is considered to be low for foraging and nesting.

California Spotted Owl (*Strix occidentalis occidentalis*). The California spotted owl is a Federal Species of Concern and State Species of Special Concern. This species occurs in all of the major mountain ranges in southern California, although some ranges support very few pairs. It is found at elevations ranging from below 1,000 feet to 8,500 feet above msl in mature forests typically with a dense, multi-layered canopy. Its prey base consists of woodrats (i.e., *Neotoma* spp.) and other rodents. Surveys were conducted for this species on the Project site in the spring and summer of 2002 (refer to Appendix 15.6, *Biological Resources Information*). Although one male spotted owl was detected approximately one mile to the northwest of the Project site, no nesting pairs or individuals were observed on the Project site. Therefore, no nesting pairs presently occur on the Project site; however, individuals have a high potential to forage on the Project site.

Gray Vireo (*Vireo vicinior*). The gray vireo is a State Species of Special Concern. This species is a summer resident in a few highly localized areas on the coastal mountain ranges in southern California. It occurs on dry, desert-facing slopes in the San Gabriel, San Bernardino, and San Jacinto mountains. This species prefers stands of dense, mature chaparral dominated by chamise or redshank or on brushy slopes in pinyon-juniper woodlands. The Project provides limited, marginal habitat for this species. The potential for occurrence is considered to be low for foraging but there is no potential for breeding on the Project site.

Mammals

Pallid Bat (*Antrozus pallidus*). The pallid bat is a California Species of Special Concern that most commonly occurs in mixed oak and grassland habitats. This large bat roosts in rock crevices and in cavities of trees, especially oaks. The Project site provides potentially suitable roosting and foraging habitat for this species and it has a low potential to occur.

Spotted Bat (*Euderma maculatum*). The spotted bat is a Federal Species of Concern and State Species of Special Concern. Little is known about its distribution. Spotted bats forage in a wide variety of habitats but roost strictly in cliffs. The Project

site would provide foraging habitat for this species and it has a moderate potential to occur for foraging; however, no suitable roosting habitat is present.

California Mastiff Bat (*Eumops perotis californicus*). The California mastiff bat, the largest bat in the United States, is a Federal Species of Concern and a California Species of Special Concern. This species is a very wide-ranging and high-flying insectivore that typically forages in open areas with high cliffs. It roosts in crevices in small colonies. The Project site would provide limited foraging habitat for this species and it has a low potential to occur for foraging; however, no suitable roosting habitat is present.

San Bernardino Mountain Flying Squirrel (*Glaucomys sabrinus californicus*). The San Bernardino Mountain flying squirrel is a Federal Species of Concern and State Species of Special Concern. It occurs in the San Bernardino Mountains between 5,200 and 8,500 feet above msl. This species prefers mid- to upper-elevation, dense, mature coniferous forest habitats, particularly those containing white fir. They use cavities in large trees, snags, and logs for cover. The Project site provides suitable foraging habitat for this species and the potential for occurrence is considered high; however, the potential for this species to breed on the Project site is considered to be low as this species prefers to breed in relatively dense coniferous forests in proximity to riparian areas.

Small-footed Myotis (*Myotis ciliolabrum*). The small-footed myotis is a Federal Species of Concern that occurs throughout much of the western United States, occupying a variety of habitats. This species feeds among trees or over brush, and roosts in cavities of cliffs, trees, or rocks and within caves or mine shafts. The Project site provide potentially suitable roosting and foraging habitat for this species and the potential for occurrence is considered to be low for roosting and high for foraging.

Long-eared Myotis (*Myotis evotis*). The long-eared myotis is a Federal Species of Concern that is restricted to high-elevation habitats. It is known to occur in Coon Creek in the San Bernardino National Forest. This species can occur in a variety of habitats, but are usually associated with coniferous forests where they roost under exfoliating tree bark. The Project site provides potentially suitable roosting and foraging habitat for this species and the potential for occurrence is considered to be high for foraging and roosting.

Occult Little Brown Bat (*Myotis lucifugus*). The occult little brown bat is a Federal Species of Concern and State Species of Special Concern that is restricted to high-elevation habitats. This species occurs in pine forests at elevations ranging from 6,000 to 9,000 feet above msl. It roosts in buildings, trees, and cliffs and feeds over water or open sites. The Project site provides suitable roosting and foraging habitat and the potential for this species to occur is considered to be high for foraging and roosting.

Fringed Myotis (*Myotis thysanodes*). The fringed myotis is a Federal Species of Concern that is restricted to high-elevation habitats. This species has been observed on Arrastre Creek on the San Bernardino National Forest. It occurs in a wide variety of habitats but is most commonly found in dry pine or mixed conifer

forests and pinyon-juniper woodlands where it will roost in caves, buildings, mine shafts, rock crevices in cliff faces, trees, and bridges. Hibernation has only been documented in buildings and mines. The Project site provides marginally suitable roosting and foraging habitat for this species and potential for occurrence is considered to be moderate for foraging and low for roosting.

Long-legged Myotis (*Myotis volans*). The long-legged myotis is a Federal Species of Concern that is restricted to high-elevation habitats. This species has been observed on Arrastre Creek on the San Bernardino National Forest. It is primarily a bat of coniferous forests but also occurs seasonally in riparian and desert habitats. It uses abandoned buildings, cliff crevices, exfoliating tree bark, and hollows within snags as summer day roosts; caves and mine tunnels for hibernation. The Project site provides marginally suitable foraging and roosting habitat for this species and its potential to occur on the Project site is considered to be moderate for foraging and roosting.

Yuma Myotis (*Myotis yumanensis*). The Yuma myotis is a Federal Species of Concern and a relatively small bat that occurs statewide. This species is closely associated with water and wooded canyon bottoms throughout its range. Caves and old buildings are preferred roosting habitats, with roosts numbering up to 2,000 individuals. The Project site provides potentially suitable foraging habitat for this species and the potential for this species to forage on the Project site is considered to be moderate; however, this species is not expected to roost on the Project site.

Pacific Western Big-eared Bat (*Plecotus townsendii pallescens*). The Pacific western big-eared bat occurs throughout California and is a Federal Species of Concern and State Species of Special Concern. In the southern portion of the state, the subspecies, *P.T. pallescens*, occupies a variety of communities, including oak woodlands, arid deserts, grasslands, and high-elevation forests and meadows. Known roosting sites in California include mines, caves, and buildings. The Project site would provide foraging habitat for this species and it has a moderate potential to forage on the Project site; however, no suitable roosting habitat is present.

ON-GOING REGIONAL AND LOCAL HABITAT CONSERVATION PROGRAMS

Carbonate Plant Critical Habitat/San Bernardino Mountains Carbonate Habitat Management Strategy

On January 23, 2003, the USFWS designated critical habitat for five Federally-listed plants on 13,180 acres of land in the San Bernardino Mountains. The five plants are Cushenbury milk-vetch (*Astragalus albens*), Cushenbury buckwheat (*Eriogonum ovalifolium* var. *vineum*), San Bernardino Mountains bladderpod (*Lesquerella kingii* ssp. *bernardina*), Cushenbery oxytheca (*Oxytheca parishii* var. *goodmaniana*), and Parish's daisy (*Erigeron parishii*). Critical habitat for these species covers 11,980 acres between the western edge of White Mountain and the eastern edge of Rattlesnake Canyon, 685 acres northeast of Big Bear Lake, and 515 acres of San Bernardino National Forest lands on Sugarlump Ridge south of Bear Valley. The project site is not located in any areas designated as critical habitat for these five carbonate plants. In addition, a Carbonate Habitat Management Strategy is currently being developed to address the long-term conservation of carbonate habitat in the

San Bernardino Mountains. The strategy identifies potential and occupied carbonate habitat and actions to conserve carbonate plants. Plant surveys on the project site have not identified any carbonate habitat on the project site that may be subject to conservation measures outlined in the Carbonate Habitat Management Strategy.

County of San Bernardino General Plan

The County of San Bernardino General Plan contains goals and policies/actions designed to preserve biological resources that apply to development within the County's jurisdiction. The general plan contains a list of Rare, Endangered and Threatened species that occur in San Bernardino County, adverse effects on which result in a mandatory finding of significant effect pursuant to State CEQA Guidelines, Section 15065 if individuals are adversely affected by County land use map changes and discretionary land use approvals, thereby requiring the preparation of an Environmental Impact Report (EIR). Listed plant species identified within the General Plan with potential to occur on the Project site include Parish's checkerbloom and bird's foot checkerbloom. Listed wildlife species identified within the General Plan with potential to occur on the Project site include the southern rubber boa and bald eagle. This *Biological Resources Assessment*, contained in Appendix 15.6, has been prepared as supporting documentation for the proposed Project EIR, which satisfies the requirements of the County of San Bernardino General Plan.

County of San Bernardino Biotic Resources Overlay District

The Project site lies within a County of San Bernardino Biotic Resources (BR) Overlay District. The purpose of the BR Overlay District is to "implement General Plan policies regarding the protection and conservation of beneficial rare and endangered plants and animal resources and their habitats which have been identified within unincorporated areas of the county" (Article 2, 85.030201). The County General Plan implements the intent of the BR Overlay District by requiring all proposed land uses with a minimum of 25 percent of the total proposed development area within the BR Overlay District to prepare a biological technical report identifying impacts to biological resources and mitigation measures designed to reduce or eliminate Project related impacts. The *Biological Resources Assessment* is intended to satisfy the requirements of the BR Overlay District.

Plant Protection and Management Ordinance – County of San Bernardino Development Code

The County of San Bernardino requires under Chapter 8, Division 9 of the County Development Code (Plant Protection and Management) that development on all private and public lands within the unincorporated areas of San Bernardino County is subject to specific requirements. Removal of any native plant from unincorporated areas of San Bernardino requires the approval of a removal permit. Additionally, the following sections of the ordinance would apply to native plants on the Project site:

89.0110(b) The provisions of this Division shall not authorize the removal of perch trees within identified American Bald eagle habitat.

89.0115(c) The reviewing authority may require certification from an appropriate tree expert or native plant expert that such tree removals are appropriate, supportive of a healthy environment and are in compliance with the provisions of this chapter.

89.0205 Any coniferous tree or portion thereof, including stumps, shall be treated in accordance with one of the methods specified in Sections 89.0205 and 89.0210 within fifteen (15) days after such a tree or portion of such a tree has been cut.

Migratory Bird Treaty Act (MBTA)

The MBTA established in 1918 the federal prohibition, unless permitted by regulations, to pursue, hunt, take, capture, or kill any migratory bird species or any part, nest, or egg of any such migratory bird species covered by the act. Impacts to any bird (or its nest) listed by the MBTA are considered punishable by fines and/or imprisonment. Additionally, impacts to nesting MBTA-listed species are considered a significant impact by CEQA per guideline section.

IMPACTS

The determination of impacts in this analysis is based on a comparison of maps depicting Project grading limits and maps of on-site biological resources. All construction activities, including staging and equipment areas, are assumed to be contained within the limits of grading. Both direct and indirect impacts on biological resources have been evaluated. Direct impacts are those that involve the initial loss of habitats due to grading and construction. Indirect impacts are those that would be related to disturbance from construction activities (e.g., noise, dust) and use of the Project site.

Biological impacts associated with the proposed Project were evaluated with respect to the following special status biological issues:

- Federally- or State-listed Endangered or Threatened species of plant or wildlife;
- Non-listed species that meet the criteria in the definition of Rare, Threatened, or Endangered in the California Environmental Quality Act (CEQA) Guidelines;
- Streambeds, lakebeds, wetlands, and their associated vegetation;
- Habitats suitable to support a Federally- or State-listed Endangered or Threatened species of plant or wildlife;
- Species designated as California Species of Special Concern or Federal Species of Concern;
- Habitat, other than wetlands, considered special status by regulatory agencies (USFWS, CDFG) or resource conservation organizations; and

- Other species or issues of concern to regulatory agencies or conservation organizations.

The actual and potential occurrence of these resources within the Project site was correlated with the significance criteria noted below to determine whether the impacts of the proposed Project on these resources would be considered significant.

SIGNIFICANCE CRITERIA

Appendix G of the CEQA Guidelines contains the Initial Study Environmental Checklist Form which includes questions relating to biological resources. The issues presented in the Initial Study Checklist have been utilized as thresholds of significance in this Section. Accordingly, a Project may create a significant environmental impact if one or more of the following occurs:

- If the Project has 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 Game and Wildlife Service (refer to Impact Statement 5.8-1).

- If the Project has 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 U.S. Fish and Game and Wildlife Service (refer to Impact Statement 5.8-2).

- If the Project has 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 (refer to impact Statement 5.8-3).

- If the Project interferes substantially with the movement of any native or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impedes the use of native wildlife nursery sites (refer to Impact Statement 5.8-4).

- If the Project conflicts with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (refer to Impact Statement 5.8-5).

- If the Project conflicts with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan (refer to Section 10.0, *Effects Found Not to be Significant*).

Section 15065(a), *Mandatory Findings of Significance*, of the CEQA Guidelines states that a Project may have a significant effect on the environment if "…the Project has the potential to substantially 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 an endangered, rare or threatened species…".

An evaluation of whether an impact on biological resources would be substantial must consider both the resource itself and how that resource fits into a regional or local context. Substantial impacts would be those that would substantially diminish, or result in the loss of, an important biological resource or those that would obviously conflict with local, State or Federal resource conservation plans, goals, or regulations. Impacts are sometimes locally adverse but not significant because, although they would result in an adverse alteration of existing conditions, they would not substantially diminish or result in the permanent loss of an important resource on a population- or region-wide basis.

Section 15380 of CEQA indicates that a lead agency can consider a non-listed species to be Rare or Endangered for the purposes of CEQA if the species can be shown to meet the criteria in the definition of Rare or Endangered. For the purposes of this discussion, the current scientific knowledge on the population size and distribution for each special status species was considered according to the definitions for Rare and Endangered listed in Section 15380 of CEQA.

The actual and potential occurrence of these resources within the Project vicinity was correlated with the previously identified significance criteria to determine whether the impacts of the proposed Project on these resources would be significant.

Additionally, the proposed Project must be consistent with County adopted Standard Conditions of Approval (SCA). Thus, this section identifies the SCAs that would offset the biological impact of clearing existing vegetation types for individual lot development. The majority of the SCAs would be enforced by the County of San Bernardino during the entitlement process and are discussed to demonstrate Project consistency with local and regional policies and plans applicable to the proposed Project. SCAs applicable to the proposed Project include, but are not limited to the following:

SCA-1 Tree replanting will be required on a 2 to 1 basis as per San Bernardino County Plant Protection and Management Ordinance along road cuts and fills. Spacing between planted trees should be no closer than 20 feet. Low volume, fire resistant shrubs and ground cover are also recommended for planting on roadside slopes. A Professional Forester or ISA Certified Arborist with experience in the San Bernardino Mountains should review the landscaping plan before submittal to the County.

SCA-2 The landscape plan shall include tree protection guidelines which state that all construction activities should be limited to the late summer or early fall period. Heavy equipment shall be confined to skid trails, building sites, driveway pads, and parking areas. Heavy vehicle grading over 2 inches, operation, service, storage, placement of fill six inches or deeper, waste disposal, and construction of concrete or asphalt pads shall not take place within the dripline of remaining trees. Utility construction and foundation footings should

also remain outside the dripline (if not possible, consult a professional arborist regarding if roots should be cut, tree removed, or if other preventative measures are possible). All measures should be taken to prevent damage to roots and provide subsequent treatment if injury occurs.

SCA-3 Logs shall be removed from the site within 15 days to reduce the potential for bark beetle infestations. California Forest Practice Rules allow chipping, debarking, sealing with clear plastic for 4 to 6 months, or lopping of limbs from stems greater than 3 inches in diameter and scattering so that all material has maximum exposure to solar radiation. Spraying of individual pine trees with carbaryl insecticide prior to construction is considered advantageous.

Potential impacts are grouped below according to topic. The mitigation measures at the end of this section directly correspond with the numbered impact statements.

SPECIAL STATUS BIOLOGICAL RESOURCES

5.8-1 *Project implementation would affect species identified as special status. Implementation of recommended mitigation measures would reduce impacts to a less than significant level to biological species, with the exception of the Bald Eagle. Impacts to the Bald Eagle are concluded as significant and unavoidable.*

A total of 62.56 acres of native and non-native vegetation types, including developed areas, would be impacted by the proposed project. These areas are discussed below, summarized in Table 5.8-4, *Vegetation Types Impacted* and illustrated on Exhibit 5.8-3, *Biological Resources – Project Impacts*.

Table 5.8-4
Vegetation Types Impacted

Vegetation Type	Existing Acreage	Impacted Acreage
Jeffrey Pine Forest	54.91	54.91
Pebble Plain	0.69	0.69
Lake Shoreline	4.14	4.14
Developed	2.82	2.82
Total	**62.56**	**62.56**

Vegetation Types

Pebble Plains. A total of 0.69 acre of pebble plain habitat would be impacted by Project implementation. Approximately 379 acres of pebble plain are known to exist in the San Bernardino Mountains, 60 percent (227 acres) of which occurs on public

lands. Development of the Project site would remove 0.18 percent of the remaining acreage of pebble plain known to occur on both public and private lands. Although the proposed Project would impact a small area of pebble plain habitat relative to the amount of this vegetation type within the San Bernardino Mountains, Mitigation Measure 5.8-1ga ~~is recommended to~~ would ensure that impacts are reduced to less than significant levels.

Montane Meadows. Botanical surveys during 2002 were limited on the Project site and throughout southern California due to a very low rainfall year. Many plant species indicative of the montane meadow vegetation type are either annual (i.e., complete their life cycles in a single year and then die) or perennial herbs (i.e., die back to the ground level each year and persist as underground bulbs or rootcrowns). In poor rainfall years, annual and perennial herbs may not be visible, though they may exist on a site as an inactive seed, bulb, or rootcrown. Therefore, the extent of montane meadow on the Project site could not be determined during the 2002 botanical survey. However, implementation of Mitigation Measure 5.8-1a would reduce impacts to this vegetation type to a less than significant level.

Plants

Project implementation would result in impacts on four special status plant species known to occur on the Project site, including one Federally-listed Threatened and CNPS List 1B species, ash-gray Indian paintbrush; and three CNPS List 1B species, Parish's rock cress, Big Bear Valley woollypod, and silver-haired ivesia. Additionally, Project implementation may result in impacts to special status species potentially occurring on the Project site, including six Threatened or Endangered species and 20 CNPS Lists 1B and 2 species. Project implementation also has the potential to impact potentially suitable habitat for 15 CNPS List 4 species.

SPECIAL STATUS PLANT SPECIES KNOWN TO OCCUR ON THE PROJECT SITE

One Federally-listed Threatened and CNPS List 1B species, ash-gray Indian paintbrush; and three CNPS List 1B species, Parish's rock cress, Big Bear Valley woollypod, and silver-haired ivesia, were observed on the Project site during the 2002 botanical surveys. Populations of ash-gray Indian paintbrush and Parish's rock cress were found to be widespread throughout an approximately 11.8 acre area of open Jeffrey pine forest with an herbaceous layer of Wright's matting buckwheat in the western half of the Project site. The approximately 0.64 acre of pebble plain habitat was included in this area. Silver haired ivesia was found to be concentrated entirely within the mapped pebble plain habitat. Bear Valley woollypod was found in patches scattered throughout Jeffrey pine forest habitat on the Project site. It is expected that population sizes for these species on the Project site would be larger during a normal rainfall year (i.e., at least 40 percent of average annual precipitation).

Impacts on these species would be considered significant according to CEQA Guideline Section 15065. However, implementation of mitigation measure 5.8-1a would reduce impacts to a less than significant level.

SPECIAL STATUS PLANT SPECIES POTENTIALLY OCCURRING ON THE PROJECT SITE

Botanical surveys during 2002 were limited on the Project site and throughout southern California due to a very low rainfall year. Many plant species are either annual (i.e., complete their life cycles in a single year and then die) or perennial herbs (i.e., die back to the ground level each year and persist as underground bulbs or rootcrowns). In poor rainfall years, annual and perennial herbs may not be visible, though they may exist on a site as an inactive seed, bulb, or rootcrown. Most of the special status plants of the Big Bear area are perennial herbs, making a conclusive determination of "presence" or "absence" based on field surveys difficult during low rainfall years. However, previous reports of presence and determination of habitat quality can be used to estimate the probability that a special status plant species might occur on the Project site.

There is potential for several special status plants on the Project site that were not detectable this spring due to dry conditions. Special status plants potentially occurring on the Project site include the six listed Threatened or Endangered species (bird's foot checkerbloom, San Bernardino bluegrass, California dandelion, Big Bear Valley sandwort, southern mountain buckwheat, and slender-petalled thelypodium); one CNPS List 1B and state-listed Rare species and Candidate for federal listing as Threatened or Endangered (Parish's checkerbloom); and 26 CNPS List 1B or 2 species as follows:

- rock sandwort
- Big Bear Valley milk vetch
- Palmer's mariposa lily
- San Bernardino Mountain owl's clover
- male fern
- San Bernardino Mountains dudleya
- leafy buckwheat
- San Bernardino Mountain gilia
- shaggy-haired alum root
- Parish's alumroot
- short-sepaled lewisia
- lemon lily
- Baldwin Lake linanthus
- San Bernardino Mountain monkeyflower
- purple monkeyflower
- Baja navarretia
- Parish's yampah
- Bear Valley phlox
- Bear Valley pyrrocoma
- San Bernardino butterweed
- prairie wedge grass
- southern jewelflower
- grey-leaved violet

Surveys during a normal rainfall year would be required to determine presence or absence and the extent of these species on the Project site. The loss of potential

habitat for these species would be considered significant according to CEQA Guideline Section 15065. However, implementation of mitigation measure 5.8-1a would reduce impacts to a less than significant level.

There is potential for fifteen CNPS List 4 species on the Project site. The plants in the CNPS List 4 category are of limited distribution or infrequent throughout a broad area in California, and their vulnerability or susceptibility to threat appears relatively low at this time. CNPS is actively monitoring populations of the List 4 species and they will be transferred to a more appropriate list if the degree of endangerment or rarity of these species should change. The CNPS List 4 species present on the Project site do not meet the definitions of Rare, Threatened, or Endangered according to CEQA Guideline Section 15065. However, they are addressed in the *Biological Resources Assessment*, refer to Appendix 15.6, given the number of species potentially present on the Project site. No significant impacts to CNPS List 4 species are anticipated at present.

Wildlife

The proposed Project would result in the loss of potential habitat for several special status wildlife species potentially present on the Project site. For those species expected to occur, potential impacts were evaluated for the habitat that the species is expected to occupy.

Invertebrates. Project implementation may result in impacts on one special status invertebrate species, the Andrews' marble butterfly. Although not observed during general wildlife surveys, the Andrews' marble butterfly has potential to occur on the Project site. Potential habitat for this species is present among plants in the pebble plain habitat on the Project site. However, the Project site contains a minimal amount of habitat relative to the availability of habitat for this species throughout the San Bernardino Mountains. Thus, impacts are considered less than significant.

Amphibians. Project implementation may result in impacts on special status amphibian species. No Federally- or State-listed amphibian species have potential to occur on the Project site. One species that is a Federal Species of Concern and state Species of Special Concern, the yellow-blotched salamander, has potential to occur on the Project site. Potential habitat for this species occurs on the Project site in mesic areas with rotting logs and leaf litter. The loss of potential habitat for this species would be considered less than significant due to the limited amount of habitat loss relative to the availability of habitat for this species in the region.

Reptiles. Project implementation may result in impacts on special status reptile species. One Federal Species of Concern, the southern sagebrush lizard, has been observed on the Project site. Four additional species that are federal Species of Concern and/or State Species of Special Concern have potential to occur on the Project site. These species are the silvery legless lizard, coastal western whiptail, San Bernardino ringneck snake, and San Bernardino Mountain kingsnake. The loss of potential habitat for these species would be considered less than significant due to the limited amount of habitat loss relative to the availability of habitat for these species in the region.

Intensive surveys for the State-listed Threatened southern rubber boa were conducted on the Project site in the spring and summer of 2002. Given the negative results of two independent focused survey techniques and the lack of historical records in the immediate vicinity of the Project site, the survey report concluded that this species is not expected to occur on the Project site. Therefore, no impacts to this species are anticipated.

Birds

Project implementation may result in impacts on special status bird species. Two Federally- and/or State-listed Endangered species have potential to occur on the Project site, the American peregrine falcon and bald eagle. One Fully Protected species, the white-tailed kite, has potential to occur on the Project site. In addition, 16 Federal Species of Concern and/or State Species of Special Concern have potential to occur on the Project site and are discussed below.

Bald Eagle. The bald eagle rarely nests in southern California. However, small wintering populations of bald eagle often occur in scattered montane locations in the region. Big Bear Lake supports the largest wintering population of bald eagle in southern California and may include as many as 30 individuals in peak years. The bald eagle was observed using several trees on the project site for perch and roost locations. A records search also demonstrated that some of the most utilized perch and roost trees on the north shore of the lake are located on the project site. Given the limited distribution of wintering populations of bald eagles in southern California, removal of these trees and/or construction of uses in proximity to trees such that there would be a loss of perching or roosting habitat value for wintering bald eagles would be considered a significant impact. Implementation of mitigation measures 5.8-1b and 5.8-1c would reduce impacts to this species. However, impacts would remain significant following implementation of the recommended mitigation measures.

Cooper's Hawk, Northern Goshawk, Sharp-shinned Hawk, Golden Eagle, Long-eared Owl, Ferruginous Hawk, Northern Harrier, White-tailed Kite, Merlin, American Peregrine Falcon, Osprey, Prairie Falcon, and California Spotted Owl. Project implementation would reduce the amount of foraging habitat for these species. This impact would contribute to the cumulative loss of foraging habitat for these raptor species. However, the loss of potential foraging habitat for these species would be considered adverse, but less than significant due to the limited amount of habitat loss relative to the availability of foraging habitat for these species in the San Bernardino Mountains and National Forest.

The Cooper's hawk, long-eared owl, white-tailed kite, and California spotted owl also have potential to nest on the project site. If an active raptor nest (common or special status species) were found on the project site, the loss of the nest would be considered a violation of the California Fish and Game Code Sections 3503, 3503.5, and 3513. The loss of any active raptor nest occurring on the project site would be considered significant. The potential impact on these species would be reduced to a less than significant level with the implementation of mitigation measure 5.8-1d.

Black Swift, Yellow Warbler, Hepatic Tanager, Purple Martin, and Gray Vireo. Project implementation would reduce the amount of foraging habitat for these species. In addition, the hepatic tanager and purple martin have potential to nest on the project site and implementation of the project may impact active nests. The loss of potential habitat for these species would be considered adverse, but less than significant due to the limited amount of habitat loss relative to the availability of habitat for these species in the San Bernardino Mountains and National Forest. However, impacts to individual nests would result in a violation of the MBTA and would be considered a significant impact. However, implementation of mitigation measure 5.8-1e would reduce impacts to a less than significant level.

Mammals

Project implementation may result in impacts on special status mammal species. No Federally- and/or State-listed species have potential to occur on the Project site. However, 11 Federal Species of Concern and/or State Species of Special Concern have potential to occur on the Project site and are discussed below.

Pallid Bat, Spotted Bat, California Mastiff Bat, Small-Footed Myotis, Long-Eared Myotis, Occult Little Brown Bat, Fringed Myotis, Long-Legged Myotis, Yuma Myotis, and Pacific Western Big-Eared Bat

The proposed Project provides suitable foraging habitat for these bat species. Project implementation would reduce the amount of foraging habitat for these species. The pallid bat, small-footed myotis, long-eared myotis, Occult little brown bat, fringed myotis, long-legged myotis, and Yuma myotis, also have potential to roost on the Project site. This impact would contribute to the cumulative loss of foraging and roosting habitat for these bat species. However, the loss of potential habitat for these species would be considered adverse, but less than significant, due to the limited amount of habitat loss relative to the availability of foraging and roosting habitat for these species in the San Bernardino Mountains and National Forest.

San Bernardino Mountain Flying Squirrel. The Project site provides suitable foraging and breeding habitat for this species. Project implementation would impact habitat for this species. However, the loss of potential habitat would be considered adverse, but less than significant, due to the limited amount of habitat loss relative to the availability of habitat for this species in the San Bernardino Mountains and National Forest.

SENSITIVE NATURAL COMMUNITIES/HABITATS

5.8-2 *The proposed Project would impact portions of the Project site that are habitat for referenced sensitive species. Implementation of recommended mitigation measures would reduce impacts to a less than significant level.*

DIRECT IMPACTS

Flora and Vegetation Type Impacts

A total of 61.87 acres of native and non-native vegetation types, including developed areas, would be impacted by the proposed Project. These areas are discussed below, summarized in Table 5.8-4 and illustrated on Exhibit 5.8-2.

Jeffrey Pine Forest

A total of 54.91 acres of Jeffrey pine forest, including 17.38 acres of open Jeffrey pine forest, would be impacted by Project implementation. Approximately 58,526 acres of Jeffrey pine forest occurs in the San Bernardino National Forest and 141,604 acres in the Cleveland, San Bernardino, Angeles and Los Padres National Forests collectively. Impacts on this vegetation type would be considered less than significant since this vegetation type is common throughout the San Bernardino Mountains and other mountain ranges in the region.

Lake Shoreline

A total of 4.14 acres of lake shoreline would be impacted by Project implementation. Man-made lakes are essentially distinct ecosystems, with an aquatic fauna and flora that bears little resemblance to what naturally occurs in the streams that formed them. Impacts on this vegetation type would be considered less than significant since Big Bear Lake is a man-made reservoir created by the construction of Bear Valley Dam. Montane meadow habitat may occur within the lake shoreline vegetation type. Impacts to montane meadow are discussed above under *Special Status Biological Resources Impacts*.

Pebble Plains

A total of 0.69 acre of pebble plain habitat would be impacted by Project implementation. Impacts to pebble plain habitat are discussed above under *Special Status Biological Resources Impacts*.

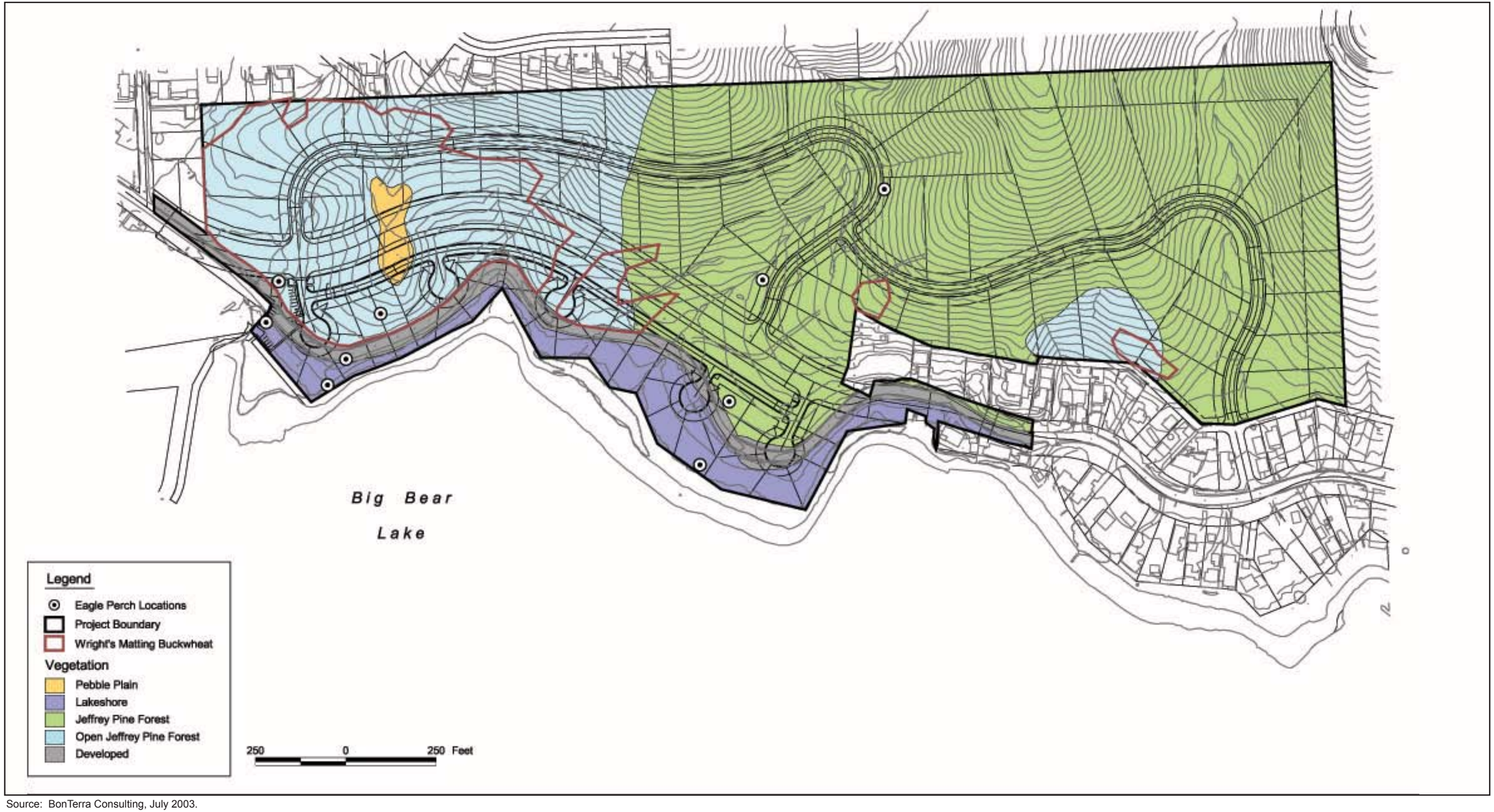
Developed

A total of 2.82 acres of disturbed vegetation in developed areas would be impacted by Project implementation. Impacts on this vegetation type would not be considered significant since this vegetation type is considered to have a low biological value.

WILDLIFE IMPACTS/INDIRECT IMPACTS

Wildlife Impacts

To assess impacts on wildlife, the total impact on a given vegetation type that provides habitat for wildlife was evaluated. Exhibit 5.8-3, *Biological Resources - Project Impacts*, illustrates the vegetation types (i.e., wildlife habitat) that would be impacted as a result of Project implementation. The following discussion of wildlife impacts focuses on the common species occurring on the Project site. Impacts on special status wildlife species are addressed above under *Special Status Biological Resources Impacts*.



Source: BonTerra Consulting, July 2003.

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The loss of habitat, loss of wildlife, wildlife displacement, and habitat fragmentation that would result from construction of the proposed Project would not be considered significant because these impacts would not substantially diminish habitat for wildlife in the region nor reduce any specific wildlife populations in the region to below self-sustaining numbers.

INDIRECT IMPACTS

Indirect impacts are those related to disturbance by construction (such as noise, dust, and urban pollutants) and long-term use of the Project site and its effect on the adjacent habitat areas. The indirect impact discussion below includes a general assessment of the potential indirect affects (noise, dust and urban pollutants, lighting, human activity, and non-native species introduction), of the construction and operation of the proposed Project. Particular focus is placed on the indirect effects on the natural open space area on the Project site collectively referred to as edge effects.

Edge effects occur where development, including roads, takes place adjacent to natural open space areas. Edge effects threaten the ecological integrity, recreational experience, aesthetic quality, public investment, and safety operations of preserved or undeveloped natural areas located adjacent to developed areas. When development is configured in a manner that creates a high ratio of development edge to natural open space, there is an increase in the potential impacts caused by human use (indirect impacts). These indirect effects that address both the short-term construction and long-term use of the Project site are outlined below.

Noise Impacts

Noise levels on the Project site would increase over present levels during and upon completion of construction of the proposed Project. During construction, temporary noise impacts have the potential to disrupt foraging, nesting, roosting, and denning activities for a variety of wildlife species. Upon completion of construction, noise levels on the Project site would increase as a result of increased human activity associated with residential uses. Both short and long-term noise impacts could potentially disrupt the foraging and roosting potential of the site for the bald eagle. Any interruption of the foraging and/or roosting behavior of the bald eagle would be considered a significant impact.

Short-term construction noise impacts on the bald eagle could be avoided by prohibiting grading and construction activities when wintering populations are present (between November and March). However, given restrictions on construction resulting from mitigation for direct impacts (i.e., 5.8-1d and 5.8-1e) construction activities would be limited strictly to the month of October. Consequently, no feasible mitigation could be determined at this time. Therefore, both short- and long-term residential noise impacts on the bald eagle would be considered an unavoidable significant impact of the proposed project.

Increased Dust and Urban Pollutants

Grading activities would disturb soils and result in the accumulation of dust on the surface of the leaves of trees, shrubs, and herbs in the natural open space areas adjacent to the Project site. The respiratory function of the plants in these areas would be impaired when dust accumulation is excessive. These impacts are considered adverse, though less than significant.

Additional impacts on biological resources in the area may occur as a result of changes in water quality. Urban runoff from the proposed Project containing petroleum residues and the potential for improper disposal of petroleum and chemical products from construction equipment (temporary) or infrastructure areas (i.e., vehicles, improper disposal of chemicals) (permanent) could affect water quality on-site and off-site, including Big Bear Lake. This, in turn, could affect populations of aquatic species. Water quality could also be affected by runoff of nutrients from landscape features of the proposed Project. Mitigation would require that the applicant apply for coverage under the State Water Resources Control Board's General Permit for Storm Water Discharge Associated with Construction Activity and comply with all of the provisions of the permit, including the development of a Storm Water Pollution Prevention Plan (which includes provisions for the implementation of Best Management Practices and erosion control measures).

Night Lighting

Lighting of the residential units would inadvertently result in an indirect effect on the behavioral patterns of nocturnal and crepuscular (i.e., active at dawn and dusk) wildlife that are present along the boundaries of the natural areas of the project site. Of particular concern is the effect on small ground-dwelling animals that use the darkness to hide from predators, and on owls, which are specialized night foragers. In addition, the increase in night lighting could discourage nesting and roosting along the lake shore. Most notably, lighting associated with the proposed project could disrupt roosting behavior of the bald eagle on the project site. This increased lighting, in conjunction with the increased noise and habitat loss, would be considered potentially significant. Implementation of mitigation measures 5.8-2a and 5.8-2b would reduce this impact to a less than significant level.

Human Activity

The increase in human activity (i.e., noise, foot traffic) would increase the disturbance of natural open space adjacent to the project site. Human disturbance could disrupt normal foraging and breeding behavior of wildlife remaining in adjacent areas, diminishing the value of these open space habitat areas. Most notably, residential activity associated with the proposed project could disrupt foraging and roosting behavior of the bald eagle on the project site. Implementation of mitigation measures 5.8-2a, 5.8-2b and 5.8-2c would reduce impacts to less than significant levels.

Non-Native Species Introduction

The native habitat types within the natural open space areas adjacent to the project site would be subject to greater pressure from non-native plant species within the developed portions of the project site. Areas that have undergone disturbance generally contain a high number of non-native grasses and forbs that can successfully out-compete the native plants in the region. This will be especially true after initial project grading of the project site. Should non-native plants establish themselves in these areas prior to the establishment of native plant species or non-native/non-invasive plant species in the landscape areas, the non-natives may become invasive in the natural open space areas. Left uncontrolled, these "weeds" may begin encroaching into the adjacent natural areas. These impacts could become significant if uncontrolled. Implementation of mitigation measure 5.8-2d would reduce impacts to a less than significant level.

JURISDICTIONAL WATERS

5.8-3 *Development of the proposed Project ~~does not have~~has the potential to impact jurisdictional waters. Analysis has concluded that potentially significant impacts would be reduced to a less than significant level~~impact would occur in this regard after regulatory compliance~~ with implementation of the recommended mitigation measures.*

Any development proposal that involves impacting the drainages, streams, or wetlands on the site through filling, stockpiling, conversion to a storm drain, channelization, bank stabilization, road or utility line crossings, or any other modification would require permits from the Corps, the RWQCB, and the CDFG before any development could commence on the Project site. Both permanent and temporary impacts are regulated and would trigger the need for permits. Processing of the RWQCB 401 and CDFG 1602 agreement can occur concurrently with the Corps 404 permit process and can utilize the same information and analysis. The Corps will not issue its authorization until the RWQCB completes the Section 401 Water Quality Certification. Applications to both the RWQCB and the CDFG require submittal of a valid California Environmental Quality Act (CEQA) document along with the application.

Mitigation may be required by the regulatory agencies during the permit process. Compensatory mitigation for the loss of jurisdictional function and values is a fundamental component of the applicant regulatory programs. Mitigation can take several forms. It can consist of (1) avoidance or minimization of impacts, (2) compensation in the form or habitat creation, restoration and enhancement, or (3) compensation through participation in a mitigation bank. The first type of mitigation is preferred by the agencies. For any project that impacts jurisdictional areas, it is also preferred by the agencies that compensation through the creation of habitat be performed on-site and in-kind (i.e., riparian woodland for riparian woodland). Conceptual mitigation will be discussed during the Pre-Application Field Meeting with the regulatory agencies. However, the exact requirements of any special permit conditions and mitigation established for this project would be dictated by the regulatory agencies following the review of the formally submitted project applications.

WATERS OF THE U.S. (WETLAND) DETERMINATION

As previously noted, in order to be considered a wetland, an area must exhibit all three of the wetland parameters (i.e., vegetation, soil and hydrology) per the evaluation criteria in the Wetland Delineation Manual. Based on the results of the field investigations, it was determined that not all three parameters were present within the drainages (hydric soils nor riparian vegetation were present). As a result, no Corps wetlands were identified on the Project site and no impacts would occur in this regard.

WATERS OF THE U.S. (NON-WETLAND) DETERMINATION

Based on the results of the field observations and data collection, RBF identified 0.15-acre of Corps jurisdictional "waters of the U.S." within the proposed Project site. The drainages are ephemeral; Big Bear Lake, although not included in the acreage calculation, is also considered jurisdictional by the Corps. Utilizing the most current development plans, it was determined that ~~roadway~~ the proposed improvements would impact approximately 0.2~~0~~4-acre of Corps jurisdiction. Discharges include approximately 0.04-acres to ephemeral drainages and approximately 0.20-acres of impact as a result of fill material associated with the proposed marina.

CALIFORNIA DEPARTMENT OF FISH AND GAME (1602~~3~~) JURISDICTION

Based on the results of the field observations and data collection, RBF identified 0.15-acre of CDFG jurisdictional streambed~~waters~~. Utilizing the most current development plans, it was determined that ~~roadway~~ the proposed improvements would impact 4.38~~0.04~~-acres of CDFG jurisdiction (includes streambed, shoreline, and lake impacts) (refer to Exhibit 5.8-2, *Jurisdictional Map)*.

OVERVIEW OF REGULATORY APPROVAL PROCESS

The following is a summary of the various permits, agreements, and certifications required prior to construction activities taking place within the jurisdictional areas.

Army Corps of Engineers

The Corps regulates discharges of dredged fill materials into "waters of the United States" under Section 404 of the Clean Water Act (CWA). Since improvements associated with the proposed Project would result in the discharge of material within the jurisdiction of the Corps, a 404 permit would be required.

California Department of Fish and Game

~~As noted above, the drainage within the proposed Project area meets the CDFG's definition as streambed and thus would be regulated by the CDFG. An agreement from the Department would be required. The CDFG agreement requires a fee and approximately 45 days processing time.~~ As noted above, areas within the Project site meet the CDFG's definition as streambed and lakebed. Since improvements associated with the proposed project would impact CDFG Jurisdiction, a 1602 Streambed Alteration Agreement (SAA) must be obtained prior to construction. A

processing fee and CEQA c~~C~~ompliance is necessary in order for the Agreement to be issued.

Regional Water Quality Control Board

The RWQCB requires that a CEQA compliance certification be obtained before starting the RWQCB process. Processing time should not exceed 60 days following submission of a complete application (determination of what constitutes a complete application is made by the RWQCB). Additionally, the RWQCB requires that water quality concerns related to urban storm water runoff be addressed. Any 401 Certification application submitted to the RWQCB should incorporate the use of Best Management Practices (BMPs) for the treatment of pollutants carried by storm water runoff in order to be considered a complete application. For the 404 permit to be approved, a 401 water certification would be required. A fee is required as part of the application submittal. Also refer to Section 5.11, *Hydrology and Drainage.*

~~Overall, impacts to the jurisdictional water present on the Project site would be reduced to a less than significant level through cojpliance with the regulatory process (i.e., 404 permit, CDFG agreement, 401 certification.)~~ Implementation of the recommended mitigation measure (Mitigation Measure 5.3-8a) regarding a 3:1 replacement-to-impact ratio for all unavoidable impacts to jurisdictional areas would ensure that significant impacts to jurisdictional waters are reduced to a less than significant level. Compliance with the regulatory process (i.e., 404 permit, CDFG agreement, 401 certification) would ensure the enforcement and implementation of the recommended mitigation measure. It is also noted that additional mitigation requirements may be required through the permitting process depending on the quality of habitat impacted, project design and other factors.

WILDLIFE MOVEMENT

5.8-4 *Project implementation may interfere with the movement of a native resident or migratory wildlife species. Analysis has concluded that impacts are less than significant.*

The development of the project site would not impact wildlife corridors, by definition, but may affect local travel routes. Construction of the residential areas and realignment of Highway 38 would result in reduced connectivity between Big Bear Lake as a water source to the contiguous open spaces on and to the north of the project site. Additionally, construction of the proposed project would result in increased traffic on the project site by residents that would further impede movement of terrestrial wildlife currently crossing the site and Highway 38. Although this impact is considered locally adverse, it is not considered significant because the impact does not substantially affect a regionally important wildlife movement corridor.

REGIONAL AND LOCAL POLICIES/PLANS

5.8-5 *Project implementation would not conflict with adopted regional and/or local policies/plans pertaining to biological resources. Analysis has concluded that impacts are less than significant.*

ON-GOING REGIONAL AND LOCAL HABITAT CONSERVATION PROGRAMS

San Bernardino Valley Multi-Species Habitat Conservation Plan (MSHCP)

The Project site is not encompassed by the draft MSHCP and is not subject to its policies and provisions. Therefore, no conflicts with the policies of the MSHCP are anticipated.

County of San Bernardino General Plan

The project site is located in unincorporated San Bernardino County and is subject to the provisions and policies of the County of San Bernardino General Plan. The General Plan contains a list of species considered Rare, Threatened, or Endangered by the County. Projects potentially impacting County-listed species must prepare an EIR to determine the significance of impacts on these species. Two plant species identified within the General Plan, Parish's checkerbloom and bird's foot checkerbloom, have the potential to occur on the project site. Presence or absence of these species could not be determined on the project site during the 2002 botanical surveys due to a low rainfall year. Therefore, impacts on these species were assessed according to the presence of suitable habitat. Implementation of mitigation measure 5.8-1a would determine specific population impacts and reduce impacts to these species to less than significant levels.

County of San Bernardino Biotic Resources Overlay District

The intent of the BR Overlay District is to require the preparation of a biological technical report for projects within the BR Overlay District identifying impacts to biological resources and mitigation measures designed to reduce or eliminate Project-related impacts. This biological technical report is intended to satisfy the requirements of the BR Overlay District.

Plant Protection and Management Ordinance – County of San Bernardino Development Code

Title 8, Division 9 of the San Bernardino County Development Code contains policies and requirements applicable to the project site including Section 89.0110(a), 89.0115(c), and 89.0205.

Section 89.0110(b) states that the provisions of this Division shall not authorize the removal of perch trees within identified American Bald eagle habitat. Implementation of mitigation measures 5.8-1a and 5.8-1b would ensure the project's compliance with this section.

Section 89.0115(c) requires that the County "may require certification from an appropriate tree expert or native plant expert that such tree removals are appropriate, supportive of a healthy environment and are in compliance with the provisions of this chapter". The Forester's Report and the Botanical Survey Letter Report are intended to satisfy the requirements of this section (refer to Appendix 15.6, *Biological Resources Information*). The County shall make a determination based on the evidence presented herein and in the Forester's Report as to the

significance of the proposed Project impacts to native plants and compliance with the provisions of Division 9 of the County Development Code.

The intent of Section 89.0205 is to treat coniferous tree species such that they don't present a risk of fire, and spread tree insect pests and infection. Compliance with this Section would be enforced by the County standard conditions and requirements during construction of the proposed Project. Implementation of standard condition of approval 3 (SCA-3) would reduce impacts to less than significant levels.

Migratory Bird Treaty Act (MBTA)

Implementation of the proposed project may impact the nests of species covered by the MBTA, including the Cooper's hawk, purple martin, and hepatic tanager. However, implementation of mitigation measures 5.8-1d and 5.8-1e would reduce impacts to these species to a less than significant level.

CUMULATIVE

5.8-6 *Cumulative development in the Project area may impact the area's biological resources. Analysis has concluded that ~~with implementation of the specified mitigation and compliance with all applicable County, State and Federal regulations concerning biological resources, a less than significant impact would occur in this regard.~~project implementation incrementally adding to impacts on bald eagle habitat in the Big Bear Valley would result in a significant and unavoidable cumulative impact to the wintering bald eagle population on Big Bear Lake.*

The proposed project contains some of the most utilized bald eagle roosting and perching habitat in the Big Bear Valley. Construction of the proposed project would diminish the habitat value of the project site for the species. When viewed in conjunction with other past, present, and reasonably foreseeable developments planned for the Fawnskin/Big Bear Lake area, the loss of bald eagle perch and roosting trees on the project site would significantly impact bald eagle habitat on the north shore of Big Bear Lake. Thus, cumulative impacts to the bald eagle are considered significant. Mitigation measures reflective of recommendations developed by scientific studies in the Big Bear Valley, including Kimball Garrett's study on the effects of human activity on wintering bald eagles (1981), are provided as part of the proposed project. However, implementation of these mitigation measures would not reduce direct or cumulative impacts to bald eagle habitat to a level considered less than significant.

~~t~~The loss of Jeffrey pine forest, pebble plain habitat and other native vegetation, as well as the loss of wildlife habitat could be considered a negative cumulative effect. However, with implementation of the recommended mitigation measures cumulative impacts to the Jeffrey pine trees would be mitigated to a less than significant level. ~~The proposed project would impact 0.69 acres of pepple plain habitat, however, implementation of the recommended mitigation measures would ensure that impacts would be reduced to less than significant levels.~~Additionally, implementation of the recommended mitigation measures would reduce impacts to 0.69 acre of pebble plain habitat to a less than significant level.

Potential impacts would be site specific and an evaluation of potential impacts would be conducted on a project-by-project basis. This would be especially true of those developments located in areas that contain sensitive species and habitat. Each incremental development would be required to comply with all applicable County, State and Federal regulations concerning the preservation of biological resources. ~~In consideration of these regulations,~~ However, potential cumulative impacts upon ~~biological resources~~ wintering bald eagle populations would ~~not~~ be considered significant and unavoidable.

MITIGATION MEASURES

Potential impacts to Biological Resources from Project implementation would be addressed through a two-category mitigation program consisting of Standard Conditions of Approval and mitigation measures. The Standard Conditions of Approval are addressed in the impact discussions above. The mitigation measures within each category are described below.

SPECIAL STATUS BIOLOGICAL RESOURCES

SPECIAL STATUS PLANTS AND VEGETION TYPES

5.8-1a ~~Prior to vegetation clearing, grading, or other disturbance, the project site shall be surveyed during a year with precipitation at least 40 percent of average for the area to determine presence or absence of special status plant species and vegetation types. Surveys shall focus on listed special status vegetation types, and Threatened or Endangered, and CNPS List 1B and 2 species whose presence could not be determined during surveys due to lack of rainfall. The location and extent of special status species populations shall be mapped and the size of the populations accurately documented.~~

~~The project applicant shall pay compensation for the loss of special status botanical resources identified on the project site by the survey by funding the purchase and management of off-site habitat through contributions to a fund established by the California Wildlife Foundation on behalf of the CDFG. The California Wildlife Foundation is an independent 501(c)3 nonprofit corporation founded to assist the CDFG and other governmental agencies in the management of funds and mitigation banks designed to offset the impact of development on California's native flora and fauna. Off-site habitat containing the same species as those identified within resources impacted by the proposed project shall be purchased at a ratio agreed upon by the County of San Bernardino, San Bernardino National Forest, USFWS, and CDFG. The typical mitigation ratio is 3:1 (i.e., three acres of habitat purchased for preservation for each acre impacted by development).~~

~~If additional surveys during a year with precipitation at least 40 percent of average do not encounter additional special status plant resources, the project applicant is responsible for the mitigation of a minimum of 11.8 acres of pebble plain and open Jeffrey pine forest in the western half of~~

~~the project site that is known to be occupied by the federally-listed Threatened ash-gray Indian paintbrush (i.e., would be required to fund the purchase of 35.4-acres of offsite habitat from the California Wildlife Foundation if the agreed mitigation ratio is 3:1).~~

Prior to vegetation clearing, grading, or other disturbance, the project site shall be surveyed during a year with precipitation at least 40 percent of average for the area to determine presence or absence of special status plant species and vegetation types. Surveys shall focus on special status vegetation types, and Threatened or Endangered, and CNPS List 1B and 2 species whose presence could not be determined during surveys due to lack of rainfall. The location and extent of special status species populations shall be mapped and the size of the populations accurately documented. Pebble plain habitat acreages will be recalculated following the survey using criteria established by the Habitat Management Guide for Pebble Plain Habitat on the National Forest System (2002).

Should avoidance/retention on-site of the 4.91 acres of Pebble Plain habitat in permanent open space under a Conservation Easement Agreement not occur, the Project Applicant shall pay compensation for the loss of special status botanical resources identified on the project site during the survey by funding the purchase, establishment of a conservation easement, and management of off-site habitat within the conservation easement by an entity approved by the CDFG. Off-site habitat containing the same species as those identified within resources impacted by the proposed project shall be purchased at a ratio of 3:1 (i.e., three acres of habitat purchased for preservation for each acre impacted by development). Prior to the initiation of clearing or grading activities on the project site, the conservation easement will be established, the management entity will be approved by the CDFG, and a non-wasting endowment will be established for the monitoring and management of the preservation site by the management entity in perpetuity.

If additional surveys during a year with precipitation at least 40 percent of average do not encounter additional special status plant resources, the Project Applicant is responsible for mitigating impacts to a minimum of 11.8-acres of pebble plain and open Jeffrey pine forest in the western half of the project site that is known to be occupied by the Federally-listed Threatened ash-gray Indian paintbrush. As such, the applicant would be required to fund the purchase and maintenance of 35.4-acres of offsite pebble plain and open Jeffrey pine forest habitat that contains special status plant species, including Ash-gray Indian paintbrush and others known to occur on the site.

SPECIAL STATUS WILDLIFE

5.8-1b Trees identified on Exhibits 3 and 4 of the Bald Eagle Survey Report (Appendix E, see attached) as eagle perch locations shall be preserved in place upon project completion and shall not be removed under any circumstances. Any development that may occur within the project site

and in the individual lots must avoid impacts to these trees and their root structures. All construction or landscaping improvements, including irrigation, will be prohibited on or around the exposed root structures or within the dripline of these trees. These restrictions on development of the individual tentative tracts must be clearly presented and explained to any potential prospective developers and/or homeowners prior to assumption of title and close of escrow. This measure shall be identified as a Note on the Composite Development Plan.

5.8-1c Prior to vegetation clearing, grading, or other disturbance, the project site shall be surveyed to identify all large trees (i.e., greater than 20-inches in diameter at 4.5 feet from the ground) within 600 feet from the high water line. Trees identified on the project site as having a diameter in excess of 20-inches at four feet from the ground within 600 feet of the shoreline shall be documented and tagged. Any development that may occur within the project site and in the individual lots must avoid impacts to tagged trees and their root structures. All construction or landscaping improvements, including irrigation, will be prohibited on or around the exposed root structures or within the dripline of these trees. These restrictions on development of the individual tentative tracts must be clearly presented and explained to any potential prospective developers and/or homeowners prior to assumption of title and close of escrow. This measure shall be identified as a Note on the Composite Development Plan.

5.8-1d Seven days prior to the onset of construction activities, a qualified biologist shall survey within the limits of project disturbance for the presence of any active raptor nests. Any nest found during survey efforts shall be mapped on the construction plans. If no active nests are found, no further mitigation would be required. Results of the surveys shall be provided to the CDFG.

If nesting activity is present at any raptor nest site, the active site shall be protected until nesting activity has ended to ensure compliance with Section 3503.5 of the California Fish and Game Code. Nesting activity for raptors in the region of the project site normally occurs from February 1 to June 30. To protect any nest site, the following restrictions on construction are required between February 1 and June 30 (or until nests are no longer active as determined by a qualified biologist): (1) clearing limits shall be established a minimum of 300 feet in any direction from any occupied nest and (2) access and surveying shall not be allowed within 200 feet of any occupied nest. Any encroachment into the 300/200 foot buffer area around the known nest shall only be allowed if it is determined by a qualified biologist that the proposed activity shall not disturb the nest occupants. Construction during the nesting season can occur only at the sites if a qualified biologist has determined that fledglings have left the nest.

5.8-1e Vegetation removal, clearing, and grading on the project site shall be performed outside of the breeding and nesting season (between March

and September) to minimize the effects of these activities on breeding activities of migratory birds and other species.

5.8-1f The use of the boat dock for motorized boating shall be prohibited between the dates of December 1 and April 1. No motorized boats shall be allowed to launch or moor in the vicinity of the boat dock at any time during this period. This restriction shall be clearly displayed on signage at the entrance to the parking lot and on the boat dock visible from both land and water. This requirement shall also be published in the Homeowner's Association CC&Rs.

~~**SPECIAL STATUS VEGETION TYPES**~~

~~5.8 1g Exterior construction shall be prohibited between the dates of December 1 and April 1 (of each year). Significant impacts to pebble plain habitat can be mitigated to a less than significant level through off-site preservation. The project applicant shall pay compensation for the loss of special status botanical resources identified on the site, by the survey, by contributing to the funding of purchase and management of off-site habitat. The Applicant shall acquire habitat in the Big Bear Valley and dedicate to the CDFG or suitable conservation organization. The California Wildlife Foundation is an independent 501(c)3 nonprofit corporation founded to assist the CDFG and other governmental agencies in the management of funds and mitigation banks designed to offset the impact of development on California's native flora and fauna. Off-site habitat shall be purchased at a ratio agreed upon by the County of San Bernardino, San Bernardino National Forest, USFWS, and CDFG. The typical mitigation ratio is 3:1 (i.e., three acres of habitat purchased for preservation for each acre impacted by development. An area containing no less than 2.1 acres of pebble plain habitat in an area located adjacent to other open space areas within the project vicinity shall be preserved in perpetuity. The preserved areas shall be protected from future development through a conservation easement or other appropriate mechanism.~~

SENSITIVE NATURAL COMMUNITIES/HABITATS

WILDLIFE IMPACTS/INDIRECT IMPACTS

5.8-2a Street lamps on the project site shall not exceed 20 feet in height, shall be fully shielded to focus light onto the street surface and shall avoid any lighting spillover onto adjacent open space or properties. Furthermore, street lights shall utilize low color temperature lighting (e.g., red or orange).

5.8-2b Outdoor lighting for proposed homes on the individual tentative tracts shall not exceed 1,000 lumens. Furthermore, residential outdoor lighting shall not exceed 20 feet in height and must be shielded and focused downward to avoid lighting spillover onto adjacent open space or properties. These restrictions on outdoor lighting of the individual

tentative tracts must be clearly presented and explained to any potential prospective developers and/or homeowners prior to assumption of title and close of escrow. This requirement shall also be published in the Homeowner's Association CC&Rs.

5.8-2c To limit the amount of human disturbance ~~to~~ on adjacent natural open space areas, signs shall be posted along the northeastern and eastern perimeter of the project site where the property boundary abuts open space ~~directing people to keep out of the adjacent natural open space areas and to keep dogs leashed in areas adjacent to natural open space areas. This requirement shall be published in the Homeowner Association CC&Rs~~ with the following statement: "Sensitive plant and wildlife habitat. Please use designated trails and keep pets on a leash at all times."

In addition, a requirement stating that residents shall keep out of adjacent open space areas to the north with the exception of designated trails will be published in the Homeowner Association CC&Rs and a map of designated hiking trails will be provided to all residents.

5.8-2d Prior to ~~the issuance of individual building permits, landscaping designs~~ recordation of the final map, a landscaping plan for the entire tract shall be prepared (inclusive of a plant palette) with native trees and plant species, and, shall be submitted to the County of San Bernardino for review and approval by a qualified biologist. The review shall determine that no non-native or invasive plant species are to be used in the proposed landscaping. The biologist should suggest appropriate native plant substitutes. A note shall be placed on the Composite Development Plan indicating that all proposed landscaping (including landscaping on individual lots) shall conform with the overall approved tract map landscaping plan. A requirement shall be included stating that residents shall include a restriction of the use of tree and plant species to only native trees/plants approved per the overall tract map landscaping plan, the Homeowner Association CC&Rs shall also restrict (individual lot owners) to use only native tree and plant species approved per the overall tract map landscaping plan.

5.8-2e ~~Garages with automatic door openers shall be required. No exterior construction shall occur between December 1 and April 1, when bald eagles are present~~. Garages with automatic door openers shall be required. No exterior construction, grading or vegetation clearing shall be permitted between December 1 and April 1, which is the wintering period for bald eagles (i.e., the season when bald eagles are present in the Big Bear area).

Also refer to mitigation measures 5.8-1a to 5.8-1f.

JURISDICTIONAL WATERS

5.8-3 ~~No mitigation measures are recommended.~~ Per the direction of the California Department of Fish and Game, all unavoidable impacts to State and Federal jurisdictional lakes, streams, and associated habitat shall be compensated for with the creation and/or restoration of in-kind habitat on-site and/or off-site at a minimum 3:1 replacement-to-impact ratio. Additional requirements may be required through the permitting process depending on the quality of habitat impacted, project design and other factors.

WILDLIFE MOVEMENT

5.8-4 No mitigation measures are recommended.

REGIONAL AND LOCAL POLICIES/PLANS

5.8-5 No mitigation measures are recommended.

CUMULATIVE

5.8-6 No mitigation measures are recommended.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

Significant and unavoidable impacts related to Biological Resources have been identified for impacts to Bald Eagle populations. If the County of San Bernardino approves the project, the County shall be required to cite their findings in accordance with Section 15091 of CEQA and prepare a Statement of Overriding Considerations in accordance with section 15093 of CEQA.

No additional significant impacts related to Biological Resources have been identified following implementation of mitigation measures and/or compliance with applicable standards, requirements and/or policies by the County of San Bernardino.

5.9 CULTURAL RESOURCES

The purpose of this Section is to identify the potential for cultural resources to occur on the property and to assess the significance of such resources. This Section is based upon the *Historical/Archaeological Resources Survey Report* and the *Paleontological Resources Report* for the Moon Camp Residential Subdivision prepared by CRM in April 2002. Information pertaining to the reports are included in Appendix 15.7. The analysis in this Section has been prepared in accordance with Section 15064.5 of CEQA which considers potential impacts to prehistoric, historic and paleontological resources.

EXISTING CONDITIONS

HISTORICAL RESOURCES

PREHISTORIC CONTEXT

The project area lies in the heart of the homeland of the Serrano Indians, whose traditional territory is centered at the San Bernardino Mountains, but also includes the southern rim of the Mojave Desert, extending from today's Victorville eastward to Twentynine Palms. The name "Serrano" was derived from a Spanish term meaning "mountaineer" or "highlander."

Prior to European contact, the Serranos were primarily gatherers and hunters, and occasional fishers, who settled mostly where flowing water emerged from the mountains. Because of the variation in their habitat, the vegetable staples of the Serrano included both plant foods common in the mountains, such as acorns and piñon nuts, and those common in the desert, such as honey mesquite, yucca roots, mesquite, and cactus fruits. Game animals, including deer, mountain sheep, antelope, birds, rabbits and other small rodents, were hunted with tools and techniques quite similar to those employed by other southern California Indians. Technologically, the Serrano were also similar to their neighbors. Shell, wood, bone, stone, and plant fibers were used in making a variety of implements, such as lavishly decorated baskets, pottery, rabbit-skin blankets, and musical instruments.

The Serrano were loosely organized into exogamous clans, led by hereditary heads, and the clans in turn were affiliated with one of two exogamous moieties. The exact nature of the clans, their structure, function, and number are not known. The Bear Valley, in which Big Bear Lake is located, has been identified to be the territory of the *Yuhaviatam* or *Kuchaviatam* clan, which occupied a village in the vicinity named *Yuhaviat*, meaning "pine place." Some researchers suggest that the Bear Valley was shared between the *Yuhavetum* (*Yuhaviatam*) clan and the *Pervetum* clan.

Although contact with Europeans may have occurred as early as 1771 or 1772, Spanish influence on Serrano lifeways was negligible until 1819, when an *assistencia* under the San Gabriel Mission was established in present-day Redlands, on the edge of Serrano territory. Between then and the end of the mission era in 1834, most of the Serranos in the San Bernardino Mountains were removed to the nearby missions. At present, most Serrano descendants are found on the San

Manuel and the Morongo Indian Reservations, where they participate in ceremonial and political affairs with other Native American groups on an inter-reservation basis.

HISTORIC CONTEXT

In 1772, a small force of Spanish soldiers under the command of Pedro Fages became the first Europeans to set foot in the San Bernardino Mountains, followed shortly afterwards by Francisco Garcés, the famed explorer, in 1776. During the next 70 years, however, the Spanish/Mexican colonization activities in Alta California, which concentrated predominantly in the coastal regions, left little physical impact on the San Bernardino Mountains. Aside from occasional explorations and punitive expeditions against Indian livestock raiders, the mountainous hinterland of California remained largely beyond the attention of the missionaries, the *rancheros*, and the provincial authorities. The name "San Bernardino" was bestowed on the region at least by 1819, when a mission rancho bearing that name was established in the valley lying to the south under the supervision of Mission San Gabriel.

After the American annexation of California in 1848, the rich resources offered by the mountains brought drastic changes to the San Bernardino Mountains, spurred by the influxes of settlers from the eastern United States. Beginning in the early 1850s, the dense forest was turned into the scene—and victim—of a booming lumber industry, which brought the first wagon roads and industrial establishments into the San Bernardino Mountains. In 1860, the discovery of gold in the Bear and Holcomb Valleys ushered in a miniature gold rush, and with it a number of mining towns with several thousand residents. Around the same time, the lush mountain range also attracted cattlemen, sheepmen, and their herds, and within the next two decades gained the reputation of being the best summer grazing land in southern California. Then in 1884-1885, an even more valuable resource in arid southern California, water, became the focus of development in the San Bernardino Mountains when the Bear Valley Land and Water Company created the Big Bear Lake reservoir to ensure the success and prosperity of the Redlands colony.

By the 1890s, excessive logging and sheep grazing in the San Bernardino Mountains had given rise to a forest conservation movement among residents of the San Bernardino Valley to protect the watershed. In 1893, the movement succeeded in 1893, in persuading the U.S. government to create the San Bernardino Forest Reserve, later renamed the San Bernardino National Forest, and over the next few decades effectively brought an end to logging and sheep grazing in the San Bernardino Mountains. In the meantime, the favorable climate, enticing scenery, and the string of man-made lakes gradually propelled the resort industry to the forefront of development burgeoning from the first commercial resort established on the shore of Big Bear Lake in 1888. In 1915, the budding industry received a major boost from the completion of the automobile highway known as Rim of the World Drive. Since then, the San Bernardino Mountains have grown into—and remain—one of southern California's most popular tourism attractions.

The community of Fawnskin, the largest settlement on the north shore of Big Bear Lake, was founded in 1916, at the onset of a great building boom in Bear Valley. In that year, two Los Angeles businessmen, William Cline and Clinton E. Miller, purchased some 700 acres at this location with plans to develop a major resort

surrounded by expensive summer homes. Initially named Grout after Grout Bay, which it overlooks, the community was soon renamed Fawnskin after nearby Fawnskin Valley, which had been known by that name since 1891. The Fawnskin post office was established in 1918, and Cline and Miller's resort was completed the next year. By then, Fawnskin had already grown into a community of more than 100 summer homes, with a string of other resort camps lining the lakeshore to its east. Among these resorts were Moon Camp and Wilsted's Camp, both located in the immediate vicinity of the current project area, as further discussed below.[1]

Records Search

The Archaeological Information Center (AIC) at the San Bernardino County Museum, Redlands, provided the records search service for this study. The AIC is the official cultural resource records repository for San Bernardino County, and a part of the California Historical Resource Information System, established and maintained under the auspices of the Office of Historic Preservation.

During the records search, Robin Laska, AIC Assistant Coordinator, checked the Center's electronic database for previously identified historical/archaeological resources in or near the project area, and existing cultural resources reports pertaining to the vicinity. Previously identified historical/archaeological resources include properties designated as California Historical Landmarks, Points of Historical Interest, or San Bernardino County Historical Landmarks, as well as those listed in the National Register of Historic Places, the California Register of Historical Resources, or the California Historical Resource Information System.

Historical Research

Historical background research for this study was conducted by CRM on the basis of published literature in local and regional history and historic maps of the project vicinity. Among maps consulted for the research were the U.S. General Land Office's (GLO) land survey plat maps dated 1858 and 1896, and the U.S. Geological Survey's (USGS) topographic maps dated 1899 and 1954. These maps are collected at the Science Library of the University of California, Riverside, and the California Desert District of the U.S. Bureau of Land Management, also located in Riverside.

Field Survey

On March 21, 2002, CRM archaeologists carried out the intensive-level, on-foot field survey of the project area. During the survey, Moreno and Ballester walked the entire project area along parallel north-south transects spaced 15 meters (ca. 50 feet) apart. In this way, the ground surface was systematically inspected for any evidence of human activities dating to the prehistoric or historic periods (i.e., 50 years ago or older). Special attention was paid to animal burrow backdirt, rock outcrops, and unusual natural features. Later, CRM archaeologists revisited the property on April 2, 2002 to complete site recordation of a historic-period refuse scatter discovered during the survey (see “Field Survey Results,” below).

[1] For further discussion of the history of Fawnskin and the San Bernardino Mountains, see Robinson (1989) and LaFuze (1971).

RESULTS AND FINDINGS

RECORDS SEARCH RESULTS

According to records on file at the Archaeological Information Center, a portion of the project area, near its western end, was previously surveyed for cultural resources in 1987, and two prehistoric—i.e., Native American—artifacts were discovered during that survey. The two artifacts which included a groundstone fragment and a chipped stone tool were recorded as an isolate (P36-60758). Since they were found in a deep wash, it was suspected that these artifacts did not occur *in situ* but were rather washed to that location from upper slopes. No other cultural resources studies had taken place in the project area prior to this study, and no other cultural resources had been identified within the project boundaries.

Outside the project area but within a one-mile radius, ten other previous studies have been reported to the AIC. As a result of these and other studies in the vicinity, two archaeological sites have been recorded within the one-mile scope of the records search, and four other possible cultural resources have been reported and, since they have not been formally recorded, designated by the AIC as pending sites. One of the two recorded sites, CA-SBR-4400, consisted of a scatter of chipped stone flakes, and has since been destroyed. The other site, CA-SBR-9937H, was the Miller School House in Fawnskin, a one-room schoolhouse originally built in 1925. The four pending sites were described mainly as scattered chipped stone flakes, projectile point fragments, and/or ceramic sherds, but also included a purported Native American burial ground from the 19th century.

The majority of these previously identified cultural resources were found far enough from the project area not to be a concern for this study. However, P36-60758, is located in the western portion of the project area and the purported Native American burial ground may have been in close proximity to the eastern end of the project area, based on what little information was available at the AIC. These two potential cultural resources, therefore, were among the focal points of the field survey efforts.

HISTORICAL RESEARCH RESULTS

Historical sources consulted for this study indicate that development activities in and around the project area began in the 1910s-1920s, coinciding roughly with the birth of the nearby resort town of Fawnskin. Prior to that, the only man-made feature known to be present in the vicinity of the project area was a road “from San Bernardino to Pine Lake Post Office,” the latter being located in the present-day City of Big Bear Lake. The road skirted around the southern side of the project area, just outside the project boundary, over land that has since been inundated by the lake after construction of the current Big Bear Dam raised its water level in 1911-1912.

In 1915, the completion of Rim of the World Drive, the automobile highway that made the mountain resorts accessible to the “flatlanders”, ushered in a period of phenomenal growth in Bear Valley. Between 1913 and 1921, the number of resorts in the valley mushroomed from 2 to 52. Although the vast majority of them were concentrated on the south shore of the lake, by 1928 at least nine commercial camps or lodges were in operation along the north shore to the east of Fawnskin. Two of

these, Wilsted's Camp and Moon Camp, were evidently located in the immediate vicinity of the project area, and possibly within the project boundaries.

In the 1940s, a large number of buildings was noted in the project area, clustered mostly around the two curves in the highway. While the exact nature of these buildings is not identified in sources consulted during this research, their presence probably attests to the heyday of the resort camps around Big Bear Lake, especially in the midst of the post-WWII prosperity. During the 1950s and the early 1960s, however, rapid advances in modern transportation technology and the resulting shift in American lifestyle began to erode the popularity of such resort camps. Perhaps reflecting that trend, by 1969-1971, the buildings that once occupied the western portion of the project area had disappeared. Since then, all buildings on the property have been removed.

In summary, the results of historical background research suggest that the project area may have hosted one or possibly two of the early resort camps that helped transform Big Bear Lake into the popular playground it is today, and both date to at least the 1920s. The search for possible remains of these camps, thus, formed another focal point of the archaeological field investigations.

FIELD SURVEY RESULTS

No prehistoric sites, features, or artifacts were encountered during the field survey. A diligent effort was made to search for any surface manifestation of the reported Native American burial ground, but none was found. Nor could either of the two prehistoric artifacts noted in the project area in 1987 (P36-60758) be located during the survey. Remnants of picnic sites were observed on the northern side of North Shore Drive, but all were determined to be of recent origin.

In the southeastern portion of the project area, the field survey revealed the presence of a historic-period refuse scatter, which was recorded as an archaeological site and subsequently designated CA-SBR-10635H. The artifact deposit at this location has been heavily disturbed by apparent bottle-hunting activities, and presumably many of the more valuable artifacts have been removed. The remaining artifacts include rusted cans, glass fragments, ceramic sherds, pieces of wood or metal, and other historic-period artifacts mixed with modern trash. Among the more notable items are nine cone-top beer cans, seven solder drop cans, two broken glass bottles, two fragments of an aqua glass insulator, and an old battery. Some of the artifacts, such as the cone-top and solder drop hole-in-cap cans, generally date to the 1930s-1940s, while others, such as the punch-top steel can, may have come from as late as the 1950s-1960s.

Most of the artifacts were found in two concentrations, each centered around a large pit dug recently by bottle hunters. Several more looters' pits have been dug in and around the two larger pits. In all, the pit measures approximately 61 feet along the north-south axis and 49 feet along the east-west axis within the project area, but the refuse scatter extends farther east beyond the project boundaries. In fact, CA-SBR-10635H can be seen as the edge of a much larger refuse deposit located mostly on the adjacent property, around an old structure foundation at that location.

PALEONTOLOGICAL RESOURCES

SETTING

The project area is located in the San Bernardino Mountains, which comprise a portion of the Transverse Ranges geomorphic province, the only east-west trending province in the State of California. This portion of the Transverse Ranges province is bounded by the Peninsular Ranges province on the south, the Little San Bernardino Mountain portion of the Transverse Ranges province to the east, the Mojave Desert province on the north, and the San Gabriel Mountain portion of the Transverse Ranges province to the west (refer to Footnote 1).

The project area lies upon the lower slopes of Delmar Mountain, on the north shore of Big Bear Lake. North Shore Drive (State Route 38) passes through the property. In aerial photographs taken in 1953, 1965, and 1979, the property is shown to be covered by an open forest with ground commonly visible between the trees (aerial photo 1953; 1965; 1979). The 1965 aerial photograph shows nearby Grout Bay to be a mud flat with a wide, exposed shoreline area along the southern edge of the project area.

The portion of the project area north of State Route 38 is wooded to openly wooded, with most of the ground covered by a dense to moderate duff zone composed mainly of pine needles, pine cones, and oak leaves. Surface exposures were limited to roads, steep slopes, canyon bottoms, and a few open meadow-like areas. Large pines, oaks, and cedars make up the bulk of the trees. Also present are buck brush, pinyon pines, sage, cacti, and grasses. The soil is a gravelly sand with scattered to locally dense areas of cobble or small boulder clasts in the surface float. The clasts are mainly quartzite, with only a few scattered granitic clasts. Based on the soil borings and some road cuts, the surface rocky float is probably the result of lag deposits. In other words, the larger rocks are concentrated at the surface as the smaller materials, such as sand, silt, and clay, are eroded away. This side of the highway contains at least three old dirt roads.

The area south of State Route 38 is fenced along the highway, and is accessible through what appears to have been an old, partially graveled driveway. This area has a few scattered large pines, some willows near the shoreline, and is well covered by grasses and weeds. The most open area lies within portions of the access road that are not graveled. The surface soils are a gravelly sand with minor cobble float and only a few scattered small boulders. All but one of the larger rocks are quartzite. Since some buildings are known to have occupied this area in the past, it is possible that the boulders were brought in. The surface level is slightly above the beach during full stands of the lake. Soil borings found that the rock material within the saturated zone is disintegrating, which would suggest that any fossil bone material within this zone would also be disintegrating. The saturated zone should be at or above the lake level, as water tables are usually drawn upward by capillary action to roughly parallel the surface contours of the ground.

The San Bernardino Mountains have been uplifted along the southern edge by the San Andreas Fault and by several steeply reverse dipping faults on the north. These mountains are composed mainly of gneisses, schists, plutonic rocks, and several

kinds of hybrid rocks. They also contain sequences of quartzite and marble from which Paleozoic fossils have been found. The plutonic rocks are mainly of diorite to quartz monzonite to granite in composition and are considered to be Jurassic and/or Cretaceous in age. Both the plutonic and metamorphic rocks are intruded by dikes of aplite, pegmatite, lamprophyre, amphibolite, and fine grained basaltic to rhyolitic rocks. Some Quaternary sedimentary deposits can be found filling canyons and some late Tertiary-Quaternary sedimentary rocks are present along the San Andreas Fault along the south and southwest margins of the range.

The north shoreline of Big Bear Lake includes a strip of Qc, described as the Cabazon fanglomerate of Quaternary age. It is comprised mainly of an unsorted angular to subangular quartzite-rich fanglomerate. The rocks just to the north of the fanglomerates are mapped as the Cactus Granite of Jurassic age.

Another geologic map of the surrounding area shows an east-west fault within the bedrock outcrops just north of the project area. The bedrock is mapped as Precambrian metasedimentary rocks, mainly quartzite, marble, and schist. The rocks between the bedrock and the north shore of Big Bear Lake are shown as Quaternary Alluvium. Except for the fault, geologic mapping shows the same geology for the project area.

A more detailed geologic map of the project area shows most of the property to be designated as “aa” and the upper portions as “rf2m.” The aa is described as alluvium and colluvium that are considered to be deposits on active surfaces. The rf2m is described as dissected, inactive fan gravels still adjacent to the source, considered to be deposits on relict surfaces. While previous mapping shows the rock constituent to be mainly marble, a recent geotechnical study in the same mapped material and near the project area found a large amount of quartzite, rather than marble, to be present. The presence of predominantly quartzite rock material within a gravelly sand at this location was confirmed during the field survey. The surface soils appear to become sandier toward the lake.

The water table was found to be shallow, at 7 to 20 feet, and the rock material within the saturated zone was found to be highly decomposed. The ground water zone, as well as the top of the water table, appears to fluctuate with the lake level. This continued wetting and drying of the rocks material within the ground water zone may be responsible for the noted decomposition of the rock. At depth, all three soil borings encountered sandy clays indicative of ponded sediments. These clays suggest that sometime in the geologic past there was a natural lake occupying the portion of the valley where the man-made Big Bear Lake is now located.

Big Bear Lake is a man-made feature that was built by damming up the headwaters of one of the tributaries of the Santa Ana River as it ran through Big Bear Valley. When the alluvial deposits that once lined the sides and bottom of the Valley were flooded, more recent alluvial deposits began to prograde into the lake. The project area was once on the higher portion of the Valley, in an area of active sedimentation. Such an area would not be a favorable location for the preservation of vertebrate fossil remains, as any animal dying there would have been subject to carnivore feeding and destruction by the movement of coarse rocky material moving down-slope toward the canyon bottom. The decomposing nature of the rock within the

saturated zone would suggest that any fossil material that might have survived within these rocks when they were deposited would have been destroyed along with the rock as they decomposed.

RECORDS SEARCH

The records search service was provided by the Regional Paleontologic Locality Inventory located at the San Bernardino County Museum in Redlands and the Natural History Museum of Los Angeles County in Los Angeles. These institutions maintain files of regional paleontological site records as well as supporting maps and documents. The records search results are used to identify previously performed paleontological resource assessments and known paleontological localities near the project area. In addition, a literature search was conducted using materials in the CRM library and the personal library of the author, including unpublished reports produced from surveys of other properties in the vicinity.

FIELD SURVEY

On March 22, 2002, CRM geologist/paleontologist conducted the field assessment of the project area. The survey was carried out by walking two east-west traverses, north of State Route 38, spaced approximately 50 meters apart and two east-west traverses, south of the highway, spaced approximately 10 meter apart. The results of the survey are incorporated into the sections below.

RESULTS AND FINDINGS

EXISTING DATA SUMMARY

The paleontology record searches conducted by the San Bernardino Museum and Natural History Museum of Los Angeles County indicate that no paleontological localities have been discovered within the boundaries of the project area, or within a one-mile radius of the project area. However, one paleontological locality, approximately five miles to the east, has been previously reported to have produced vertebrate fossils from sediments that could be present in the deeper levels of the current project area. Based on the recent nature of the upper sediments, the San Bernardino County Museum assigns the project area a “low potential to contain significant nonrenewable paleontologic resources,” and states that “no mitigation program is recommended at this time.” The Natural History Museum of Los Angeles County concurs that the upper deposits have low sensitivity for paleontological resources, but points out that excavations in the deeper deposits in the portion of the property north of State Route 38 “may well encounter significant fossil remains.”

The field survey confirmed the presence of recent alluvium on the ground surface. As expected, no fossil remains were found to be present in the project area during the field survey.

IMPACTS

SIGNIFICANCE CRITERIA

The purpose of this study is to identify any potential cultural resources within or adjacent to the project area, and to assist the County of San Bernardino Land Use Services Department in determining whether such resources meet the official definitions of "historical resources," as provided in the California Public Resource Code, in particular CEQA.

According to Public Resources Code Section 5020.1(j), historical resource includes, but is not limited to, "any object, building, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California." More specifically, the California Environmental Quality Act (CEQA) Guidelines (Section 15064.5(a) (1-3)) state that the term "historical resources" applies to such resources listed in or determined to be eligible for listing in California Register of Historical Resources, included in a local register of historical resources, or determined to be historically significant by the Lead Agency.

Regarding the proper criteria of historical significance, the CEQA Guidelines (Section 15064.5 (a) (1-3)) mandate that "a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources". A resource may be listed in the California Register if it meets any of the following criteria:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- Is associated with the lives of persons important in our past.
- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
- Has yielded, or may be likely to yield, information important in prehistory or history (Public Resources Code Section 5024.2 (c)).

According to Appendix G, the Initial Study Checklist, of the CEQA Guidelines, a project would typically have a significant impact on cultural resources if the project would cause one or more of the following to occur.

- Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5 (refer to Impact Statement 5.9-1);
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5 (refer to Impact Statement 5.9-1);

- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature (refer to Impact Statement 5.9-2); and/or

- Disturb any human remains, including those interred outside of formal cemeteries (refer to Section 5.9-3).

ARCHAEOLOGICAL/HISTORICAL RESOURCES

5.9-1 *The proposed Project may cause a significant impact to unknown archaeological and/or historic resources visible on-site. Implementation of recommended mitigation measures would reduce impacts to a less than significant level.*

Site CA-SBR-10635H, as stated above, consists of a historic-period refuse scatter. Since many of the artifacts at the site can be dated to the pre-WWII period, it is possible, and probable, that the items were deposited in connection with the early 20th century resort camps known to be in operation in the vicinity. Due to the limited number and types of the artifacts observed, there is insufficient evidence to establish this association conclusively, or association with any persons or events of recognized historic significance. Furthermore, the site constitutes a minor component of a larger historic-period refuse deposit located outside the project area, and its limited information potential is further diminished by extensive disturbances and the intrusion of modern trash. Based on these considerations, the *Historical/ Archeological Resources Survey Report* concludes that Site CA-SBR-10635H, as recorded during this study, does not appear to meet any of the criteria for listing in the California Register, and thus does not qualify as a "historical resource."

Although the field survey effort included a detailed reconnaissance of the site, the potential does exist for subsurface resources to occur and that cannot be visibly detected. This potential impact can be considered significant thus requiring field monitoring mitigation by an archaeologist, qualified and approved by the County during grading and other associated clearing activities. Implementation of mitigation would reduce the significance of potential impacts to a less than significant level.

PALEONTOLOGICAL RESOURCES

5.9-2 *The proposed Project may cause a significant impact to unknown paleontological resources on-site. Implementation of recommended mitigation measures would reduce impacts to a less than significant level.*

The field survey results, supported by literature and subsurface testing, indicate that the project area contains sediments deposited during Holocene time. Vertebrate fossils have been found in these same age sediments approximately five miles east of this location. Geologic studies suggest that these vertebrate fossil remains were found in sediments probably associated with a natural Holocene lake (Baldwin Lake) and not in alluvial sediments associated with alluvial fan deposits.

Previous geologic studies have recorded sands and some gravels at depths greater than five feet in the area north of State Route 38. Based on those findings, and in view of the recent alluvium covering the surface to a depth of five feet and the

ground water saturation situation south of the highway, the *Paleontological Resources Survey Report* concludes that there is a moderate potential for the presence of vertebrate fossils within the project area, north of State Route 38, at depths greater than five feet. Although the field survey effort included a detailed reconnaissance of the site, the potential does exist for subsurface resources to occur that cannot be visibly detected. This potential impact can be considered significant thus requiring field monitoring mitigation by a geologist/paleontologist, qualified and approved by the County, during grading and other associated clearing activities. Implementation of mitigation would reduce the significance of potential impacts to a less than significant level.

BURIAL SITES

5.9-3 *The proposed Project may cause a significant impact to Native American burial sites which could occur on-site. Implementation of the specified mitigation measures would reduce impacts to a less than significant level.*

According to the *Historical/Archeological Resources Survey Report*, records indicate that a Native American burial ground may have been in close proximity to the eastern end of the project area. A diligent field survey effort was conducted to find any surface manifestation of the reported burial ground, however, none was found. Despite the findings of the field survey effort, the potential does exist for human remains to occur and that cannot be visibly detected. This potential impact can be considered significant and would require that all proper notification actions be taken in the event that human remains are discovered during construction/earth-moving activities. Implementation of mitigation would reduce the significance of potential impacts to a less than significant level.

CUMULATIVE

5.9-4 *Cumulative development may adversely affect cultural resources in the north shore area. Resources are evaluated and mitigated on a project-by-project basis.*

The Moon Camp project is located within the north shore of Big Bear Lake. There is limited potential for future development in the project vicinity, assuming that existing US Forest Service owned lands remain undisturbed and undeveloped. Although there is a limited development potential in the north shore area, potential impacts to cultural resources would be evaluated on a site specific, project-by-project basis to ensure that impacts are reduced to less than significant levels. This would be especially true of those developments located in areas considered to have a high sensitivity for cultural (archaeological, paleontological and historical) resources. Each incremental development would be required to comply with all applicable State and Federal regulations concerning preservation, salvage, or handling of cultural resources. In consideration of these requirement and limited amounts of developable land, potential cumulative impacts upon cultural resources would not be considered significant.

MITIGATION MEASURES

The following mitigation measures directly correspond to the identified impact statements in the Impacts discussion.

ARCHAEOLOGICAL/HISTORICAL RESOURCES

5.9-1 Project-related grading, grubbing, trenching, excavations, and/or other earth-moving activities in the project area shall be monitored by a qualified archaeologist. In the event that a material of potential cultural significance is uncovered during such activities on the project site, all earth-moving activities in the project area shall cease and the archeologist shall evaluate the quality and significance of the material. Earth-moving activities shall not continue in the area where a material of potential cultural significance is uncovered until resources have been completely removed by the archaeologist and recorded as appropriate.

PALEONTOLOGICAL RESOURCES

5.9-2a Grading shall be monitored during excavation in areas identified as likely to contain paleontologic resources by a qualified paleontological monitor. Monitoring shall be accomplished for any undisturbed subsurface older alluvium, which might be present in the subsurface. The monitor shall be equipped to salvage fossils as they are unearthed to avoid construction delays and to remove samples of sediments which are likely to contain the remains of small fossil invertebrates and vertebrates. The monitor must be empowered to temporarily halt or divert grading equipment to allow for removal of abundant or large specimens.

5.9-2b Recovered specimens shall be prepared to a point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates.

5.9-2c Identification and curation of specimens into a museum repository with permanent retrievable storage shall occur for paleontological resources.

5.9-2d A report of findings shall be prepared with an appended itemized inventory of specimens. The report shall include pertinent discussion of the significance of all recovered resources where appropriate. The report and inventory when submitted to the appropriate Lead Agency, shall signify completion of the program to mitigate impacts to paleontologic resources.

BURIAL SITES

5.9-3 In the event human remains are discovered during grading/ construction activities, work shall cease in the immediate area of the discovery and the Project Applicant shall comply with the requirements and procedures set forth in Section 5097.98 of the Public Resources Code, including notification of the County Coroner, notification of the Native American

Heritage Commission, and consultation with the individual identified by the Native American Heritage Commission to be the "most likely descendent."

CUMULATIVE

5.9-4 No mitigation measures are recommended.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

No significant impacts related to Cultural Resources have been identified following implementation of mitigation measures referenced in this Section.

5.10 GEOLOGY AND SOILS

The purpose of this Section is to describe the geologic, soil and seismic setting of the project area, identify potential impacts associated with the proposed project, and recommend mitigation measures to reduce the significance of impacts. Information in this Section is based on a geotechnical report for the site prepared by Geologist D. Scott Magorien (dated August, 2002), which includes a site investigation and liquefaction testing program.

The scope of work performed by Mr. Magorien as part of the geology, soils and seismicity portion for the Moon Camp EIR included the following:

- Compile and review relevant reports and maps that address geotechnical, geologic and hydrogeologic conditions for the project and surrounding area. A list of the reports, maps and other relevant data reviewed for this study are presented in the References section of Appendix 15.8.

- A field investigation for this study that included:

  - Reconnaissance-level geologic mapping performed on February 26 and June 20, 2002.

  - Excavation and logging of seven (7) backhoe/test pits on June 20, 2002 to assess near surface soil conditions and bedrock lithology and structure.

  - Drilling, logging and sampling three (3) exploratory rotary wash borings on June 11 and 12, 2002 for the purpose of assessing the presence of potentially liquefiable soils in the vicinity of the lake. During the drilling, Standard Penetration Tests (SPT) were performed every five (5) feet, and samples from each test placed in plastic bags for later soil classification. Applicable well drilling permits were obtained from the County of San Bernardino prior to actual drilling of each of the borings.

- Contacted various individuals who have relevant information concerning the geologic and hydrologic conditions in the area.

Information pertaining to the investigation are provided in this section and Appendix 15.8.

EXISTING CONDITIONS

GEOLOGIC SETTING

The Moon Camp project area is situated within the central portion of the Southern California physiographic province known as the Transverse Ranges Geomorphic Province. This province consists of an east-west trending set of mountain ranges, which include from east to west, San Bernardino, San Gabriel and Santa Inez

mountains. This alignment of youthful mountains owes its existence to ongoing tectonic activity associated with the San Andres Fault system. The geomorphology of the San Bernardino Mountains attests to the youthful nature of this uplifted structural block which is bordered on the north by the North Frontal Fault System, and on the south by the San Andreas fault.

Big Bear Valley is one of a series of east-west trending valleys in the eastern San Bernardino Mountains, believed to have formed largely by both high angle and low angle faults in the region. The valley is considered to be a bedrock enclosed basin filled with more than 500 feet of lucustrine and alluvial sediments derived from the surrounding mountainous areas.

Big Bear Lake, which borders the project area on the south, was created by construction of a dam in 1884 across Bear Creek. In 1912, an 80-foot high multiple-arch dam was constructed to replace the lower older dam. In the late 1980's the Big Bear Lake Dam underwent a seismic retrofit, which included improvement of the foundation conditions beneath the downstream side of the dam. When full, the lake has an area of 2,960 acres, a volume of about 72,200 acre-feet, and a water surface elevation of 6,745 feet.

Topographically, the project area occupies the southernmost margin of a lobe-shaped, south-facing hillside that descends into Big Bear Lake. Natural slopes within the area display surface gradients ranging from 2:1 (horizontal to vertical) along the eastern margin of the site, to approximately 4:1 within the central and western portions, to more gentle gradients near the shoreline of Big Bear Lake. The highest point within the project area is at an elevation of 6,962 feet above mean sea level. Maximum relief between the northern margin of the property and the high water line (i.e., 6,745 feet msl) is approximately 215 feet.

There are two prominent, southerly flowing drainages transecting the project area. Surface gradients within these ephemecal drainage courses average approximately 0.08 foot/foot.

The two major geologic units that comprise the project area include older alluvium of Pliocene-late Miocene age (i.e., 1.5 to 5 million years old), and lesser amounts of Holocene age (present to 11,000 years ago) alluvium that occupies the bottom of the major active stream channels. The older alluvial deposits comprise approximately 90 percent of the project area and extend to the northern shoreline of Big Bear Lake.

Based on a review of published relevant geologic, geotechnical data, as well as the findings from exploratory drilling, excavation of test pits and reconnaissance-level geologic mapping, there appears to be only limited geologic hazards on the property as it relates to site development. Possible geologic/geotechnical constraints to proposed residential development include potential instability of large cut slopes, soil erosion within the two major drainages that transect the property, and possible earthquake-induced seiche along the near shore portions of the site. Although the project area is located within the seismically active region of southern California, there are no documented active or potentially active faults transecting or projecting towards the project area.

GEOLOGIC MATERIALS

Surficial materials within the site consist of topsoil, slopewash materials and recent stream-laid alluvial deposits within the active stream channels. Older alluvial deposits underlie the entire site at relatively shallow depths. The distribution of the more significant deposits is shown on Exhibit 5.10-1, *Geologic Map*. The designations shown below, in parenthesis, correspond to those shown on the geologic map.

TOP SOIL (NOT DESIGNATED ON GEOLOGIC MAP)

Native topsoil which blankets much of the site consists mainly of sandy loam with angular gravel to cobble-size fragments of quartzite derived from older bedrock formations. These soils are typically dry, porous, loose, contain varying amounts of organic material, and range in thickness from approximately eight to ten inches deep. These soils are considered to be moderately erodible in their natural condition and considered too gravelly and cobbley for use as topsoil for landscaping.

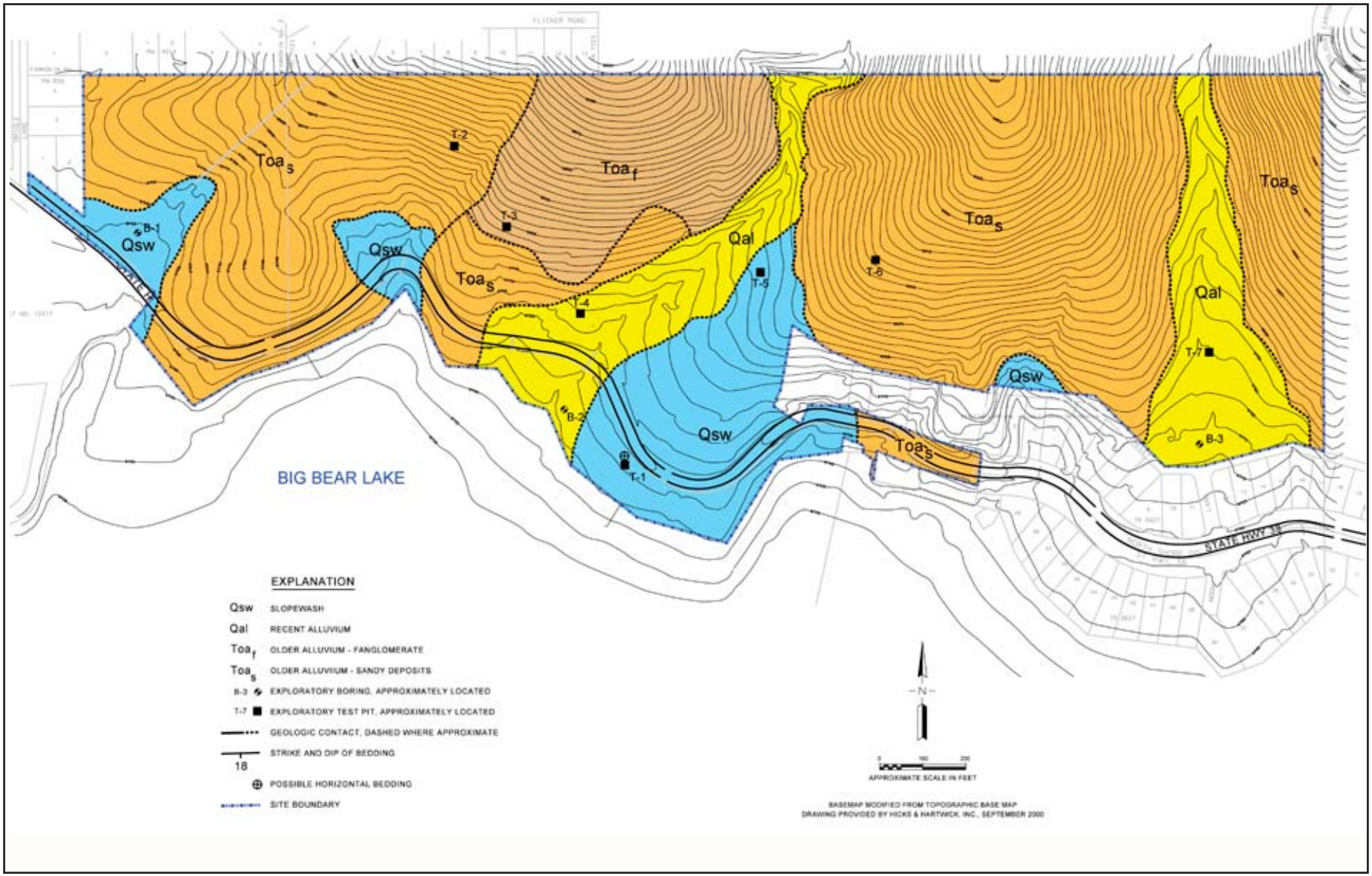
SLOPEWASH (Qsw)

Slopewash deposits consist of the downslope accumulation of eroded topsoil and sediments derived from the underlying older alluvial materials. Slopewash typically contains abundant organic debris and is moderately to highly compressible.

Slopewash occurs within broad drainage swales, and as widespread blanket deposits on the more gentle, natural slope in the south central portion of the area. The compositions of these soil-like deposits reflect the composition of the older alluvial soils from which they are derived. Where observed in the exploratory test pits, slopewash deposits consist largely of an admixture of silty sand, angular gravel to cobble-size fragments of hard, crystalline bedrock. These soils range in thickness from 1 to 4 ½ feet, and are commonly dark brown to dark yellowish-brown in color, loose to medium dense, dry to slightly moist, porous, and contain varying amounts of roots and rootlets, and are considered moderately to highly compressible. Erodibility in their natural state is considered to be slight to moderate.

ALLUVIAL (Qal)

Alluvial deposits occupy the bottom of two major and one minor drainage channels that transect the project area (refer to Exhibit 5.10-1, *Geologic Map*). These Holocene age, soil-like materials have been deposited, eroded and re-deposited by intermittently flowing streams within these drainages. Where encountered in exploratory borings B-2 and B-3, and exploratory test pit TP-7, these soils consist of crudely stratified layers and lenses of silty sand with varying amounts of angular gravel to cobble-size fragments of quartzite and marble. The alluvial soils are dark brown to dark yellowish-brown in color, comprised of fine to medium grain sand, dry to slightly moist, loose and moderately porous and contain numerous roots and rootlets. Where noted in the two borings and the test pit, the thickness of the alluvial soils in the study area ranges from about 3.5 to 17 feet (±). Exploratory boring B-1 encountered only surficial slopewash-type deposits (as described above).



Source: D. Scott Magorien, CEG, Geologic Map, August 2002.

Exhibit 5.10-1

RBF CONSULTING

PLANNING ■ DESIGN ■ CONSTRUCTION

12/05 JN 10-101901

MOON CAMP TT #16136
ENVIRONMENTAL IMPACT REPORT

Geologic Map

Prior to this investigation, RGS Geosciences' (2001) geologic feasibility study indicated that these alluvial soils near the shoreline of Big Bear Lake are potentially susceptible to seismically-induced liquefaction. Each of these drainages was targeted, as close to the shoreline as considered practical, for exploratory drilling and standard penetration testing (SPT) in three (3) exploratory borings. These borings have been designated B-1, B-2 and B-3, the locations of which are shown on Exhibit 5.10-1, *Geologic Map*.

The primary approach used in this study to assess liquefaction potential of the alluvial soils was based on an empirically based approach as presented by Seed and Idriss (1982). For this approach, SPT blowcounts (e.g. drive energy of a 140 pound weight falling a distance of 18 inches), as well as other seismic and overburden pressures at the point(s) of interest are needed for the assessment. For this study, SPT blowcounts were obtained at approximately every five feet in each of the three rotary-wash borings.

Based on the results of the SPT and visual observations of the soil samples, the recent (i.e., Holocene age) alluvial soils below a depth of approximately eight feet are not considered prone to settlement or seismically-induced liquefaction. The upper eight feet are considered compressible, and are highly erodible. Given the gravelly/ cobbley nature of the near surface alluvium, and the elevation as it relates to high water level in the lake (elevation 6,745 feet msl), the likelihood of seismically induced liquefaction of these sediments along, or inland, of the lakefront is considered remote.

OLDER ALLUVIUM (Toa_s Toa_f)

The entire project area is underlain to significant depths (greater than 400 feet) by what is referred to as Older Alluvium of Plio-Miocene age. These ancient deposits represent what remains of an extensive accumulation of alluvial (stream-laid) soil materials that had been eroded from adjacent bedrock highlands north of the project area. According to geologic mapping by the U.S. Geologic Survey, these alluvial deposits rest unconformably above granitic bedrock of Cretaceous age. Although well dissected, these deposits form an increasingly thickening wedge from north to south. According to water well logs (Geoscience Support Services, Inc., 2000), these sediments are over 400 feet thick near the shoreline and serve as the principal groundwater reservoir beneath the site.

Exposures of the older alluvial deposits are limited to small areas on the road cuts along State Route 38, and on several 12- to 18-foot high road cuts on Polique Canyon Road that leads into Holcomb Valley. No evidence of significant surficial or gross instability was observed either within the project area or along the roadway cuts. Many of these road cuts were quite steep, having inclinations exceeding 45˚. However, the lower portions of these cut slopes were commonly covered with a tallu apron displaying an inclination of approximately 33˚.

In order to evaluate the near-surface lithologic makeup and bedding plane structure of these sedimentary deposits for the purpose of preliminarily assessing slope stability issues, six (6) exploratory backhoe pits were excavated within the property using a rubber-tired, Case 580 extend-a-hoe equipped with a 3 foot wide bucket.

Each of the pits was situated within an area characterized by a certain type of topographic terrain and/or near a proposed cut slope, and varied in depth from approximately two to six feet below ground surface. All the pits were geologically logged and backfilled with the excavated materials. The location of each pit is shown on Exhibit 5.10-1, *Geologic Map*.

The main lithologic character of these ancient soils is represented by layers of clayey sand (labeled Toa_s on the geologic map) that contains varying amounts (up to about 10 percent) of angular, gravel to cobble-size fragments of quartzite derived from older bedrock that now forms discontinuous exposures along the ridgeline to the north of the project area. These older alluvial soils are commonly dark yellowish-brown to strong brown in color, are very dense (i.e., over-consolidated), contain medium to coarse-grained sand particles, and are thinly to thickly bedded. Based on observations within exploratory test pit excavations, these soils were difficult to excavate below a depth of several feet.

Near the north-central portion of the study area the older alluvium is represented by fanglomerate-type deposits. These materials labeled Toa_f (on the geologic map) represent the eroded remnants of an ancient alluvial fan, consisting largely of angular to subangular cobble to gravel size quartzite fragments with approximately 30 percent sitly sand. Similarly to the underlying clayey sand deposits, the fanglomerate is light brownish-yellow, dense, and is difficult to excavate past a depth of about three feet. These deposits appear to have limited area extent, and form a relatively thin verneer atop the more extensive, older clayey sand (Toa_s) deposits.

Overall, there does not appear to be any major geotechnical-related constraints associated with the older alluvial deposits, except perhaps where clay deposits prove to be moderately or highly expansive and where significant cut slopes are planned, as discussed in the Impacts section which follows.

GEOLOGIC STRUCTURE

The geologic structure within the project area is defined by the orientation of bedding planes within the older alluvium (Toa_s). Where observed in the exploratory test pits TP-2 and TP-5, located within the northern portion of the study area, bedding planes exposed near the bottom of each pit varied in strike between North 65˚ West (N65W), and east-west (EW), and dip to the south and southwest at 10˚ and 18˚. In test pit TP-1, located near the shoreline of Big Bear Lake, bedding within the older alluvium appeared to be essentially horizontal. If these bedding plane attitudes are representative of the upland and shoreline areas of the project site, it would appear that the older alluvium has been folded into a roughly east-west trending synclinal fold, the southern limb of which has been eroded away during the formation of Bear Valley. If true, this folding is judged to have occurred over a period of hundreds of thousands of years as a result of San Andreas tectonics. Conversely, this apparent variation in the dip of bedding planes could be a result of ancient faulting associated with uplift of the San Bernardino Mountains. However, no evidence of faulting, active or otherwise, has been documented within or adjacent to the project area.

If these bedding planes observed in the exploratory test pits are representative of the orientation of bedding within areas of the site, south-facing cut slopes associated

with construction for the new alignment for State Route 38, as well as internal streets north of the new highway, could present concerns related to slope stability. If bedding planes near the shoreline area, south of realigned State Route 38, are essentially horizontal (as depicted in test pit TP-1), no such gross slope stability problem would be anticipated. However, where significant cut slopes are planned, a site-specific subsurface investigation should be performed in order to evaluate the nature and extent of bedding planes and the presence of any weak clay layers.

MINERAL RESOURCES

There are no economic metallic or non-metallic ore deposits within or directly adjacent to the project area. The potential for oil and/or gas deposits beneath the site is considered remote.

GEOLOGIC HAZARDS

The primary geologic hazards within the project area are those associated with possible slope instability for new slopes, soil erosion, strong ground motion from earthquakes, and potential seiche along the shoreline.

The project area is situated within the County of San Bernardino Geologic Hazard (GH) Overlay District. For information purposes only, the GH Overlay District was created to provide greater safety by establishing review procedures and setbacks for areas that are subject to potential geologic problems such as ground shaking from earthquakes, liquefaction and subsidence.

FAULTING AND SEISMICITY

Hazards associated with earthquakes include primary hazards, such as ground shaking and surface rupture; and secondary hazards, such as liquefaction, seismically-induced settlement, landsliding, tsunamis, and seiches.

In accordance with the California Department of Conservation Division of Mines and Geology, a fault is a fracture in the crust of the earth along which rocks on one side have moved relative to those on the other side. Most faults are the result of repeated displacements over a long period of time. An inactive fault is a fault that has not experienced earthquake activity within the last three million years. In comparison, an active fault is one which has experienced earthquake activity in the past 11,000 years. A fault which has moved within the last two to three million years, but not proven by direct evidence to have moved within the last 11,000 years, is considered potentially active. No active or potentially active faults are located within or project towards the Project area.

The Project area, like most of Southern California is part of a seismically active region. The Alquist-Priolo Act of 1972 (now the Alquist-Priolo Earthquake Fault Zoning Act, Public Resources Code 2621-2624, Division 2 Chapter 7.5) regulates development near active faults so as to mitigate the hazard of surface fault-rupture. Under the Act, the State Geologist is required to delineate “special study zones along known active faults in California”. The Act also requires that, prior to approval of a project, a geologic study be conducted to define and delineate any hazards from

surface rupture. A registered geologist by the State of California, within or retained by the lead agency for the project must prepare this geologic report. A 50-foot setback from any known trace of an active fault is required. The project area is not currently known to be located within an Alquist-Priolo Fault Rupture Hazard Zone, according to the California Division of Mines and Geology.

The Modified Mercalli intensity scale was developed in 1931 and measures the intensity of an earthquake's effects in a given locality, and is perhaps much more meaningful to the layman, as compared to the Richter Scale, because it is based on actual observations of earthquake effects at specific places. On the Modified Mercalli intensity scale, values range from I to XII. The most commonly used adaptation covers the range of intensity from the conditions of "I –not felt except by very few, favorably situate," to "XII – damage total, lines of sight disturbed, objects thrown into the air". While an earthquake has only one magnitude, it can have many intensities, which decrease with distance from the epicenter.

Ground shaking accompanying earthquakes on nearby faults can be expected to be felt within the Project site. However, the intensity of ground shaking would depend upon the magnitude of the earthquake, the distance to the epicenter, and the geology of the area between the epicenter and the property.

A listing of active faults considered capable of producing strong ground motion at the Project site, their distances from the Project site, and the maximum expected earthquake along each fault is presented in Table 5.10-1, *Summary of Fault and Generalized Earthquake Information for the Moon Camp Project Site*. Also presented are generalized evaluations of maximum ground shaking on site for the maximum earthquakes, and generalized predictions of the likelihood of such events occurring.

Table 5.10-1
Summary of Fault and Generalized Earthquake Information for the Moon Camp Project Site

Name	Miles (direction from site)	Maximum Magnitude	Expected Level of Ground Shaking	Likelihood
North Frontal (Western Segmane)	6.5 (north)	7.0	High	Moderate
Helendale	8.0 (east)	7.3	High	Moderate
San Andreas	14 (south)	7.3	High	High
Pinto Mountain	18 (southeast)	7.0	Moderate	Moderate
San Jacinto	25 (southwest)	6.7	Moderate	High

The most severe ground shaking would be expected to accompany a large earthquake on the North Frontal Fault. An earthquake magnitude of 7.0 on this fault could produce Modified Mercallli intensities in the range of VIII to X within the property, and a maximum horizontal ground acceleration between .060 and 1.22 (Hilltop Geotechnical 2001). Damage from ground rupture on-site is extremely unlikely because no known active faults cross the property.

Secondary earthquake hazards, which include liquefaction, ground lurching, lateral spreading, seismically induced settlement, tsunamis, and earthquake induced landsliding, are discussed in the following sections.

Liquefaction

Seismic ground shaking of relatively loose, granular soils that are saturated or submerged can cause the soils to liquefy and temporarily behave as a dense fluid. Liquefaction is caused by a sudden temporary increase in pore water pressure due to seismic densification or other displacement of submerged granular soils. Liquefaction more often occurs in earthquake prone areas underlain by young alluvium where the groundwater table is higher than 50 feet below the ground surface.

The borings conducted for this EIR were drilled in accordance with the "Guidelines for Evaluating and Mitigating Seismic Hazards in California, 1997" published by the Division of Mines and Geology (DMG) of the Department of Conservation. These guidelines are otherwise known as SP 117 (Special Publication 117). The procedures for analyzing liquefaction potential at the site conform to the "Recommended Procedures for Implementation of DMG Special Publication 117" produced by the Southern California Earthquake Center (SCEC) in 1999. Rotary wash drilling techniques were used to advance the borings for this site and Standard Penetration Tests (SPTs) were conducted in general accordance with ASTM D1586. A standard sampler driven by automatic hammer was used to perform the SPTs. Previous measurements by the drilling company rated the hammer energy at 75 to 80 percent. The SCEC recommends the use of the 1985 simplified procedures by Seed and others to analyze liquefaction potential. Typically, the methodology is to determine a corrected blowcount $(N_1)_{60}$ and use a recommended relationship between the corrected SPT blow count and the equivalent uniform cyclic stress ratio necessary to trigger liquefaction during a 7½-magnitude earthquake. For $(N_1)_{60}$ greater than 30, the potential for earthquake-induced liquefaction is practically non existent. Field SPT values were corrected for sampler type, drill rod lengths, hammer type and release system, and overburden stresses to generate the corrected value $(N_1)_{60}$. SPT data for this project show generally high blowcount. Consequently, corrected SPT blowcounts yielded $(N_1)_{60}$ values that were greater than 30.

Based on the results of the SPT data obtained from the exploratory borings, as well as observations within the exploratory test pits, there are no conditions within the project area that could promote liquefaction. Although shallow groundwater is present beneath the shoreline portions of the property, the lithologic character of the older alluvial materials that underlie the entire shoreline area of the project is such that the potential for liquefaction is considered nonexistent.

The only possible exception could be small areas directly at the lake-shoreline interface and the mouth of the major alluvial channels. However, only one of these areas lies within the project area. Given the nature of the lithologic conditions and high SPT blowcounts encountered in exploratory boring B-3 near the mouth of this channel, the lateral extent of any loose, saturated alluvial soils would be very limited. The likelihood of liquefaction-induced impacts in this area is considered low.

Ground Lurching

Certain soils have been observed to move in a wave-like manner in response to intense seismic ground shaking, forming ridges or cracks on the ground surface. Areas underlain by thick accumulations of colluvium and alluvium appear to be more susceptible to ground lurching than bedrock. Under strong seismic ground motion conditions, lurching can be expected within loose, cohesionless solids, or in clay-rich soils with high moisture content. Generally, only lightly loaded structures such as pavement, fences, pipelines and walkways are damaged by ground lurching; more heavily loaded structures appear to resist such deformation. Ground lurching may occur where deposits of loose alluvium exist on the project site, such as within the two major alluviated channels that transect the project area.

Lateral Spreading

Lateral spreading involves the lateral displacement of surficial blocks of sediment as a result of liquefaction in a subsurface layer. As previously stated the liquefaction potential within the project area, however, is considered to be nonexistent.

Seismically Induced Ground Settlement

Strong ground shaking can cause settlement by allowing sediment particles to become more tightly packed, thereby reducing pore space. Unconsolidated, loosely packed alluvial deposits are especially susceptible to this phenomenon. Poorly compacted artificial fills may also experience seismically induced settlement. Unconsolidated soils such as modern alluvial soils within the two active stream channels are subject to seismically induced ground settlement.

Tsunamis

A tsunami is a seismic sea-wave caused by sea-bottom deformations that are associated with earthquakes beneath the ocean floor. The hazard from tsunamis is considered non-existent, given the large distance from the Pacific Ocean.

Seiching

Seiching involves an enclosed body of water oscillating due to groundshaking, usually following an earthquake. Lakes and water towers are typical bodies of water affected by seiching. Because of the proximity of the subject site to Big Bear Lake, the site is susceptible to damage from seiching. The largest amplitude of ground motion associated with a seismic event in this area is anticipated to be related to a major earthquake along the North Frontal Fault zone.

Other Geologic Hazards

Landslides. No landslides are known to exist within the upgradient of the site. Field reconnaissance did not disclose the presence of older, existing landslides within or near the subject property. Aerial photographic analyses performed as part of this study also did not disclose any existing landslides or slumps in the project area.

IMPACTS

SIGNIFICANCE CRITERIA

Appendix G of the California Environmental Quality Act (CEQA) Guidelines contains the Initial Study Environmental Checklist form used during preparation of the project Initial Study as contained in Appendix 15.1 of this EIR. The Initial Study includes questions relating to geology, soils and mineral resources. The issues presented in the Initial Study Checklist have been utilized as thresholds for significance in this Section. Accordingly, a project may create a significant environmental impact if one or more of the following occurs:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

  - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (refer to Section 10.0, *Effects Found Not to be Significant*);
  - Strong seismic ground shaking (refer to Impact Statement 5.10-3);
  - Seismic-related ground failure, including liquefaction (refer to Section 10.0, *Effects Found Not to be Significant*);
  - Landslides (refer to Section 1.0, *Effects Found Not to be Significant).*

- Result in substantial soil erosion or the loss of topsoil (refer to Impact Statement 5.10-2);

- 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 (refer to Impact Statement 5.10-1);

- Be located on expansive soils, as defined in Table 18-1 B of the Uniform Building Code (1994), creating substantial risks to life or property (refer to Impact Statement 5.10-5); and/or

- Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater (refer to Section 10.0, *Effects Found Not to be Significant*).

Potential impacts associated with the project area's topography, soils, and the region's seismic activities are identified below. Mitigation measures are provided to reduce the significance of impacts.

The level of geotechnical and landform information contained herein is adequate to analyze the potential project effects on earth resources and landforms, and to determine appropriate mitigation measures. For certain items, the project geotechnical engineer should perform further testing and review of on-site conditions as part of the final design work. This additional work will further refine details for site

design, but is not anticipated to alter the conclusions of significance contained herein. In accordance with CEQA case law, this later additional refinement is not a deferral of mitigation. Rather, it is a design refinement, consistent with the commitment to mitigation included in this EIR.

The conceptual grading plan prepared by Hicks and Hartwick, Inc. (dated 6/6/01) indicates the creation of numerous, southerly-facing, 2:1 (horizontal to vertical) cut and fill slopes adjacent to the realigned portion of State Route 38 and the two (2) roadways internal to the development. Based on the nature of bedding planes observed within the older alluvial deposits in test pits TP-2 and TP-5, southerly-facing cut slopes north of the realigned section of State Route 38 may be grossly unstable. If so, the lots adjacent to these cut slopes could be significantly impacted.

There are also a number of other short- and long-term impacts to the current physical/geological setting that can be generally expected from grading and development activities. These are described in the following impacts sections.

Based on the results of the data obtained from the exploratory boring and test pits, liquefaction is not considered to be a significant impact due to the nonexistent potential within the project site.

The most significant potential impacts to site development would be caused by changes in existing topography, erosion of surficial soil deposits, ground shaking from nearby seismic sources, and potential seiche along the shoreline properties. Impacts to the existing groundwater conditions beneath the site may include increased amounts of recharge to the underlying aquifer(s) as a result of widespread landscape irrigation or leaky buried water transmission lines. As stated in Section 5.11, *Hydrology and Drainage*, of this, EIR, if groundwater from on-site water wells are to provide the water supply to the project area, additional studies will be necessary to assess the impacts to the underlying aquifer as a result of groundwater withdrawals.

SLOPE STABILITY

5.10-1 *Development of the proposed Project could result in slope failures. Implementation of the recommended mitigation measures and compliance with the County Development Code and Uniform Building Code would reduce impacts to less than significant levels.*

Given the apparent southerly inclination of bedding planes within the older alluvial deposits, proposed of south-facing, manufactured cut slopes could be grossly unstable. If weak clay layers within the older alluvium were found to be dipping out-of-slope, in what is referred to as “daylighted bedding”, slope failures could occur and encroach into adjacent lots.

Methods to mitigate such conditions could include to construction of 2:1 (horizontal to vertical) buttressed slopes using on-site native soil materials, or constructing geotextile-reinforced soil buttresses where cut slopes are planned. Either of these methods, as well as a number of other forms of proven slope reinforcement methods would reduce this impact to a less than significant level.

SOIL EROSION

5.10-2 *Development of the proposed Project could result in accelerated soil erosion. Project compliance with the County Development Code, the Uniform Building Code and the recommended mitigation measures would reduce impacts to a less than significant level.*

The younger alluvial deposits within the two major stream channels are highly erodible. Adverse surface drainage could promote accelerated soil erosion which could undermine proposed structures and lead to increased sedimentation within Big Bear Lake. This impact would be considered significant if not mitigated.

Mitigation measures, such providing adequate surface drainage away from these soils or covering them with a roadway, would reduce this impact to a less than significant level.

GROUND SHAKING

5.10-3 *Development of the proposed Project may increase the number of people/structures exposed to effects associated with seismically induced ground shaking. Implementation of the recommended mitigation measures and compliance with the County Development Code and the Uniform Building Code would reduce potential impacts to less than significant.*

Given the highly seismic character of the Southern California Region, moderate to severe ground shaking can be expected within the project area due to moderate to large earthquakes on the nearby North Frontal, Helendale, or San Andreas fault zones. This impact would be considered significant if not mitigated. In order to reduce this impact a less than significant level, all structures for human occupancy should be constructed in accordance with seismic design standards set forth in the latest edition of the Uniform Building Code.

SEICHE

5.10-4 *Development of the proposed Project may expose people/structures to seiching as a result of significant ground motion related to an earthquake. Project compliance with recommended mitigation measures would reduce impacts to less than significant levels.*

Seiche-induced run-up along the shoreline properties adjacent to Big Bear Lake could conceivably occur due to significant ground motion from a major earthquake. The amount of potential run-up would be dependant on the inclination of the near-shore environment and the height of the lake level at the time of the seismic event. Assuming the lake would be at its highest level during such an event, mitigation measures involving at least 5 feet of “free-board” above the high-water line for all residential structures would reduce this impact to a less than significant level.

EXPANSIVE SOILS

5.10-5 *Development of the proposed Project may create substantial risks to life or property as a result of expansive soils. Implementation of the recommended mitigation measure would reduce impacts to less than significant levels.*

Currently, there is insufficient information concerning the expansive nature of the alluvial soils beneath the project site. This impact will need to be evaluated in ~~additional~~ design level geotechnical analysis/studies~~.~~, which include ~~1)~~ a quantitative geotechnical analysis~~,~~ ~~2), a design level geotechnical engineering report,~~ and ~~3)~~ a design-level engineering geology report. Implementation of the recommended mitigation measures ~~of~~ from the design-level geotechnical engineering report ~~the recommended mitigation measure and conclusions rendered in the referenced reports~~ would reduce impacts to less than significant levels.

CUMULATIVE

5.10-6 *The proposed Project, combined with future development, may result in increased short-term impacts such as erosion and sedimentation, and long-term seismic impacts within the area. Mitigation is incorporated on a project-by-project basis to reduce impacts to a less than significant level in areas deemed suitable for development.*

Soils and geologic conditions in the Project vicinity may vary by location. Short-term cumulative impacts such as erosion and sedimentation would occur. The only cumulative long-term impact related to geology is the exposure of people and the property in the vicinity of the North Frontal Fault System to the potential for seismically induced ground shaking. Implementation of the cumulative projects would incrementally increase the number of people and structures potentially subject to a seismic event. Such exposure can be minimized by adhering to UBC standards and requirements. The cumulative effects of increased seismic risk would be addressed on a project-by-project basis in order to determine the need for project specific mitigation.

MITIGATION MEASURES

This section directly corresponds to the identified Impact Statements in the impacts subsection.

SLOPE STABILITY

5.10-1 The stability of ~~S~~south facing cut slopes shall be analyzed as part of the design-level geotechnical investigation. ~~u~~Utilize~~e~~ing 2:1 buttressed slopes using on site native soil materials, or ~~by~~ constructing geotextile-reinforced soil buttresses ~~where~~for planned unstable cut slopes ~~are planned~~ are typical engineering designs for stabilizing slopes. Either of these methods, or other methods must be approved by the San Bernardino County Department of Building and Safety~~Geologist for slope reinforcement may be utilized~~.

SOIL EROSION

5.10-2a Due to the potential for erosion associated with younger alluvial deposits within the two major on-site stream channels, increased surface drainage quantities associated with development on-site shall be directed away from the stream channels.

5.10-2b Prior to the issuance of Grading Permits, the Project Applicant shall prepare a Soil Erosion and Sedimentation Plan for submittal and approval by the County Building and Safety Department.

GROUND SHAKING

5.10-3 Engineering design for all structures and roadways shall be based on the current California Uniform Building Code at the time of project development. Construction plans shall be in accordance with seismic design standards set forth by the County's Development Code and Uniform Building Code.

SEICHE

5.10-4 Residential structures shall be located in areas which provide a minimum of five feet of freeboard above the high water line for any structures.

EXPANSIVE SOILS

5.10-5 Prior to grading permit issuance, ~~geologic analysis/studies shall be required including 1) a~~ a quantitative geotechnical analysis and~~of liquefaction, 2) a~~ design-level geotechnical engineering report shall be required and submitted to the County of San Bernardino Department of Building and Safety for their approval. ~~and 3) a design level engineering geology report.~~

CUMULATIVE

5.10-6 No mitigation measures are recommended.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

No significant impacts related to Geology and Soils have been identified following implementation of mitigation measures and/or compliance with applicable standards, policies and/or County of San Bernardino Development Code and standards set forth in the Uniform Building Code.

5.11 HYDROLOGY AND DRAINAGE

This Section analyzes potential impacts on existing drainage patterns and flood control facilities in the Project area, as well as the potential effects on the groundwater and water quality in Big Bear Lake. Mitigation measures are recommended to reduce potential impacts to a less than significant level. Information in this Section is based on the Hydrology and Water Quality Report for the Project site prepared by RBF Consulting (June 2002), hydrological data made available by Hicks & Hartwick, Inc., the Geohydrologic Investigation of the Moon Camp Area (GSS 2000 report), prepared by Geoscience Support Services, Inc. (GSS) (July 2000), the Focused Geohydrologic Evaluation of the Maximum Perennial Yield of the North Shore and Grout Creek Hydrologic Subunit Tributary Subareas (GSS 2003 report), prepared by GSS (December 2003) and the Delineation of Jurisdictional Waters, prepared by RBF Consulting (July 2004).

EXISTING CONDITIONS

The purpose of this existing conditions evaluation is to establish a baseline for comparison of the pre-project and the post-project conditions. Baseline conditions investigated include: land use, hydrology, floodplain mapping, groundwater and surface water quality.

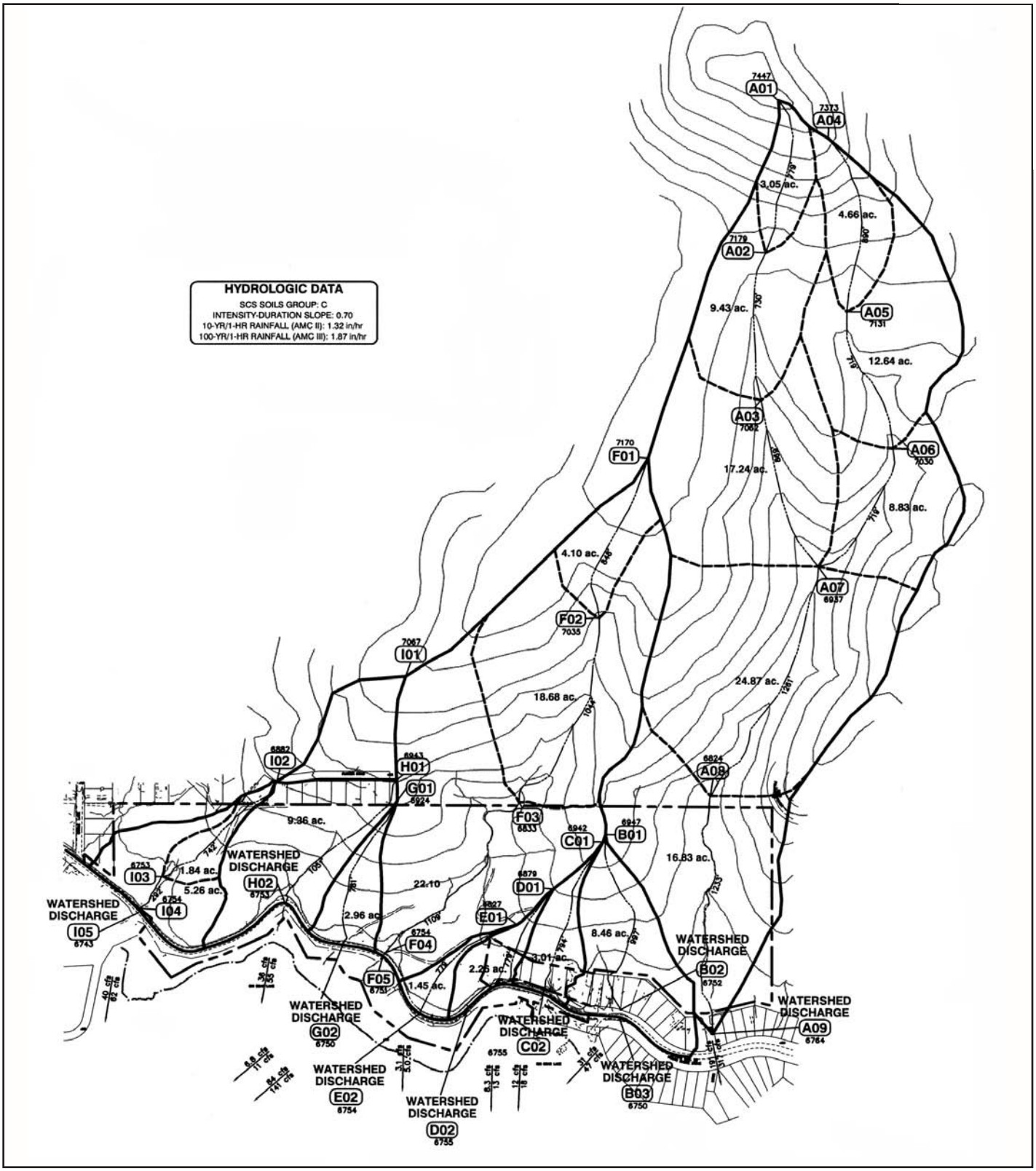
The watershed tributary to the site can be separated into nine drainage areas consisting of approximately 177 acres. Flows enter Big Bear Lake via cross culverts under State Route 38 and direct sheet flow over State Route 38. The drainage areas are labeled A through I. Area A, located on the eastern end of the site, contains a natural channel passing through the proposed development site. It is the largest drainage area consisting of 98 acres.

HYDROLOGY

Hicks & Hartwick, Inc. conducted a hydrology analysis that provides the basis for the existing condition hydrology for the Project site. Hydrologic calculations utilized to evaluate surface runoff from the 10-year and 100-year hypothetical design storm frequencies of tributary drainage areas were performed using Advances Engineering Software 1983-1994 (AES). The computer software (AES) creates an inactive watershed system to compute hydraulic and hydrological information for a given watershed. The watershed subarea boundaries were delineated in their *Preliminary Drainage Study*. Hydrologic parameters used in the analysis, such as rainfall and soil classification, are presented in the *San Bernardino County Hydrology Manual* dated May 1983. Exhibit 5.11-1, *Existing Condition Hydrology Map*, illustrates the hydrology for the existing condition.

EXISTING WATERSHED DESCRIPTION

The historic drainage pattern for the area follows the natural topography, north to south with the flow outleting to Big Bear Lake.



Source: Hicks & Hartwick, Inc., Preliminary Drainage Study.

Not to Scale

MOON CAMP TT #16136
ENVIRONMENTAL IMPACT REPORT

Existing Condition Hydrology Map

RBF CONSULTING
PLANNING ■ DESIGN ■ CONSTRUCTION

12/05 JN 10-101901

Exhibit 5.11-1

The maximum elevation differential of the watershed is approximately 213 feet (from elevation 2,960 at the northeast boundary to 2,747 feet at the lakefront). The site has slopes of five to 40 percent. Due to on-site drainage patterns, the project site was divided into nine areas (A through I). Area "A" is on the eastern portion of the watershed and area "I" is on the western portion. Table 5.11-1, *Drainage Area Breakdown*, provides further detail on the nine existing drainage areas and subareas.

Table 5.11-1
Drainage Area Breakdown

Drainage Area	Area (acres)	Number of Subareas
A	95.4	8
B	8.5	1
C	3.0	1
D	2.3	1
E	1.5	1
F	44.9	3
G	3.0	1
H	9.4	1
I	11.4	3

All soil types are classified into four hydrologic groups (A, B, C and D). Soil type A has low runoff potential and consists primarily of sand and gravel. Soil type B has a moderate infiltration rate and consists mostly of sandy-loam soils. Soil type C has a slow infiltration rate and consists primarily of silty-loam soils. Soil type D has a high runoff potential and consists of clay soils.

Area "A" is composed of 8 subareas. Currently all land in area "A" is natural. There is a natural channel running down the center of watershed "A". Approximately 50 percent of the land on the north end of sub-watershed "A" is composed of soil type "D", while the remainder is composed of soil type "C". Area "B" is composed of one subarea. Area "B's" land use consists of 1.0 dwelling unit per acre (DU/AC). Areas "C", "D", and "H" are all composed of one subarea. Within these subareas, the land use consists of 1.0 DU/2.5 AC. Areas "E" and "G" are also composed of one subarea each. These subareas exist as natural lands. Area "F" is composed of three subareas. The entire drainage area is comprised of natural lands. Area "I" is composed of three subareas. In the upper drainage area, the land use consists of 4.0 DU/AC. In the second drainage area, the land use consists of 1.0 DU/2.5 AC. The downstream drainage area in subarea "I" consists of natural lands.

RBF observed that the existing culverts which cross State Route 38 were either plugged with sediment, had crushed inlets, or both. These deficiencies result in little to no capacity in the existing culverts. The deficiencies cause ponding and overtopping of State Route 38.

RATIONAL METHOD

Hicks & Hartwick performed the hydrologic calculations to determine the 10-year and 100-year peak flow rates using the *San Bernardino County Hydrology Manual* dated May 1983. The Rational Method is an empirical computation procedure used for developing a peak runoff rate (discharge) for storms of a specific recurrence interval. The design discharges were computed by generating a hydrologic "link-node" model, which divides the area into drainage subareas. These subareas are tributary to a concentration point or hydrologic "node" point determined by the existing terrain and street layout. The assumptions/guidelines applied for use of the Rational Method are included in Appendix 15.9, *Hydrology Data*.

EXISTING CONDITION SURFACE WATER HYDROLOGY

To establish the baseline hydrologic conditions for the Project, both 10-year and 100-year frequency storm were analyzed by Hicks & Hartwick. The flows for the 10-year storm are used to determine local storm drain sizing, while the 100-year analysis is used for larger master plan facilities and floodplain mapping. The predominant hydrologic soil classification of the natural watershed is soil type "C" and "D", which corresponds to a high runoff potential, with the soil having slow infiltration rates consistent with clay soils. Table 5.11-2, *Existing Conditions Peak Flowrates*, summarizes the results of the existing condition analysis utilizing the 1983-1994 Advanced Engineering Software.

FLOODPLAIN MAPPING

The County of San Bernardino is a participant in the National Flood Insurance Program (NFIP). Communities participating in the NFIP must adopt and enforce minimum floodplain management standards, including identification of flood hazards and flooding risks. Participation in the NFIP allows communities to purchase low cost insurance protection against losses from flooding. The published Flood Insurance Rate Maps (FIRMs) for the Project site are included on Community Panel Number 060270 7295B. The FIRMs indicated that there are no existing flood hazards within the Project site.

JURISTICTIONAL WATERS

RBF Consulting conducted a Delineation of Jurisdictional Waters (July 2004). The findings of their Study are summarized below.

WATERS OF THE U.S. (WETLAND) DETERMINATION

In order to be considered a wetland, an area must exhibit all three of the wetland parameters (i.e., vegetation, soil and hydrology) per the evaluation criteria in the Wetland Delineation Manual. Based on the results of the field investigations, it was determined that not all three parameters were present within the drainages (neither hydric soils nor riparian vegetation were present). As a result, RBF identified no Corps wetlands on the proposed Project site.

Table 5.11-2
Existing Conditions Peak Flowrates

Subarea	Area (acres)	Total Area (AC)	Tc (min)	Total 10-Yr. Peak Q (cfs)	Total 100-Yr. Peak Q (cfs)
Watershed A					
A1 – A2	3	3	16.6	7.8	12.2
A2 – A3	9.4	12.5	17.4	30.3	48.4
A3 – A7	17.2	29.7	18.3	69.0	111.0
A4 – A5	4.7	4.7	18.4	11.0	17.4
A5 – A6	12.6	17.3	19.2	39.4	62.5
A6 – A7	8.8	26.1	20.0	57.4	91.6
A7 – A8	24.9	79.0	19.6	170.1	227.3
A8 – A9	16.8	95.9	21.2	191.5	317.3
Watershed B					
B1 – B2	8.5	8.5	10.3	31.1	47.3
Watershed C					
C1 – C2	3.0	3.0	9.4	11.7	17.9
Watershed D					
D1 – D2	2.3	2.3	10.0	8.3	12.8
Watershed E					
E1 – E2	1.5	1.5	19.9	3.1	5
Watershed F					
F1 – F2	4.1	4.1	20.0	8.6	14.1
F2 – F3	18.7	22.8	21.1	45.6	75.2
F3 – F4	22.1	44.9	22.5	84.4	141.1
Watershed G					
G1 – G2	3.0	3.0	18.1	6.7	10.9
Watershed H					
H1 – H2	9.4	9.4	9.6	35.7	54.6
Watershed I					
I1 – I2	4.3	4.3	9.4	17.3	25.7
I2 – I3	1.8	6.1	10.2	22.9	34.7
I3 – I4	5.3	11.4	10.7	40.2	61.9

WATERS OF THE U.S. (NON-WETLAND) DETERMINATION

~~The unnamed drainages within the Project site exhibited evidence of flow (i.e., sediment/silt deposition) sufficient to document the Ordinary High Water Mark (OHWM) (i.e., channel bed and bank lines), thus meeting the criteria for jurisdictional waters.~~ Evidence of an Ordinary High Water Mark (OHWM) was observed within the on-site ephemeral drainages, primarily indicated by sediment deposits. It should also be noted that Big Bear Lake adjoins the project site to the south. Based on discussions with the Big Bear Municipal Water District, the current water level of Big Bear Lake (as of June 28, 2004) is 6,727.8-feet above mean sea level (msl). The high water mark is reported to be 6,743.2 feet above msl. Refer to ~~Appendix 15.10, *Jurisdictional Delineation*, and~~ Exhibit 5.8-2, *Jurisdictional Map*, for an illustration of jurisdictional boundaries.

Based on the results of the field observations and data collection, RBF identified 0.15-acre of Corps jurisdictional "waters of the U.S." within the proposed project site. ~~The drainages are ephemeral.~~ In addition to on-site ephemeral drainages, the Corps considers Big Bear Lake jurisdictional. The Corps' jurisdictional limits are delineated at the high water line, which is reported to be at 6,743.20-foot elevation (and below).

CALIFORNIA DEPARTMENT OF FISH AND GAME (1602~~3~~) JURISDICTION

Based on the results of the field observations and data collection, RBF identified 0.15-acre of CDFG jurisdictional streambed~~waters~~ located within the boundaries of the Project site (refer to Exhibit 5.8-2, *Jurisdictional Map)*. As with the Corps, Big Bear Lake would be considered jurisdictional by the CDFG, including the approximate 4.14-acre lake shoreline. Utilizing the most current development plans, it was determined that the proposed improvements would impact 4.38-acres of CDFG jurisdiction (includes streambed, shoreline, and lake impacts). Refer to Section 5.8, *Biological Resources*, for further discussion regarding jurisdictional waters.

GROUNDWATER

The Big Bear Lake Watershed has been divided into seven hydrologic subunits based on surface water drainage divides. Two of the hydrologic subunits, the North Shore and Grout Creek Subunits, extend across most of the northern portion of Big Bear Lake. Although the subunits can be categorized as independent surface drainage catchments, their large size and/or elongated east-west extent warrant further subdivision to distinguish available groundwater resources in the eastern portion from available groundwater resources in the western portion.

As stated above, ~~T~~the groundwater conditions cited in this EIR are based on two separate reports prepared by Geoscience Support Services, Inc. (GSS). The GSS 2000 report includes data on the groundwater quality, on-site well operations (Wells-FP-2 and FP-3) and groundwater supply potential. ~~in 2000 and a~~ The GSS 2003 report ~~Focused Geohydrologic Evaluation of the Maximum Perennial Yield for the North Shore and Grout Creek Hydrologic Subareas, prepared in 2003~~ includes current data on groundwater supplies in the North Shore and Grout Creek Hydrologic Subunits. The findings in the GSS 2003 report regarding groundwater supplies are

assumed to supercede the 2000 findings. The GSS 2003 report presents a focused geohydrologic evaluation of the maximum perennial yield of the North Shore and Grout Creek Subunits that includes dividing each subunit into smaller tributary subareas. However, the data regarding groundwater quality and well operations in the GSS 2000 report are still applicable and cited in this section. It is also noted that the wells analyzed in the GSS 2000 report are not included in the GSS 2003 report, as they are non-operational. Well FP-2 is located on the Moon Camp project site.

Although the project area is located entirely within tributary subarea A of the North Shore Hydrologic Subunit, potential groundwater resources are analyzed for both the North Shore and the Grout Creek Hydrologic Subunits as they are both considered potential sources to supply water to the project.

~~According to the 2000 report, the entire project site is within subunit A of the North Shore subarea of Big Bear Lake. The western one-third lies within the Grout Creek subarea. The North Shore subarea is similar in several respects to the Grout Creek subarea. For example, a considerable amount of the water bearing (older alluvial) material present is above the known groundwater surface. Only a band of these materials adjacent to Big Bear Lake are continuously saturated.~~

~~According to a recent geohydrologic investigation of the Moon Camp Area by Geoscience Support Services (GSS, 2000), the older alluvial deposits represent the main water-bearing formation beneath the site. Groundwater-level data from two U.S. Forest Service wells located within the project area suggest that Big Bear Lake provides recharge to the aquifer beneath the project area. Additional groundwater recharge emanates from gravity drainage from the higher elevations north of the Moon Camp area.~~

~~Based on studies by GSS (2000), the main water-bearing zones within the older alluvial deposits consist of intermixed and interlayered sand and gravels. However, lithologic data from the two U.S. Forest Service wells indicate that these sand and gravel aquifers are not continuous over wide areas and tend to follow subsurface channels (GSS, 2000). In mid 2000, groundwater beneath the southern margin of the site was approximately 5 to 10 feet below the level in the lake. More recent groundwater level observations from the three exploratory borings drilled for the liquefaction analysis appears to be similar with respect to the level of the lake.~~

~~The results from GSS 2000 geohydrologic investigation indicate the recoverable amount of groundwater in the Moon Camp area is estimated at 230 acre-feet per year. Based on the nature of the aquifer materials, thickness of the aquifer and the discharge rate of existing wells in the Moon Camp area is estimated at 230 acre-feet per year. Based on the nature of the aquifer materials, thickness of the aquifer and the discharge rate of existing wells in the Moon Camp area, the potential to develop a 100 gallon per minute (gpm) water well supply is considered by GSS (2000) to be good. Chemical analyses of the groundwater from the two on-site water wells indicate that the groundwater is of superior quality. However, the iron concentration (0.69 mg/l) in one well exceeds the state maximum concentration limit for iron (0.3 mg/l) (GSS, 2000).~~

Maximum perennial yield was evaluated in the context of the total average annual ground water recharge within the North Shore and Grout Creek Subunits. Ground water recharge is the total amount of water that reaches the aquifer (i.e., ground water reservoir) through natural processes, such as deep percolation of precipitation falling on the land surface and infiltration beneath flowing stream channels. In the development of ground water resources for municipal supply, however, not all of the natural recharge that any given aquifer receives on an average annual basis can be developed.

Maximum perennial yield is distinguished from average annual ground water recharge through the following definition:

> *The maximum quantity of ground water perennially available if all possible methods and sources are developed for recharging the basin. The quantity depends on the amount of water economically, legally, and politically available to the organization or agency managing the basin (Todd, 1980).*

By definition, the maximum perennial yield is some portion (i.e. subset) of the total amount of ground water recharge that the aquifers receive from precipitation on an average annual basis. Not all of the water that reaches the aquifer can be developed for beneficial use because either it is not economically feasible, or there is no legal right to the water, or political constraints prevent or inhibit development.

Average annual ground water recharge estimates were assigned to smaller tributary subareas, which were determined from surface drainage divides within the larger hydrologic subunits. The North Shore Subunit was subdivided into six tributary subareas (A through F) and the Grout Creek Subunit was subdivided into four tributary subareas (A through D). The boundaries of the tributary subareas represent surface water drainage divides, which, for most of the tributary subareas also represent ground water flow divides. Exceptions include the margins of Big Bear Lake and in the southeast portion of the North Shore Subunit where the ground water within one subarea/subunit can be in hydraulic communication with adjacent subareas/subunits.

Average annual ground water recharge was estimated for each tributary subarea using a watershed hydrologic model and by estimating ground water underflow (conducted for the alluvial portion of the Grout Creek Subunit only). When possible, measured data was used as input for the analysis of ground water discharge. Measured data included:

- Long-term precipitation records from weather stations within the Big Bear Lake watershed,
- Evapotranspiration data from evaporation pans and weather stations within the watershed,
- Ground water levels, and
- Ground water production.

However, most of the input parameters that are required for a detailed evaluation of the average annual ground water recharge had to be estimated or assumed from data collected outside the Grout Creek and North Shore Subunits or outside the Big

Bear Lake Watershed due to lack of measured data in the area. Although the assumed values are published and are from reliable sources (i.e., the U.S. Environmental Protection Agency, United States Geological Survey, etc.), they are not specific to the area of interest. Numerous additional monitoring features can be developed to collect the data necessary to refine the ground water recharge estimates. However, priority should be given to the construction of monitoring wells and the development of a reliable ground water level baseline for the tributary subareas.

NORTH SHORE HYDROLOGIC SUBUNIT

Groundwater in the North Shore Hydrologic Subunit generally occurs in the unconsolidated alluvial deposits on the lower slopes of the surrounding mountains and in the fractures and weathered portions of the bedrock. Groundwater in the alluvium occurs at depths ranging from approximately 5 feet (ft) in the western portions of the Subunit and near the RV Park wells to approximately 50 ft near Division Well Nos. 6 and 7 (refer to Figure 2 in the GSS 2003 report for well location in the North Shore and Grout Creek Subunits).

Groundwater flows by gravity drainage from areas of high elevation (the mountain slopes) into areas of low elevation, ultimately collecting in the sediments beneath Big Bear Lake. Groundwater recharge likely occurs as deep percolation of runoff through the younger alluvium and fractures in the bedrock during periods of prolonged precipitation.

The primary sources of groundwater discharge from the North Shore Subunit are underflow and groundwater pumping from wells within the Subunit. The DWP currently operates four vertical production wells within the North Shore Subunit (RV Park Well Nos. 1 and 2 and Division Well Nos. 6 and 7). Combined average annual groundwater production from DWP wells between 1993 and 2002 is 282 acre-feet per year acre-ft/yr. Pumping data for the 20 private wells in the Subunit were not available. However, assuming that they are domestic sources and that an average single family home uses approximately 200 gallons per day per year (gpd/yr), it is estimated that production from these wells is approximately 4.5 acre-ft/yr.

Groundwater levels in the central portion of the North Shore Hydrologic Subunit, as measured in RV Park Well No. 1, have declined approximately 20 feet between 1996 and 2002. The groundwater level in this well is relatively stable, however, with most of the decline occurring after year 2000, a period of relatively dry climatic conditions. Groundwater levels in Division Well No. 6, located in the eastern portion of the Subunit, have declined approximately 80 ft between 1992 and 2003. Recent groundwater level declines in the eastern portion of the Subunit can also be correlated with dry climatic conditions, although the greater degree of decline is also a reflection of higher groundwater production in the area.

Estimates of Average Annual Groundwater Recharge (North Shore Subunit)

Estimates of average annual groundwater recharge were assigned to each tributary subarea using the watershed model. Required input parameters for the watershed model for which no measured data were available were obtained from the EPA

database of hydrologic parameters. Based on the watershed modeling results, the estimates of average annual groundwater recharge for the North Shore Hydrologic Subunit range from approximately 150 to 430 acre-ft/yr with a midpoint of approximately 290 acre-ft/yr. This range of recharge is approximately 2 to 7 percent of average annual precipitation for the Subunit, which is within the range of accepted recharge estimates for other groundwater basins in southern California (3 to 7 percent) determined by the Metropolitan Water District of Southern California (MWD). The midpoint of the range is approximately 4.5 percent of precipitation for the Subunit.

Estimates of average annual groundwater recharge for the six tributary subareas range from 27 acre-ft/yr (subarea E) to 73 acre-ft/yr (subarea B) (refer to Table 5.11-3, *Summary of Groundwater Recharge Results North Shore Tributary Subareas*). These groundwater recharge estimates represent the average of the watershed model output range, which is based on the average of typical and possible input values. The data suggests that the RV Park wells are producing groundwater at a rate (approximately 14 acre-ft/yr), which is well within their subarea's (subarea B) average annual groundwater recharge. Combined average annual groundwater production from Division Well Nos. 6 and 7 is exceeding that subarea's (subarea F) average annual groundwater recharge. However, it is important to note that these wells are in the alluvial portion of the subarea, which is in hydraulic continuity with the alluvial portions of the adjacent hydrologic subunit (i.e. the Division Subunit to the south). Accordingly, production from these wells should be evaluated in the context of the groundwater basin in this area and not the watershed tributary to the wells.

Maximum Perennial Yield (North Shore Subunit)

According to the GSS 2003 report, the midpoint of the estimated range of average annual groundwater recharge (approximately 290 acre-feet per year) is considered a good estimate of maximum perennial yield for the North Shore Hydrologic Subunit, given the available data.

The results of the ground water recharge analysis for the North Shore Subunit are as follows:

Table 5.11-3
Summary of Ground Water Recharge Results - North Shore Tributary Subareas

Tributary Subarea	Area (acres)	Annual Precipitation (inches)	Average Annual Ground Water Recharge – Low Estimate (acre-ft/yr)	Average Annual Ground Water Recharge – High Estimate (acre-ft/yr)	Average of Ground Water Recharge Estimate Range (acre-ft/yr)
A	247	27.87	14	44	29
B	720	25.45	36	110	73
C	828	23.01	37	107	72
D	558	21.45	22	63	43
E	392	20.01	15	39	27
F	814	18.27	23	66	44
TOTAL	3,559	136.06	147	429	288

GROUT CREEK HYDROLOGIC SUBUNIT

Groundwater within the Grout Creek Subunit occurs in both the bedrock and alluvium. The Cedar Dell slant wells (located in subarea C) are drilled into the Mesozoic granitic rock and typically produce approximately 20 gallons per minute, collectively. Groundwater in the alluvium occurs at depths ranging from approximately 20 to 90 ft and flows to the south toward Grout Bay (Big Bear Lake) at a gradient of 0.024 to 0.043 ft/ft. Pumping test and lithologic data from the Barbara Lee Lane Well and specific capacity data from Wells 12P01, 13C01, and Northshore Well Nos. 1, 2, and 3 were used to estimate aquifer transmissivity. Estimates range from 700 to 1,900 gpd/ft.

Groundwater recharge likely occurs within the Grout Creek streambed during periods of extended runoff, near the contact between the bedrock and alluvium and, to a lesser extent, as percolation of precipitation directly on the alluvium. Groundwater recharge also occurs through fractures in the bedrock formations.

The primary sources of groundwater discharge from the Grout Creek Subunit are underflow and groundwater pumping from wells within the Subunit. DWP currently operates two vertical production wells, two slant wells in bedrock, and one spring within the Grout Creek Subunit. Average annual groundwater production from DWP wells within the Subunit from 1989 to 2002 has been approximately 134 acre-ft/yr. With the exception of pumping from Barbara Lee Lane Well No. 1, all of the municipal groundwater production in the Grout Creek Hydrologic Subunit is from tributary subarea C. Pumping data for the 29 private wells in the Subunit were not available. However, assuming that they are domestic sources and that an average single family home uses about 200 gpd/yr, it is estimated that production from these wells is approximately 6.5 acre-ft/yr.

Estimates of Average Annual Groundwater Recharge (Grout Creek Subunit)

Groundwater level elevations in North Shore Well Nos. 1 and 3, both located at the discharge end of tributary subarea C, have been relatively stable between 1995 and 2003, with seasonal fluctuations and a minor decline during the relatively dry climatic cycle from 1999 to December 2003. The average annual groundwater recharge of the Grout Creek Subunit was estimated using the underflow method and the watershed model.

The underflow method indicated an average annual groundwater recharge estimate of approximately 200 acre-ft/yr. It should be noted, however, that the underflow calculation only accounts for outflow in the alluvial aquifer and does not account for outflow through the bedrock in the Subunit. It is assumed that some outflow occurs within the bedrock aquifer, which is one reason why the underflow estimate for the Grout Creek Subunit is lower than the perennial yield estimate from the watershed model (described below).

Based on the watershed modeling results, the average annual groundwater recharge for the Grout Creek Hydrologic Subunit (subareas A through D) is estimated to range from approximately 260 to 840 acre-ft/yr with a midpoint of approximately 550 acre-ft/yr (refer to Table 5.11-4, *Summary of Groundwater Recharge Results Grout Creek*

Tributary Subareas). This range of recharge is approximately 2 to 8 percent of average annual precipitation for the Subunit. The midpoint of the range is approximately 5 percent of precipitation for the Subunit. Assumed input parameters for the watershed model are based on the average of EPA' s suggested parameter ranges.

The relative disparity between the average annual recharge estimates obtained from the underflow analysis and watershed model is partly due to the estimated nature of the input parameters used in each analysis. In the case of the underflow analysis, the transmissivity parameter is estimated based on review of lithologic logs and pumping tests in wells within the Big Bear area that are perforated in similar aquifer materials. More representative values can be obtained via formal aquifer pumping tests using the wells in the Subunit. For the watershed model, 18 of the 20 required input parameters are estimated from the EPA' s database, which is not specific to the mountains of Southern California. Additionally, the underflow analysis does not account for all of the recharge within the bedrock. As data is collected in the future, the range of recharge will become less.

Estimates of average annual groundwater recharge for the four tributary subareas range from 66 acre-ft/yr (subarea D) to 217 acre-ft/yr (subarea C). These average annual recharge values represent the average of the watershed model output range, which is based on the average of typical and possible input values. These data suggest that average annual groundwater production from the Grout Creek Hydrologic Subunit (approximately 134 acre-ft/yr), which occurs almost entirely from tributary subarea C, is within the average annual recharge for both the tributary subarea and the hydrologic subunit.

Maximum Perennial Yield (Grout Creek Subunit)

The maximum perennial yield of the Grout Creek Hydrologic Subunit is within the range of average annual groundwater recharge specified by the watershed model, but is more likely to be in the lower end of the range than the upper end. As mentioned previously, by definition, maximum perennial yield is the amount of water that can be developed economically, legally and politically. In consideration of this, subareas A and B of the Grout Creek Subunit are remote and are located on land under the jurisdiction of the United States Forest Service (USFS). There is no established distribution system in subareas A and B of the Grout Creek Subunit. Furthermore, access to the area would likely require a lengthy negotiation process with the USFS. Given these factors, developing groundwater resources in these subareas is not currently practical.

At this time, it is recommended to use the sum of the midpoint recharge estimates for tributary subareas C and D (217 acre-ft plus 66 acre-ft; see Table 5.11-4) as the maximum perennial yield for the Grout Creek Subunit (total of 283 acre-ft/yr). It should be emphasized that as groundwater production is initiated in each subarea, it will be very important to monitor groundwater levels in dedicated non-pumping monitoring wells (i.e. " key wells") located in each tributary subarea from which groundwater is extracted. As was recommended for the North Shore Hydrologic Subunit, future management of the groundwater resources in each tributary subarea

should rely more on established groundwater level thresholds than the perennial yield estimates.

The results of the groundwater recharge analysis for the Grout Creek Subunit are as follows:

Table 5.11-4
Summary of Ground Water Recharge Results
Grout Creek Tributary Subareas

Tributary Subarea	Area (acres)	Annual Precipitation (inches)	Average Annual Ground Water Recharge – Low Estimate (acre-ft/yr)	Average Annual Ground Water Recharge – High Estimate (acre-ft/yr)	Average of Ground Water Recharge Estimate Range (acre-ft/yr)
A	1,074	33.44	74	249	161
B	850	29.01	50	160	105
C	1,668	29.93	104	331	217
D	592	26.74	32	99	66
Total (A to D)	4,184	119	260	839	549
Total (C and D only)	2,260	56.67	136	430	283

Tributary subareas A and B are excluded from the totals because they are not currently practicable to developed due to their remote locations and are located on land under the jurisdiction of the U.S. Forest Service.

GROUNDWATER QUALITY

According to the GSS 2000 Report, groundwater samples collected from Well FP-2 located on the southern portion of the Moon Camp site in 1987 was submitted for a full Title 22 analysis. The chemical analysis indicated that the groundwater quality in the Moon Camp area is calcium bicarbonate and is generally of superior water quality as all concentrations were below maximum contaminant levels (MCLs), with the exception of iron with a concentration of 0.69 mg/L. The MCL for iron is 0.3 mg/L. However, the iron concentration of Well-FP-3 (located approximately 800 feet to the northeast of Well FP-2) was only 0.06 mg/L, which suggest that iron concentrations are possibly lower elsewhere.

STORM WATER QUALITY

Storm water quality is a significant concern in Southern California. This section discusses typical pollutants found in storm water runoff and discusses what sort of contaminants may be found in existing storm water runoff. Based on the Clean Water Act, a 303 (d) list has been developed, which includes Big Bear Lake. The 303(d) Clean Water Act section contains a list of impaired surface water bodies which identifies primary pollutants, sources of pollutants and a priority schedule for developing Total Maximum Daily Loads (TNDL) to reduce the amount of pollutants in the water body. For a specific discussion concerning the status of the 303(d) listing for Big Bear Lake refer to the Existing Storm Water Quality discussion below.

NONPOINT SOURCE POLLUTANTS

A net effect of urbanization can be to increase pollutant export over naturally occurring conditions. The impact of the higher export can be on the adjacent streams and also on the downstream receiving waters. However, an important consideration in evaluating storm water quality from the project is to assess if it impairs the beneficial use to the receiving waters. Nonpoint source pollutants have been characterized by the following major categories in order to assist in determining the pertinent data and its use. Receiving waters can assimilate a limited quantity of various constituent elements, but there are thresholds beyond which the measured amount becomes a pollutant and results in an undesirable impact. Background of these standard water quality categories provides understanding of typical urbanization impacts.

Sediment. Sediment is made up of tiny soil particles that are washed or blown into surface waters. It is the major pollutant by volume in surface water. Suspended soil particles can cause the water to look cloudy or turbid. The fine sediment particles also act as a vehicle to transport other pollutants including nutrients, trace metals, and hydrocarbons. Construction-sites are the largest source of sediment for urban areas under development. Another major source of sediment is streambank erosion, which may be accelerated by increases in peak rates and volumes of runoff due to urbanization.

Nutrients. Nutrients are a major concern for surface water quality, especially phosphorous and nitrogen, which can cause algal blooms and excessive vegetative growth. Of the two, phosphorus is usually the limiting nutrient that controls the growth of algae in lakes. The orthophosphorous form of phosphorus is readily available for plant growth. The ammonium form of nitrogen can also have severe effects on surface water quality. The ammonium is converted to nitrate and nitrite forms of nitrogen in a process called nitrification. This process consumes large amounts of oxygen which can impair the dissolved oxygen levels in water. The nitrate form of nitrogen is very soluble and is found naturally at low levels in water. When nitrogen fertilizer is applied to lawns or other areas in excess of plant needs, nitrates can leach below the root zone, eventually reaching ground water. Orthophosphate from auto emissions also contributes phosphorus in areas with heavy automobile traffic. As a general rule of thumb, nutrient export is greatest from development sites with the most impervious areas. Other problems resulting from excess nutrients are 1) surface algal scums, 2) water discolorations, 3) odors, 4) toxic releases, and 5) overgrowth of plants. Common measures for nutrients are total nitrogen, organic nitrogen, total Kjeldahl nitrogen (TKN), nitrate, ammonia, total phosphate, and total organic carbon (TOC).

Trace Metals. Trace metals are primarily a concern because of their toxic effects on aquatic life, and their potential to contaminate drinking water supplies. The most common trace metals found in urban runoff are lead, zinc, and copper. Fallout from automobile emissions is also a major source of lead in urban areas. A large fraction of the trace metals in urban runoff are attached to sediment and this effectively reduces the level, which is immediately available for biological uptake and subsequent bioaccumulation. Metals associated with the sediment settle out rapidly and accumulate in the soils. Also, urban runoff events typically occur over a shorter

duration, which reduces the amount of exposure and could be toxic to the aquatic environment. The toxicity of trace metals in runoff varies with the hardness of the receiving water. As total hardness of the water increases, the threshold concentration levels for adverse effects increases.

Oxygen-Demanding Substances. Aquatic life is dependent on the dissolved oxygen in the water. When organic matter is consumed by microorganisms dissolved oxygen (DO) is consumed in the process. A rainfall event can deposit large quantities of oxygen demanding substance in lakes and streams. The biochemical oxygen demand of typical urban runoff is on the same order of magnitude as the effluent from an effective secondary wastewater treatment plant. A problem from low DO results when the rate of oxygen-demanding material exceeds the rate of replenishment. Oxygen demand is estimated by direct measure of DO and indirect measures such as biochemical oxygen demand (BOD), chemical oxygen demand (COD), oils and greases, and total organic carbon (TOC).

Bacteria. Bacteria levels in undiluted urban runoff exceed public health standards for water contact recreation almost without exception. Studies have found that total coliform counts exceeded EPA water quality criteria at almost every site and almost every time it rained. The coliform bacteria that are detected may not be a health risk in themselves, but are often associated with human pathogens.

Oil and Grease. Oil and grease contain a wide variety of hydrocarbons some of which could be toxic to aquatic life in low concentrations. These materials initially float on water and create the familiar rainbow-colored film. Hydrocarbons have a strong affinity for sediment and quickly absorb within it. The major source of hydrocarbons in urban runoff is through leakage of crankcase oil and other lubricating agents from automobiles. Hydrocarbon levels are highest in the runoff from parking lots, roads, and service stations. Residential land uses generate less hydrocarbons export, although illegal disposal of waste oil into storm waters can be a local problem.

Other Toxic Chemicals. Priority pollutants are generally related to hazardous wastes or toxic chemicals and can be sometimes detected in storm water. Priority pollutant scans have been conducted in previous studies of urban runoff, which evaluated the presence of over 120 toxic chemicals and compounds. The scans rarely revealed toxins that exceeded the current safety criteria. The urban runoff scans were primarily conducted in suburban areas not expected to have many sources of toxic pollutants (with the possible exception of illegally disposed or applied household hazardous wastes). Measures of priority pollutants in storm water include - 1) phthalate (plasticizer compound), 2) phenols and creosols (wood preservatives), 3) pesticides and herbicides, 4) oils and greases, 5) metals.

PHYSICAL CHARACTERISTICS OF SURFACE WATER QUALITY

Standard parameters which can assess the quality of storm water provide a method of measuring impairment. A background of these typical characteristics assists in understanding water quality requirements. The quantity of a material in the environment and its characteristics determine the degree of availability as a pollutant in surface runoff. In an urban environment, the quantity of certain pollutants in the

environment is a function of the intensity of the land use. For instance, a high density of automobile traffic makes a number of potential pollutants (such as lead and hydrocarbons) more available. The availability of a material, such as a fertilizer, is a function of the quantity and the manner in which it is applied. Applying fertilizer in quantities that exceed plant needs leaves the excess nutrients available for loss to surface or ground water.

The physical properties and chemical constituents of water traditionally have served as the primary means for monitoring and evaluating water quality. Evaluating the condition of water through a water quality standard refers to its physical, chemical, or biological characteristics. Water quality parameters for storm water comprise a long list and are classified in many ways. In many cases, the concentration of an urban pollutant, rather that the annual load of that pollutant, is needed to assess a water quality problem. Some of the physical, chemical or biological characteristics that evaluate the quality of the surface runoff are:

Dissolved Oxygen. Dissolved oxygen in the water has a pronounced effect on the aquatic organisms and the chemical reactions that occur. It is one of the most important biological water quality characteristics in the aquatic environment. The dissolved oxygen concentration of a water body is determined by the solubility of oxygen, which is inversely related to water temperature, pressure, and biological activity. Dissolved oxygen is a transient property that can fluctuate rapidly in time and space. Dissolved oxygen represents the status of the water system at a particular point and time of sampling. The decomposition of organic debris in water is a slow process and the resulting changes in oxygen status respond slowly also. The oxygen demand is an indication of the pollutant load and includes measurements of biochemical oxygen demand or chemical oxygen demand.

Biochemical Oxygen Demand (BOD). The biochemical oxygen demand (BOD) is an index of the oxygen-demanding properties of the biodegradable material in the water. Samples are taken from the field and incubated in the laboratory after which the residual dissolved oxygen is measured. The BOD value commonly referenced is the standard 5-day values. These values are useful in assessing stream pollution loads and for comparison purposes.

Chemical Oxygen Demand. The chemical oxygen demand (COD) is a measure of the pollutant loading in terms of complete chemical oxidation using strong oxidizing agents. It can be determined quickly because it does not rely on bacteriological actions as with BOD. COD does not necessarily provide a good index of oxygen demanding properties in natural waters.

Total Dissolved Solids (TDS). TDS concentration is determined by evaporation of a filtered sample to obtain residue whose weight is divided by the sample volume. The TDS of natural waters varies widely. There are several reasons why TDS are an important indicator of water quality. Dissolved solids affect the ionic bonding strength related to other pollutants such as metals in the water. TDS are also a major determinant of aquatic habitat. TDS affect saturation concentration of dissolved oxygen and influence the ability of a water body to assimilate wastes. Eutrophication rates depend on total dissolved solids.

pH. The pH of water is the negative log, base 10, of the hydrogen ion (H^+) activity. A pH of 7 is neutral; a pH greater than 7 indicates alkaline water; a pH less than 7 represents acidic water. In natural water, carbon dioxide reactions are some of the most important in establishing pH. The pH at any one time is an indication of the balance of chemical equilibrium in water and affects the availability of certain chemicals or nutrients in water for uptake by plants. The pH of water directly affects fish and other aquatic life. Generally, toxic limits for pH values are less than 4.8 and greater than 9.2.

Alkalinity. Alkalinity is the opposite of acidity, representing the capacity of water to neutralize acid. Alkalinity is also linked to pH and is caused by the presence of carbonate, bicarbonate, and hydroxide, which are formed when carbon dioxide is dissolved. A high alkalinity is associated with a high pH and excessive solids. Most streams have alkalinities less than 200 mg/l. Typically, alkalinity of 100-200mg/l seem to support well-diversified aquatic life.

Specific Conductance. The specific conductivity of water, or its ability to conduct an electric current, is related to the total dissolved ionic solids. Long-term monitoring of a project's waters can develop a relationship between specific conductivity and TDS. Its measurement is quick and inexpensive and can be used to approximate TDS. Specific conductivities in excess of 2000 µohms/cm indicate a TDS level too high for most freshwater fish.

Turbidity. The clarity of water is an important indicator of water quality that relates to the ability of photosynthetic light to penetrate. Turbidity is an indicator of the property of water that causes light to become scattered or absorbed. Turbidity is caused by suspended clays and other organic particles. It can be used as an indicator of certain water quality constituents such as predicting the sediment concentrations.

Nitrogen (N). Sources of nitrogen in storm water are from the additions of organic matter or chemical additions to water bodies. Ammonia and nitrate are important nutrients for the growth of algae and other plants. Excessive nitrogen can lead to eutrophication since nitrification consumes dissolved oxygen in the water. Nitrogen occurs in many forms. Organic Nitrogen breaks down into ammonia, which eventually becomes oxidized to nitrate-nitrogen, a form available for plants. High concentrations of nitrate-nitrogen (N/N) in water can stimulate growth of algae and other aquatic plants, but if phosphorus (P) is present, only about 0.30 mg/l of nitrate-nitrogen is needed for algal blooms. Some fish life can be affected when nitrate-nitrogen exceeds 4.2 mg/l. There are a number of ways to measure the various forms of aquatic nitrogen. Typical measurements of nitrogen include Kjeldahl nitrogen (organic nitrogen plus ammonia); ammonia; nitrite plus nitrate; nitrite; and nitrogen in plants. The principal water quality criteria for nitrogen focus on nitrate and ammonia.

Phosphorus (P). Phosphorus is an important component of organic matter. In many water bodies, phosphorus is the limiting nutrient that prevents additional biological activity from occurring. The origin of this constituent in urban storm water discharge is generally from fertilizers and other industrial products. Orthophosphate is soluble and is considered to be the only biologically available form of phosphorus. Since phosphorus strongly associates with solid particles and is a significant part of organic

material, sediments influence concentration in water and are an important component of the phosphorus cycle in streams. Important methods of measurement include detecting orthophosphate and total phosphorus.

EXISTING STORM WATER QUALITY

Water quality monitoring has historically been conducted on Big Bear Lake. The monitoring has resulted in Big Bear Lake being listed on the Santa Ana Regional Water Quality Board Section 303(d) list for impaired water bodies. Table 5.11-5, *Big Bear Lake Pollutant List*, contains the 303(d) list of the pollutants found in Big Bear Lake and the source of the pollutant.

Table 5.11-5
Big Bear Lake Pollutant List

Pollutant Stressors	Source	Priority
Copper	Resource Extraction	High
Mercury	Resource Extraction	High
Metals	Resource Extraction	High
Noxious Aquatic Plants	Unknown Non-Point Source	High
Nutrients	Construction and Snow Skiing Activities	High
Sedimentation and Siltation	Construction, Snow Skiing Activities and Unknown Non-Point Source	High
Source: Draft 2002 Clean Water Act Section 303(D) List and TMDL Priority Schedule.		

The Project site lacks data on storm water runoff quality. In the absence of site-specific data, expected storm water quality can be qualitatively discussed by relating typical pollutants to specific land uses.

Currently, the site is vacant, consisting of primarily open space with trees and shrubs. The watershed is primarily open land with 83.7 percent of the watershed 100 percent pervious (natural area), 4.7 percent is 80 percent pervious (1 dwelling unit per acre), 9.2 percent is 70 percent pervious (2.5 dwelling units per acre) and 2.4 percent is 60 percent pervious (4 dwelling units per acre). The expected existing pollutants in the existing condition storm water runoff from the residential area are trash, nutrients, bacteria, oil and grease, and household hazardous wastes from the residential development. There is also oil and grease associated with automobile use on-site and on State Route 38. The natural areas that make up the majority of the site contribute suspended solids.

Currently, the site does not contain any structural Best Management Practices (BMP) which would potentially decrease the amount of pollutants in storm water runoff. It is likely that portions of potential pollutants are removed through the use of natural conveyance. Conveying flows overland through vegetation affords some infiltration and biofiltration of runoff and thus, potential pollutant removal. However, the residential areas are on the lakeshore end of the Project site, providing little natural

conveyance. A draw back to conveying flows overland is that it tends to create erosion problems and thus increase suspended solids in the runoff. Problems associated with suspended solids and erosion are evident on the Project Site as illustrated in Figure 5 of Appendix 15.9, *Hydrology Data*.

IMPACTS

SIGNIFICANCE CRITERIA

Appendix G of the California Environmental Quality Act (CEQA) Guidelines contains the Initial Study Environmental Checklist form used during preparation of the Project Initial Study, which is contained in Appendix 15.1, *Initial Study/Notice of Preparation*, of this EIR. The Initial Study includes questions relating to hydrology, drainage and water quality. The issues presented in the Initial Study Checklist have been utilized as thresholds of significance in this Section. Accordingly, a project may create a significant environmental impact if it causes one or more of the following to occur:

- Violation of any water quality standards or waste discharge requirements (refer to Impact Statements 5.11-3 and 5.11-4);

- Substantial depletion of groundwater supplies or substantial interference 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) (refer to Impact Statement, 5.11-2);

- Substantial alteration of 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 (refer to Impact Statement 5.11-1);

- Substantial alteration of 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 (refer to Impact Statement 5.11-1);

- Creation or contribution of runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provision of substantial additional sources of polluted runoff (refer to Impact Statement 5.11-1);

- Otherwise substantial degradation of water quality (refer to Impact Statements 5.11-3 and 5.11-4);

- Housing placement 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 (refer to Section 10.0, *Effects Found Not To Be Significant*);

- Placement within a 100-year flood hazard area structures which would impede or redirect flood flows (refer to Section 10.0, *Effects Found Not To Be Significant*); and/or

- Exposure of people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam (refer to Section 10.0, *Effects Found Not To Be Significant*).

Potential impacts associated with drainage and water quality are categorized below according to topic. Mitigation measures at the end of this Section directly correspond to the impact statements below.

The following discussion is an evaluation of the proposed Project which is then compared to the existing conditions analysis to determine impacts associated with development of the property. Proposed conditions investigated include: land use, proposed storm drain configuration, hydrology, floodplain mapping, groundwater and surface water quality.

Federal, State and local drainage laws and regulations govern the evaluation of impacts to surface water drainage. For this evaluation, impacts to surface water drainage would be considered significant if the Project alters the drainage patterns of the site, causing erosion, siltation, or increased runoff, thus, resulting in increased flooding. Increase in the amount of runoff could be considered significant if it impacts State Route 38 or downstream storm drain facilities.

The evaluation of impacts to storm water quality is of growing concern throughout Southern California. In response to the growing concerns and implementation of the Clean Water Act, the Santa Ana Regional Water Quality Control Board has a tentative draft of the Municipal National Pollution Discharge Elimination System (NPDES) Permit for San Bernardino County. The Order Number is R8-2002-0012. The current NPDES number for San Bernardino County is CAS618036.

Development Planning for Storm Water Management

The requirement to implement a program for development planning was based on Federal and State statutes including: Section 402 (p) of the Clean Water Act. The Clean Water Act amendments of 1987 established a framework for regulating storm water discharges from municipal, industrial, and construction activities under the NPDES program. The primary objectives of the municipal storm water program requirements are to:

- Effectively prohibit non-storm water discharges, and

- Reduce the discharge of pollutants from the storm water conveyance system to the Maximum Extent Practicable.

For this evaluation, impacts to storm water quality would be considered significant if the project did not attempt to address storm water pollution to the maximum extent practicable. Currently, there are no definitive water quality standards that require storm water quality leaving a project site to meet standards for individual pollutants.

Therefore, impacts to storm water quality will be considered less than significant if they meet the requirements of the Water Quality Management Plan (WQMP). Starting January 2004 permittees (San Bernardino County) are required to review their existing BMPs for new developments and submit to Executive Officers for Review. Based on Order No. R8-200-0012 for San Bernardino County all new developments must follow the following guidelines:

> *A new development is defined as projects for which tentative tract or parcel map approval was not received by June 1, 2004. However, projects that have not commenced grading by the initial expiration date of the tentative tract or parcel map approval shall be deemed a new development project as defined in this section. New development does not include projects receiving map approval after June 1, 2004 that are proceeding under a common scheme of development that was the subject of a tentative tract or parcel map approval that occurred prior to June 1, 2004.*

The WQMP requirements for on-site and or watershed based BMPs include the following:

- The pollutants in post-development runoff shall be reduced using controls that utilize best available technology (BAT) and best conventional technology (BCT).
- The discharge of any listed pollutant to an impaired waterbody on the 303(d) list shall not cause or contribute to an exceedance of receiving water quality objective.

DRAINAGE AND RUNOFF

5.11-1 *The proposed Project could significantly alter drainage patterns which could result in increased erosion potential and runoff. Impacts are concluded as less than significant with implementation of the Project design features (i.e., the provision of adequate outlet structures, storm drains to contain flows and proper bluff drainage).*

HYDROLOGY

The hydrology calculations by Hicks & Hartwick were used to evaluate surface runoff associated with 10-year and 100-year hypothetical design storm frequencies from the tributary drainage areas. The watershed subarea boundaries were delineated according to physical constraints from the topography, existing drainage facilities and proposed developments. Exhibit 5.11-2, *Proposed Conditions Hydrology Map*, illustrates the hydrology for the proposed condition. Hydrologic parameters used in the analysis, such as rainfall and soil classification, are as presented in the *San Bernardino County Hydrology Manual*.

WATERSHED DESCRIPTION

The drainage patterns for the area follow the natural topography, north to south with the flow draining into Big Bear Lake. The proposed Project has some redirection of flow and the elimination of sheet flow across State Route 38. All cross-culverts would be designed to handle the 100-year storm event.

Due to on-site drainage patterns, the proposed Project site was divided into ten areas (A through J). Area "A" is on the eastern portion of the watershed and area "J" is on the western portion. In the proposed condition, the watershed delineation would slightly change from the existing condition due to grading and the proposed addition of impervious areas.

Table 5.11-6, *Proposed Condition Drainage Area Breakdown*, provides further detail on the ten drainage areas and subareas.

Table 5.11-6
Proposed Condition Drainage Area Breakdown

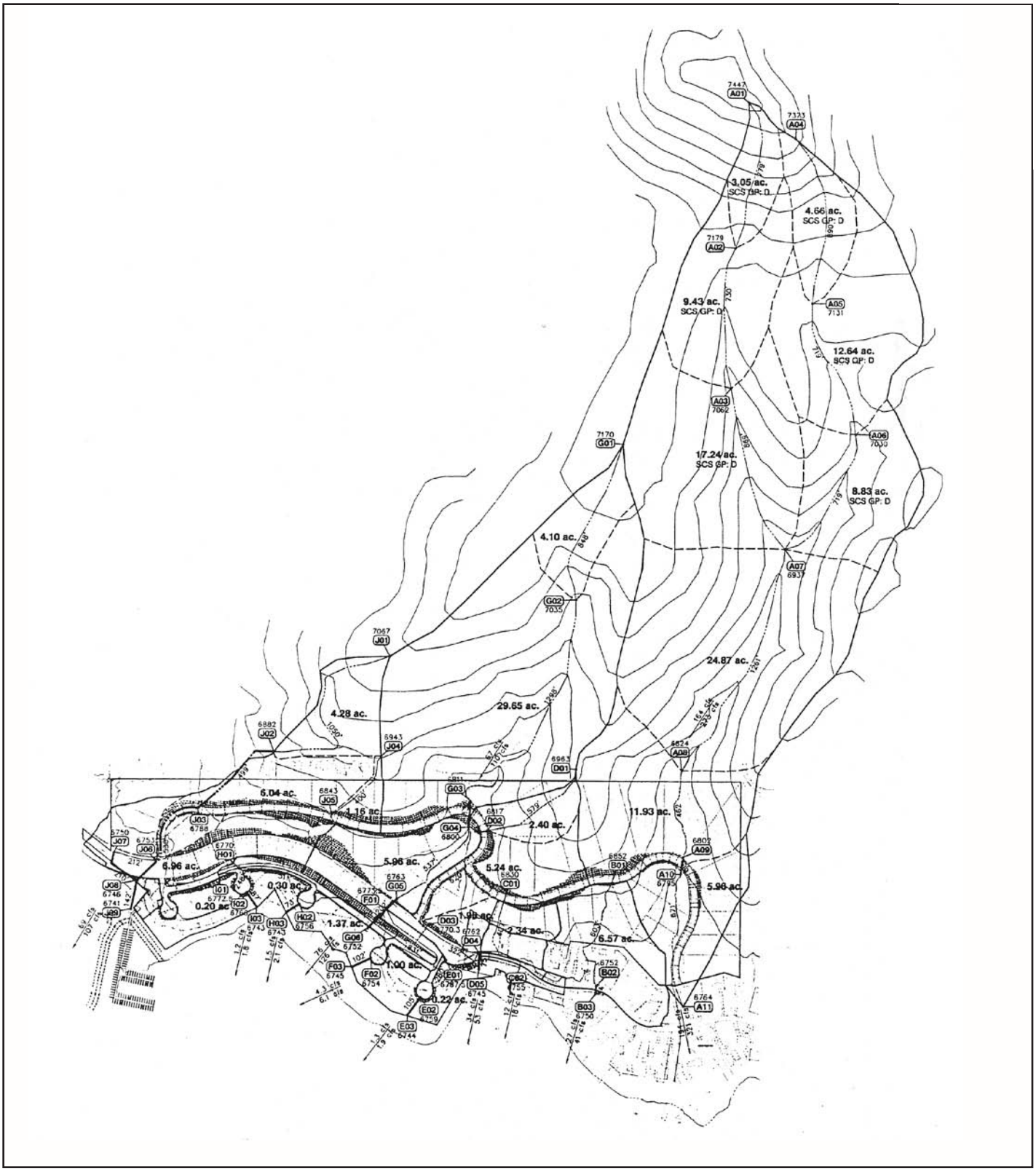
Drainage Area	Area (acres)	Number of Subareas
A	96.9	9
B	6.6	1
C	2.3	1
D	9.6	3
E	0.2	1
F	1.0	1
G	39.7	3
H	0.3	1
I	0.2	1
J	14.2	4

Approximately 35 percent of the overall watershed that contains the proposed Project would be developed. The 92 residential lots would contain custom homes along the north shore of Big Bear Lake. Table 5.11-7, *Percent Impervious Based on Land Use*, shows the percent impervious values for the types of land uses proposed on the Project site. The values presented are from the *San Bernardino County Hydrology Manual*.

Table 5.11-7
Percent Impervious Based on Land Use

Land Use	Percent Pervious
1.0 Dwelling per Acre	80%
2.0 Dwellings per Acre	60%
4.0 Dwellings per Acre	50%
1.0 Dwelling per 2.5 Acre	90%
Commercial [1]	10%
Natural Area – Soil Type C	100%
Natural Area – Soil Type D	100%

[1] This land use value was used for the proposed roadways.



Source: Hicks & Hartwick, Inc., Preliminary Drainage Study.

Not to Scale

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12/05 JN 10-101901

MOON CAMP TT #16136
ENVIRONMENTAL IMPACT REPORT

Proposed Conditions Hydrology Map

Exhibit 5.11-2

Surface Water Hydrology

Table 5.11-8, *Proposed Condition Peak Flow Rates*, summarizes the results of the proposed condition hydrologic analysis.

The proposed condition would have a greater amount of impervious area than the existing condition. The change in impervious area would have the potential to cause significant downstream impacts. Hicks & Hartwick have proposed to upsize the cross culverts to contain the 100-year storm water flow along State Route 38 and eliminate sheet flow across the highway. They have also proposed to add catch basins and cross culverts along the residential roads. All flow would be directed into the Big Bear Lake, similar to the current condition. From the existing condition of 412.2 cfs for the 10-year and 669.1 cfs for the 100-year storm event, the overall watershed flow rate in the proposed condition would contain an increase of 8.7 cfs in the 10-year storm event and an increase of 9.5 cfs in the 100-year storm event. This was determined by calculating the change in total runoff between the existing condition and the proposed condition.

Provided that the proposed cross culverts are sized for 100-year burn and bulking flow rates, the burn and bulking method would increase the runoff from the natural areas. San Bernardino County Hydrology Manual does not contain a burning and bulking method. Therefore, the method found in the Los Angeles County Hydrology Manual is recommended to determine required culvert sizes. In addition, the cross culverts should all be designed with headwalls to prevent CMP crushing, and maintained adequately. No additional hydrologic mitigation is required.

In summary, the proposed Project would alter drainage areas and percent pervious areas on the Moon Camp site, which could be considered potentially significant to siltation and erosion potential unless mitigated. However, all cross culverts and storm drain systems would be sized appropriately so all flows leaving the site were contained, therefore no flooding would occur on- or off-site. Thus, potential flooding and erosion impacts would be reduced to less than significant levels with implementation of the recommended mitigation measures. Additionally, by placing inline filtration devices and water quality basins, the suspended solids being deposited into Big Bear Lake would be reduced to a less than significant level.

GROUNDWATER

5.11-2 *The proposed project may result in groundwater overdraft conditions. Although mitigation measures requiring further testing are referenced, based upon the evidence presented to date, it is concluded that groundwater overdraft is a significant adverse impact and until additional technical review is conducted, the project would result in an unavoidable adverse impact.*

GROUNDWATER RESOURCES

Based on the analyses presented in the GSS December 2003 Report, the following have been concluded regarding the maximum perennial yield of the North Shore Hydrologic Subunit:

- The North Shore Hydrologic Subunit can be conveniently subdivided into six tributary subareas (A through F) based on surface water drainage divides.

- The range of average annual ground water recharge for the North Shore Hydrologic Subunit as a whole is approximately 150 to 430 acre-ft/yr with a midpoint of approximately 290 acre-ft/yr. The midpoint of the range is approximately 4.5 percent of precipitation for the Subunit, which is within the range of accepted recharge estimates for other ground water basins in southern California (3 to 7 percent).

- Based upon the watershed modeling results, the midpoint of the average annual ground water recharge estimate (290 acre-ft/yr) is considered a good estimate of maximum perennial yield for the North Shore Hydrologic Subunit, given the available data. However, additional ground water monitoring and geohydrologic data collection are required in each individual subarea to manage the ground water resources in the area as it is developed in the future.

- Combined average annual ground water production from Division Well Nos. 6 and 7 is exceeding that subarea's average annual ground water recharge. However, these wells are in the alluvial portion of the subarea, which is in hydraulic continuity with the alluvial portions of the adjacent hydrologic subunit (i.e., the Division subunit to the south). Accordingly, production from these wells should be evaluated in the context of the ground water basin in this area and not the watershed tributary to the wells.

For the Grout Creek Hydrologic Subunit, the following is concluded:

- The Grout Creek Hydrologic Subunit can be conveniently subdivided into four tributary subareas (A through D) based on surface water drainage divides.

- The range of average annual recharge for the Grout Creek Hydrologic Subunit as a whole is approximately 260 to 840 acre-ft/yr with the midpoint of approximately 550 acre-ft/yr (subareas A through D). The midpoint of the range is approximately 5 percent of precipitation for the Subunit, which is within the range of accepted recharge estimates for other ground water basins in southern California (3 to 7 percent).

- Ground water resources in subareas A and B of the Grout Creek Subunit would be difficult to develop because they are remote and are located on land under the jurisdiction of the USFS.

- Due to the cost and political limitations associated with ground water development in subareas A and B, it is currently recommended to use the sum of the midpoint recharge estimates for tributary Subareas C and D (283 acre-ft/yr) as the maximum perennial yield for the Grout Creek Subunit.

GSS's 2003 Report concludes that, given the possible range of recharge for the North Shore and Grout Creek Hydrologic Subunits, and correspondingly the range of recharge for the individual tributary subareas within each subunit, it is recommended

that development planning for tributary subareas be initially based on the maximum perennial yield estimates as described above. However, as ground water production is initiated in each tributary subarea, it will be very important to monitor ground water levels in dedicated non-pumping monitoring wells located in each tributary subarea from which ground water is extracted. The GSS estimate of maximum perennial yield is based on long-term precipitation records. However, short-term periods (5 to 10 years) of relatively low precipitation have been observed throughout the period of record. These short-term periods of low precipitation are anticipated to have a significant impact on the ground water levels in the North Shore and Grout Creek Hydrologic Subunits because the storage capacity of the ground water reservoir is relatively small (shallow alluvium underlain by granitic bedrock). For this reason, GSS concludes that future ground water production, and development in each tributary subunit should rely more on established ground water level thresholds than the perennial yield estimates.

Upon completion of the 2003 GSS Report, RBF Consulting was directed by the County of San Bernardino to conduct a peer review of the report for incorporation into the EIR. Engineering Geologist, D. Scott Magorien, reviewed the subject GSS Report from the standpoint of assessing available ground water resources within the vicinity of the Moon Camp Project area. The primary concern is that there is not enough detail provided to do the kind of detailed review that is believed warranted in order to thoroughly evaluate the nature of the ground water resources, nor the actual long-term impacts on this resource in the vicinity of the Moon Camp Project site. The following points have been identified:

- The perennial yield is based on a watershed model that is run with assumptions for most of the parameters and is primarily based on long-term precipitation records. These results have a fair amount of uncertainty in them (they mention that they used many parameters that were not specific to the area of interest).

- The input parameters in the watershed models are estimated from the EPA's database, which are not specific to the mountains of Southern California.

- It is not possible to verify the calculations of underflow as the parameters used in the calculation (like the Transmissivity or aquifer thickness) and sample calculations are not provided.

- There should be a difference in recharge if the area is alluvium or bedrock. Based on the report, it is difficult to determine if the distinction is made in the modeling when assigning values. The output from the watershed modeling doesn't indicate it is an important distinction. For example, North Shore tributary subareas B and C have about the same recharge and the areas are similar, but C appears to be underlain by substantially more alluvium than subarea B. It appears that the watershed parameters are applied uniformly across the watershed.

- It is stated that the reason for the recent groundwater level declines in the eastern portion of North Shore can be correlated with dry climatic conditions although the greater degree of decline is also a reflection of higher

groundwater production in the area. Based on Mr. Magorien's review of the data, the production rate from Division Well No. 6 (see report Table 4) is the much more correlatable with the drop in water levels. Based upon information/studies available as of the publication of the Draft EIR, there is the potential that~~It appears~~ the North Shore Subunit is in an overdraft situation given ~~their~~the analyzed pumping rates.

- On page 23 of the 2003 report, it is stated that the range in recharge calculated is within the range of accepted recharge estimates for other ground water basins in southern California (3% - 7%). This is used as a quasi-validation of results. The high altitude alpine basins with substantial bedrock exposures seem to be a bit more unique.

Based on the information presented in the 2003 GSS report, as well as the 2000 report, it is concluded by Mr. Magorien in the peer review that the groundwater basin associated with the North Shore Hydrologic Subunit in which the Moon Camp Project area is situated~~, is in~~ has the potential to be in a state of overdraft. Any additional groundwater withdrawals from this Subunit will only exacerbate this potential overdraft condition. Considerably more investigative studies involving exploratory drilling and aquifer testing to assess the actual nature of the groundwater regime in the vicinity of the Moon Camp Project are is warranted. Furthermore, although there appears to be groundwater resources available within the neighboring Grout Creek hydrologic unit, a more thorough hydrogeologic investigation is also warranted for this hydrologic unit before additional groundwater resources can be exploited for a project the size of Moon Camp.

As stated in Section 5.3, *Public Services and Utilities*, the project would require approximately 46 acre-feet per year of water to meet the average daily water demand for the proposed residential uses. If water was obtained from existing well(s) (FP-2 and/or FP-3), which are located in subarea A of the North Creek Hydrologic Subunit, subarea A alone would not have the requisite water resources to meet the ADD over the course of a one-year period, as it only averages approximately 29 ac-ft/yr of groundwater recharge. Thus, it can be concluded that additional water resources beyond what is available from on-site wells or wells located within subarea A of the North Shore Hydrologic Subunit would need to be obtained to meet the water demands of the project.

~~Regarding the two existing wells located within the Moon Camp Project site, no mention was given in the latest GSS report as to the potential hydrologic interconnection of the groundwater aquifer with Big Bear Lake. Given the proximity of these wells to the lake, it appears highly probably that the water extracted from one or both of these wells could include some component of lake water.~~

Based upon the conclusions rendered by GSS and subsequent peer review, additional review is necessary to conclude hydrologic subunit effects. Although mitigation measures requiring further testing are referenced, based upon the evidence presented to date, it is concluded that impacts to groundwater resources are~~overdraft is~~ a significant adverse effect and until additional technical review is conducted to verify conditions, the Project would result in an unavoidable impact.

Interference with Big Bear Lake Water Levels

Regarding the two existing wells located within the Moon Camp Project site, no mention was given in the latest 2003 GSS report as to the potential hydrologic interconnection of the groundwater aquifer with Big Bear Lake. The GGSS 2000 report states that the water level in the lake is approximately 5 to 10 feet higher than the water level elevation of Well FP-2, indicating that there is the potential for recharge from the lake. Thus, given the proximity of the existing on-site wells to the lake, it appears highly probable that the water extracted from one or both of these wells could include some component of lake water. It may be possible to mitigate this impact by relocating wells up slope and away from the lake. However, further study is necessary to determine the interconnection of lake water to the subareas of the North Shore and Grout Creek Subunits.

GROUNDWATER QUALITY

As stated in the Existing Conditions section above, groundwater samples collected from Well FP-2 located on the southern portion of the Moon Camp site in 1987 were submitted for a full Title 22 analysis. The chemical analysis indicated that the groundwater quality in the Moon Camp area is generally of superior water quality, with the exception of iron concentration. Thus, if existing on-site wells are utilized for obtaining water resources for the proposed project, mitigation measures have been recommended to ensure that the wells are in acceptable operating condition and that groundwater does not exceed the maximum contaminant level (MCL) for iron concentrations (refer to Mitigation Measures 5.3-6a and 5.3-6b). However, it also acknowledged that all potential water resources, including the above referenced wells, for the proposed project would be subject to all applicable local, State and/or Federal groundwater quality standards.

WATER QUALITY - CONSTRUCTION

5.11-3 *Grading, excavation and construction activities associated with the proposed Project could impact water quality due to sheet erosion of exposed soils and subsequent deposition of particles and pollutants in drainage areas. Impacts would be reduced to a less than significant level through regulatory compliance and with incorporation of the recommended mitigation.*

Construction controls are separated from the rest of the water quality management because the measures are temporary and specific to the type of construction. Construction of a project such as the Moon Camp Project would typically produce potential pollutants such as nutrients, heavy metals, pesticides and herbicides, toxic chemicals related to construction and cleaning, waste materials including wash water, paints, wood, paper, concrete, food containers, and sanitary wastes, fuel, and lubricants.

Table 5.11-8
Proposed Condition Peak Flow Rates

Subarea	Area (acres)	Total Area (acres)	Tc (min)	Total 10-Year Peak Q (cfs)	Total 100-Year Peak Q (cfs)
Watershed A					
A1 – A2	3.0	3	16.6	7.8	12.2
A2 – A3	9.4	12.5	17.8	30.3	48.4
A3 – A7	17.2	29.7	18.8	69.0	111.0
A4 – A5	4.7	4.7	18.4	11.0	17.4
A5 – A6	12.6	17.3	19.2	39.4	62.5
A6 – A7	8.8	26.1	20.1	57.4	91.6
A7 – A8	24.9	79.0	1.4	170.1	277.3
A8 – A9	11.9	91.0	0.7	189.9	311.6
A9 – A10	6.0	96.9	1.0	194.3	321.0
Watershed B					
B1 – B2	6.6	6.6	8.7	27.5	41.5
Watershed C					
C1 – C2	2.3	2.3	6.8	11.9	17.7
Watershed D					
D1 – D2	2.4	2.4	8.2	10.4	15.8
D2 – D3	5.2	7.6	9.8	29.1	45.1
D3 – D4	2.0	9.6	10.7	34.1	53.5
Watershed E					
E1 – E2	0.2	0.2	5.8	1.3	1.9
Watershed F					
F1 – F2	1.0	1.0	9.5	4.3	6.1
Watershed G					
G1 – G2	4.1	4.1	20.0	8.6	14.1
G2 – G3	29.6	33.8	21.4	66.7	110.2
G3 – G4	6.0	39.7	22.3	76.1	126.0
Watershed H					
H1 – H2	0.3	0.3	7.6	1.5	2.1
Watershed I					
I1 – I2	0.2	0.2	5.7	1.2	1.8
Watershed J					
J1 – J2	4.3	4.3	9.4	17.3	25.7
J2 – J3	1.2	1.2	6.8	5.9	8.7
J3 – J4	6.0	7.2	9.6	28.0	43.6
J4 – J5	7.0	14.2	10.3	51.9	81.3

As part of compliance with the NPDES requirements, a Notice of Intent (NOI) would need to be prepared and submitted to the Santa Ana Regional Water Quality Control Board providing notification and intent to comply with the State of California general permit. Prior to construction, a Storm Water Pollution Prevention Plan (SWPPP) is required for the construction activities on-site. The SWPPP outlines the source control and/or treatment control BMPs that would avoid or mitigate runoff pollutants at the construction site to the "maximum extent practicable." Compliance with the NPDES requirements would reduce construction-related impacts to water quality to a less than significant level.

WATER QUALITY – LONG-TERM

5.11-4 *Project development may result in long-term impacts to the quality of storm water and urban runoff, subsequently impacting water quality. Impacts would be reduced to less than significant levels with incorporation of the recommended mitigation measures along with State and County Development Code requirements.*

A Water Quality Management Plan is required for the proposed Project as stated in the guidelines in the *Draft Water Quality Management Plan (WQMP) For Urban Runoff* prepared by San Bernardino County. The WQMP conforms to the new National Pollutant Discharge Elimination System (NPDES) permit requirement for San Bernardino County (effective as of July 2004). At the time of RBF's analysis, a Water Quality Management Plan had not been available for the Project.

Project development would increase the impervious area impacting storm water quality. The Project would increase pollutant loading in Big Bear Lake located immediately off-site. The lake is presently impaired due to the following existing pollutants: copper, mercury, metals, noxious aquatic plants, nutrients, and sediment and siltation. The 303(d) list currently indicates that all of the listed pollutants are a "high" priority. A "high" priority indicates that the receiving water body would be subject to Total Maximum Daily Loads (TMDL) by the year 2005. Based on the current Draft 303(d) list, it appears that the Santa Ana Regional Water Quality Control Board is currently developing TMDLs for Big Bear Lake. Therefore, the recommended mitigation focuses on meeting potential TMDLs for Big Bear Lake.

Preparation of a Water Quality Management Plan (WQMP) containing both structural and non-structural Best Management Practices (BMPs) is required. The WQMP would be based on the San Bernardino County Draft WQMP Guidelines and NPDES permits that will be in effect as of January 2004. Compliance with the NPDES permit, WQMP standards and specified mitigation would reduce long-term water quality impacts to less than significant levels.

Overall, the Project has the potential to violate water quality standards due to an increase in the level of activity on the Project site. Without mitigation, the Project would be expected to increase pollutant loadings, including hydrocarbons, fertilizers, and pesticides. The recommended mitigation includes a comprehensive Water Quality Management Plan (WQMP) for Urban Runoff, including both Structural and Non-Structural BMPs, which would comply with the requirements made by the Santa

Ana Regional Water Quality Control Board. This mitigation would reduce potential impacts to a less than significant level.

JURISDICTIONAL WATER IMPACTS

Refer to Section 5.8, *Biological Resources*, for a discussion of potential impacts to jurisdictional waters.

CUMULATIVE

5.11-5 *The proposed Project along with other future development may result in increased hydrology and drainage impacts in the area. Due to inconclusive of potential overdraft conditions, cumulative groundwater impacts are concluded to be significant and unavoidable. Other hydrology and drainage impacts are evaluated on a project-by-project basis in order to mitigate to a less than significant level.*

Due to inconclusive project testing of potential overdraft conditions for the groundwater basin associated with the North Shore Hydrologic Subunit, cumulative impacts to the Subunit are also concluded to be significant and unavoidable.

For purposes of the drainage and water quality analysis, cumulative impacts are considered for projects in the same watershed as the proposed Moon Camp Project. Per the projects identified in Section 4.0, *Basis for Cumulative Analysis*, Tract 12217 (Marina Point), Tract 15465 (Kelsch) and Relocation of the Moonridge Zoo adjacent to the Discovery Center are all in the same watershed or adjacent watersheds as Moon Camp. All three of these cumulative projects drain into Big Bear Lake and would have to comply with the same TMDL standards and the Water Quality Management Plan for Urban Runoff as outlined in the Santa Ana Region's NPDES Permit and Water Discharge Requirements. Therefore, the cumulative impacts and mitigation for the Projects would be limited to those associated with the Moon Camp Project.

MITIGATION MEASURES

This section directly corresponds to the identified Impact Statements in the impacts subsection.

DRAINAGE AND RUNOFF

5.11-1 The proposed cross culverts shall be sized for 100-year burn and bulking flow rates. The burn and bulking method would increase the runoff from the natural areas. The method provided in the Los Angeles County Hydrology Manual is recommended. In addition, the cross culverts shall all be designed with headwalls to prevent CMP crushing, and shall be maintained adequately.

GROUNDWATER

Refer to Mitigation Measures 5.3-6a and 5.3-6b for mitigation regarding operations and groundwater quality from existing on-site wells.

~~5.11-2 Based upon the technical analysis presented, a potential groundwater overdraft condition would occur and no additional mitigation measures have been identified.~~

5.11-2a Within three months of project approval, the Project Applicant shall submit a plan for a detailed geohydrologic investigation. The plan must present the possible sources of groundwater selected for the project and the methodology proposed to investigate those sources. If the on-site wells are to be utilized to serve this project, it must be determined if either could draw water from Big Bear Lake. The plan must be prepared by a California Registered Geologist.

5.11-2b Within six months of plan approval, the Project Applicant shall submit the results of the geohydrologic investigation. The report must be prepared by a California Registered Geologist.

5.11-2c Concurrently or within three months of approval by the geohydrologic report, the Project Applicant shall submit a groundwater monitoring plan in accordance with San Bernardino County's "Guidelines for Preparation of a Groundwater Monitoring Plan." The plan must be prepared by a California Registered Geologist.

WATER QUALITY - CONSTRUCTION

5.11-3 Prior to Grading Permit issuance and as part of the Project's compliance with the NPDES requirements, a Notice of Intent (NOI) shall be prepared and submitted to the Santa Ana Regional Water Quality Control Board providing notification and intent to comply with the State of California general permit. Also, a Storm Water Pollution Prevention Plan (SWPPP) shall be completed for the construction activities on-site. A copy of the SWPPP shall be available and implemented at the construction-site at all times. The SWPPP shall outline the source control and/or treatment control BMPs to avoid or mitigate runoff pollutants at the construction-site to the "maximum extent practicable." At a minimum, the following shall be implemented from the *California Storm Water Best Management Practice Handbook - Construction Activity:*

- *CA 1 Dewatering Operations* – This operation requires the use of sediment controls to prevent or reduce the discharge of pollutants to storm water from dewatering operations.

- *CA 2 Paving Operations* – Prevent or reduce the runoff of pollutants from paving operations by proper storage of materials, protecting storm drain facilities during construction, and training employees.

- *CA 3 Structural Construction and Painting* – Keep site and area clean and orderly, use erosion control, use proper storage facilities, use safe products and train employees to prevent and reduce pollutant discharge to storm water facilities from construction and painting.

- *CA 10 Material Delivery and Storage* – Minimize the storage of hazardous materials on-site. If stored on-site, keep in designated areas, install secondary containment, conduct regular inspections and train employees.

- *CA 11 Material Use* – Prevent and reduce the discharge of pesticides, herbicides, fertilizers, detergents, plaster, petroleum products and other hazardous materials from entering the storm water.

- *CA 20 Solid Waste Management* - This BMP describes the requirements to properly design and maintain trash storage areas. The primary design feature requires the storage of trash in covered areas.

- *CA 21 Hazardous Waste Management* - This BMP describes the requirements to properly design and maintain waste areas.

- *CA 23 Concrete Waste Management* – Prevent and reduce pollutant discharge to storm water from concrete waste by performing on and off-site washouts in designated areas and training employees and consultants.

- *CA 24 Sanitary Septic Water Management* – Provide convenient, well-maintained facilities, and arrange regular service and disposal of sanitary waste.

- *CA 30 Vehicle and Equipment Cleaning* – Use off-site facilities or wash in designated areas to reduce pollutant discharge into the storm drain facilities.

- *CA 31 Vehicle and Equipment Fueling* – Use off-site facilities or designated areas with enclosures or coverings to reduce pollutant discharge into the storm drain facilities.

- *CA 32 Vehicle and Equipment Maintenance* – Use off-site facilities or designated areas with enclosing or coverings to reduce pollutant discharge into the storm drain facilities. In addition, run a “dry site” to prevent pollution discharge into storm drains.

- *CA 40 Employee and Subcontractor Training* – Have a training session for employees and subcontractors to understand the need for implementation and usage of BMPs.

- *ESC 2 Preservation of Existing Vegetation* – Minimize the removal of existing trees and shrubs since they serve as erosion control.

- *ESC 10 Seeding and Planting* – Provide soil stability by planting and seeding grasses, trees, shrubs, vines, and ground cover.

- *ESC 11 Mulching* – Stabilize cleared or freshly seeded areas with mulch.

- *ESC 20 Geotextiles and Mats* – Natural or synthetics material can be used for soil stability.

- *ESC Dust Control* – Reduce wind erosion and dust generated by construction activities by using dust control measures.

- *ESC 23 Construction Road Stabilization* – All on-site vehicle transport routes shall be stabilized immediately after grading and frequently maintained to prevent erosion and control dust.

- *ESC 24* – Stabilized Construction Entrance – Stabilize the entrance pad to the construction area to reduce amount of sediment tracked off-site.

- *ESC 30 Earth Dikes* – Construct earth dikes of compacted soil to divert runoff or channel water to a desired location.

- *ESC 31 Temporary Drains and Swales* – Use temporary drains and swales to divert off-site runoff around the construction-site and stabilized areas and to direct it into sediment basins or traps.

- *ESC 40 Outlet Protection* – Use rock or grouted rock at outlet pipes to prevent scouring of soil caused by high velocities.

- *ESC 41 Check Dams* – Use check dams to reduce velocities of concentrated flows, thereby reducing erosion and promoting sedimentation behind the dams. Check dams are small and placed across swales and drainage ditches.

- *ESC 50 Silt Fence* – Composed of filter fabric, these are entrenched, attached to support poles, and sometimes backed by wire fence support. Silt fences promote sedimentation behind the fence of sediment-laden water.

- *ESC 51 Straw Bale Barrier* – Place straw bales end to end in a level contour in a shallow trench and stake them in place. The bales detain runoff and promote sedimentation.

- *ESC 52 Sand Bag Barriers* – By stacking sand bags on a level contour, a barrier is created to detain sediment-laden water. The barrier promotes sedimentation.

- *ESC 53 Brush or Rock Filter* – Made of 0.75 to 3-inch diameter rocks placed on a level contour or composed of brush wrapped in filter cloth and staked to the toe of the slope provides a sediment trap.

- *ESC 54 Storm Drain Inlet Protection* – Devices that remove sediment from sediment laden storm water before entering the storm drain inlet or catch basin.

- *ESC 55 Sediment Trap* – A sediment trap is a small, excavated, or bermed area where runoff for small drainage areas can pass through allowing sediment to settle out.

WATER QUALITY – LONG-TERM

5.11-4a Prior to Grading Permit issuance, a Water Quality Management Plan shall be developed and shall include both Non-Structural and Source Control BMPs. The WQMP shall conform to the San Bernardino County Draft NPDES permit and WQMP standards. The following are the minimum required controls to be implemented as a part of the *Water Quality Management Plan (WQMP) for Urban Runoff.*

- *Education for Property Owners, Tenants and Occupations* – The Property Owners Association is required to provide awareness educational material, including information provided by San Bernardino County. The materials shall include a description of chemicals that should be limited to the property and proper disposal, including prohibition of hosing waste directly to gutters, catch basins, storm drains or the lake.

- *Activity Restrictions* – The developer shall prepare conditions, covenants and restriction of the protection of surface water quality.

- *Common Area Landscape Management* – For the common landscape areas on-going maintenance shall occur consistent with County Administrative Design Guidelines or city equivalent, plus fertilizer and pesticide usage consistent with the instructions contained on product labels and with regulation administered by the State Department of Pesticide Regulation or county equivalent.

- *Common Area Catch Basin Inspection* – Property Owners Associations shall have privately owned catch basins cleaned and maintained, as needed. These are intended to prevent sediment, garden waste, trash and other pollutants from entering the public streets and storm drain systems.

- *Common Area Litter Control* – POAs shall be required to implement trash management and litter control procedures to minimize pollution to drainage waters.

- *Street Sweeping Private Streets and Parking Lots* – Streets and Parking lots shall be swept as needed, to prevent sediment, garden waste, trash and other pollutants from entering public streets and storm drain systems.

The following controls from the *California Storm Water Best Management Practice Handbook - Municipal* shall be employed:

- *SC10 Housekeeping Practices* - This entails practices such as cleaning up spills, proper disposal of certain substances and wise application of chemicals.

- *SC32 Used Oil Recycling* - May apply to maintenance and security vehicles.

- *SC72 Vegetation Controls* – Vegetation control typically includes chemical (herbicide) application and mechanical methods. Chemical methods are discussed in SC10. Mechanical methods include leaving existing vegetation, cutting less frequently, hand cutting, planting low maintenance vegetation, collecting and properly disposing of clippings and cuttings, and educating employees and the public.

- *SC73 Storm Drain Flushing* - Although general storm drain gradients are sufficiently steep for self-cleansing, visual inspection may reveal a buildup of sediment and other pollutants at the inlets or outlets, in which case flushing may be advisable.

5.11-4b The Water Quality Management Plan (WQMP) shall include Structural or Treatment BMPs. The structural BMPs utilized shall focus on meeting potential TMDL requirements for noxious aquatic plants, nutrients, sedimentation and siltation. The structural BMPs shall conform to the San Bernardino County NPDES permit and the San Bernardino WQMP standards.

Consistent with the WQMP guidelines contained in the *Draft National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements* for San Bernardino County, Structural BMPs shall be required for the proposed Project. They shall be sized to comply with one of the following numeric sizing criteria or be considered by the permittees to provide equivalent or better treatment.

Volume Based BMPs shall be designed to infiltrate or treat either:

- The volume of runoff produced from the 85th percentile 24-hour storm event, as determined from the local historical rainfall record; or

- The volume of the annual runoff produced by the 85th percentile 24-hours rainfall event, determined as the maximized capture storm water volume for the area, from the formula recommended in Urban

Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87 (1998); or

- The volume of annual runoff based on unit basin storage volume, to achieve 80% or more volume treatment by the method recommended in California Stormwater Best Management Practice Handbook – Industrial/Commercial (1993); or

- The volume of runoff, as determined from the local historical rainfall record, that achieves approximately the same reduction in pollutant loads and flows as achieved by mitigation of the 85th percentile 24-hour runoff event.

OR

Flow – based BMPs shall be designed to infiltrate or treat either:

- The maximum flow rate of runoff produced from a rainfall intensity of 0.2 inch of rainfall per hour; or

- The maximum flow rate of runoff produced by the 85th percentile hourly rainfall intensity, as determined from the local historical rainfall record, multiplied by a factor of two; or

- The maximum flow rate of runoff, as determined from the local historical rainfall record that achieved by mitigation of the 85th percentile hourly rainfall intensity multiplied by a factor of two.

The following are the minimum required controls to be implemented as a part of the *Water Quality Management Plan (WQMP) for Urban Runoff.*

- *Control of Impervious Runoff* – Surface runoff shall be directed to landscaped areas or pervious areas.

- *Common Area Efficient Irrigation* – Physical implementation of the landscape plan consistent with County Administrative Design Guidelines or city equivalent, which may include provision of water sensors, programmable irrigation timers, etc.

- *Common Area Runoff-Minimizing Landscape Design* – Group plants with similar water requirements in order to reduce excess irrigation runoff and promote surface filtration.

- *Catch Basin Stenciling* – "No Dumping – Flows to Lake" or equivalent effective phrase shall be stenciled on catch basins to alert the public as to the destination of pollutant discharging into storm drain.

- *Debris Posts* – These shall be installed to prevent large floatable debris from entering the storm drains. They shall be placed upstream of the cross culverts.

- *Inlet Trash Racks* – These shall be installed where appropriate to reduce intake and transport through the storm drain system of large floatable debris. Trash racks shall be provided where drainage from open areas enters storm drain or cross culverts.

5.11-4c Storm water treatment under the NPDES Permit and the future TMDL requirements shall include the construction of treatment BMPs. Treatment BMPs appropriate for on-site use shall include infiltration trenches and basins, swales, inlet filtration, and/or water quality basins. All storm water runoff shall be treated before leaving the site to reduce pollutants in Big Bear Lake.

Infiltration Trenches and Basins

Infiltration Trenches and/or Basins shall be used on site to meet potential future TMDLs for noxious aquatic plants and nutrients. Infiltration trenches and basins treat storm water runoff through filtration. A typical infiltration trench is essentially an excavated trench, that is lined with filter fabric and backfilled with stones. Depth of the infiltration trench shall range from three to eight feet and shall be located in areas with permeable soils, and water table and bedrock depth situated well below the bottom of the trench. Trenches shall not be used to trap coarse sediments since large sediment would likely clog the trench. Grass buffers may be installed to capture sediment before it enters the trench to minimize clogging. Infiltration basins shall be used for drainage areas between five and 50 acres. Infiltration basins shall be either in-line or off-line, and may treat different volumes such as the water quality volume or the 2-year or 10-year storm.

Swales

The project shall implement either vegetative swales, enhanced vegetated swales utilizing check dams and wide depressions, a series of small detention facilities designed similarly to a dry detention basin, or a combination of these treatment methods into a treatment train (series of Structural BMPs). The Water Quality Management Plan shall address treatment for the Project to assure that runoff from the site is treated to the “maximum extent practicable”.

The swales shall be treated as water quality features and shall be maintained differently than grass areas. Specifically, pesticides, herbicide, and fertilizers, which may be used on the grass areas, shall not be used in the vegetation swales.

Filtration

Filtration shall be implemented as a treatment method and shall use drop-in infiltration devices or inline devices.

Drop-infiltration devices at all curb inlets within the internal parking lots shall be implemented to provide potential pollutant removal. Existing examples of these filtration devices include the Drain Pac Storm Drain Inserts and Fossil Filters. These types of devices are efficient at removing oil and grease, debris, and suspended solids from treated waters. Some of these devices have also exhibited high efficiencies at removing heavy metals and other pollutants.

Inline devices suggested for use onsite include the Continuous Deflection Separator (CDS® unit). Once the runoff has entered the storm drain, an in-line diversion would direct the treatment flow to a CDS® unit. The CDS® unit is a non-blocking, non-mechanical screening system, which would provide a second line of defense for solids removal. Adsorption materials can be added within the CDS® unit to aid in the removal of oil and grease. The treated flow will exit the CDS® unit and continue downstream.

To assure the efficiency of these filtration devices, monitoring shall be conducted. The use of street sweeps on the parking lots and streets shall aid in reducing the amounts of sediment and debris that flow through the devices. This will extend the effectiveness of the devices during a storm and will lower the frequency of required maintenance. The devices shall be checked and cleaned, if necessary, once a month during the rainy season, following any precipitation and at the end of the dry season prior to the first precipitation event of the rainy season.

Consideration shall be given to using these filtration units in other areas besides the parking lot inlets. Another potential location is at the downstream end of the tributary pipes that feed the discharge point. Siting these units at a downstream point would allow for the treatment of a greater amount of runoff.

CUMULATIVE

5.11-5 No mitigation measures are recommended.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

Due to inconclusive testing of potential overdraft conditions for the groundwater basin associated with the North Shore Hydrologic Subunit, project and cumulative impacts are concluded to be significant and unavoidable.

If the County of San Bernardino approves the project, the County shall be required to adopt findings in accordance with Section 15091 of the CEQA Guidelines and prepare a Statement of Overriding Considerations in accordance with Section 15093 of the CEQA Guidelines.

No additional significant impacts related to hydrology and water quality have been identified following implementation of the recommended mitigation measures and/or through regulatory compliance.

6.0 Long-Term Implications of the Proposed Project

6.0 LONG-TERM IMPLICATIONS OF THE PROPOSED PROJECT

6.1 THE RELATIONSHIP BETWEEN SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

If the proposed Project is approved and constructed, a variety of short-term and long-term impacts would occur on a local level. During Project grading and construction, portions of surrounding uses may be temporarily impacted by dust and noise. Short-term erosion may occur during grading. There may also be a minor increase in dust and vehicle emissions caused by grading and construction activities. However, these disruptions would be temporary, and may be mitigated to a large degree through mitigation cited in this report and the standards for construction as cited in the County of San Bernardino Development Code (refer to Section 5.0, *Description of Environmental Setting, Impacts and Mitigation Measures*).

Ultimate development of the Project site would create long-term environmental consequences that are associated with a transition in land use. The long-term effects of the proposed Project and subsequent development may impact the physical, aesthetic, and human environments. Long-term physical consequences of development include: increased traffic volumes, additional noise created by traffic generated from the Project, incremental increased demands for public utilities, and increased energy and natural resource consumption. Long-term biological resource consequences associated with grading, construction and landscaping would also include the replacement of on-site vegetation with other plant varieties. Long-term visual/aesthetic impacts include alterations in views across the site. Incremental degradation of local and regional air quality would also be a long-term impact.

6.2 IRREVERSIBLE ENVIRONMENTAL CHANGES THAT WOULD BE INVOLVED IN THE PROPOSED ACTION SHOULD IT BE IMPLEMENTED

Approval of the proposed Project would cause irreversible environmental changes. Implementation of the proposed Project would result in the following changes:

- Commitment of land, which would be physically altered.
- Vegetation removal for grading and construction activities.
- Alteration of the human environment as a consequence of the development process. The project represents an enhanced commitment to residential and recreational uses which intensifies land uses on the project site.

- Utilization of various new raw materials, such as lumber, sand and gravel for construction. Some of these resources are already being depleted worldwide. The energy consumed in development and maintaining the site may be considered a permanent investment.

- Incremental increases in vehicular activity in the surrounding circulation system, resulting in associated increases in air emissions and noise levels.

6.3 GROWTH-INDUCING IMPACTS

Pursuant to the California Environmental Quality Act (CEQA) Guidelines, Section 15126(g), the following discussion identifies ways in which the proposed Moon Camp Project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. According to CEQA, growth-inducing impacts should be assessed in terms of whether a proposed project influences the rate, location, and the amount of growth. Projects that remove obstacles to population growth, or allow or encourage growth that would not otherwise have occurred if the project were not built, would be growth inducing. Potential growth-inducing impacts are also assessed based on a project's consistency with adopted plans that have addressed growth management from a local and regional standpoint.

Potential growth-inducing impacts from the proposed Moon Camp Project are analyzed below as they relate to population, housing and employment factors. Also refer to Section 5.1, *Land Use and Relevant Planning*, for additional analyses.

REGIONAL AND LOCAL SETTING

San Bernardino County encompasses approximately 20,160 square miles. Approximately ninety percent of the County is desert and the remainder consists of the San Bernardino Valley and San Bernardino Mountains. The City of Big Bear Lake is situated along the south shore of Big Bear Lake. Data available for the City of Big Bear Lake is utilized as background information for this Section. The Community of Fawnskin, located along the north shore of Big Bear Lake, differs from the City of Big Bear Lake and south shore area in that Fawnskin does not encounter the vast numbers of tourists and visitors during holiday weekends and/or peak winter or summer travel times.

Population and housing data from the 2000 Census were obtained for the County of San Bernardino and the City of Big Bear Lake. The 2000 Census does not recognize Fawnskin in the category of "Place," thus, data for Fawnskin is based upon the Census database for the 92333 Zip Code. The 92333 Zip Code database generally encompasses the area between Holcomb Valley Rd. on the east, Polique Canyon Rd. on the north, North Shore Drive on the South and Rim of the World Drive on the west. Thus, it is assumed that the 92333 Zip Code database represents the Community of Fawnskin. Since the 1990 Census also does not recognize Fawnskin in the category of "Place," and does not have a database for the 92333 Zip Code, information is based on 2000 Census data only.

POPULATION

San Bernardino County. San Bernardino County is one of the fastest growing counties in California. According to the U.S. Census, the County's 2000 Census population was 1,709,434 persons, representing an approximately 17 percent population increase over the County's 1990 Census population of 1,418,380 persons. San Bernardino County's 2002 population was an estimated 1,783,656 persons.[1]

City of Big Bear Lake. The City of Big Bear Lake's 1990 population was 5,351 persons. Between 1990 and 2000 the City grew by less than one percent with a 2000 population of 5,438 persons. The City's 2002 population was an estimated 5,696 persons.[2]

Community of Fawnskin. According to the U.S. Census, the Community of Fawnskin's permanent population in 2000 was 409 persons. In addition to the permanent population, the community experiences seasonal fluctuations in its population. The seasonal population is comprised of both winter and non-winter visitation and activities, although these temporary changes in population peak during winter. Thus, due to the resort nature of the Community, many of the residences listed as "vacant" in the 2000 Census are occupied during seasonal periods, weekends, and/or Holidays. Assuming that all of the 664 existing housing units are occupied simultaneously, it can be concluded that as many as 1428 persons (664 housing units x 2.15 persons per household) could potentially populate the Fawnskin Community during peak weekend/holiday periods.

HOUSING

San Bernardino County. According to the 2000 Census, San Bernardino County's housing stock was an estimated 601,369 units. The County's housing stock increased by approximately 10 percent between 1990 (542,332 units) and 2000. In 2000, approximately 12 percent (72,775 units) of the housing units were vacant. The average household size (persons per household) in 2000 was 3.15 persons. In 2002, the County's total housing stock was an estimated 612,890 units and vacancy rate was approximately 12 percent.[3]

City of Big Bear Lake. The City of Big Bear Lake's housing stock as of 2000 was an estimated 8,705 housing units, representing an increase of approximately two percent over the City's 1990 housing stock of 8,564 housing units. In 2000, approximately 73 percent (6,362 units) of the housing units were vacant. The average household size in 2000 was 2.31 persons. In 2002, the City's total housing stock was an estimated 8,941 units and vacancy rate was approximately 73

[1] State of California, Department of Finance, *City/County Population and Housing Estimates, 2002, Revised 2001, with 2000 Census Counts*. Sacramento, California, May 2002.

[2] Ibid.

[3] Ibid.

percent.[4] This vacancy rate is attributed to the fact that many of the homes are not the permanent/primary residence for the property owners.

Community of Fawnskin. In 2000, Fawnskin's total housing stock was an estimated 664 housing units. Approximately 71 percent (474 units) of the housing units were vacant. As with the City of Big Bear Lake, the Community's high vacancy rate is attributed to the fact that the majority of the homes are not the permanent/primary residence for the property owners. The average household size in 2000 was 2.15 persons.

EMPLOYMENT

The County's civilian labor force in 2001 was an estimated 814,600 persons, while the unemployment rate was approximately 4.8 percent. The total number of jobs existing in the County in 2001 for all industries was 560,400. The vast majority of these jobs were in the service-producing sector (approximately 80 percent) including approximately 25 percent in the services sector and approximately 25 percent in the trade sector.

Employment data is not available for the City of Big Bear Lake or the Community of Fawnskin.

PROJECT IMPACTS

Implementation of the proposed Project would result in the development of as many as 92 housing units. Based on the City of Big Bear Lake average household size multiplier of 2.31 persons per household, the proposed Project has the potential to increase Fawnskin's population by approximately 212 persons at buildout. The Project's potential population growth would represent an approximately 52 percent increase over the Community's permanent population estimate of 409 persons (2000) and an approximately 15 percent increase over the Community's peak weekend/holiday period population of 1,428 persons. Project implementation would be considered growth inducing inasmuch as the proposed development would result in the construction of additional housing, consequentially fostering population growth.

Potential growth-inducing impacts are also assessed based on a project's consistency with adopted plans that have addressed growth management from a local and regional standpoint. The following discussion addresses the Project's consistency with the General Plan.

As noted in Section 5.1, *Land Use and Relevant Planning*, the Project site is currently designated Rural Living (RL)-40. Based on the 40-acre minimum lot size for the RL District, the dwelling unit potential of the Project site is approximately two dwelling units (62.43/40=1.56). Based upon the City of Big Bear Lake's estimate of 2.31 persons per household and a dwelling unit potential of two units, Fawnskin's population could increase by approximately three persons under the existing RL-40 District. Thus, the proposed Project would result in a greater population increase (212 additional persons) than what would be anticipated under the existing RL-40

[4] Ibid.

District. Project implementation would be considered growth inducing inasmuch as the proposed development would result in a greater population increase than what was anticipated with the existing RL-40 District.

As discussed in Section 5.3, *Public Utilities*, Project implementation would require the expansion of existing water and wastewater facilities to meet increased demands associated with Project-related population growth. This extension is not considered growth inducing inasmuch as the extension was anticipated in the General Plan. As discussed in Section 5.1, *Land Use and Relevant Planning*, the Project site is designated Improvement Level 1 (IL-1). IL-1 is applied to those areas planned for the densest and highest intensity level of development. The Project would be required to provide each of the improvements specified in Figure II-15 of the San Bernardino County General Plan, *Improvement Standards – Mountain*. The Project would be subject to implementation of the IL-1 standards according to more detailed County guidelines. With implementation of the required improvements, the Project would provide the appropriate and applicable infrastructure facilities and services essential to the proposed residential uses. Additionally, the Project would represent a reasonable extension of the existing pattern of infrastructure facilities and services in the surrounding area. As outlined in Table 5.1-1, *Summary of Land Uses*, existing IL-1 areas are located north, south, east and west of the Project site. The extension of facilities and services consistent with IL-1 standards was anticipated for the Project site and the Project would not be growth inducing in this regard.

The *Growth Management* section of the General Plan focuses on ways to monitor and manage future growth of the County in order to preserve valuable resources and maintain a high quality of life for all residents. In order to anticipate the cost of providing services to future development, the General Plan divides the County into three broad development areas (urban, rurban, and rural) based on the factors outlined below. These development area designations then define the types of uses that are allowed, enabling the County to anticipate the types of services they will need to provide.

- Existing and anticipated level of development and level of build-out at planned densities.
- Current lot pattern/sizes.
- Proximity to water and sewer District service boundaries and capability for providing future service to designated areas.
- Availability of public services and the carrying capacity of existing infrastructure facilities.
- Proposed expansion/extension of existing, and development of new facilities.
- Hazards.
- Carrying capacity of existing natural resources.
- The extent and potential for damage to significant environmental resources.

- Spheres of influence/city boundaries.

Urban Areas (UA) are areas that are committed or planned for higher density/ intensity uses. A full range of public facilities and services (including water, sewer, roads, flood control/drainage, police and fire services, etc.) shall be focused on these areas. Urban areas include:

- Areas surrounded by incorporated cities.
- Areas adjacent to incorporated cities, generally divided into parcels 5,000 square feet up to one (1) acre, and served by a water purveyor.
- Areas within the sphere of influence of incorporated cities.

Urban areas should be suitable for urban land uses. The following Land Use Districts can be located within urban areas[5]:

- Single Residential RS
- Multiple Residential RM
- Office Commercial CO
- Neighborhood Commercial CN
- General Commercial CG
- Service Commercial CS
- Community Industrial IC
- Regional Industrial IR

Rurban Areas (RB) are designed to accommodate residential development opportunities for those who desire ex-urban, low density, or country living environment and are willing to assume the costs of providing many of their own services and amenities. The low intensities accommodated in this district generally permit onsite septic systems and wells, thereby reducing public expenditures. These areas are not expected to be converted to higher intensities in the future; they are expected to be built as currently designated. Rurban areas are areas that meet one or more of the following criteria:

- Areas adjacent to incorporated cities, generally divided into parcels of 1.0 acre up to 5.0 acres.
- Areas in remote locations with limited access already subdivided into parcels that are less than 5.0 acres.
- Areas where onsite disposal systems may be permitted.

The following Land Use Districts can be located in Rurban Areas:

- Rural Living RL
- Single Residential RS (1 acre min. parcel size)
- Neighborhood Commercial CN

[5] The Planned Development (PD), Institutional (IN) and Floodway (FW) Districts can be located in any of the three areas.

- Service Commercial CS
- Community Industrial IC
- Highway Commercial CH

Rural Areas (RA) are comprised of agricultural and unimproved lands and low-intensity residential development. These areas are not required for urban development at the present time and, according to current population projections, will not be required (for urban development) in the next twenty years. There is generally a long-term commitment to maintain a rural lifestyle in these areas. Although certain basic public services and facilities are available to these areas, few, if any, urban services are either available, planned or encouraged. Rural areas are defined as lands which are generally suitable for lower density/ intensity land uses because they meet one or more of the following criteria:

- Used for agriculture, general open space or as a watershed for a public water supply.

- Isolated subdivided areas and commercial centers which are not adjacent to incorporated cities.

- Divided into parcels of 5.0 acres or larger, next to an urban incorporated area.

- Subdivided areas that use onsite wastewater management systems that are adjacent to, but not surrounded by incorporated areas.

The following Land Use Districts can be located in Rural Areas:

- Resource Conservation RC
- Agriculture AG
- Rural Living RL
- Neighborhood Commercial CN
- Service Commercial CS
- Rural Commercial CR
- Highway Commercial CH

The Project site is located within a designated Urban Area. As previously noted, the Project proposes a Land Use District Change to RS which is a permitted land use District in an UA. Thus, growth commensurate with the proposed Project was anticipated for the Project site and the Project would not be considered growth inducing in this regard.

Overall, the proposed development would not require the substantial development of unplanned/unforeseen support uses and services as is evidenced by the site's and the surrounding area's existing IL-1 and UA designations. As a result, the proposed project would not result in significant growth-inducing impacts.

7.0 Alternatives to the Proposed Project

7.0 ALTERNATIVES TO THE PROPOSED PROJECT

In accordance with California Environmental Quality Act (CEQA) Guidelines Section 15126.6, the following Section describes a range of reasonable alternatives to the proposed Project which could feasibly attain the basic project objectives and would avoid or substantially lessen any of the significant effects. The evaluation also reviews the comparative merits of each alternative. The analysis focuses on alternatives capable of eliminating significant adverse environmental effects or reducing significance, even if these alternatives would impede, to some degree, the attainment of the project objectives. Potential environmental impacts associated with four separate alternatives are compared to impacts from the proposed Project below. These alternatives include the "No Project/No Development" Alternative, "No Project/Existing Designation" Alternative, "Reduced Density, Without Road Realignment and Without Marina" Alternative and "Reduced Density, With Project Redesign" Alternative. The "No Project" Alternative scenario is a requirement in an EIR pursuant to Section 15126.6(e) of CEQA. Refer to Table 7-1, *Comparison of Alternatives*, which is an impact matrix comparing the Alternatives to the proposed Project. The Environmentally Superior Alternative is identified and discussed in Section 7.5.

7.1 "NO PROJECT/NO DEVELOPMENT" ALTERNATIVE

DESCRIPTION OF ALTERNATIVE

Implementation of the "No Project/No Development" Alternative would retain the site in its current condition. None of the improvements proposed as part of the project and/or the existing designation would occur. The following discussion evaluates the potential environmental impacts associated with the No Project/No Development Alternative as compared to impacts from the proposed Project.

IMPACT COMPARISON TO THE PROPOSED PROJECT

Land Use and Relevant Planning

According to the County of San Bernardino General Plan Map, the project site is designated as Rural Living (RL-40), with the exception of the State Route 38 right-of-way. Under the No Project/No Development Alternative no development would occur onsite. The existing General Plan designation (RL-40) would remain and an amendment to the Official Land Use District would not occur. With no development occurring within the project site, it would remain in its existing undeveloped condition. It is further noted that it is not the intent of the County to preclude development from occurring within the project site.

Recreation

Since no new residents would be generated by this Alternative, no new demands would be placed on Big Bear Lake or local and regional park facilities in the area.

This Alternative would retain existing on-site paths/trails. However, public access on the site and to the lakefront would not be assured since the Project site is private property. Additionally, this Alternative would not involve the construction of any recreational facilities (i.e., marina facilities). The No Project/No Development Alternative would be considered environmentally superior to the proposed Project.

Table 7-1
Comparison of Alternative Environmental Impacts with Proposed Project

Issue	No Project/No Development	No Project/ Existing Designation	Reduced Density, Without Road Realignment and Without Marina	Reduced Density, With Project Redesign
Land Use and Relevant Planning	□	□	□	=
Recreation	□	□	=	=
Fire and Police Protection	□	=	=	=
Schools	□	□	□	□
Libraries	□	□	=	=
Water and Sewer	□	=	=	=
Solid Waste	□	□	=	=
Utilities	□	□	□	□
Aesthetics/Light and Glare	□	□	□	□
Traffic and Circulation	□	□	□	□
Air Quality	□	□	□	□
Noise	□	□	□	□
Biological Resources	□	□	□	□
Cultural Resources	□	□	□	□
Geology and Soils	□	□	□	=
Hydrology and Drainage	□	□	=	=

= Impact is equivalent to impact of proposed Project (neither environmentally superior nor inferior).
□ Impact is less than impact of proposed Project (environmentally superior).
■ Impact is greater than impact of proposed Project (environmentally inferior).

Public Services and Utilities

Fire and Police Protection. The No Project/No Development Alternative would not involve new residences; thus, no new demand for fire and police protection services over existing conditions would be required. The No Project/No Development Alternative would be considered environmentally superior to the proposed Project.

Schools. The No Project/No Development Alternative would not generate additional school children and would not place demands on the school district serving the sites. Thus, this Alternative would not strain current educational resources. Compared to the proposed Project, the No Project/No Development Alternative would be considered environmentally superior.

Libraries. The No Project/No Development Alternative would not generate additional residents and would not place demands on libraries serving the project site. Thus, this Alternative would not impact current resources. Since the proposed Project would create minimal demands on library resources, the No Project/No Development Alternative would be considered environmentally superior to the proposed Project.

Water and Sewer. The No Project/No Development Alternative would not involve development within the project area. Consequently, the need to extend water and sewer lines to the project site would not occur under this Alternative. Compared to the proposed Project, the No Project/No Development Alternative would be considered environmentally superior.

Solid Waste. The No Project/No Development Alternative would not produce new generators of solid waste, and would not impact existing County landfills. The No Project/No Development Alternative would be considered environmentally superior to the proposed Project.

Utilities. The No Project/No Development Alternative would not increase the demand for utility services beyond existing levels. The No Project/No Development Alternative would be considered environmentally superior to the proposed Project.

Aesthetics/Light and Glare

The visual character of the site, which consists of undeveloped forested land would remain unchanged, and no site grading would occur. Existing views of Big Bear Lake and the distant mountain ranges to the south would not be obstructed from the project site, which includes views from State Route 38. In addition, lighting impacts would be eliminated, as no new light sources would be introduced onto the project site. Compared to the proposed Project, the No Project/No Development Alternative would be considered environmentally superior.

Traffic and Circulation

The No Project/No Development Alternative would not result in the realignment of State Route 38 and would not create new interior roads within the project area. This Alternative would not increase project-related traffic above current levels. However, the realignment of State Route 38 would be considered as a circulation improvement since the roadway would be straightened to reduce safety hazards. Due to the reduction in traffic generation, the No Project/No Development Alternative would be considered environmentally superior to the proposed Project.

Air Quality

No new long-term sources of air pollution would result from increased traffic, watercraft uses, wood burning fireplaces and the increased use of energy sources. The No Project/No Development Alternative would be considered environmentally superior to the proposed Project.

Noise

The noise increases created by project-related traffic and watercraft on Big Bear Lake would not occur under this Alternative. The No Project/No Development Alternative would be considered environmentally superior to the proposed Project.

Biological Resources

The impacts to plants and wildlife would not occur under this Alternative. The No Project/No Development Alternative would be considered environmentally superior to the proposed Project.

Cultural Resources

The impacts to cultural resources would not occur under this Alternative. The No Project/No Development Alternative would be considered environmentally superior to the proposed Project.

Geology and Soils

The No Project/No Development Alternative would not involve development within the project area. Consequently, no new structures would be subject to seismic hazards, such as ground shaking or seismically induced settling. Compared to the proposed Project, the No Project/No Development Alternative would be considered environmentally superior.

Hydrology and Drainage

The No Project/No Development Alternative would not involve development within the project area. Thus, no groundwater source would be extracted and no new sources of stormwater runoff would be created. Compared to the proposed Project, the No Project/No Development Alternative would be considered environmentally superior.

ABILITY TO MEET PROJECT OBJECTIVES

The No Project/No Development Alternative would not result in any of the environmental impacts associated with the proposed construction and development of the proposed Project. This Alternative would avoid potential impacts resulting from alterations of the project sites' physical characteristics and construction of new structures and uses. Maintaining the Project site in its existing condition would not alter the visual characteristic of the Project site. The No Project/No Development Alternative would eliminate recreation, aesthetic, public services and utilities, traffic

and circulation, air quality, noise, biological resources, cultural resources, geology, soils, hydrology and groundwater impacts associated with the proposed Project. However, this Alternative is not consistent with the Project objectives, which are to provide up to 92 single-family residential lots, to be developed as custom lots in the future. The Project also seeks realignment of North Shore Drive to improve the design of the roadway, which would also allow for lakefront lots to be developed.

7.2 "NO PROJECT/EXISTING DESIGNATION" ALTERNATIVE

DESCRIPTION OF ALTERNATIVE

Implementation of the "No Project/Existing Designation" Alternative would be in accordance with the existing Official Land Use District Rural Living-40 (40-acre minimum lot size). This Alternative would result in 1.5 residential lots on the project site. This Alternative would be less intensive than the proposed Project. Approximately three persons (1.5 housing units x 2.15 persons/household) would be added to the permanent population of the Community of Fawnskin. It is further noted that in addition to a single-residential structure, other uses can be allowed including those in the "Additional Uses" section of the County Development Code, subject to a Conditional Use Permit. The following discussion evaluates the potential environmental impacts associated with the No Project/Existing Designation Alternative as compared to impacts from the proposed Project.

IMPACT COMPARISON TO THE PROPOSED PROJECT

Land Use and Relevant Planning

According to the County of San Bernardino General Plan Map, the project site is designated as Rural Living (RL-40), with the exception of the State Route 38 right-of-way. Under the No Project/Existing Designation Alternative, dwelling units consistent with the Rural Living (RL-40) land use designation would be developed. The existing General Plan designation (RL-40) would remain and an amendment to the Official Land Use District would not be processed. The No Project/Existing Designation Alternative would be considered environmentally superior to the proposed Project.

Recreation

Approximately three new residents would be generated by this Alternative. This nominal increase in population would not create new demands on Big Bear Lake or local and regional park facilities in the area. Unlike the proposed Project, this Alternative would not involve the construction of any recreational facilities (i.e., marina facilities). This Alternative would retain existing on-site paths/trails. However, public access on the Project site and to the lakefront would not be assured since the Project site is private property. The No Project/Existing Designation Alternative would be considered environmentally superior to the proposed Project.

Public Services and Utilities

Fire and Police Protection. The No Project/Existing Designation Alternative would result in development of 1.5 residential lots on the project site; thus, a nominal increase in the demand for fire and police protection services would occur over existing conditions. Similar to the proposed Project, this Alternative would not result in the need for expansion or construction of police or fire protection facilities. The No Project/Existing Designation Alternative would be considered neither environmentally superior or inferior to the proposed Project.

Schools. The No Project/Existing Designation Alternative would generate approximately one school child (.20 students x 1.5 dwelling units), which is approximately 17 fewer school children than the proposed Project. Since existing school enrollments exceed the capacity at all three schools that would serve the project site, increases in students would further strain resources. Since the No Project/Existing Designation Alternative would generate less impact on existing educational resources, it would be considered environmentally superior to the proposed Project.

Libraries. The No Project/Existing Designation Alternative would generate approximately three additional residents; however, as with the proposed Project, the addition of three new residents would not significantly impact libraries serving the project site. The No Project/Existing Designation Alternative would be considered environmentally superior to the proposed Project.

Water and Sewer. Given that the No Project/Existing Designation Alternative would result in development of 1.5 residential lots on the project site, the need to extend water and sewer lines to the project site would be less of an impact than with the proposed Project. Since water supplies and existing reservoir facilities in the Big Bear Valley are limited, this Alternative would produce less impact to the resource. This Alternative would result in similar water service impacts due to the inability of providers to confirm service. Thus, compared to the proposed Project, the No Project/Existing Designation Alternative would not be considered to be environmentally superior or inferior to the proposed project.

Solid Waste. The No Project/Existing Designation Alternative would produce less solid waste when compared to the proposed Project. However, this Alternative, as with the proposed Project, would not result in significant impacts to existing landfills. The No Project/Existing Designation Alternative would be considered environmentally superior to the proposed Project.

Utilities. The No Project/Existing Designation Alternative would result in a nominal increase in demand for utility services (i.e., gas, electric) beyond existing levels and at levels less than those of the proposed Project. The need for modification and addition of utilities into the project site would be less than for the proposed Project. The No Project/Existing Designation Alternative would be considered environmentally superior to the proposed Project.

Aesthetics/Light and Glare

The visual character of the site, which consists of undeveloped forest land, would be slightly modified under the No Project/Existing Designation Alternative. Given that this Alternative proposes only 1.5 residential lots and no realignment of State Route 38, fewer impacts are anticipated with respect to landform alteration, aesthetics and light and glare. The development of 1.5 lots designated for residential uses would not involve the extensive removal of Jeffrey pine trees. Although trees may be removed onsite, the property would retain its forested nature. The No Project/Existing Alternative would maintain the views of Big Bear Lake and distant mountain ranges to the south from State Route 38 and surrounding land uses. Big Bear Lake would remain in its current aesthetic condition, as no recreational facilities on the Lake would occur with this Alternative. Thus, compared to the proposed Project, the No Project/No Development Alternative would be considered environmentally superior.

Traffic and Circulation

The No Project/Existing Designation Alternative would not result in the realignment of State Route 38, would not create new interior roads within the project area and would nominally increase project-related traffic above current levels. Similar to the proposed Project, this Alternative would contribute to the existing intersection deficiency at Stanfield Cutoff and Big Bear Boulevard. However, this Alternative would result in fewer new trips on the local road system when compared to the proposed Project. The No Project/Existing Designation Alternative would be considered environmentally superior to the proposed Project.

Air Quality

Fewer vehicular trips would be generated under this Alternative than for the proposed Project, which would also produce less mobile and energy source emissions. With fewer homes, less particulate emissions would be generated. This Alternative would result in fewer local and regional air pollutant emissions. Additionally, construction-related emissions from the realignment of State Route 38 would not occur with this Alternative. Thus, the No Project/Existing Designation Alternative would be considered environmentally superior to the proposed Project.

Noise

Given that approximately 90 less residential lots would occur under this Alternative, long-term noise levels associated with vehicular traffic would be less than the noise levels under the proposed Project. Additionally, this Alternative does not include new marina facilities, which in turn, would not produce new noise sources from watercraft utilizing Big Bear Lake. Additionally, construction-related noise from the realignment of State Route 38 would not occur with this Alternative. The No Project/Existing Designation Alternative would be considered environmentally superior to the proposed Project.

Biological Resources

The No Project/Existing Designation Alternative would impact existing on-site biological resources with the development of 1.5 residential lots, as compared to 92 residential lots of the proposed Project. While this Alternative could result in removal of trees for the development of 1.5 residential lots, the proposed Project would remove approximately 655 trees, or 24 percent of the existing 2,772 trees for roadway construction. The proposed Project could also involve additional tree removal during individual lot development and construction of custom homes. This Alternative would not involve a marina facility which would result in no impacts to Big Bear Lake in this regard. The No Project/Existing Designation Alternative would be considered environmentally superior to the proposed Project.

Cultural Resources

Development under either the proposed Project or the No Project/Existing Designation Alternative has the potential to impact on-site cultural resources. Although the proposed Project would alter a greater quantity of land than the No Project/Existing Designation Alternative, both would require monitoring by qualified archeological and/or paleontological experts. Thus, the No Project/No Development Alternative would be considered neither environmentally superior or inferior to the proposed Project.

Geology and Soils

Under this Alternative, less residents and structures would be exposed to seismic hazards than the proposed Project. The proposed Project would involve grading for the realignment of State Route 38 and for structures to the north and south (lakefront) of State Route 38. Grading required for this Alternative would occur for development of 1.5 residential lots. The amount of grading associated with this Alternative would result in less potential impacts resulting from slope stability than the proposed Project. Compared to the proposed Project, the No Project/Existing Designation Alternative would be considered environmentally superior.

Hydrology and Drainage

The No Project/Existing Designation Alternative would involve less development in the project area than the proposed Project. The amount of impermeable surface area (i.e., roads, driveways, etc) would be less with this Alternative than the proposed Project. Additionally, this Alternative would involve fewer residences and vehicles on-site, thus reducing sources of stormwater pollution runoff. The groundwater overdraft condition noted for the proposed project may still occur with this Alternative, but at a significantly reduced rate. Compared to the proposed Project, the No Project/Existing Designation Alternative would be considered environmentally superior.

ABILITY TO MEET PROJECT OBJECTIVES

The No Project/No Development Alternative would decrease the intensity of the environmental impacts associated with the proposed construction and development

of the proposed Project. This Alternative would decrease potential impacts resulting from alterations of the Project sites' physical characteristics and construction of new structures and uses. By not realigning State Route 38 and not removing the amount of trees associated with the proposed Project, the project site would maintain the majority of its existing condition and the visual character of the Project site would not be significantly altered. The No Project/Existing Designation Alternative would reduce impacts to recreation, public services and utilities, aesthetics, traffic and circulation, air quality, noise, biological resources, geology/soils, hydrology/drainage and groundwater associated with the proposed Project. However, while meeting the objectives established in the County General Plan, this Alternative does not meet the objectives established for the proposed Project, which are to provide up to 92 single-family residential lots, to be developed as custom lots in the future. The Project also seeks realignment of North Shore Drive in order to improve the design of the roadway, which would also allow for lakefront lots to be developed.

7.3 "REDUCED DENSITY, WITHOUT ROAD REALIGNMENT AND WITHOUT MARINA" ALTERNATIVE

DESCRIPTION OF ALTERNATIVE

For the Reduced Density, Without Road Realignment and Without Marina Alternative, development of 62 residential lots and associated infrastructure (as depicted in the project description) would occur on the north side of the existing State Route 38 alignment. State Route 38 would not be realigned and no residential development would occur to the south of State Route 38. The land area south of State Route 38, along the lakefront, would be retained in its current state. Approximately 133 persons (62 housing units x 2.15 persons/household) would be added to the permanent population of the Community of Fawnskin.

IMPACT COMPARISON TO THE PROPOSED PROJECT

Land Use and Relevant Planning

As with the proposed Project, this Alternative would require an amendment to the Official Land Use District designation of the project site, per the County of San Bernardino General Plan. Currently, the project site is designated as Rural Living (RL-40). Under the Reduced Density, Without Road Realignment and Without Marina Alternative, as well as the proposed Project, development onsite would not be consistent with the Rural Living (RL-40) land use designation. Development would include 62 residential lots and associated infrastructure under the Single Residential (RS-7200) land use designation. This Alternative would not include realignment of State Route 38, thus no amendment to the Circulation Element of the General Plan would occur. Similar to the proposed Project, development standards under this Alternative would be required to be consistent with the provisions of the Geologic Hazard, Fire Safety, Biotic Resources and Scenic Resources Overlay District provisions/requirements in the San Bernardino Development Code. Per the provisions of the Geologic Hazard, Fire Safety, and Biotic Resources Overlay

Districts, either the proposed Project or this Alternative would result in less than significant impacts, with compliance of the development standards outlined in the Development Code and mitigation measures referenced in the applicable technical reports (i.e., geology/soils and biological reports). This Alternative would not result in obstructed views of Big Bear Lake and distant mountain ranges from the lakefront and/or State Route 38. Hence, this Alternative would be consistent with development standards set forth in the Scenic Resources Overlay District. The Reduced Density, Without Road Realignment and Without Marina Alternative would be considered environmentally superior to the proposed Project.

Recreation

This Alternative would not include residential development along the lakefront. The lakefront would remain in its existing condition. Public access on the site and to the lakefront would not be assured since the Project site is private property. This Alternative and the proposed Project would result in the loss of trails within the forested areas to the north from the project site. Neither this Alternative, nor the proposed Project would increase the use of existing parks or recreational facilities such that substantial physical deterioration would occur. The Reduced Density, Without Road Realignment and Without Marina Alternative would be considered neither environmentally superior nor inferior to the proposed Project.

Public Services and Utilities

Fire and Police Protection. The Reduced Density, Without Road Realignment and Without Marina Alternative would result in development of 62 residential lots, as compared to 92 residential lots with the proposed Project. Development under this Alternative or the proposed Project would increase the demand for fire and police protection services over existing conditions. Similar to the proposed Project, this Alternative would not result in the need for expansion or construction of police or fire protection facilities. The Reduced Density, Without Road Realignment and Without Marina Alternative would be considered neither environmentally superior nor inferior to the proposed Project.

Schools. The Reduced Density, Without Road Realignment and Without Marina Alternative would generate approximately 12 school children (.20 x 62 dwelling units), which is six fewer school children than the proposed Project. Since existing school enrollments currently exceed the capacity at all three schools that would serve the project site, increases in students would further impact resources. Since the Reduced Density, Without Road Realignment and Without Marina Alternative would generate less impact on existing educational resources, it would be considered environmentally superior to the proposed Project.

Libraries. The Reduced Density, Without Road Realignment and Without Marina Alternative would generate approximately 133 residents; however, as with the proposed Project, the addition of these new residents would not significantly impact libraries serving the project site. The Reduced Density, Without Road Realignment and Without Marina Alternative would be considered neither environmentally superior or inferior to the proposed Project.

Water and Sewer. Given that the Reduced Density, Without Road Realignment and Without Marina Alternative would result in development of 62 residential lots on the project site, the need to increase water supply and treatment and/or storage facilities would be less of an impact than with the proposed Project. Since water supplies and existing reservoir facilities in the Big Bear Valley are limited, this Alternative, when compared to the proposed Project, would result in a reduced impact on currently strained resources. This Alternative would result in similar water service impacts due to the inability of providers to confirm service. On this basis, when compared to the proposed Project, the Reduced Density, Without Road Realignment and Without Marina Alternative would not be considered to be environmentally superior or inferior to the proposed Project.

Solid Waste. The Reduced Density, Without Road Realignment and Without Marina Alternative would produce less solid waste when compared to the proposed Project. However, this Alternative, as with the proposed Project, would not create impacts to existing landfills. The Reduced Density, Without Road Realignment and Without Marina Alternative would be considered neither environmentally superior or inferior to the proposed Project.

Utilities. The Reduced Density, Without Road Realignment and Without Marina Alternative would increase the demand for utility services (i.e., gas, electric) beyond existing levels but, at levels less than those of the proposed Project. The need for modification and addition of utilities would be less than for the proposed Project. The Reduced Density, Without Road Realignment and Without Marina Alternative would be considered environmentally superior to the proposed Project.

Aesthetics/Light and Glare

As with the proposed Project, the visual character of the site, which consists of undeveloped forest land, would be modified under the Reduced Density, Without Road Realignment and Without Marina Alternative. Given that this Alternative involves development to the north of State Route 38 and no realignment of State Route 38, fewer Aesthetic impacts are anticipated with respect to landform alteration, aesthetics and light and glare. Since this Alternative does not involve residential lot development south of State Route 38, views of Big Bear Lake and the distant mountain ranges from State Route 38 would be retained. Although existing views of the Lake and mountains to the south, from Flicker Road, may still be obstructed with this Alternative, surrounding uses to the east and west would retain views of the Lake and mountains. Furthermore, residential lot development associated with the proposed Project would limit public access to the lakefront and change the visual character of the site from a forested, undeveloped nature to a developed residential area. Compared to the proposed Project, the Reduced Density, Without Road Realignment and Without Marina Alternative would be considered environmentally superior.

Traffic and Circulation

When compared to the proposed Project, the Reduced Density, Without Road Realignment and Without Marina Alternative would not result in the realignment of State Route 38 and would generate less traffic on surrounding roadways. This Alternative would result in fewer new trips on the local road system when compared

to the proposed Project. However, both the proposed Project and this Alternative would contribute to the existing intersection deficiency at Stanfield Cutoff and Big Bear Boulevard. The proposed Project and this Alternative would be required to pay "fair-share" fees to mitigate respective contributions to the existing intersection deficiency. The Reduced Density, Without Road Realignment and Without Marina Alternative would be considered environmentally superior to the proposed Project.

Air Quality

Fewer vehicular trips would be generated under this Alternative than for the proposed Project, which would also produce less mobile and energy source emissions. With fewer homes, less particulate emissions would be generated. This Alternative would result in fewer local and regional air pollutant emissions. Additionally, construction-related emissions from the realignment of State Route 38 would not occur with this Alternative. Thus, the Reduced Density, Without Road Realignment and Without Marina Alternative would be considered environmentally superior to the proposed Project.

Noise

Given that approximately 30 less residential lots would occur under this Alternative, long-term noise levels associated with vehicular traffic would be less than the noise levels under the proposed Project. Additionally, construction-related noise from the realignment of State Route 38 would not occur with this Alternative. The Reduced Density, Without Road Realignment and Without Marina Alternative would be considered environmentally superior to the proposed Project.

Biological Resources

The conversion of undeveloped forest land and impacts to biological resources north of State Route 38 would be similar to the proposed project. This Alternative would not modify existing habitat to the south of Highway 38. Thus, no physical impacts to biological resources to the south of Highway 38 would occur. Compared to the proposed Project, the Reduced Density, Without Road Realignment and Without Marina Alternative would be considered environmentally superior.

Cultural Resources

Development under either the proposed Project or the Reduced Density, Without Road Realignment and Without Marina Alternative has the potential to impact on-site cultural resources. Although the proposed Project would alter a greater quantity of land than the Reduced Density, Without Road Realignment and Without Marina Alternative, both would require monitoring by qualified archeological and/or paleontological experts. Thus, the No Project/No Development Alternative would be considered neither environmentally superior or inferior to the proposed Project.

Geology and Soils

Under this Alternative, less residents and structures would be exposed to seismic hazards than the proposed Project. Unlike this Alternative, the proposed Project

would involve grading for the realignment of State Route 38 and for structures to the north and south (lakefront) of State Route 38. Grading required for this Alternative would occur for development of approximately 62 residential lots north of State Route 38. The amount of grading associated with this Alternative would create similar potential impacts from slope stability as the proposed Project, since both descriptions would develop homes on the steepest portions (northern half) of the site. Compared to the proposed Project, the Reduced Density, Without Road Realignment and Without Marina Alternative would be considered environmentally superior.

Hydrology and Drainage

The Reduced Density, Without Road Realignment and Without Marina Alternative would involve less development within the project area than the proposed Project. The amount of impermeable surface area (i.e., roads, driveways, etc) would be less with this Alternative than the proposed Project. Additionally, this Alternative would involve fewer residences and vehicles on-site, thus reducing pollution sources of stormwater runoff. The overdraft condition noted for the proposed Project may still occur and based on 62 units of development would result in consistent groundwater affects. Compared to the proposed Project, the Reduced Density, Without Road Realignment and Without Marina Alternative would be neither environmentally superior nor inferior.

ABILITY TO MEET PROJECT OBJECTIVES

The Reduced Density, Without Road Realignment and Without Marina Alternative would decrease the intensity of the environmental impacts associated with the proposed construction and development of the proposed Project. This Alternative would decrease potential impacts resulting from alterations of the Project sites' physical characteristics and construction of new structures and uses. By not realigning State Route 38 and not removing the number of trees associated with the proposed Project, the site would maintain the existing forested nature and visual character south of State Route 38. Views of the Lake and mountain ranges would be retained from State Route 38 and from uses to the east and west of the project site. The Reduced Density, Without Road Realignment and Without Marina Alternative would reduce impacts to public services and utilities, aesthetics, traffic and circulation, air quality, noise, biological resources, geology and soils and hydrology and drainage when compared to the proposed Project. Groundwater affects would be consistent with conclusions rendered for the proposed Project. This Alternative does not meet the entire objectives established for the proposed Project which is to provide up to 92 single-family residential lots to be developed as custom lots in the future. The proposed Project also seeks to provide a marina facility and realign of North Shore Drive in order to improve the design of the roadway, which would also allow for lakefront lots to be developed.

7.4 "REDUCED DENSITY, WITH PROJECT REDESIGN" ALTERNATIVE

DESCRIPTION OF ALTERNATIVE

For the Reduced Density, With Project Redesign Alternative, development of 66 residential lots and associated infrastructure would occur on project site. Implementation of this Alternative would include the realignment of State Route 38. Twenty-one (21) and 45 lots would be developed on the south and north sides of the realigned State Route 38, respectively. This Alternative would include a marina facility, with 72 boat slips. Approximately 142 persons (66 housing units x 2.15 persons/household) would be added to the permanent population of the Community of Fawnskin.

IMPACT COMPARISON TO THE PROPOSED PROJECT

Land Use and Relevant Planning

As with the proposed Project, this Alternative would require an amendment to the Official Land Use District designation of the project site, per the County of San Bernardino General Plan. Currently, the project site is designated as Rural Living (RL-40). Under the Reduced Density, With Project Redesign Alternative, as well as the proposed Project, development onsite would not be consistent with the Rural Living (RL-40) land use designation. Development would include 66 residential lots and associated infrastructure under the Single Residential (RS-7200) land use designation. This Alternative would include realignment of State Route 38, thus an amendment to the Circulation Element of the General Plan would be required. Similar to the proposed Project, development standards under this Alternative would be required to be consistent with the provisions of the Geologic Hazard, Fire Safety, Biotic Resources and Scenic Resources Overlay Districts in the San Bernardino Development Code. Per the provisions of the Geologic Hazard, Fire Safety, and Biotic Resources Overlay Districts, either Alternative would result in similar less than significant impacts with compliance of the development standards outlined in the Development Code and identified mitigation measures in the appropriate technical reports (i.e., geology/soils and biological reports). Similar to the proposed Project, this Alternative would result in obstructed views of Big Bear Lake and the distant mountain ranges from the portion of the lakefront and/or State Route 38 that traverses the project site. Thus, this Alternative would not be consistent with the developments standards set forth in the Scenic Resources Overlay District. The Reduced Density, With Project Redesign Alternative would be considered neither environmentally superior nor inferior to the proposed Project.

Recreation

Similar to the proposed Project, this Alternative would include residential development along the lakefront. The shoreline/lakefront would be developed with residential uses (21 dwelling units) and would include marina facilities (Lot "C") which would be located south of North Shore Drive. Public access to the lakeshore would be maintained at the eastern and western boundaries of the site. However, public

access on the site and to the lakefront would not be assured since the Project site is a private property. This Alternative and the proposed Project would include the loss of trails and access to the forested areas to the north from the project site. This Alternative would include a 72-boat slip marina facility. The increase in boats on the Lake would not impact the boating capacity of the Lake. Neither this Alternative, nor the proposed Project would increase the use of existing parks or recreational facilities such that substantial physical deterioration would occur. The Reduced Density, With Project Redesign Alternative would be considered neither environmentally superior nor inferior to the proposed Project.

Public Services and Utilities

Fire and Police Protection. The Reduced Density, With Project Redesign Alternative would result in development of 66 residential lots, as compared to 92 residential lots within the proposed Project. Development under this Alternative or the proposed Project would result in a nominal increase in the demand for fire and police protection services over existing conditions. Similar to the proposed Project, this Alternative, would not result in the need for expansion or construction of police or fire protection facilities. The Reduced Density, With Project Redesign Alternative would be considered neither environmentally superior nor inferior to the proposed Project.

Schools. The Reduced Density, with Project Redesign Alternative would generate approximately 13 school children (.20 x 66 dwelling units), which is five fewer school children than the proposed Project. Since existing school enrollments currently exceed the capacity at all three schools that would serve the project site, increases in students would further impact resources. Since the Reduced Density, With Project Redesign Alternative would generate less strain on existing educational resources, it would be considered environmentally superior to the proposed Project.

Libraries. The Reduced Density, With Project Redesign Alternative would generate approximately 142 residents; however, as with the proposed Project, the addition of these new residents would not significantly impact libraries serving the project site. The Reduced Density, With Project Redesign Alternative would be considered neither environmentally superior nor inferior to the proposed Project.

Water and Sewer. Given that the Reduced Density, With Project Redesign Alternative would allow development of 66 residential lots on the project site, the need to increase water supply and treatment and/or storage facilities would be less of an impact than with the proposed Project. Since water supplies and existing reservoir facilities in the Big Bear Valley are limited, this Alternative, when compared to the proposed Project, would produce less impact on currently strained resources. This Alternative would result in similar water service impacts due to the inability of providers to confirm service. On this basis, when compared to the proposed Project, the Reduced Density, With Project Redesign Alternative would not be considered to be environmentally superior or inferior to the proposed Project.

Solid Waste. The Reduced Density, With Project Redesign Alternative would produce less solid waste when compared to the proposed Project. However, this Alternative, as with the proposed Project, would not create impacts to existing

landfills. The Reduced Density, With Project Redesign Alternative would be considered neither environmentally superior nor inferior to the proposed Project.

Utilities. The Reduced Density, With Project Redesign Alternative would increase the demand for utility services (i.e., gas, electric) beyond existing levels but, at levels less than those of the proposed Project. Given the density of this Alternative, the need for modification and addition of utilities would be less than for the proposed Project. The Reduced Density, With Project Redesign Alternative would be considered environmentally superior to the proposed Project.

Aesthetics/Light and Glare

As with the proposed Project, the visual character of the site, which consists of undeveloped forest land, would be modified under the Reduced Density, With Project Redesign Alternative. Given that this Alternative proposes development to the north and south of State Route 38 and the realignment of State Route 38, similar impacts are anticipated with respect to landform alteration, aesthetics and light and glare. Since this Alternative would involve decreased residential densities to the south of State Route 38, views of Big Bear Lake and the distant mountain ranges from State Route 38 would not be as obstructed when compared to the proposed Project. Residential lot development associated with this Alternative, as well as the proposed Project, would limit public access to the lakefront and change the visual character of the site from a forested, undeveloped nature to a developed residential area. As with the proposed project, this Alternative would alter the visual character of the Lake with implementation of the marina facilities. Thus, similar to the proposed Project, the Reduced Density, With Project Redesign Alternative would change the visual character of the project area and adversely impact views of the lake and the distant mountain ranges. However, since residential lot densities along the lakefront would be reduced in comparison to the proposed Project, providing increased viewing opportunities of the lake and distant mountain ranges, this Alterative is considered environmentally superior to the proposed Project.

Traffic and Circulation

As compared to the proposed Project, the Reduced Density, With Project Redesign Alternative would also result in the realignment of State Route 38, but would generate less project-related traffic above current levels. This Alternative would result in fewer new trips on the local road system when compared to the proposed Project. However, both the proposed Project and this Alternative would contribute to the existing intersection deficiency at Stanfield Cutoff and Big Bear Boulevard. The proposed Project and this Alternative would likely pay “fair-share” fees to mitigate their respective contribution to the existing intersection deficiency. The Reduced Density, With Project Redesign Alternative would be considered environmentally superior to the proposed Project.

Air Quality

Fewer vehicular trips would be generated under this Alternative than for the proposed Project, which would produce less mobile and energy source emissions. Additionally, with fewer homes, less particulate emissions would be generated.

This Alternative would result in fewer local and regional air pollutant emissions. Thus, the Reduced Density, With Project Redesign Alternative would be considered environmentally superior to the proposed Project.

Noise

Given that 26 less residential lots would occur under this Alternative, long-term noise levels associated with vehicular traffic would be less than the noise levels under the proposed Project. Additionally, this Alternative would include a 72 boat slip marina facility, compared to a 100-boat slip marina with the proposed Project, which in turn, would produce less new noise sources from watercraft utilizing Big Bear Lake. Thus, compared to the proposed Project, the Reduced Density, With Project Redesign Alternative would be considered environmentally superior.

Biological Resources

The Reduced Density, With Project Redesign Alternative would impact existing on-site biological resources similar to the proposed Project. Both the proposed Project and this Alternative could involve additional tree removal during individual lot development and construction of custom homes. Additionally, both the proposed Project and this Alternative would remove approximately 655 trees, or 24 percent of the existing 2,772 trees for realignment of Route 38. Since residential lot densities would be reduced in comparison to the proposed Project, it is anticipated that residential homesite design can account for tree locations and substantially reduce the number to be removed for lot development and thus, reduce impacts to biological resources such as the bald eagle. Thus, the Reduced Density, With Project Redesign Alterative is considered environmentally superior to the proposed Project.

Cultural Resources

Development under either the proposed Project or the Reduced Density, With Project Redesign Alternative has the potential to impact on-site cultural resources. Although the proposed Project would alter a greater quantity of land than the Reduced Density, with modified Project Design Alternative, both would require monitoring by qualified archeological and/or paleontological experts. Thus, the Reduced Density, With Project Redesign Alternative would be considered neither environmentally superior nor inferior to the proposed Project.

Geology and Soils

Under this Alternative, less residents and structures would be exposed to seismic hazards than the proposed Project. Both this Alternative and the proposed Project would involve grading for the realignment of State Route 38 and for structures to the north and south (lakefront) of State Route 38. Grading required for this Alternative would occur for development of approximately 66 residential lots to the north and south of State Route 38. The amount of grading associated with this Alternative would create similar potential impacts from slope stability as the proposed Project, since both would develop homes on the steepest portions (northern half) of the site. Compared to the proposed Project, the Reduced Density, With Project Redesign Alternative would be considered neither environmentally superior nor inferior.

Hydrology and Drainage

The Reduced Density, With Project Redesign Alternative would involve less development in the project area than the proposed Project. The amount of impermeable surface area (i.e., residences, driveways, etc) would be less with this Alternative than the proposed Project. Additionally, this Alternative would involve fewer residences and vehicles on-site, thus reducing pollution sources of stormwater runoff. The overdraft condition noted for the proposed Project may still occur and based on 66 units of development would result in consistent groundwater affects. Compared to the proposed Project, the Reduced Density, With Project Redesign Alternative would be neither environmentally superior nor inferior.

ABILITY TO MEET PROJECT OBJECTIVES

The Reduced Density, With Project Redesign Alternative would decrease the intensity of the environmental impacts associated with the proposed construction and development of the proposed Project. This Alternative would decrease potential impacts resulting from alterations of the Project sites' physical characteristics and construction of new structures and uses. Since this Alternative would involve decreased residential densities to the south of State Route 38, views of Big Bear Lake and the distant mountain ranges from State Route 38 would be less obstructed when compared to the proposed Project. The Reduced Density, With Project Redesign Alternative would result in reduced impacts to public services and utilities, aesthetics, traffic and circulation, air quality, noise, biological resources and hydrology and drainage associated with the proposed Project. Groundwater affects would be consistent with conclusions rendered for the proposed Project. This Alternative does not meet the entire objectives established for the proposed Project which is to provide up to 92 single-family residential lots to be developed, as custom lots, in the future.

7.5 "ENVIRONMENTALLY SUPERIOR" ALTERNATIVE

The proposed Project would generate impacts related to public services and utilities, aesthetics, traffic and circulation, air quality, noise, biological resources, cultural resources, geology and soils and hydrology and drainage. All impacts, with the exception of those identified for public services/utilities (ability to be served water), aesthetics, air quality, biological resources and hydrology (groundwater) can be mitigated to less than significant levels. The identified aesthetic, air quality, biological resources and hydrology (groundwater) impacts remain significant and unavoidable, even with the imposition of mitigation measures.

The "No Project/No Development" and the "No Project/Existing Designation" Alternatives would both eliminate and/or reduce all environmental impacts from those anticipated for the proposed Project. However, these alternatives are not being considered for the reason that they do not meet the objectives established for the proposed Project.

The "Reduced Density, With Project Redesign" and the "Reduced Density, Without Road Alignment and Without Marina" Alternatives both would result in fewer impacts to public services and utilities, aesthetics/light and glare, traffic and circulation, air

quality, noise, biological resources, and hydrology and drainage. While the "Reduced Density, With Project Redesign" Alternative most closely meets the objectives of the proposed Project, it would also result in significant and unavoidable aesthetic impacts. However, the "Reduced Density, Without Road Alignment and Without Marina" Alternative would reduce the majority of all impacts to less than significant levels, including aesthetic impacts.

In addition, as cited in Section 15126.6(e)(2) of the CEQA Guidelines: *"If the environmentally superior alternative is the "No Project" Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives."* Thus, the "Reduced Density, Without Road Alignment and Without Marina" Alternative is concluded as the environmentally superior alternative.

8.0 Inventory of Mitigation Measures

8.0 INVENTORY OF MITIGATION MEASURES

LAND USE AND RELEVANT PLANNING

SAN BERNARDINO COUNTY GENERAL PLAN

5.1-1 No mitigation measures are recommended.

SAN BERNARDINO COUNTY DEVELOPMENT CODE

5.1-2 No mitigation measures are recommended.

CUMULATIVE

5.1-3 No mitigation measures are recommended.

RECREATION

EXPANSION AND/OR CONSTRUCTION OF RECREATIONAL FACILITIES

5.2-1 No mitigation measures are recommended.

PUBLIC ACCESS

5.2-2 ~~No mitigation measures are recommended.~~ The proposed project shall be conditioned to incorporate a pedal path easement along the south side of North Shore Drive, prior to map recordation.

CUMULATIVE

5.2-3 No mitigation measures are recommended.

PUBLIC SERVICES AND UTILITIES

FIRE PROTECTION

5.3-1a The fire flow requirement shall be 1750 gpm @ 2 hours based on homes in the range of 3,600 to 4,800 square feet, and 2,000 gpm @ 2 hours for homes greater than 4,800 square feet.

5.3-1b ~~Fire sprinklers for each residence shall be provided in lieu of additional manpower.~~ All residences less than 5,000 square feet shall be subject to the standard fire sprinkler requirement (NFPA 13D). Homes above 5,000 square feet shall be subject to the NFPA13R~~have a larger~~ sprinkler requirement ~~(FPA13R)~~.

5.3-1c A ~~f~~Fuels ~~modification program~~Management Plan, with specifications, shall be prepared and subject to approval by the County of San Bernardino

Fire Department and San Bernardino National Forest Service. The Fuels Management Plan shall implement the fire safety requirements of the FS1 Fire Safety Overlay District, including a 30-foot minimum setback requirement from the National Forest. The fuel modification zone shall be located entirely within the project's boundaries. ~~The 100 foot fuel modification requirement shall not terminate at a property line. The 100 foot fuel modification requirement shall extend beyond property lines. Where such fuel modification zone extends onto U.S. Forest Service land, an easement or permit shall be required to be obtained.~~ The minimum~~100 foot~~ fuel modification zone requirements may be greater in steeper areas (up to 300 ft.), as determined by the Fire ~~Agency~~ Department.

5.3-1d Cul-de-sac lengths shall be no longer than 350 feet.

5.3-1e A Homeowner's Association or a Special District shall be established to ~~assure~~ implement the Fuels Management Plan. The Fuels Management Plan shall specify any professional assistance, if necessary, to implement the action portion of the plan. The Plan shall determine if a Registered Professional Forrester is necessary for professional guidance to implement the Plan. ~~Long-term vegetation maintenance. An annual vegetation maintenance program shall be included.~~ The HOA or Special District is to be responsible for fuel modification in common areas.

~~5.3-1f Fire resistance/drought tolerant landscaping shall be required and referenced in the Homeowner's Association or Special District Standards.~~

POLICE PROTECTION

5.3-2 No mitigation measures are recommended.

SCHOOLS

5.3-3 No mitigation measures are recommended.

LIBRARIES

5.3-4 No mitigation measures are recommended.

WASTEWATER

5.3-5a Prior to issuance of building permits, the Project Applicant shall fund all on-site and off-site sewer improvements required to support development of the Project site. Such improvements shall be to the satisfaction of the BBARWA, and may include replacement of existing sewer lines rather than construction of parallel lines.

5.3-5b Prior to issuance of building permits, the Project Applicant shall provide evidence to the County of San Bernardino that the BBARWA has

sufficient transmission and treatment plant capacity to accept sewage flows from the Project site.

5.3-5c The Project Applicant shall relocate the BBARWA 10" force main by installing new pipe (and/or bonding for the relocation) so that it is aligned within the south shoulder of the relocated State Route 38. The 10" force main shall be accessible for BBARWA to maintain and repair the sewer force main. The force main shall not pass through residential lots within the proposed tract.

5.3-5d The Project Applicant shall install air release valves and vaults at high elevation points on the new force main to minimize odors. Air release valves shall be large enough to enclose 55-gallon drum carbon filters to control odors.

WATER

5.3-6a ~~Prior to approval of building permits, a video inspection of water supply casings and screen shall be conducted in order to update~~ Values of production rates and pumping levels for on-site water supply wells shall be obtained through step-drawdown and constant rate pumping tests. Water samples shall be taken during the inspection for testing and analysis in accordance with standard requirements.

5.3-6b If either or both of the two existing on-site wells are utilized as a water source for the project, ~~T~~the Project Applicant shall equip the~~two existing on-site~~ wells to meet DWP and/or County Special Districts Department standards and dedicate these facilities and water rights to the appropriate water purveyor~~County of San Bernardino~~. Within the proposed tract, no individual private irrigation wells shall be permitted.

5.3-6c ~~If served by CSA 53-C through a contract with the City of Big Bear Lake Department of Water and Power, t~~ After a determination has been made regarding the water purveyor, the Project Applicant shall advance fair-share funds ~~or enter into a reimbursement agreement with the~~ to the appropriate water agency (CSA and/or DWP) ~~(if required)~~ towards constructing a new reservoir and pipeline improvement at Cline-Miller Reservoir (with an estimated project cost at $481,100). These facilities would be dedicated to the appropriate water agency.

5.3-6d The following water conservation measures are the minimum measures that shall be complied with in conjunction with domestic water supply to the project. A Homeowners Association shall be responsible for enforcing the water conservation measures. Additional measures may be imposed as a result of a contract for water supply between CSA 53-C and the City of Big Bear Lake DWP:

- Landscape shall not be irrigated between the hours of nine (9) a.m. and six (6) p.m.

- Residences, buildings and premises shall be limited to watering every other day.

- Landscape irrigation shall be limited to what is needed and shall not be excessive. Water from landscape irrigation shall not be allowed to run off into streets.

- Water shall not be allowed to leak from any waterline, faucet, or any other facility, either within or outside a private residence, business establishment or on private property. All such leaking waterlines, faucets, and other facilities shall be repaired immediately to prevent leakage.

- Sidewalks, paved driveways, and parkways shall not be washed off with hoses, except as required for sanitary purposes.

- Non-commercial washing of cars, and boats or any other vehicle shall only be done with an automatic shut-off nozzle on a hose, or with a bucket.

- New landscaping shall not exceed more than one-thousand square feet of turf on a parcel or lot or twenty-five percent of the available landscape area.

- A model landscaping and irrigation guide shall be prepared for the tract and required by homeowner association rules. The guide shall specify a plant palate that emphasizes native plants and cultivars that are suitable for the mountain climate. Plant materials shall be low water consuming and fire resistant. Irrigation shall emphasize drip and bubbler type emitters with limit aerial spray irrigation methods. The guide shall be reviewed and approved by the Land Use Services Department.

SOLID WASTE

5.3-7 No mitigation measures are recommended.

NATURAL GAS

5.3-8 No mitigation measures are recommended.

ELECTRICITY

5.3-9 No mitigation measures are recommended.

CUMULATIVE

5.3-10 No mitigation measures are recommended.

AESTHETICS/LIGHT AND GLARE

SHORT-TERM AESTHETIC/LIGHT AND GLARE IMPACTS

5.4-1a Construction equipment staging areas shall be located away from existing residential uses. Appropriate screening (i.e., temporary fencing with opaque material) shall be used to buffer views of construction equipment and material, when feasible. Staging locations shall be indicated on project Grading Plans.

5.4-1b All construction-related lighting associated with the construction of new roadways, the realignment of State Route 38, and the installation of utilities shall be located and aimed away from adjacent residential areas. Lighting shall use the minimum wattage necessary to provide safety at the construction site. A construction safety lighting plan shall be submitted to the county for review concomitant with Grading Permit applications for the subdivision of the lots.

LONG-TERM AESTHETIC IMPACTS

5.4-2a Roof pitches shall not exceed 9/12 and no higher than two-story for any portion of the structure footprint for lots 62-92.

5.4-2b All homes shall provide a two-car garage with automatic garage doors.

5.4-2c A view envelope for each property shall be established by creating a line starting at 6 feet at each side lot line and moving up at a 30 degree angle until both lines meet at the middle of the property. The area located under these lines is the view envelope. Structures shall not protrude outside the view envelope. The view envelope orients the building ridgeline parallel to the view corridors on narrower lots providing views for residents located behind the property.

5.4-2d New development shall be subordinate to the natural setting and minimize reflective surfaces. Building materials including siding and roof materials shall be selected to blend in hue and brightness with the surroundings. Colors shall be earth tones, shades of grays, tans, browns, greens, pale yellows, and shall be consistent with the mountain character of the area.

5.4-2e Outside parking/storage areas associated with the boat dock activities shall be completely screened from view by the placement of landscaping and plantings which are compatible with the local environment and, where practicable, are capable of surviving with a minimum of maintenance and supplemental water.

5.4-2f Construction plans for each individual lot shall include the identification and placement of vegetation with the mature height of trees listed. Landscaping and plantings should not obstruct significant views, within or outside of the project, either when installed or when they reach mature

growth. The removal of existing vegetation shall not be required to create views.

5.4-2g A Note shall be placed on the Composite Development Plan stating that during construction plans review and prior to issuance of building permits for each lot, the building inspector shall refer to the Mitigation Monitoring and Compliance Program regarding these aesthetic impact mitigation measures. The building inspector shall coordinate with the Advance Planning Division the review and approval of building plans in relation to these aesthetic impact mitigation measures, prior to approval and issuance of building permits.

LONG-TERM SCENIC HIGHWAY IMPACTS

5.4-3a Any entry sign for the development shall be a monument style sign compatible with the mountain character, preferably, rock or rock-appearance.

5.4-3b Prior to recordation of the tract map (and/or any ground disturbance, whichever occurs first), landscaping plans for lettered lots B and C shall be submitted to and approved by the San Bernardino County Planning Department.

LONG-TERM LIGHT AND GLARE IMPACTS

5.4-4a All exterior lighting shall be designed and located as to avoid intrusive effects on adjacent residential properties and undeveloped areas adjacent to the project site. Low-intensity street lighting and low-intensity exterior lighting shall be used throughout the development to the extent feasible. Lighting fixtures shall use shielding, if necessary to prevent spill lighting on adjacent off-site uses.

5.4-4b Lighting used for various components of the development plan shall be reviewed for light intensity levels, fixture height, fixture location and design by an independent engineer, and reviewed and approved by the County Building and Safety Division.

5.4-4c The project shall use minimally reflective glass. All other materials used on exterior buildings and structures shall be selected with attention to minimizing reflective glare.

5.4-4d Vegetated buffers shall be used along State Route 38 to reduce light intrusion on residential development and on forested areas located adjacent to the project site.

5.4-4e Mitigation Measures 5.4-4a through 5.4-4d shall be included within the Conditions, Covenants and Restrictions (CC&Rs) of the Home Owner's Association (HOA).

5.4-4f All outdoor light fixtures shall be cutoff luminaries and shall only use high- or low-pressure sodium lamps.

5.4-4g The Project Applicant/Developer shall install light colored, reflective roof products. Such roofs shall utilize light colored, reflective materials that meet the performance standards developed by the Energy Star Labeled Roof Program, as well as the American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) Standards 90.1 and 90.2 on energy efficient buildings. This condition shall be verified by the County of San Bernardino Building and Safety Division prior to issuance of building permits.

CUMULATIVE

5.4-5 No mitigation measures are recommended.

TRAFFIC AND CIRCULATION

EXISTING CONDITIONS WITH PROJECT TRAFFIC ANALYSIS

5.5-1 For existing traffic conditions, the intersection of Stanfield Cutoff and Big Bear Boulevard currently requires the eastbound right turn lane to be converted to an eastbound through lane, through the intersection. The eastbound right turn lane is restricted to an eastbound through lane, and involves roadway widening. The project's pro rata share of these off-site road improvements is estimated to be $17,748.

YEAR 2006 TRAFFIC ANALYSIS

5.5-2 Refer to Mitigation Measure 5.5-1. No additional mitigation measures are recommended.

YEAR 2025 TRAFFIC ANALYSIS

5.5-3 For future traffic conditions, the intersection of Stanfield Cutoff and North Shore Drive shall require a traffic signal. The project's pro rata share of the signal is $56,523.

SAFETY HAZARDS AND EMERGENCY ACCESS

5.5-4a Parking shall be restricted on State Route 38.

5.5-4b A 150-foot eastbound left turn pocket shall be striped for traffic on North Shore Drive turning left into the project entry locations.

5.5-4c For future traffic conditions, intersection geometrics as recommended in Table 1b of the Kunzman Associates June 2003 *Traffic Analysis* report, shall be implemented.

5.5-4d All streets internal to the project shall be constructed to full ultimate cross-sections. ~~as adjacent development occurs.~~

5.5-4e A STOP sign shall be installed to control outbound traffic on all site access roadways onto North Shore Drive.

5.5-4f The County of San Bernardino shall periodically review traffic operations in the vicinity of the site once the project is constructed in order to assure that the traffic operations are satisfactory.

5.5-4g Landscape plantings and signs shall be limited to 36 inches in height within 25 feet of project driveways to assure good visibility.

AIR QUALITY

SHORT-TERM AIR QUALITY IMPACTS

5.6-1 In accordance with the County Development Code and SCAQMD Rules, the Project Applicant shall incorporate the following measures during the construction phase of the Project to the satisfaction of the SCAQMD and County of San Bernardino. Compliance with this measure is subject to periodic field inspections by the SCAQMD and County of San Bernardino.

Grading:

Apply non-toxic soil stabilizers according to manufacturer's specifications to all inactive construction areas (previously graded for ten days or more);

- Replace ground cover in disturbed areas as quickly as possible;
- Enclose, cover, water two times daily or apply non-toxic soil binders in accordance to manufacturer's specifications to exposed piles (i.e., gravel, sand, dirt) with 5% or greater silt content;
- Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 mph; and
- All trucks hauling dirt, sand, soil, or other loose materials shall be covered and shall maintain at least two feet of freeboard (i.e., minimum vertical distance between top of the load and the top of the trailer).

Paved Roads:

- Sweep streets at the end of the day if visible soil material is carried onto adjacent public paved roads.

LONG-TERM OPERATIONAL IMPACTS

5.6-2 To the extent feasible, the project shall incorporate the installation of EPA-certified wood burning stoves or fireplaces. If this is not feasible, then the installation of a ceramic coating on the honeycomb inside a catalytic combustor shall be investigated as a feasible alternative. Alternatively, the use of natural gas fireplaces may be used as a feasible alternative.

CONSISTENCY WITH AIR QUALITY MANAGEMENT PLAN

5.6-3 No mitigation measures are recommended.

CUMULATIVE

5.6-4 No mitigation measures are recommended.

NOISE

SHORT-TERM CONSTRUCTION NOISE AND VIBRATION IMPACTS

5.7-1a Construction activities shall be limited to the hours of 7:00 a.m. ~~and~~ to 7:00 p.m. Monday to Saturday and prohibited on Sundays and Federal Holidays.

5.7-1b All construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers, to the satisfaction of the County Engineer.

5.7-1c Stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receptors, to the satisfaction of the County Engineer.

5.7-1d Stockpiling and staging areas shall be located as far as practical from noise sensitive receptors during construction activities, to the satisfaction of the County Engineer.

LONG-TERM NOISE IMPACTS

5.7-2 No mitigation measures are recommended.

STATIONARY NOISE

5.7-3 No mitigation measures are recommended.

WATERCRAFT

5.7-4 No mitigation measures are recommended.

CUMULATIVE

5.7-5 No mitigation measures are recommended.

BIOLOGICAL RESOURCES

SPECIAL STATUS BIOLOGICAL RESOURCES

SPECIAL STATUS PLANTS

5.8-1a ~~Prior to vegetation clearing, grading, or other disturbance, the project site shall be surveyed during a year with precipitation at least 40 percent of average for the area to determine presence or absence of special status plant species and vegetation types. Surveys shall focus on listed special status vegetation types, and Threatened or Endangered, and CNPS List 1B and 2 species whose presence could not be determined during surveys due to lack of rainfall. The location and extent of special status species populations shall be mapped and the size of the populations accurately documented.~~

~~The project applicant shall pay compensation for the loss of special status botanical resources identified on the project site by the survey by funding the purchase and management of off-site habitat through contributions to a fund established by the California Wildlife Foundation on behalf of the CDFG. The California Wildlife Foundation is an independent 501(c)3 nonprofit corporation founded to assist the CDFG and other governmental agencies in the management of funds and mitigation banks designed to offset the impact of development on California's native flora and fauna. Off-site habitat containing the same species as those identified within resources impacted by the proposed project shall be purchased at a ratio agreed upon by the County of San Bernardino, San Bernardino National Forest, USFWS, and CDFG. The typical mitigation ratio is 3:1 (i.e., three acres of habitat purchased for preservation for each acre impacted by development).~~

~~If additional surveys during a year with precipitation at least 40 percent of average do not encounter additional special status plant resources, the project applicant is responsible for the mitigation of a minimum of 11.8-acres of pebble plain and open Jeffrey pine forest in the western half of the project site that is known to be occupied by the federally-listed Threatened ash-gray Indian paintbrush (i.e., would be required to fund the purchase of 35.4-acres of offsite habitat from the California Wildlife Foundation if the agreed mitigation ratio is 3:1).~~

Prior to vegetation clearing, grading, or other disturbance, the project site shall be surveyed during a year with precipitation at least 40 percent of average for the area to determine presence or absence of special status plant species and vegetation types. Surveys shall focus on special status vegetation types, and Threatened or Endangered, and CNPS List 1B and 2 species whose presence could not be determined during surveys due to lack of rainfall. The location and extent of special status species populations shall be mapped and the size of the populations accurately documented. Pebble plain habitat acreages will be recalculated following

the survey using criteria established by the Habitat Management Guide for Pebble Plain Habitat on the National Forest System (2002).

Should avoidance/retention on-site of the 4.91 acres of Pebble Plain habitat in permanent open space under a Conservation Easement Agreement not occur, the Project Applicant shall pay compensation for the loss of special status botanical resources identified on the project site during the survey by funding the purchase, establishment of a conservation easement, and management of off-site habitat within the conservation easement by an entity approved by the CDFG. Off-site habitat containing the same species as those identified within resources impacted by the proposed project shall be purchased at a ratio of 3:1 (i.e., three acres of habitat purchased for preservation for each acre impacted by development). Prior to the initiation of clearing or grading activities on the project site, the conservation easement will be established, the management entity will be approved by the CDFG, and a non-wasting endowment will be established for the monitoring and management of the preservation site by the management entity in perpetuity.

If additional surveys during a year with precipitation at least 40 percent of average do not encounter additional special status plant resources, the Project Applicant is responsible for mitigating impacts to a minimum of 11.8-acres of pebble plain and open Jeffrey pine forest in the western half of the project site that is known to be occupied by the Federally-listed Threatened ash-gray Indian paintbrush. As such, the applicant would be required to fund the purchase and maintenance of 35.4-acres of offsite pebble plain and open Jeffrey pine forest habitat that contains special status plant species, including Ash-gray Indian paintbrush and others known to occur on the site.

SPECIAL STATUS WILDLIFE

5.8-1b Trees identified on Exhibits 3 and 4 of the Bald Eagle Survey Report (Appendix E, see attached) as eagle perch locations shall be preserved in place upon project completion and shall not be removed under any circumstances. Any development that may occur within the project site and in the individual lots must avoid impacts to these trees and their root structures. All construction or landscaping improvements, including irrigation, will be prohibited on or around the exposed root structures or within the dripline of these trees. These restrictions on development of the individual tentative tracts must be clearly presented and explained to any potential prospective developers and/or homeowners prior to assumption of title and close of escrow. This measure shall be identified as a Note on the Composite Development Plan.

5.8-1c Prior to vegetation clearing, grading, or other disturbance, the project site shall be surveyed to identify all large trees (i.e., greater than 20-inches in diameter at 4.5 feet from the ground) within 600 feet from the high water line. Trees identified on the project site as having a diameter in excess of 20-inches at four feet from the ground within 600 feet of the shoreline

shall be documented and tagged. Any development that may occur within the project site and in the individual lots must avoid impacts to tagged trees and their root structures. All construction or landscaping improvements, including irrigation, will be prohibited on or around the exposed root structures or within the dripline of these trees. These restrictions on development of the individual tentative tracts must be clearly presented and explained to any potential prospective developers and/or homeowners prior to assumption of title and close of escrow. This measure shall be identified as a Note on the Composite Development Plan.

5.8-1d Seven days prior to the onset of construction activities, a qualified biologist shall survey within the limits of project disturbance for the presence of any active raptor nests. Any nest found during survey efforts shall be mapped on the construction plans. If no active nests are found, no further mitigation would be required. Results of the surveys shall be provided to the CDFG.

If nesting activity is present at any raptor nest site, the active site shall be protected until nesting activity has ended to ensure compliance with Section 3503.5 of the California Fish and Game Code. Nesting activity for raptors in the region of the project site normally occurs from February 1 to June 30. To protect any nest site, the following restrictions on construction are required between February 1 and June 30 (or until nests are no longer active as determined by a qualified biologist): (1) clearing limits shall be established a minimum of 300 feet in any direction from any occupied nest and (2) access and surveying shall not be allowed within 200 feet of any occupied nest. Any encroachment into the 300/200 foot buffer area around the known nest shall only be allowed if it is determined by a qualified biologist that the proposed activity shall not disturb the nest occupants. Construction during the nesting season can occur only at the sites if a qualified biologist has determined that fledglings have left the nest.

5.8-1e Vegetation removal, clearing, and grading on the project site shall be performed outside of the breeding and nesting season (between March and September) to minimize the effects of these activities on breeding activities of migratory birds and other species.

5.8-1f The use of the boat dock for motorized boating shall be prohibited between the dates of December 1 and April 1. No motorized boats shall be allowed to launch or moor in the vicinity of the boat dock at any time during this period. This restriction shall be clearly displayed on signage at the entrance to the parking lot and on the boat dock visible from both land and water. This requirement shall also be published in the Homeowner's Association CC&Rs.

~~**SPECIAL STATUS VEGETATION TYPES**~~

~~5.8-1g Exterior construction shall be prohibited between the dates of December 1 and April 1 (of each year). Significant impacts to pebble plain habitat can be mitigated to a less than significant level through off-site preservation. The project applicant shall pay compensation for the loss of special status botanical resources identified on the site, by the survey, by contributing to the funding of purchase and management of off-site habitat. The Applicant shall acquire habitat in the Big Bear Valley and dedicate to the CDFG or suitable conservation organization. The California Wildlife Foundation is an independent 501(c)3 nonprofit corporation founded to assist the CDFG and other governmental agencies in the management of funds and mitigation banks designed to offset the impact of development on California's native flora and fauna. Off-site habitat shall be purchased at a ratio agreed upon by the County of San Bernardino, San Bernardino National Forest, USFWS, and CDFG. The typical mitigation ratio is 3:1 (i.e., three acres of habitat purchased for preservation for each acre impacted by development. An area containing no less than 2.1 acres of pebble plain habitat in an area located adjacent to other open space areas within the project vicinity shall be preserved in perpetuity. The preserved areas shall be protected from future development through a conservation easement or other appropriate mechanism.~~

SENSITIVE NATURAL COMMUNITIES/HABITATS

WILDLIFE IMPACTS/INDIRECT IMPACTS

5.8-2a Street lamps on the project site shall not exceed 20 feet in height, shall be fully shielded to focus light onto the street surface and shall avoid any lighting spillover onto adjacent open space or properties. Furthermore, street lights shall utilize low color temperature lighting (e.g., red or orange).

5.8-2b Outdoor lighting for proposed homes on the individual tentative tracts shall not exceed 1,000 lumens. Furthermore, residential outdoor lighting shall not exceed 20 feet in height and must be shielded and focused downward to avoid lighting spillover onto adjacent open space or properties. These restrictions on outdoor lighting of the individual tentative tracts must be clearly presented and explained to any potential prospective developers and/or homeowners prior to assumption of title and close of escrow. This requirement shall also be published in the Homeowner's Association CC&Rs.

5.8-2c To limit the amount of human disturbance ~~to~~ on adjacent natural open space areas, signs shall be posted along the northeastern and eastern perimeter of the project site where the property boundary abuts open space~~ directing people to keep out of the adjacent natural open space areas and to keep dogs leashed in areas adjacent to natural open space areas. This requirement shall be published in the Homeowner~~

~~Association CC&Rs~~ with the following statement: "Sensitive plant and wildlife habitat. Please use designated trails and keep pets on a leash at all times."

In addition, a requirement stating that residents shall keep out of adjacent open space areas to the north with the exception of designated trails will be published in the Homeowner Association CC&Rs and a map of designated hiking trails will be provided to all residents.

5.8-2d Prior to ~~the issuance of individual building permits, landscaping designs~~ recordation of the final map, a landscaping plan for the entire tract shall be prepared (inclusive of a plant palette) with native trees and plant species, and, shall be submitted to the County of San Bernardino for review and approval by a qualified biologist. The review shall determine that no non-native or invasive plant species are to be used in the proposed landscaping. The biologist should suggest appropriate native plant substitutes. A note shall be placed on the Composite Development Plan indicating that all proposed landscaping (including landscaping on individual lots) shall conform with the overall approved tract map landscaping plan. A requirement shall be included stating that residents shall include a restriction of the use of tree and plant species to only native trees/plants approved per the overall tract map landscaping plan, the Homeowner Association CC&Rs shall also restrict (individual lot owners) to use only native tree and plant species approved per the overall tract map landscaping plan.

5.8-2e ~~Garages with automatic door openers shall be required. No exterior construction shall occur between December 1 and April 1, when bald eagles are present~~. Garages with automatic door openers shall be required. No exterior construction, grading or vegetation clearing shall be permitted between December 1 and April 1, which is the wintering period for bald eagles (i.e., the season when bald eagles are present in the Big Bear area).

Also refer to mitigation measures 5.8-1a to 5.8-1f.

JURISDICTIONAL WATERS

5.8-3 ~~No mitigation measures are recommended.~~ Per the direction of the California Department of Fish and Game, all unavoidable impacts to State and Federal jurisdictional lakes, streams, and associated habitat shall be compensated for with the creation and/or restoration of in-kind habitat on-site and/or off-site at a minimum 3:1 replacement-to-impact ratio. Additional requirements may be required through the permitting process depending on the quality of habitat impacted, project design and other factors.

WILDLIFE MOVEMENT

5.8-4 No mitigation measures are recommended.

REGIONAL AND LOCAL POLICIES/PLANS

5.8-5 No mitigation measures are recommended.

CUMULATIVE

5.8-6 No mitigation measures are recommended.

CULTURAL RESOURCES

ARCHAEOLOGICAL/HISTORICAL RESOURCES

5.9-1 Project-related grading, grubbing, trenching, excavations, and/or other earth-moving activities in the project area shall be monitored by a qualified archaeologist. In the event that a material of potential cultural significance is uncovered during such activities on the project site, all earth-moving activities in the project area shall cease and the archeologist shall evaluate the quality and significance of the material. Earth-moving activities shall not continue in the area where a material of potential cultural significance is uncovered until resources have been completely removed by the archaeologist and recorded as appropriate.

PALEONTOLOGICAL RESOURCES

5.9-2a Grading shall be monitored during excavation in areas identified as likely to contain paleontologic resources by a qualified paleontological monitor. Monitoring shall be accomplished for any undisturbed subsurface older alluvium, which might be present in the subsurface. The monitor shall be equipped to salvage fossils as they are unearthed to avoid construction delays and to remove samples of sediments which are likely to contain the remains of small fossil invertebrates and vertebrates. The monitor must be empowered to temporarily halt or divert grading equipment to allow for removal of abundant or large specimens.

5.9-2b Recovered specimens shall be prepared to a point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates.

5.9-2c Identification and curation of specimens into a museum repository with permanent retrievable storage shall occur for paleontological resources.

5.9-2d A report of findings shall be prepared with an appended itemized inventory of specimens. The report shall include pertinent discussion of the significance of all recovered resources where appropriate. The report and inventory when submitted to the appropriate Lead Agency, shall signify completion of the program to mitigate impacts to paleontologic resources.

BURIAL SITES

5.9-3 In the event human remains are discovered during grading/ construction activities, work shall cease in the immediate area of the discovery and the Project Applicant shall comply with the requirements and procedures set forth in Section 5097.98 of the Public Resources Code, including notification of the County Coroner, notification of the Native American Heritage Commission, and consultation with the individual identified by the Native American Heritage Commission to be the "most likely descendent."

CUMULATIVE

5.9-4 No mitigation measures are recommended.

GEOLOGY AND SOILS

SLOPE STABILITY

5.10-1 The stability of ~~S~~south facing cut slopes shall be analyzed as part of the design-level geotechnical investigation. ~~u~~Utiliz~~e~~ing 2:1 buttressed slopes using on site native soil materials, or ~~by~~ constructing geotextile-reinforced soil buttresses ~~where~~for planned unstable cut slopes ~~are planned~~ are typical engineering designs for stabilizing slopes. Either of these methods, or other methods must be approved by the San Bernardino County Department of Building and Safety~~Geologist for slope reinforcement may be utilized~~.

SOIL EROSION

5.10-2a Due to the potential for erosion associated with younger alluvial deposits within the two major on-site stream channels, increased surface drainage quantities associated with development on-site shall be directed away from the stream channels.

5.10-2b Prior to the issuance of Grading Permits, the Project Applicant shall prepare a Soil Erosion and Sedimentation Plan for submittal and approval by the County Building and Safety Department.

GROUND SHAKING

5.10-3 Engineering design for all structures and roadways shall be based on the 2001 California Uniform Building Code. Construction plans shall be in accordance with seismic design standards set forth by the County's Development Code and Uniform Building Code.

SEICHE

5.10-4 Residential structures shall be located in areas which provide a minimum of five feet of freeboard above the high water line for any structures.

EXPANSIVE SOILS

5.10-5 Prior to grading permit issuance, ~~geologic analysis/studies shall be required including 1)~~ a quantitative geotechnical analysis and~~of liquefaction, 2) a~~ design-level geotechnical engineering report shall be required and submitted to the County of San Bernardino Department of Building and Safety for their approval. ~~and 3) a design level engineering geology report.~~

CUMULATIVE

5.10-6 No mitigation measures are recommended.

HYDROLOGY AND DRAINAGE

DRAINAGE AND RUNOFF

5.11-1 The proposed cross culverts shall be sized for 100-year burn and bulking flow rates. The burn and bulking method would increase the runoff from the natural areas. The method provided in the Los Angeles County Hydrology Manual is recommended. In addition, the cross culverts shall all be designed with headwalls to prevent CMP crushing, and shall be maintained adequately.

GROUNDWATER

~~5.11-2 Based upon the technical analysis presented, a potential groundwater overdraft condition would occur and no additional mitigation measures have been identified.~~

5.11-2a Within three months of project approval, the Project Applicant shall submit a plan for a detailed geohydrologic investigation. The plan must present the possible sources of groundwater selected for the project and the methodology proposed to investigate those sources. If the on-site wells are to be utilized to serve this project, it must be determined if either could draw water from Big Bear Lake. The plan must be prepared by a California Registered Geologist.

5.11-2b Within six months of plan approval, the Project Applicant shall submit the results of the geohydrologic investigation. The report must be prepared by a California Registered Geologist.

5.11-2c Concurrently or within three months of approval by the geohydrologic report, the Project Applicant shall submit a groundwater monitoring plan

in accordance with San Bernardino County's "Guidelines for Preparation of a Groundwater Monitoring Plan." The plan must be prepared by a California Registered Geologist.

WATER QUALITY - CONSTRUCTION

5.11-3 Prior to Grading Permit issuance and as part of the Project's compliance with the NPDES requirements, a Notice of Intent (NOI) shall be prepared and submitted to the Santa Ana Regional Water Quality Control Board providing notification and intent to comply with the State of California general permit. Also, a Storm Water Pollution Prevention Plan (SWPPP) shall be completed for the construction activities on-site. A copy of the SWPPP shall be available and implemented at the construction-site at all times. The SWPPP shall outline the source control and/or treatment control BMPs to avoid or mitigate runoff pollutants at the construction-site to the "maximum extent practicable." At a minimum, the following shall be implemented from the *California Storm Water Best Management Practice Handbook - Construction Activity:*

- *CA 1 Dewatering Operations* – This operation requires the use of sediment controls to prevent or reduce the discharge of pollutants to storm water from dewatering operations.
- *CA 2 Paving Operations* – Prevent or reduce the runoff of pollutants from paving operations by proper storage of materials, protecting storm drain facilities during construction, and training employees.
- *CA 3 Structural Construction and Painting* – Keep site and area clean and orderly, use erosion control, use proper storage facilities, use safe products and train employees to prevent and reduce pollutant discharge to storm water facilities from construction and painting.
- *CA 10 Material Delivery and Storage* – Minimize the storage of hazardous materials on-site. If stored on-site, keep in designated areas, install secondary containment, conduct regular inspections and train employees.
- *CA 11 Material Use* – Prevent and reduce the discharge of pesticides, herbicides, fertilizers, detergents, plaster, petroleum products and other hazardous materials from entering the storm water.
- *CA 20 Solid Waste Management* – This BMP describes the requirements to properly design and maintain trash storage areas. The primary design feature requires the storage of trash in covered areas.
- *CA 21 Hazardous Waste Management* – This BMP describes the requirements to properly design and maintain waste areas.

- *CA 23 Concrete Waste Management* – Prevent and reduce pollutant discharge to storm water from concrete waste by performing on and off-site washouts in designated areas and training employees and consultants.

- *CA 24 Sanitary Septic Water Management* – Provide convenient, well-maintained facilities, and arrange regular service and disposal of sanitary waste.

- *CA 30 Vehicle and Equipment Cleaning* – Use off-site facilities or wash in designated areas to reduce pollutant discharge into the storm drain facilities.

- *CA 31 Vehicle and Equipment Fueling* – Use off-site facilities or designated areas with enclosures or coverings to reduce pollutant discharge into the storm drain facilities.

- *CA 32 Vehicle and Equipment Maintenance* – Use off-site facilities or designated areas with enclosing or coverings to reduce pollutant discharge into the storm drain facilities. In addition, run a "dry site" to prevent pollution discharge into storm drains.

- *CA 40 Employee and Subcontractor Training* – Have a training session for employees and subcontractors to understand the need for implementation and usage of BMPs.

- *ESC 2 Preservation of Existing Vegetation* – Minimize the removal of existing trees and shrubs since they serve as erosion control.

- *ESC 10 Seeding and Planting* – Provide soil stability by planting and seeding grasses, trees, shrubs, vines, and ground cover.

- *ESC 11 Mulching* – Stabilize cleared or freshly seeded areas with mulch.

- *ESC 20 Geotextiles and Mats* – Natural or synthetics material can be used for soil stability.

- *ESC Dust Control* – Reduce wind erosion and dust generated by construction activities by using dust control measures.

- *ESC 23 Construction Road Stabilization* – All on-site vehicle transport routes shall be stabilized immediately after grading and frequently maintained to prevent erosion and control dust.

- *ESC 24* – Stabilized Construction Entrance – Stabilize the entrance pad to the construction area to reduce amount of sediment tracked off-site.

- *ESC 30 Earth Dikes* – Construct earth dikes of compacted soil to divert runoff or channel water to a desired location.

- *ESC 31 Temporary Drains and Swales* – Use temporary drains and swales to divert off-site runoff around the construction-site and stabilized areas and to direct it into sediment basins or traps.

- *ESC 40 Outlet Protection* – Use rock or grouted rock at outlet pipes to prevent scouring of soil caused by high velocities.

- *ESC 41 Check Dams* – Use check dams to reduce velocities of concentrated flows, thereby reducing erosion and promoting sedimentation behind the dams. Check dams are small and placed across swales and drainage ditches.

- *ESC 50 Silt Fence* – Composed of filter fabric, these are entrenched, attached to support poles, and sometimes backed by wire fence support. Silt fences promote sedimentation behind the fence of sediment-laden water.

- *ESC 51 Straw Bale Barrier* – Place straw bales end to end in a level contour in a shallow trench and stake them in place. The bales detain runoff and promote sedimentation.

- *ESC 52 Sand Bag Barriers* – By stacking sand bags on a level contour, a barrier is created to detain sediment-laden water. The barrier promotes sedimentation.

- *ESC 53 Brush or Rock Filter* – Made of 0.75 to 3-inch diameter rocks placed on a level contour or composed of brush wrapped in filter cloth and staked to the toe of the slope provides a sediment trap.

- *ESC 54 Storm Drain Inlet Protection* – Devices that remove sediment from sediment laden storm water before entering the storm drain inlet or catch basin.

- *ESC 55 Sediment Trap* – A sediment trap is a small, excavated, or bermed area where runoff for small drainage areas can pass through allowing sediment to settle out.

WATER QUALITY – LONG-TERM

5.11-4a Prior to Grading Permit issuance, a Water Quality Management Plan shall be developed and shall include both Non-Structural and Source Control BMPs. The WQMP shall conform to the San Bernardino County Draft NPDES permit and WQMP standards. The following are the minimum required controls to be implemented as a part of the *Water Quality Management Plan (WQMP) for Urban Runoff.*

- *Education for Property Owners, Tenants and Occupations* – The Property Owners Association is required to provide awareness educational material, including information provided by San Bernardino County. The materials shall include a description of chemicals that should be limited to the property and proper disposal, including prohibition of hosing waste directly to gutters, catch basins, storm drains or the lake.

- *Activity Restrictions* – The developer shall prepare conditions, covenants and restriction of the protection of surface water quality.

- *Common Area Landscape Management* – For the common landscape areas on-going maintenance shall occur consistent with County Administrative Design Guidelines or city equivalent, plus fertilizer and pesticide usage consistent with the instructions contained on product labels and with regulation administered by the State Department of Pesticide Regulation or county equivalent.

- *Common Area Catch Basin Inspection* – Property Owners Associations shall have privately owned catch basins cleaned and maintained, as needed. These are intended to prevent sediment, garden waste, trash and other pollutants from entering the public streets and storm drain systems.

- *Common Area Litter Control* – POAs shall be required to implement trash management and litter control procedures to minimize pollution to drainage waters.

- *Street Sweeping Private Streets and Parking Lots* – Streets and Parking lots shall be swept as needed, to prevent sediment, garden waste, trash and other pollutants from entering public streets and storm drain systems.

The following controls from the *California Storm Water Best Management Practice Handbook - Municipal* shall be employed:

- *SC10 Housekeeping Practices* – This entails practices such as cleaning up spills, proper disposal of certain substances and wise application of chemicals.

- *SC32 Used Oil Recycling* – May apply to maintenance and security vehicles.

- *SC72 Vegetation Controls* – Vegetation control typically includes chemical (herbicide) application and mechanical methods. Chemical methods are discussed in SC10. Mechanical methods include leaving existing vegetation, cutting less frequently, hand cutting, planting low maintenance vegetation, collecting and properly disposing of clippings and cuttings, and educating employees and the public.

- *SC73 Storm Drain Flushing* – Although general storm drain gradients are sufficiently steep for self-cleansing, visual inspection may reveal a buildup of sediment and other pollutants at the inlets or outlets, in which case flushing may be advisable.

5.11-4b The Water Quality Management Plan (WQMP) shall include Structural or Treatment BMPs. The structural BMPs utilized shall focus on meeting potential TMDL requirements for noxious aquatic plants, nutrients, sedimentation and siltation. The structural BMPs shall conform to the San Bernardino County NPDES permit and the San Bernardino WQMP standards.

Consistent with the WQMP guidelines contained in the *Draft National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements* for San Bernardino County, Structural BMPs shall be required for the proposed Project. They shall be sized to comply with one of the following numeric sizing criteria or be considered by the permittees to provide equivalent or better treatment.

Volume Based BMPs shall be designed to infiltrate or treat either:

- The volume of runoff produced from the 85th percentile 24-hour storm event, as determined from the local historical rainfall record; or

- The volume of the annual runoff produced by the 85th percentile 24-hours rainfall event, determined as the maximized capture storm water volume for the area, from the formula recommended in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87 (1998); or

- The volume of annual runoff based on unit basin storage volume, to achieve 80% or more volume treatment by the method recommended in California Stormwater Best Management Practice Handbook – Industrial/Commercial (1993); or

- The volume of runoff, as determined from the local historical rainfall record, that achieves approximately the same reduction in pollutant loads and flows as achieved by mitigation of the 85th percentile 24-hour runoff event.

OR

Flow –based BMPs shall be designed to infiltrate or treat either:

- The maximum flow rate of runoff produced from a rainfall intensity of 0.2 inch of rainfall per hour; or

- The maximum flow rate of runoff produced by the 85th percentile hourly rainfall intensity, as determined from the local historical rainfall record, multiplied by a factor of two; or

- The maximum flow rate of runoff, as determined from the local historical rainfall record that achieved by mitigation of the 85th percentile hourly rainfall intensity multiplied by a factor of two.

The following are the minimum required controls to be implemented as a part of the *Water Quality Management Plan (WQMP) for Urban Runoff.*

- *Control of Impervious Runoff* – Surface runoff shall be directed to landscaped areas or pervious areas.

- *Common Area Efficient Irrigation* – Physical implementation of the landscape plan consistent with County Administrative Design Guidelines or city equivalent, which may include provision of water sensors, programmable irrigation timers, etc.

- *Common Area Runoff-Minimizing Landscape Design* – Group plants with similar water requirements in order to reduce excess irrigation runoff and promote surface filtration.

- *Catch Basin Stenciling* – "No Dumping – Flows to Lake" or equivalent effective phrase shall be stenciled on catch basins to alert the public as to the destination of pollutant discharging into storm drain.

- *Debris Posts* – These shall be installed to prevent large floatable debris from entering the storm drains. They shall be placed upstream of the cross culverts.

- *Inlet Trash Racks* – These shall be installed where appropriate to reduce intake and transport through the storm drain system of large floatable debris. Trash racks shall be provided where drainage from open areas enters storm drain or cross culverts.

5.11-4c Storm water treatment under the NPDES Permit and the future TMDL requirements shall include the construction of treatment BMPs. Treatment BMPs appropriate for on-site use shall include infiltration trenches and basins, swales, inlet filtration, and/or water quality basins. All storm water runoff shall be treated before leaving the site to reduce pollutants in Big Bear Lake.

Infiltration Trenches and Basins

Infiltration Trenches and/or Basins shall be used on site to meet potential future TMDLs for noxious aquatic plants and nutrients. Infiltration trenches and basins treat storm water runoff through filtration. A typical infiltration trench is essentially an excavated trench, that is lined with filter fabric and backfilled with stones. Depth of the infiltration trench shall range from three to eight feet and shall be located in areas with permeable soils, and water table and bedrock depth situated well below the bottom of the trench. Trenches shall not be used to trap coarse sediments since large sediment would likely clog the trench. Grass

buffers may be installed to capture sediment before it enters the trench to minimize clogging. Infiltration basins shall be used for drainage areas between five and 50 acres. Infiltration basins shall be either in-line or off-line, and may treat different volumes such as the water quality volume or the 2-year or 10-year storm.

Swales

The project shall implement either vegetative swales, enhanced vegetated swales utilizing check dams and wide depressions, a series of small detention facilities designed similarly to a dry detention basin, or a combination of these treatment methods into a treatment train (series of Structural BMPs). The Water Quality Management Plan shall address treatment for the Project to assure that runoff from the site is treated to the "maximum extent practicable".

The swales shall be treated as water quality features and shall be maintained differently than grass areas. Specifically, pesticides, herbicide, and fertilizers, which may be used on the grass areas, shall not be used in the vegetation swales.

Filtration

Filtration shall be implemented as a treatment method and shall use drop-in infiltration devices or inline devices.

Drop-infiltration devices at all curb inlets within the internal parking lots shall be implemented to provide potential pollutant removal. Existing examples of these filtration devices include the Drain Pac Storm Drain Inserts and Fossil Filters. These types of devices are efficient at removing oil and grease, debris, and suspended solids from treated waters. Some of these devices have also exhibited high efficiencies at removing heavy metals and other pollutants.

Inline devices suggested for use onsite include the Continuous Deflection Separator (CDS® unit). Once the runoff has entered the storm drain, an in-line diversion would direct the treatment flow to a CDS® unit. The CDS® unit is a non-blocking, non-mechanical screening system, which would provide a second line of defense for solids removal. Adsorption materials can be added within the CDS® unit to aid in the removal of oil and grease. The treated flow will exit the CDS® unit and continue downstream.

To assure the efficiency of these filtration devices, monitoring shall be conducted. The use of street sweeps on the parking lots and streets shall aid in reducing the amounts of sediment and debris that flow through the devices. This will extend the effectiveness of the devices during a storm and will lower the frequency of required maintenance. The devices shall be checked and cleaned, if necessary, once a month during the

rainy season, following any precipitation and at the end of the dry season prior to the first precipitation event of the rainy season.

Consideration shall be given to using these filtration units in other areas besides the parking lot inlets. Another potential location is at the downstream end of the tributary pipes that feed the discharge point. Siting these units at a downstream point would allow for the treatment of a greater amount of runoff.

CUMULATIVE

5.11-5 No mitigation measures are recommended.

9.0 Inventory of Significance After Mitigation

9.0 INVENTORY OF SIGNIFICANCE AFTER MITIGATION

LAND USE AND RELEVANT PLANNING

No unavoidable significant impacts related to Land Use and Relevant Planning have been identified following compliance with the San Bernardino County General Plan and Development Code policies and standards.

RECREATION

No significant impacts related to Recreational facilities have been identified in this Section.

PUBLIC SERVICES AND UTILITIES

Due to the inability of water providers to confirm service to the project, project as well as cumulative impacts are concluded as significant and unavoidable. This conclusion is further supported by the significant and unavoidable conclusion cited in Section 5.11, *Hydrology and Drainage*, due to inconclusive testing of potential overdraft conditions for the groundwater basin associated with the North Shore Hydrologic Subunit.

If the County of San Bernardino approves the project, the County shall be required to adopt findings in accordance with Section 15091 of the CEQA Guidelines and prepare a Statement of Overriding Considerations in accordance with Section 15093 of the CEQA Guidelines.

No additional unavoidable significant impacts related to public services and utilities have been identified following implementation of the recommended mitigation measures and compliance with applicable County, service or utility provider requirements, County Codes and Ordinances.

AESTHETICS/LIGHT AND GLARE

Significant and unavoidable impacts related to Aesthetics/Light and Glare have been identified for viewshed alterations involving existing residents to the north, east and west of the project site. Additionally, significant and unavoidable impacts have been identified for views from State Route 38, a scenic highway, to the south and from the south shore of Big Bear Lake. If the County of San Bernardino approves the project, the County shall be required to cite their findings in accordance with Section 15091 of CEQA and prepare a Statement of Overriding Considerations in accordance with section 15093 of CEQA.

No additional significant impacts related to Aesthetic/Light and Glare have been identified following implementation of mitigation measures and/or compliance with applicable standards, requirements and/or policies by the County of San Bernardino.

TRAFFIC AND CIRCULATION

Following implementation of recommended mitigation measures, Traffic and Circulation impacts would be reduced to a less than significant level.

AIR QUALITY

The following air quality impacts would remain significant and unavoidable following mitigation:

- ROG and NO_X from construction activities;
- Project Operations: Exceedance of State and/or Federal emission levels (ROG, CO and PM_{10}) from project operations; and
- Project implementation would result in a significant unavoidable impact with respect to consistency with the AQMP.

If the County of San Bernardino approves the project, the County shall be required to cite their findings in accordance with Section 15091 of CEQA and prepare a Statement of Overriding Considerations in accordance with Section 15093 of CEQA.

NOISE

No unavoidable significant impacts related to noise have been identified following implementation of recommended mitigation measures and compliance with applicable requirements set forth by the County of San Bernardino and the Big Bear Municipal Water District.

BIOLOGICAL RESOURCES

Significant and unavoidable impacts related Biological Resources have been identified for impacts to Bald Eagle populations. If the County of San Bernardino approves the project, the County shall be required to cite their findings in accordance with Section 15091 of CEQA and prepare a Statement of Overriding Considerations in accordance with section 15093 of CEQA.

No additional significant impacts related to Biological Resources have been identified following implementation of mitigation measures and/or compliance with applicable standards, requirements and/or policies by the County of San Bernardino.

CULTURAL RESOURCES

No significant impacts related to Cultural Resources have been identified following implementation of mitigation measures referenced in this Section.

GEOLOGY AND SOILS

No significant impacts related to Geology and Soils have been identified following implementation of mitigation measures and/or compliance with applicable standards,

policies and/or County of San Bernardino Development Code and standards set forth in the Uniform Building Code.

HYDROLOGY AND DRAINAGE

Due to inconclusive testing of potential overdraft conditions for the groundwater basin associated with the North Shore Hydrologic Subunit, project and cumulative impacts are concluded to be significant and unavoidable.

If the County of San Bernardino approves the project, the County shall be required to adopt findings in accordance with Section 15091 of the CEQA Guidelines and prepare a Statement of Overriding Considerations in accordance with Section 15093 of the CEQA Guidelines.

No additional significant impacts related to hydrology and water quality have been identified following implementation of the recommended mitigation measures and/or through regulatory compliance.

10.0 Effects Found Not To Be Significant

10.0 EFFECTS FOUND NOT TO BE SIGNIFICANT

The County of San Bernardino conducted an Initial Study in February, 2002 to determine significant effects of the project. In the course of this evaluation, certain impacts of the project were found to be less than significant due to the inability of a project of this scope to create such impacts or the absence of project characteristics producing effects of this type. The effects determined not to be significant are not required to be included in primary analysis sections of the Draft EIR. In accordance with CEQA Guidelines Section 15128, the following section provides a brief description of potential impacts found to be less than significant. A copy of the Initial Study is found in Appendix 15.1.

AGRICULTURAL RESOURCES

- *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?*

- *Conflict with existing zoning for agricultural use, or a Williamson Act contract?*

- *Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?*

The project site is not known to contain soils that have been designated as prime or unique agricultural soils and agricultural activities have not historically occurred at the project site. The project would not adversely impact prime or locally important agriculture as none occur within the project area. The entire site is zoned residential and is not under a Williamson Act contract. No further discussion of agricultural resources is required in an EIR.

BIOLOGICAL RESOURCES

- *Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?*

No habitat conservation plans exist in the project area; this project will therefore not pose any conflict with existing plans for biological resource conservation.

GEOLOGY AND SOILS

- *Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?*

The proposed project does not include the use of septic tanks or alternative wastewater disposal systems.

HAZARDS AND HAZARDOUS MATERIALS

- *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*

- *Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?*

- *Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*

The project is a residential subdivision that includes the development of a boat dock for use by the residents of the development project. The storage and use of boats and fuel would be typical of any residential land use. The boat dock would not be an improved marina or include the storage of any fuels on-site. No other hazardous materials would be stored on-site or transported through the property as a result of the subdivision. The project would not require additional analysis of hazardous materials in an EIR.

- *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?*

The project site is not identified by the County of San Bernardino as a hazardous waste site (Map "Identified Hazardous Waste Sites," December 1, 1994). The County Fire Department HazMat Division responded to a Project Notice for Tentative Tract No. 16136 that "No hazardous materials conditions apply to this project" (July 24, 2001).

- *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?*

- *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?*

The project is not located within an airport land use plan or within the flight path of the Big Bear Airport, which is located 3.5 miles to the east. There are no nearby airstrips. The proposed residential development would not pose a safety hazard for any residents or other visitors to the site resulting from proximity of the Big Bear airport.

LAND USE AND PLANNING

- *Physically divide an established community?*

The project lies within the community of Fawnskin. Fawnskin is primarily developed to the west of the project site, with scattered residences south and east of the site. Because the project and the entire community of Fawnskin is accessible via State Highway 38, there will be no physical division of the existing community.

- *Conflict with any applicable habitat conservation plan or natural community conservation plan?*

No habitat conservation or natural community conservation plans exist in the project area; this project will therefore not pose any conflict with existing plans for conservation.

MINERAL RESOURCES

- *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?*

- *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?*

The site is not within an area designated by the State for locally important mineral resources and it does not lie within the County of San Bernardino's Mineral Resource Zone. The San Bernardino Mountains however are rich in mineral resources; known occurrences include gold, silver, lead, zinc, iron, manganese, and tungsten. Claims have been operated extensively but most have been non productive for at least 15 years. Just north of the project site is Holcomb Valley where William F. Holcomb discovered placer gold in May 1860. The mapped gold placer area begins approximately 1.5 miles north of the project site's northeastern boundary and the nearest placer gold claim (Wayne Placers) is located in section 8, approximately one mile to the northeast. One-half mile to the northeast is a site (Polique Canyon) identified as metal prospect or nonmetallic deposit, which has not been operated. All other mapped claims, mines, and quarries are further to the north of the project site *(Geology of the San Bernardino Mountains North of Big Bear Lake, California, pp 51 – 67).* No impacts to mineral resources would occur as a result of the project's implementation.

NOISE

- *For a project located within an airport land use plan or, where such a plan has bet 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?*

- *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?*

The site is not within proximity to an airport or airstrip. The Big Bear City airport is located approximately 3 miles to the east of the Project site. No impact will occur from aviation noise.

POPULATION AND HOUSING

- *Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?*

- *Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?*

The project is a 95-lot residential development on currently vacant land. There would be no displacement of existing housing or people

TRANSPORTATION/TRAFFIC

- *Result in inadequate parking capacity?*

There is no public parking associated with the development project. Each individual lot would have typical residential parking provisions.

AIR TRAFFIC PATTERNS

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

No changes to air traffic patterns would result from the proposed residential subdivision project.

- *Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).*

According to the Initial Study, the residential development would have no impact on existing public transportation systems or programs. No bike lanes exist in the vicinity of State Highway 38.

11.0 Organizations and Persons Consulted

11.0 ORGANIZATIONS AND PERSONS CONSULTED

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Victorville, California 92392-0919

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12.0 Bibliography

12.0 BIBLIOGRAPHY

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13.0 Mitigation Monitoring Program

13.0 MITIGATION MONITORING PROGRAM

Section 2.0 of this EIR identifies the mitigation measures that will be implemented to reduce the impacts associated with the Moon Camp Project. The California Environment Quality Act (CEQA) was amended in 1989 to add Section 21081.6, which requires a public agency to adopt a monitoring and reporting program for assessing and ensuring compliance with any required mitigation measures applied to proposed development. As stated in Section 21081.6 of the Public Resources Code,

> *". . . the public agency shall adopt a reporting or monitoring program for the changes to the project which it has adopted, or made a condition of project approval, in order to mitigate or avoid significant effects on the environment."*

Section 21081.6 provides general guidelines for implementing mitigation monitoring programs and indicates that specific reporting and/or monitoring requirements, to be enforced during project implementation, shall be defined prior to final certification of the EIR.

The mitigation monitoring table below lists those mitigation measures that may be included as conditions of approval for the project. These measures correspond to those outlined in Section 2.0 and discussed in Section 5.0. To ensure that the mitigation measures are properly implemented, a monitoring program has been devised which identifies the timing and responsibility for monitoring each measure. The developer will have the responsibility for implementing the measures, and the various County of San Bernardino departments will have the primary responsibility for monitoring and reporting the implementation of the mitigation measures.

MITIGATION MEASURE:
RECREATION 5.2-2 The proposed project shall be conditioned to incorporate a pedal path easement along the south side of North Shore Drive prior to map recordation.
IMPLEMENTATION AND VERIFICATION:
1) Pedestrian easement must be incorporated into the site design. 2) Plans must be submitted to the Planning Division for review and approval. 3) The Planning Division shall verify compliance with the approved site design.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) The easement shall be included on the tract map prior to map recordation.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
PUBLIC SERVICES AND UTILITIES 5.3-1a The fire flow requirement shall be 1750 gpm @ 2 hours based on homes in the range of 3,600 to 4,800 square feet, and 2,000 gpm @ 2 hours for homes greater than 4,800 square feet.
IMPLEMENTATION AND VERIFICATION:
1) Submit evidence to the County of San Bernardino Fire Department that the water pressure meets the required fire flow. 2) The County of San Bernardino Fire Department shall verify compliance during site inspections. 3) Fire flow requirements during construction shall meet San Bernardino County Fire Department requirements.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to construction. 2) Prior to Occupancy. 3) During construction.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
PUBLIC SERVICES AND UTILITIES 5.3-1b All residences less than 5,000 square feet shall be subject to the standard fire sprinkler requirement (NFPA 13D). Homes above 5,000 square feet shall be subject to the NFPA13R sprinkler requirement.
IMPLEMENTATION AND VERIFICATION:
1) A note on the CDP shall list this requirement. 2) Submit evidence to the County Fire Department that all homes adhere to the respective sprinkler requirement. 3) The County of San Bernardino Fire Department shall verify compliance during site inspection.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to recordation of final map. 2) Prior to recordation of final map. 3) Prior to Occupancy.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
PUBLIC SERVICES AND UTILITIES 5.3-1c A Fuels Management Plan, with specifications, shall be prepared and subject to approval by the County of San Bernardino Fire Department and San Bernardino National Forest Service. The Fuels Management Plan shall implement the fire safety requirements of the FS1 Fire Safety Overlay District, including a 30-foot minimum setback requirement from the National Forest. The fuel modification zone shall be located entirely within the project's boundaries. The minimum fuel modification zone requirements may be greater in steeper areas (up to 300 ft.), as determined by the Fire Department.
IMPLEMENTATION AND VERIFICATION:
1) Submit a Fuels Management Plan to the County of San Bernardino Fire Department and San Bernardino National Forest Service. 2) The County of San Bernardino Fire Department and San Bernardino National Forest Service shall verify compliance with approved plans during site inspections.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to recordation of the final map. 2) Prior to recordation of the final map.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:			
PUBLIC SERVICES AND UTILITIES 5.3-1d Cul-de-sac lengths shall be no longer than 350 feet.			
IMPLEMENTATION AND VERIFICATION:			
1) Final map shall reflect compliance in road design. 2) Submit copy of building plans to the Building and Safety Division for approval. 3) The Building and Safety Division shall verify compliance with approved plans during site inspections.			
COMPLIANCE RECORD:			
WHEN REQUIRED:	1) Prior to recordation of the final map. 2) Prior to the issuance of grading permits/road improvement plans. 3) Prior to Occupancy.		
SUBMITTED:		**DATE SUBMITTED:**	
1.		1.	
2.		2.	
APPROVED BY:		**DATE APPROVED:**	
INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**
CORRECTION REQUIRED: (attach copies of correspondence)			**DATE:**

MITIGATION MEASURE:
PUBLIC SERVICES AND UTILITIES 5.3-1e A Homeowner's Association or a Special District shall be established to implement the Fuels Management Plan. The Fuels Management Plan shall specify any professional assistance, if necessary, to implement the action portion of the plan. The Plan shall determine if a Registered Professional Forrester is necessary for professional guidance to implement the Plan. The HOA or Special District is to be responsible for fuel modification in common areas.
IMPLEMENTATION AND VERIFICATION:
1) Establish a Homeowner's Association or Special District to implement the Fuels Management Plan. 2) The County of San Bernardino Fire Department and the San Bernardino National Forest Service shall verify compliance with the implementation of the Fuels Management Plan by the HOA or Special District.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to recordation of the final map. 2) Prior to Recordation.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
PUBLIC SERVICES AND UTILITIES 5.3-5a Prior to issuance of building permits, the Project Applicant shall fund all on-site and off-site sewer improvements required to support development of the Project site. Such improvements shall be to the satisfaction of the BBARWA, and may include replacement of existing sewer lines rather than construction of parallel lines.
IMPLEMENTATION AND VERIFICATION:
1) Submit funding to BBARWA for all on-site and off-site sewer improvements required to support development of the Project site. 2) The applicant shall submit to the County Planning Division copies of funding payments to BBARWA for sewer improvements, thereby documenting/verifying the funding payments made.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to the issuance of building permits. 2) Prior to the issuance of building permits.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
PUBLIC SERVICES AND UTILITIES 5.3-5b Prior to issuance of building permits, the Project Applicant shall provide evidence to the County of San Bernardino that the BBARWA has sufficient transmission and treatment plant capacity to accept sewage flows from the Project site.
IMPLEMENTATION AND VERIFICATION:
1) Applicant shall submit evidence that BBARWA has sufficient capacity to accept flows from the Project site. 2) The Department of Special Districts and/or BBARWA shall verify compliance with the approved plans during site inspections.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to the issuance of grading permits. 2) Prior to the issuance of building permits.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
PUBLIC SERVICES AND UTILITIES 5.3-5c The Project Applicant shall relocate the BBARWA 10" force main by installing new pipe (and/or bonding for the relocation) so that it is aligned within the south shoulder of the relocated State Route 38. The 10" force main shall be accessible for BBARWA to maintain and repair the sewer force main. The force main shall not pass through residential lots within the proposed tract.
IMPLEMENTATION AND VERIFICATION:
1) Relocate sewer mains to be aligned with SR-38; and/or bond for the relocation. 2) The Department of Special Districts and/ or BBARWA shall verify compliance with the improved plans.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to the recordation of the final map. 2) Prior to the recordation of the final map.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:			
PUBLIC SERVICES AND UTILITIES 5.3-5d The Project Applicant shall install air release valves and vaults at high elevation points on the new force main to minimize odors. Air release valves shall be large enough to enclose 55-gallon drum carbon filters to control odors.			
IMPLEMENTATION AND VERIFICATION:			
1) Submit evidence to the Building and Safety Division that air-release valves have been installed. 2) The Building and Safety Division shall verify compliance with the approved plans.			
COMPLIANCE RECORD:			
WHEN REQUIRED:	1) Prior to recordation of the final map. 2) Prior to recordation of the final map.		
SUBMITTED:		**DATE SUBMITTED:**	
1.		1.	
2.		2.	
APPROVED BY:		**DATE APPROVED:**	

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
PUBLIC SERVICES AND UTILITIES 5.3-6a Values of production rates and pumping levels for on-site water supply wells shall be obtained through step-drawdown and constant rate pumping tests. Water samples shall be taken during the inspection for testing and analysis in accordance with standard requirements.
IMPLEMENTATION AND VERIFICATION:
1) Submit production rates and pumping levels through pumping tests to the Division of Environmental Health Services and the County Geologist. 2) Division of Environmental Health Services and the County Geologist shall verify compliance with approved plans during site inspections.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to the approval of building permits. 2) Prior to the approval of building permits.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
PUBLIC SERVICES AND UTILITIES 5.3-6b If either or both of the two existing on-site wells are utilized as a water source for the project, the Project Applicant shall equip the wells to meet DWP and/or County Special Districts Department standards and dedicate these facilities and water rights to the appropriate water purveyor. Within the proposed tract, no individual private irrigation wells shall be permitted.
IMPLEMENTATION AND VERIFICATION:
1) Wells must be equipped to meet DWP and/or County Special Districts Department standards. 2) Water rights must be dedicated to the appropriate water purveyor. 3) The DWP and/or County Special Districts shall verify compliance with approved plans during site inspections.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to the approval of building permits. 2) Prior to recordation of the final tract map. 3) Prior to the approval of building permits.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
PUBLIC SERVICES AND UTILITIES 5.3-6c After a determination has been made regarding the water purveyor, the Project Applicant shall advance fair-share funds to the appropriate water agency (CSA and/or DWP) towards constructing a new reservoir and pipeline improvement at Cline-Miller Reservoir (with an estimated project cost at $481,100). These facilities would be dedicated to the appropriate water agency.
IMPLEMENTATION AND VERIFICATION:
1) Applicant shall advance fair-share funds towards constructing a new reservoir and pipeline improvement. 2) These facilities shall be dedicated to the appropriate water agency. 3) The applicant shall submit evidence/verification documenting that fair-share funds have been deposited (to CSA and/or DWP) and that the facilities have been dedicated to the appropriate water agency.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to the issuance of building permits. 2) Prior to the issuance of building permits. 3) Prior to the issuance of building permits.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
PUBLIC SERVICES AND UTILITIES 5.3-6d The following water conservation measures are the minimum measures that shall be complied with in conjunction with domestic water supply to the project. A Homeowners Association shall be responsible for enforcing the water conservation measures. Additional measures may be imposed as a result of a contract for water supply between CSA 53-C and the City of Big Bear Lake DWP: ▪ Landscape shall not be irrigated between the hours of 9:00 a.m. and 6:00 p.m. ▪ Residences, buildings and premises shall be limited to watering every other day. ▪ Landscape irrigation shall be limited to what is needed and shall not be excessive. Water from landscape irrigation shall not be allowed to run off into streets. ▪ Water shall not be allowed to leak from any waterline, faucet, or any other facility, either within or outside a private residence, business establishment or on private property. All such leaking waterlines, faucets, and other facilities shall be repaired immediately to prevent leakage. ▪ Sidewalks, paved driveways, and parkways shall not be washed off with hoses, except as required for sanitary purposes. ▪ Non-commercial washing of cars, and boats or any other vehicle shall only be done with an automatic shut-off nozzle on a hose, or with a bucket. ▪ New landscaping shall not exceed more than one-thousand square feet of turf on a parcel or lot or twenty-five percent of the available landscape area. ▪ A model landscaping and irrigation guide shall be prepared for the tract and required by homeowner association rules. The guide shall specify a plant palate that emphasizes native plants and cultivars that are suitable for the mountain climate. Plant materials shall be low water consuming and fire resistant. Irrigation shall emphasize drip and bubbler type emitters with limit aerial spray irrigation methods. The guide shall be reviewed and approved by the Land Use Services Department.
IMPLEMENTATION AND VERIFICATION:
1) Applicant shall submit evidence to the Planning Division that water conservation measures are included within the HOAs Conditions Covenants and Restrictions (CC&Rs). 2) The applicant shall submit evidence/documentation to the Planning Division verifying that the Homeowners Association CC&Rs includes provisions requiring compliance with the approved water conservation measures.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to recordation of the final map. 2) Prior to recordation of the final map.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)			**DATE:**

MITIGATION MEASURE:
AESTHETICS/LIGHT AND GLARE 5.4-1a Construction equipment staging areas shall be located away from existing residential uses. Appropriate screening (i.e., temporary fencing with opaque material) shall be used to buffer views of construction equipment and material, when feasible. Staging locations shall be indicated on project Grading Plans.
IMPLEMENTATION AND VERIFICATION:
1) Locate construction staging areas away from residential uses. 2) Utilize appropriate screening for construction staging areas. 3) Indicate staging locations on the grading plan, erosion control plan and/or SWWP. 4) The Building and Safety Division shall verify compliance with the approved plans during site inspections.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) During Construction. 2) During Construction. 3) During Construction. 4) During Construction.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
AESTHETICS/LIGHT AND GLARE 5.4-1b All construction-related lighting associated with the construction of new roadways, the realignment of State Route 38, and the installation of utilities shall be located and aimed away from adjacent residential areas. Lighting shall use the minimum wattage necessary to provide safety at the construction site. A construction safety lighting plan shall be submitted to the county for review concomitant with Grading Permit applications for the subdivision of the lots.
IMPLEMENTATION AND VERIFICATION:
1) Locate and aim constructed-related lighting away from residential areas. 2) Lighting shall use minimum wattage necessary. 3) Submit a construction safety lighting plan to the county for review. 4) The Building and Safety Division shall verify compliance with approved plans during site inspections.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) During Construction. 2) During Construction. 3) Prior to the issuance of Grading Permits. 4) During construction.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:			
AESTHETICS/LIGHT AND GLARE 5.4-2a Roof pitches shall not exceed 9/12 and no higher than two-story for any portion of the structure footprint for lots 62-92.			
IMPLEMENTATION AND VERIFICATION:			
1) Provide a note on the Composite Development Plan listing this requirement. 2) Submit a copy of the appropriate plans to the Building and Safety Division for approval. 3) The Building and Safety Division shall verify compliance with the approved plans during site inspections.			
COMPLIANCE RECORD:			
WHEN REQUIRED:	1) Prior to recordation. 2) Prior to the issuance of building permits. 3) During Construction.		
SUBMITTED:		**DATE SUBMITTED:**	
1.		1.	
2.		2.	
APPROVED BY:		**DATE APPROVED:**	
INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**
CORRECTION REQUIRED: (attach copies of correspondence)			**DATE:**

MITIGATION MEASURE:			
AESTHETICS/LIGHT AND GLARE 5.4-2b All homes shall provide a two-car garage with automatic garage doors.			
IMPLEMENTATION AND VERIFICATION:			
1) Provide a note on the Composite Development Plan listing this requirement. 2) Submit a copy of the appropriate plans to the Building and Safety Division for approval. 3) The Building and Safety Division shall verify compliance during site inspection.			
COMPLIANCE RECORD:			
WHEN REQUIRED:	1) Prior to recordation of the final map. 2) Prior to the issuance of building permits. 3) During construction.		
SUBMITTED:		**DATE SUBMITTED:**	
1.		1.	
2.		2.	
APPROVED BY:		**DATE APPROVED:**	
INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**
CORRECTION REQUIRED: (attach copies of correspondence)			**DATE:**

MITIGATION MEASURE:
AESTHETICS/LIGHT AND GLARE 5.4-2c A view envelope for each property shall be established by creating a line starting at 6 feet at each side lot line and moving up at a 30 degree angle until both lines meet at the middle of the property. The area located under these lines is the view envelope. Structures shall not protrude outside the view envelope. The view envelope orients the building ridgeline parallel to the view corridors on narrower lots providing views for residents located behind the property.
IMPLEMENTATION AND VERIFICATION:
1) Establish a view envelope. 2) Structures must not protrude outside the envelope. 3) Delineate on the Composite Development Plan. 4) Submit plans to the Planning and Building and Safety Division for approval. 5) The Planning and Building and Safety Division shall verify compliance during site inspection.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to the recordation of the final map. 2) Prior to the recordation of the final map. 3) Prior to the recordation of the final map. 4) Prior to issuance of Building Permits. 5) During construction.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
AESTHETICS/LIGHT AND GLARE 5.4-2d New development shall be subordinate to the natural setting and minimize reflective surfaces. Building materials including siding and roof materials shall be selected to blend in hue and brightness with the surroundings. Colors shall be earth tones, shades of grays, tans, browns, greens, pale yellows, and shall be consistent with the mountain character of the area.
IMPLEMENTATION AND VERIFICATION:
1) Colors must be consistent with the mountain character of the area. 2) Establish (include this measure) in the Home Owners Association Conditions Covenants and Restrictions. 3) Provide a note on the Composite Development Plan listing this requirement. 4) Design guidelines and plans must be submitted to the Planning and Building and Safety Division for approval.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) On-going. 2) Prior to recordation of the final map. 3) Prior to recordation of the final map. 4) Prior to the issuance of building permits.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
AESTHETICS/LIGHT AND GLARE 5.4-2e Outside parking/storage areas associated with the boat dock activities shall be completely screened from view by the placement of landscaping and plantings which are compatible with the local environment and, where practicable, are capable of surviving with a minimum of maintenance and supplemental water.
IMPLEMENTATION AND VERIFICATION:
1) Parking and storage areas associated with boat dock activities must be screened from view. 2) Specify (include this measure) in the Homeowners Association Conditions Covenants and Restrictions. 3) Submit a copy of landscape plans to the Planning Division for approval. 4) The Building and Safety Division shall verify compliance with approved plans during site inspections.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) On-going. 2) Prior to the recordation of the final map. 3) Prior to issuance of Grading Permits. 4) Prior to occupancy of the first residential unit.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
AESTHETICS/LIGHT AND GLARE 5.4-2f Construction plans for each individual lot shall include the identification and placement of vegetation with the mature height of trees listed. Landscaping and plantings should not obstruct significant views, within or outside of the project, either when installed or when they reach mature growth. The removal of existing vegetation shall not be required to create views.
IMPLEMENTATION AND VERIFICATION:
1) Provide a note on the Composite Development Plan listing this requirement. 2) Landscape plans must be submitted to the Planning Division for review. 3) The Building and Safety Division shall verify compliance with approved plans during the site inspections.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to recordation of the final map. 2) Prior to the issuance of building permits. 3) Prior to the issuance of Occupancy Permits.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
AESTHETICS/LIGHT AND GLARE 5.4-2g A Note shall be placed on the Composite Development Plan stating that during construction plans review and prior to issuance of building permits for each lot, the building inspector shall refer to the Mitigation Monitoring and Compliance Program regarding these aesthetic impact mitigation measures. The building inspector shall coordinate with the Advance Planning Division the review and approval of building plans in relation to these aesthetic impact mitigation measures, prior to approval and issuance of building permits.
IMPLEMENTATION AND VERIFICATION:
1) The Building and Safety Division must review building plans in relation to aesthetic impact mitigation measures. 2) The Building and Safety Division shall verify compliance with the approved plans during site inspections.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to approval and issuance of building permits. 2) Prior to occupancy.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
AESTHETICS/LIGHT AND GLARE 5.4-3a Any entry sign for the development shall be a monument style sign compatible with the mountain character, preferably, rock or rock-appearance.
IMPLEMENTATION AND VERIFICATION:
1) The applicant shall include all proposed signage (compatible with the mountain character), on the landscaping plan. 2) The Building and Safety Division shall verify compliance during site inspections.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to approval of the Landscape Plan. 2) Prior to occupancy of the first residential unit.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
AESTHETICS/LIGHT AND GLARE 5.4-3b Prior to recordation of the tract map (and/or any ground disturbance, whichever occurs first), landscaping plans for lettered lots B and C shall be submitted to and approved by the San Bernardino County Planning Department.
IMPLEMENTATION AND VERIFICATION:
1) Landscaping plans shall be submitted to the San Bernardino County Planning Division for review and approval. 2) The San Bernardino County Building and Safety Division shall verify compliance with the approved plans during site inspection.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to the recordation of the tract map. 2) Prior to occupancy of the first residential unit.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
AESTHETICS/LIGHT AND GLARE 5.4-4a All exterior lighting shall be designed and located as to avoid intrusive effects on adjacent residential properties and undeveloped areas adjacent to the project site. Low-intensity street lighting and low-intensity exterior lighting shall be used throughout the development to the extent feasible. Lighting fixtures shall use shielding, if necessary to prevent spill lighting on adjacent off-site uses.
IMPLEMENTATION AND VERIFICATION:
1) The intrusive effects of exterior lighting shall be minimized. 2) The Building and Safety Division shall verify compliance during site inspections.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) On-going. 2) Prior to the issuance of building permits.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
AESTHETICS/LIGHT AND GLARE 5.4-4b Lighting used for various components of the development plan shall be reviewed for light intensity levels, fixture height, fixture location and design by an independent engineer, and reviewed and approved by the County Building and Safety Division.
IMPLEMENTATION AND VERIFICATION:
1) The various lighting components of the development plan shall be submitted to the County Building and Safety Division for review and approval. 2) The Building and Safety Division shall verify compliance with the approved plans during site inspections.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to the issuance of Building Permits. 2) During Construction.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:			
AESTHETICS/LIGHT AND GLARE 5.4-4c The project shall use minimally reflective glass. All other materials used on exterior buildings and structures shall be selected with attention to minimizing reflective glare.			
IMPLEMENTATION AND VERIFICATION:			
1) Submit a copy of CC&Rs and/or design guidelines to the Planning Division for review and approval. 2) Provide a note on the Composite Development Plan listing this requirement. 3) The Building and Safety Division shall verify compliance during site inspections.			
COMPLIANCE RECORD:			
WHEN REQUIRED:	1) Prior to the recordation of the final map. 2) Prior to recordation of the final map. 3) During Construction.		
SUBMITTED:		**DATE SUBMITTED:**	
1.		1.	
2.		2.	
APPROVED BY:		**DATE APPROVED:**	
INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**
CORRECTION REQUIRED: (attach copies of correspondence)			**DATE:**

MITIGATION MEASURE:
AESTHETICS/LIGHT AND GLARE 5.4-4d Vegetated buffers shall be used along State Route 38 to reduce light intrusion on residential development and on forested areas located adjacent to the project site.
IMPLEMENTATION AND VERIFICATION:
1) Vegetation buffers on the open space lots shall be included on the Landscaping Plans which shall be submitted to the San Bernardino County Planning Division for review and approval. 2) Vegetation Buffers on individual lots adjacent to State Route 38 shall be included in the CC&Rs. 3) These vegetation buffers will be verified by the Building and Safety Division.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to approval of the Landscaping Plan. 2) Prior to recordation of the final map. 3) Prior to issuance of occupancy permits (for residential lots adjacent to State Highway 38).

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:			
AESTHETICS/LIGHT AND GLARE 5.4-4e Mitigation Measures 5.4-4a through 5.4-4d shall be included within the Conditions, Covenants and Restrictions (CC&Rs) of the Home Owner's Association (HOA).			
IMPLEMENTATION AND VERIFICATION:			
1) Submit a copy of the CC&Rs to the Planning Division for review and approval. 2) Building and Safety Division shall verify compliance with approved CC&Rs during site inspection.			
COMPLIANCE RECORD:			
WHEN REQUIRED:	1) Prior to recordation of final map. 2) During construction.		
SUBMITTED:		**DATE SUBMITTED:**	
1.		1.	
2.		2.	
APPROVED BY:		**DATE APPROVED:**	
INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**
CORRECTION REQUIRED: (attach copies of correspondence)			**DATE:**

MITIGATION MEASURE:
AESTHETICS/LIGHT AND GLARE 5.4-4f All outdoor light fixtures shall be cutoff luminaries and shall only use high- or low-pressure sodium lamps.
IMPLEMENTATION AND VERIFICATION:
1) Submit a copy of the CC&Rs and/or design guidelines to the Planning Division for review and approval. 2) The Building and Safety Division shall verify compliance with approved plans during site inspections.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to recordation of final map. 2) During Construction.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
AESTHETICS/LIGHT AND GLARE 5.4-4g The Project Applicant/Developer shall install light colored, reflective roof products. Such roofs shall utilize light colored, reflective materials that meet the performance standards developed by the Energy Star Labeled Roof Program, as well as the American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) Standards 90.1 and 90.2 on energy efficient buildings. This condition shall be verified by the County of San Bernardino Building and Safety Division prior to issuance of building permits.
IMPLEMENTATION AND VERIFICATION:
1) Submit a copy of the CC&Rs and/or design guidelines to the Planning Division for review and approval. 2) Provide a note on the Composite Development Plan listing this requirement. 3) The Building and Safety Division shall verify compliance with approved plans during site inspections.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to recordation of the final map. 2) Prior to recordation of the final map. 3) During construction.

SUBMITTED:	DATE SUBMITTED:
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	DATE:	INSPECTED BY:	DATE:

CORRECTION REQUIRED: (attach copies of correspondence)	DATE:

MITIGATION MEASURE:
TRAFFIC AND CIRCULATION 5.5-1 For existing traffic conditions, the intersection of Stanfield Cutoff and Big Bear Boulevard currently requires the eastbound right turn lane to be converted to an eastbound through lane, through the intersection. The eastbound right turn lane is restricted to an eastbound through lane, and involves roadway widening. The project's pro rata share of these off-site road improvements is estimated to be $17,748.
IMPLEMENTATION AND VERIFICATION:
1) The applicant shall submit evidence to the Planning Division that the project's pro rata share of off-site road improvements has been satisfied.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to the issuance of building permits.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
TRAFFIC AND CIRCULATION 5.5-3 For future traffic conditions, the intersection of Stanfield Cutoff and North Shore Drive shall require a traffic signal. The project's pro rata share of the signal is $56,523.
IMPLEMENTATION AND VERIFICATION:
1) The applicant shall submit evidence to the Planning Division that the project's pro rata share of off-site road improvements has been satisfied.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to the issuance of building permits.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:			
TRAFFIC AND CIRCULATION 5.5-4a Parking shall be restricted on State Route 38.			
IMPLEMENTATION AND VERIFICATION:			
1) The applicant shall submit evidence to the Planning Division that parking is restricted on State Route 38.			
COMPLIANCE RECORD:			
WHEN REQUIRED:	1) Prior to the issuance of building permits.		
SUBMITTED:		**DATE SUBMITTED:**	
1.		1.	
2.		2.	
APPROVED BY:		**DATE APPROVED:**	
INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**
CORRECTION REQUIRED: (attach copies of correspondence)			**DATE:**

MITIGATION MEASURE:			
TRAFFIC AND CIRCULATION 5.5-4b A 150-foot eastbound left turn pocket shall be striped for traffic on North Shore Drive turning left into the project entry locations.			
IMPLEMENTATION AND VERIFICATION:			
1) Submit evidence of left turn pocket to the Department of Public Works, and the Department of Public Works shall verify compliance.			
COMPLIANCE RECORD:			
WHEN REQUIRED:	1) Prior to the occupancy of the first residential unit.		
SUBMITTED:		**DATE SUBMITTED:**	
1.		1.	
2.		2.	
APPROVED BY:		**DATE APPROVED:**	
INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**
CORRECTION REQUIRED: (attach copies of correspondence)			**DATE:**

MITIGATION MEASURE:
TRAFFIC AND CIRCULATION 5.5-4c For future traffic conditions, intersection geometrics as recommended in Table 1b of the Kunzman Associates June 2003 *Traffic Analysis report*, shall be implemented.
IMPLEMENTATION AND VERIFICATION:
1) Submit intersection geometries to the Department of Public Works for review and approval and, the Department of Public Works shall verify intersection geometries.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to the recordation of the final map.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:			
TRAFFIC AND CIRCULATION 5.5-4d All streets internal to the project shall be constructed to full ultimate cross-sections.			
IMPLEMENTATION AND VERIFICATION:			
1) Submit evidence of compliance to the Department of Public Works and, the Department of Public Works shall verify compliance.			
COMPLIANCE RECORD:			
WHEN REQUIRED:	1) Prior to the issuance of the first building permit.		
SUBMITTED:		**DATE SUBMITTED:**	
1.		1.	
2.		2.	
APPROVED BY:		**DATE APPROVED:**	
INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**
CORRECTION REQUIRED: (attach copies of correspondence)			**DATE:**

MITIGATION MEASURE:			
TRAFFIC AND CIRCULATION 5.5-4e A STOP sign shall be installed to control outbound traffic on all site access roadways onto North Shore Drive.			
IMPLEMENTATION AND VERIFICATION:			
1) Submit evidence of stop sign installation on access roadways, to the Department of Public Works and, the Department of Public Works shall verify compliance.			
COMPLIANCE RECORD:			
WHEN REQUIRED:	1) Prior to the occupancy of the first residential unit.		
SUBMITTED:		**DATE SUBMITTED:**	
1.		1.	
2.		2.	
APPROVED BY:		**DATE APPROVED:**	
INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**
CORRECTION REQUIRED: (attach copies of correspondence)			**DATE:**

MITIGATION MEASURE:			
TRAFFIC AND CIRCULATION 5.5-4f The County of San Bernardino shall periodically review traffic operations in the vicinity of the site once the project is constructed in order to assure that the traffic operations are satisfactory.			
IMPLEMENTATION AND VERIFICATION:			
1) The County of San Bernardino Public Works Department shall verify compliance with the mitigation measure.			
COMPLIANCE RECORD:			
WHEN REQUIRED:	1) During Project implementation.		
SUBMITTED:		**DATE SUBMITTED:**	
1.		1.	
2.		2.	
APPROVED BY:		**DATE APPROVED:**	
INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**
CORRECTION REQUIRED: (attach copies of correspondence)			**DATE:**

MITIGATION MEASURE:
TRAFFIC AND CIRCULATION 5.5-4g Landscape plantings and signs shall be limited to 36 inches in height within 25 feet of project driveways to assure good visibility.
IMPLEMENTATION AND VERIFICATION:
1) Applicant shall submit a copy of CC&Rs to the Planning Division for review and approval. 2) Limitations on landscape plantings and signs on individual lots shall be included in the CC&Rs. Compliance with these limitations will be verified by the Building and Safety Division.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to the recordation of the final tract map. 2) Prior to the issuance of building permits.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
AIR QUALITY 5.6-1 In accordance with the County Development Code and SCAQMD Rules, the Project Applicant shall incorporate the following measures during the construction phase of the Project to the satisfaction of the SCAQMD and County of San Bernardino. Compliance with this measure is subject to periodic field inspections by the SCAQMD and County of San Bernardino. Grading: ▪ Apply non-toxic soil stabilizers according to manufacturer's specifications to all inactive construction areas (previously graded for ten days or more); ▪ Replace ground cover in disturbed areas as quickly as possible; ▪ Enclose, cover, water two times daily or apply non-toxic soil binders in accordance to manufacturer's specifications to exposed piles (i.e., gravel, sand, dirt) with 5% or greater silt content; ▪ Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 mph; and ▪ All trucks hauling dirt, sand, soil, or other loose materials shall be covered and shall maintain at least two feet of freeboard (i.e., minimum vertical distance between top of the load and the top of the trailer). Paved Roads: ▪ Sweep streets at the end of the day if visible soil material is carried onto adjacent public paved roads.
IMPLEMENTATION AND VERIFICATION:
1) Submit evidence to the Building and Safety Division that mitigation measures are being implemented. 2) The Building and Safety Division shall verify compliance with the mitigation measure.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) During the construction phase.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
AIR QUALITY 5.6-2 To the extent feasible, the project shall incorporate the installation of EPA-certified wood burning stoves or fireplaces. If this is not feasible, then the installation of a ceramic coating on the honeycomb inside a catalytic combustor shall be investigated as a feasible alternative. Alternatively, the use of natural gas fireplaces may be used as a feasible alternative.
IMPLEMENTATION AND VERIFICATION:
1) Provide a note on the Composite Development Plan and include in the Conditions Covenants and Restrictions. 2) Submit evidence of the installation of appropriate heating devices. 3) The Building and Safety Division shall verify installation during site inspection.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to Recordation. 2) During the construction phase. 3) During the construction phase.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:			
NOISE 5.7-1a Construction activities shall be limited to the hours of 7:00 a.m. to 7:00 p.m. Monday to Saturday and prohibited on Sundays and Federal Holidays.			
IMPLEMENTATION AND VERIFICATION:			
1) Applicant shall submit evidence of construction hours to the Building and Safety Division, and include the limitation of construction hours on all grading plans. 2) The Building and Safety Division shall verify construction does not take place during prohibited times.			
COMPLIANCE RECORD:			
WHEN REQUIRED:	1) Prior to issuance of grading permits. 2) During the construction phase.		
SUBMITTED:		**DATE SUBMITTED:**	
1.		1.	
2.		2.	
APPROVED BY:		**DATE APPROVED:**	
INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**
CORRECTION REQUIRED: (attach copies of correspondence)			**DATE:**

MITIGATION MEASURE:			
NOISE 5.7-1b All construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers, to the satisfaction of the County Engineer.			
IMPLEMENTATION AND VERIFICATION:			
1) Submit evidence of properly operating and maintained mufflers on all construction equipment to the County Building and Safety Division. 2) The County Building and Safety Division shall verify compliance with the mitigation measure.			
COMPLIANCE RECORD:			
WHEN REQUIRED:	1) During the construction phase. 2) During the construction phase.		
SUBMITTED:		**DATE SUBMITTED:**	
1.		1.	
2.		2.	
APPROVED BY:		**DATE APPROVED:**	
INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**
CORRECTION REQUIRED: (attach copies of correspondence)			**DATE:**

MITIGATION MEASURE:			
NOISE 5.7-1c Stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receptors, to the satisfaction of the County Engineer.			
IMPLEMENTATION AND VERIFICATION:			
1) The County Building and Safety Division shall verify emitted noise is directed away from sensitive receptors during site inspection.			
COMPLIANCE RECORD:			
WHEN REQUIRED:	1) During the construction phase.		
SUBMITTED:		**DATE SUBMITTED:**	
1.		1.	
2.		2.	
APPROVED BY:		**DATE APPROVED:**	
INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**
CORRECTION REQUIRED: (attach copies of correspondence)			**DATE:**

MITIGATION MEASURE:
NOISE 5.7-1d Stockpiling and staging areas shall be located as far as practical from noise sensitive receptors during construction activities, to the satisfaction of the County Engineer.
IMPLEMENTATION AND VERIFICATION:
1) The applicant shall submit evidence to the County Building and Safety Division that construction staging areas are located away from sensitive receptors. The applicant shall indicate the location of the construction staging areas on the grading plans, erosion control plans, and/or SWWP. 2) The County Building and Safety Division shall verify that staging areas are not located near sensitive receptors during site inspection.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to issuance of grading permits. 2) During the construction phase.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
BIOLOGICAL RESOURCES 5.8-1a Prior to vegetation clearing, grading, or other disturbance, the project site shall be surveyed during a year with precipitation at least 40 percent of average for the area to determine presence or absence of special status plant species and vegetation types. Surveys shall focus on special status vegetation types, and Threatened or Endangered, and CNPS List 1B and 2 species whose presence could not be determined during surveys due to lack of rainfall. The location and extent of special status species populations shall be mapped and the size of the populations accurately documented. Pebble plain habitat acreages will be recalculated following the survey using criteria established by the Habitat Management Guide for Pebble Plain Habitat on the National Forest System (2002). Should avoidance/retention on-site of the 4.91 acres of Pebble Plain habitat in permanent open space under a Conservation Easement Agreement not occur, the Project Applicant shall pay compensation for the loss of special status botanical resources identified on the project site during the survey by funding the purchase, establishment of a conservation easement, and management of off-site habitat within the conservation easement by an entity approved by the CDFG. Off-site habitat containing the same species as those identified within resources impacted by the proposed project shall be purchased at a ratio of 3:1 (i.e., three acres of habitat purchased for preservation for each acre impacted by development). Prior to the initiation of clearing or grading activities on the project site, the conservation easement will be established, the management entity will be approved by the CDFG, and a non-wasting endowment will be established for the monitoring and management of the preservation site by the management entity in perpetuity. If additional surveys during a year with precipitation at least 40 percent of average do not encounter additional special status plant resources, the Project Applicant is responsible for mitigating impacts to a minimum of 11.8-acres of pebble plain and open Jeffrey pine forest in the western half of the project site that is known to be occupied by the Federally-listed Threatened ash-gray Indian paintbrush. As such, the applicant would be required to fund the purchase and maintenance of 35.4-acres of offsite pebble plain and open Jeffrey pine forest habitat that contains special status plant species, including Ash-gray Indian paintbrush and others known to occur on the site.
IMPLEMENTATION AND VERIFICATION:
1) The applicant shall submit evidence of biological surveys to the Planning Division. 2) The conservation easement(s) shall be established and recorded on the tract map. 3) The applicant shall submit evidence to the County Planning Division that the conservation easement(s) is/are established, the management entity is approved, and a non-wasting endowment is established for the monitoring and management of the preservation site by the management entity in perpetuity.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to vegetation clearing, grading, or other disturbance. 2) Prior to recordation of the tract map 3) Prior to vegetation clearing, grading, or any other land disturbance.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.

APPROVED BY:		DATE APPROVED:	
INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**
CORRECTION REQUIRED: (attach copies of correspondence)			**DATE:**

MITIGATION MEASURE:
BIOLOGICAL RESOURCES 5.8-1b Trees identified on Exhibits 3 and 4 of the Bald Eagle Survey Report (Appendix E, see attached) as eagle perch locations shall be preserved in place upon project completion and shall not be removed under any circumstances. Any development that may occur within the project site and in the individual lots must avoid impacts to these trees and their root structures. All construction or landscaping improvements, including irrigation, will be prohibited on or around the exposed root structures or within the dripline of these trees. These restrictions on development of the individual tentative tracts must be clearly presented and explained to any potential prospective developers and/or homeowners prior to assumption of title and close of escrow. This measure shall be identified as a Note on the Composite Development Plan.
IMPLEMENTATION AND VERIFICATION:
1) The applicant shall include this measure as a note on the Composite Development Plan. 2) The Building and Safety Division shall verify the implementation of appropriate tree preservation during construction.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to recordation. 2) During the construction phase.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
BIOLOGICAL RESOURCES 5.8-1c Prior to vegetation clearing, grading, or other disturbance, the project site shall be surveyed to identify all large trees (i.e., greater than 20-inches in diameter at 4.5 feet from the ground) within 600 feet from the high water line. Trees identified on the project site as having a diameter in excess of 20-inches at four feet from the ground within 600 feet of the shoreline shall be documented and tagged. Any development that may occur within the project site and in the individual lots must avoid impacts to tagged trees and their root structures. All construction or landscaping improvements, including irrigation, will be prohibited on or around the exposed root structures or within the dripline of these trees. These restrictions on development of the individual tentative tracts must be clearly presented and explained to any potential prospective developers and/or homeowners prior to assumption of title and close of escrow. This measure shall be identified as a Note on the Composite Development Plan.
IMPLEMENTATION AND VERIFICATION:
1) The applicant shall include this measure as a note on the Composite Development Plan. 2) Forester to perform and certify compliance. 3) The applicant shall submit evidence to the Planning Division that tagged trees are protected. 4) The Building and Safety Division shall verify tree protection during site inspection.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to recordation of the tract map. 2) Prior to vegetation clearing, grading, or any other land disturbance. 3) Prior to vegetation clearing, grading, or any other land disturbance. 4) During the construction phase.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
BIOLOGICAL RESOURCES 5.8-1d Seven days prior to the onset of construction activities, a qualified biologist shall survey within the limits of project disturbance for the presence of any active raptor nests. Any nest found during survey efforts shall be mapped on the construction plans. If no active nests are found, no further mitigation would be required. Results of the surveys shall be provided to the CDFG. If nesting activity is present at any raptor nest site, the active site shall be protected until nesting activity has ended to ensure compliance with Section 3503.5 of the California Fish and Game Code. Nesting activity for raptors in the region of the project site normally occurs from February 1 to June 30. To protect any nest site, the following restrictions on construction are required between February 1 and June 30 (or until nests are no longer active as determined by a qualified biologist): (1) clearing limits shall be established a minimum of 300 feet in any direction from any occupied nest and (2) access and surveying shall not be allowed within 200 feet of any occupied nest. Any encroachment into the 300/200 foot buffer area around the known nest shall only be allowed if it is determined by a qualified biologist that the proposed activity shall not disturb the nest occupants. Construction during the nesting season can occur only at the sites if a qualified biologist has determined that fledglings have left the nest.
IMPLEMENTATION AND VERIFICATION:
1) Submit evidence of biologist consultant services contract/agreement. 2) The applicant shall submit evidence of biological surveys to the Planning Division. 3) The Planning Division shall verify that no active raptor nests were found.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to issuance of building permits. 2) Prior to initiating the construction phase. 3) Prior to initiating the construction phase.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
BIOLOGICAL RESOURCES 5.8-1e Vegetation removal, clearing, and grading on the project site shall be performed outside of the breeding and nesting season (between March and September) to minimize the effects of these activities on breeding activities of migratory birds and other species.
IMPLEMENTATION AND VERIFICATION:
1) The applicant shall include a note on the grading plans that vegetation removal and grading will be performed outside the breeding season (i.e., March to September). 2) Applicant shall submit evidence to the Planning Division that vegetation removal and grading will be performed outside the breeding season. 3) The Building and Safety Division shall verify compliance during construction/grading.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to issuance of grading permits. 2) Prior to issuance of grading permits. 3) During the construction phase.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
BIOLOGICAL RESOURCES 5.8-1f The use of the boat dock for motorized boating shall be prohibited between the dates of December 1 and April 1. No motorized boats shall be allowed to launch or moor in the vicinity of the boat dock at any time during this period. This restriction shall be clearly displayed on signage at the entrance to the parking lot and on the boat dock visible from both land and water. This requirement shall also be published in the Homeowner's Association CC&Rs.
IMPLEMENTATION AND VERIFICATION:
1) The applicant shall submit to the Planning Division a copy of the HOAs CC&Rs inclusive of the restriction of this measure. 2) The applicant shall install the required signage.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to recordation of the tract map. 2) During project construction, and prior to use of the boat dock.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
BIOLOGICAL RESOURCES 5.8-2a Street lamps on the project site shall not exceed 20 feet in height, shall be fully shielded to focus light onto the street surface and shall avoid any lighting spillover onto adjacent open space or properties. Furthermore, street lights shall utilize low color temperature lighting (e.g., red or orange).
IMPLEMENTATION AND VERIFICATION:
1) The applicant shall submit evidence to the Planning Division that street lamps conform to the guidelines. 2) The Public Works Division shall verify that street lamps conform to these guidelines.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to final approval of road improvement plans. 2) During the construction phase.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
BIOLOGICAL RESOURCES 5.8-2b Outdoor lighting for proposed homes on the individual tentative tracts shall not exceed 1,000 lumens. Furthermore, residential outdoor lighting shall not exceed 20 feet in height and must be shielded and focused downward to avoid lighting spillover onto adjacent open space or properties. These restrictions on outdoor lighting of the individual tentative tracts must be clearly presented and explained to any potential prospective developers and/or homeowners prior to assumption of title and close of escrow. This requirement shall also be published in the Homeowner's Association CC&Rs.
IMPLEMENTATION AND VERIFICATION:
1) The applicant shall submit to the Planning Division a copy of the HOA's CC&Rs inclusive of the restriction of this measure. 2) The individual lot owners shall submit evidence to the Building and Safety Division that the outdoor lighting conforms to these guidelines.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to recordation of the tract map. 2) During the construction phase.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
BIOLOGICAL RESOURCES 5.8-2c To limit the amount of human disturbance on adjacent natural open space areas, signs shall be posted along the northeastern and eastern perimeter of the project site where the property boundary abuts open space with the following statement: "Sensitive plant and wildlife habitat. Please use designated trails and keep pets on a leash at all times." In addition, a requirement stating that residents shall keep out of adjacent open space areas to the north with the exception of designated trails will be published in the Homeowner Association CC&Rs and a map of designated hiking trails will be provided to all residents.
IMPLEMENTATION AND VERIFICATION:
1) Sign design and text message shall be included in the Landscape Plan submitted to the Planning Division for review and approval. 2) The applicant shall submit to the Planning Division a copy of the HOA's CC&Rs, inclusive of the restrictions of this measure. 3) The applicant shall install the signs.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to recordation of the tract map. 2) Prior to recordation of the tract map. 3) Prior to issuance of the first occupancy permit.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
BIOLOGICAL RESOURCES 5.8-2d Prior to recordation of the final map, a landscaping plan for the entire tract shall be prepared (inclusive of a plant palette) with native trees and plant species, and, shall be submitted to the County of San Bernardino for review and approval by a qualified biologist. The review shall determine that no non-native or invasive plant species are to be used in the proposed landscaping. The biologist should suggest appropriate native plant substitutes. A note shall be placed on the Composite Development Plan indicating that all proposed landscaping (including landscaping on individual lots) shall conform with the overall approved tract map landscaping plan. A requirement shall be included stating that residents shall include a restriction of the use of tree and plant species to only native trees/plants approved per the overall tract map landscaping plan, the Homeowner Association CC&Rs shall also restrict (individual lot owners) to use only native tree and plant species approved per the overall tract map landscaping plan.
IMPLEMENTATION AND VERIFICATION:
1) The applicant shall submit a landscaping plan for the entire tract for review and approval by a qualified biologist, prior to recordation of the final map. 2) The applicant shall include a note on the Composite Development Plan indicating the approved native plant materials. 3) The applicant shall submit a copy of the HOA's CC&Rs, inclusive of the restrictions of this measure to the Planning Division and Building and Safety Division. 4) The individual lot owners shall submit landscaping plans (which conform with the overall approved tract map landscaping plan) to the Planning Division and Building and Safety Division for review and approval.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to recordation of the final tract map. 2) Prior to recordation of the final tract map. 3) Prior to recordation of the final tract map. 4) Prior to the issuance of individual building permits.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
BIOLOGICAL RESOURCES 5.8-2e Garages with automatic door openers shall be required. No exterior construction, grading or vegetation clearing shall be permitted between December 1 and April 1, which is the wintering period for bald eagles (i.e., the season when bald eagles are present in the Big Bear area).
IMPLEMENTATION AND VERIFICATION:
1) The applicant and/or subsequent individual lot owners shall submit evidence that automatic garage door openers are installed. 2) The applicant and/or subsequent individual lot owners shall not perform any exterior construction, grading, or vegetation clearing between December 1 and April 1, which will be verified by the Building and Safety Division. 3) Both requirements shall be noted on the Composite Development Plan and included in the Homeowners Association Conditions Covenants and Restrictions.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to issuance of occupancy permits. 2) During the construction phase. 3) Prior to Recordation.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
BIOLOGICAL RESOURCES 5.8-3 Per the direction of the California Department of Fish and Game, all unavoidable impacts to State and Federal jurisdictional lakes, streams, and associated habitat shall be compensated for with the creation and/or restoration of in-kind habitat on-site and/or off-site at a minimum 3:1 replacement-to-impact ratio. Additional requirements may be required through the permitting process depending on the quality of habitat impacted, project design and other factors.
IMPLEMENTATION AND VERIFICATION:
1) The applicant shall submit evidence (copies) of the required Federal and State Resources Agency's Permits (inclusive of details of compensation habitat), to the San Bernardino County Planning Division.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to issuance of grading permits, vegetation removal, and/or any other land-disturbing activity.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
CULTURAL RESOURCES 5.9-1 Project-related grading, grubbing, trenching, excavations, and/or other earth-moving activities in the project area shall be monitored by a qualified archaeologist. In the event that a material of potential cultural significance is uncovered during such activities on the project site, all earth-moving activities in the project area shall cease and the archeologist shall evaluate the quality and significance of the material. Earth-moving activities shall not continue in the area where a material of potential cultural significance is uncovered until resources have been completely removed by the archaeologist and recorded as appropriate.
IMPLEMENTATION AND VERIFICATION:
1) The applicant shall submit to the Planning Division a copy of a contract with a qualified archaeologist. 2) A qualified archaeologist shall perform the field monitoring. 3) The applicant shall submit the qualified archaeologists report of findings to the County Planning Division.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to grading, vegetation removal, and/or any other land-disturbing activity. 2) During the construction phase. 3) During the construction phrase.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
CULTURAL RESOURCES 5.9-2a Grading shall be monitored during excavation in areas identified as likely to contain paleontologic resources by a qualified paleontological monitor. Monitoring shall be accomplished for any undisturbed subsurface older alluvium, which might be present in the subsurface. The monitor shall be equipped to salvage fossils as they are unearthed to avoid construction delays and to remove samples of sediments which are likely to contain the remains of small fossil invertebrates and vertebrates. The monitor must be empowered to temporarily halt or divert grading equipment to allow for removal of abundant or large specimens.
IMPLEMENTATION AND VERIFICATION:
1) The applicant shall submit to the Planning Division a copy of a contract with a qualified paleontologist. 2) A qualified paleontologist shall perform the field monitoring. 3) The applicant shall submit the qualified paleontologist's report of findings to the County Planning Division.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to grading, vegetation removal, and/or any other land-disturbing activity. 2) During the grading phase. 3) During the grading phase.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:			
CULTURAL RESOURCES 5.9-2b Recovered specimens shall be prepared to a point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates.			
IMPLEMENTATION AND VERIFICATION:			
1) Submit evidence to the Planning Division that recovered specimens will be preserved.			
COMPLIANCE RECORD:			
WHEN REQUIRED:	1) During the construction phase.		
SUBMITTED:		**DATE SUBMITTED:**	
1.		1.	
2.		2.	
APPROVED BY:		**DATE APPROVED:**	
INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**
CORRECTION REQUIRED: (attach copies of correspondence)			**DATE:**

MITIGATION MEASURE:			
CULTURAL RESOURCES 5.9-2c Identification and curation of specimens into a museum repository with permanent retrievable storage shall occur for paleontological resources.			
IMPLEMENTATION AND VERIFICATION:			
1) Submit evidence that specimens will be stored for paleontological resources to the Planning Division.			
COMPLIANCE RECORD:			
WHEN REQUIRED:	1) During the construction phase.		
SUBMITTED:		**DATE SUBMITTED:**	
1.		1.	
2.		2.	
APPROVED BY:		**DATE APPROVED:**	
INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**
CORRECTION REQUIRED: (attach copies of correspondence)			**DATE:**

MITIGATION MEASURE:			
CULTURAL RESOURCES 5.9-2d A report of findings shall be prepared with an appended itemized inventory of specimens. The report shall include pertinent discussion of the significance of all recovered resources where appropriate. The report and inventory when submitted to the appropriate Lead Agency shall signify completion of the program to mitigate impacts to paleontologic resources.			
IMPLEMENTATION AND VERIFICATION:			
1) Submit the report of finding to the Planning Division for review.			
COMPLIANCE RECORD:			
WHEN REQUIRED:	1) During the construction phase.		
SUBMITTED:		**DATE SUBMITTED:**	
1.		1.	
2.		2.	
APPROVED BY:		**DATE APPROVED:**	
INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**
CORRECTION REQUIRED: (attach copies of correspondence)			**DATE:**

MITIGATION MEASURE:
GEOLOGY AND SOILS 5.10-1 The stability of south facing cut slopes shall be analyzed as part of the design-level geotechnical investigation. Utilizing 2:1 buttressed slopes using on site native soil materials, or constructing geotextile-reinforced soil buttresses for planned unstable cut slopes are typical engineering designs for stabilizing slopes. Either of these methods, or other methods must be approved by the San Bernardino County Department of Building and Safety.
IMPLEMENTATION AND VERIFICATION:
1) The design-level geotechnical investigation shall be submitted to the County Geologist for review/approval. 2) The Building Safety Division (i.e., County Geologist) shall verify compliance with the design-level geotechnical investigation.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to recordation of the tract map. 2) During the grading/construction phase.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:			
GEOLOGY AND SOILS 5.10-2a Due to the potential for erosion associated with younger alluvial deposits within the two major on-site stream channels, increased surface drainage quantities associated with development on-site shall be directed away from the stream channels.			
IMPLEMENTATION AND VERIFICATION:			
1) Demonstrate in the SWWP that surface drainage shall be directed away from stream channels. 2) The Department of Public Works shall verify compliance during site inspections.			
COMPLIANCE RECORD:			
WHEN REQUIRED:	1) Prior to issuance of grading permits. 2) During the construction phase. 3) During the construction phase.		
SUBMITTED:		**DATE SUBMITTED:**	
1.		1.	
2.		2.	
APPROVED BY:		**DATE APPROVED:**	

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
GEOLOGY AND SOILS 5.10-2b Prior to the issuance of Grading Permits, the Project Applicant shall prepare a Soil Erosion and Sedimentation Plan for submittal and approval by the County Building and Safety Department.
IMPLEMENTATION AND VERIFICATION:
1) The applicant shall submit a copy of the Soil Erosion and Sedimentation Plan to the Building and Safety Division. 2) The Building and Safety Division shall review/approve the Soil Erosion and Sedimentation Plan prior to issuance of grading permits.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to the issuance of Grading Permits. 2) During the grading/construction phase.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
GEOLOGY AND SOILS 5.10-3 Engineering design for all structures and roadways shall be based on the current California Uniform Building Code at the time of project development. Construction plans shall be in accordance with seismic design standards set forth by the County's Development Code and Uniform Building Code.
IMPLEMENTATION AND VERIFICATION:
1) Applicant shall submit a copy of the construction plans to the Building and Safety Department for review and approval. 2) The Building and Safety Department shall verify compliance with the construction plans during site inspections.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to the issuance of Grading Permits. 2) During the grading/construction phase.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:			
GEOLOGY AND SOILS 5.10-4 Residential structures shall be located in areas which provide a minimum of five feet of freeboard above the high water line for any structures.			
IMPLEMENTATION AND VERIFICATION:			
1) Applicant shall submit a copy of the construction plans to the Building and Safety Department for review and approval. 2) The Building and Safety Department shall verify compliance with the construction plans during site inspections.			
COMPLIANCE RECORD:			
WHEN REQUIRED:	1) Prior to the issuance of grading permits. 2) Prior to grading/construction phase.		
SUBMITTED:		**DATE SUBMITTED:**	
1.		1.	
2.		2.	
APPROVED BY:		**DATE APPROVED:**	
INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**
CORRECTION REQUIRED: (attach copies of correspondence)			**DATE:**

MITIGATION MEASURE:
GEOLOGY AND SOILS 5.10-5 Prior to grading permit issuance, a quantitative geotechnical analysis and design-level geotechnical engineering report shall be required and submitted to the County of San Bernardino Department of Building and Safety for their approval.
IMPLEMENTATION AND VERIFICATION:
1) The applicant shall submit a quantitative geotechnical analysis and design-level geotechnical investigation to the County Geologist for review and approval. 2) The Building and Safety Division (County Geologist) shall verify compliance with the approved geotechnical analysis and design-level geotechnical investigation.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to recordation of the tract map. 2) During grading/construction phase.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
GEOLOGY AND SOILS 5.11-1 The proposed cross culverts shall be sized for 100-year burn and bulking flow rates. The burn and bulking method would increase the runoff from the natural areas. The method provided in the Los Angeles County Hydrology Manual is recommended. In addition, the cross culverts shall all be designed with headwalls to prevent CMP crushing, and shall be maintained adequately.
IMPLEMENTATION AND VERIFICATION:
1) Applicant shall submit evidence to the Department of Public Works and the Building and Safety Division that proposed cross culverts shall be sized for 100-year flow rates. 2) The Department of Public Works and the Building and Safety Division shall verify compliance during site inspections.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to issuance of grading permits. 2) During the grading/construction phase.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
GEOLOGY AND SOILS 5.11-2a Within three months of project approval, the Project Applicant shall submit a plan for a detailed geohydrologic investigation. The plan must present the possible sources of groundwater selected for the project and the methodology proposed to investigate those sources. If the on-site wells are to be utilized to serve this project, it must be determined if either could draw water from Big Bear Lake. The plan must be prepared by a California Registered Geologist.
IMPLEMENTATION AND VERIFICATION:
1) The applicant shall submit a plan for a detailed geohydrologic investigation to the County Geologist, and to the Division of Environmental Health Services. 2) The Building and Safety Division (County Geologist) and the Division of Environmental Health Services shall verify compliance with recommendations of the investigation.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Within three months of project approval. 2) Prior to issuance of building permits.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:			
GEOLOGY AND SOILS 5.11-2b Within six months of plan approval, the Project Applicant shall submit the results of the geohydrologic investigation. The report must be prepared by a California Registered Geologist.			
IMPLEMENTATION AND VERIFICATION:			
1) The applicant shall, within six months of project approval, submit results of the geohydrologic investigation prepared by a California Registered Geologist to the Building and Safety Division (County Geologist) for review/approval. 2) The Building and Safety Division (County Geologist) shall verify compliance with recommendations.			
COMPLIANCE RECORD:			
WHEN REQUIRED:	1) Within six months of plan approval. 2) During the grading/construction phase.		
SUBMITTED:		**DATE SUBMITTED:**	
1.		1.	
2.		2.	
APPROVED BY:		**DATE APPROVED:**	
INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**
CORRECTION REQUIRED: (attach copies of correspondence)			**DATE:**

MITIGATION MEASURE:
GEOLOGY AND SOILS 5.11-2c Concurrently or within three months of approval by the geohydrologic report, the Project Applicant shall submit a groundwater monitoring plan in accordance with San Bernardino County's "Guidelines for Preparation of a Groundwater Monitoring Plan." The plan must be prepared by a California Registered Geologist.
IMPLEMENTATION AND VERIFICATION:
1) The applicant shall, concurrently or within three months of approval of the hydrogeologic report, submit a groundwater monitoring plan prepared by a California Registered Geologist, to the County Geologist and the Division of Environmental Health Services for review/approval. 2) The County Building and Safety Division (County Geologist) and the Division of Environmental Health Services shall verify compliance with the approved Groundwater Monitoring Plan.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Concurrently or within three months of approval by the geohydrologic report. 2) Prior to issuance of the first residential building permit.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:

GEOLOGY AND SOILS

5.11-3 Prior to Grading Permit issuance and as part of the Project's compliance with the NPDES requirements, a Notice of Intent (NOI) shall be prepared and submitted to the Santa Ana Regional Water Quality Control Board providing notification and intent to comply with the State of California general permit. Also, a Storm Water Pollution Prevention Plan (SWPPP) shall be completed for the construction activities on-site. A copy of the SWPPP shall be available and implemented at the construction-site at all times. The SWPPP shall outline the source control and/or treatment control BMPs to avoid or mitigate runoff pollutants at the construction-site to the "maximum extent practicable." At a minimum, the following shall be implemented from the *California Storm Water Best Management Practice Handbook - Construction Activity*:

- CA 1 Dewatering Operations – This operation requires the use of sediment controls to prevent or reduce the discharge of pollutants to storm water from dewatering operations.
- CA 2 Paving Operations – Prevent or reduce the runoff of pollutants from paving operations by proper storage of materials, protecting storm drain facilities during construction, and training employees.
- CA 3 Structural Construction and Painting – Keep site and area clean and orderly, use erosion control, use proper storage facilities, use safe products and train employees to prevent and reduce pollutant discharge to storm water facilities from construction and painting.
- CA 10 Material Delivery and Storage – Minimize the storage of hazardous materials on-site. If stored on-site, keep in designated areas, install secondary containment, conduct regular inspections and train employees.
- CA 11 Material Use – Prevent and reduce the discharge of pesticides, herbicides, fertilizers, detergents, plaster, petroleum products and other hazardous materials from entering the storm water.
- CA 20 Solid Waste Management - This BMP describes the requirements to properly design and maintain trash storage areas. The primary design feature requires the storage of trash in covered areas.
- CA 21 Hazardous Waste Management - This BMP describes the requirements to properly design and maintain waste areas.
- CA 23 Concrete Waste Management – Prevent and reduce pollutant discharge to storm water from concrete waste by performing on and off-site washouts in designated areas and training employees and consultants.
- CA 24 Sanitary Septic Water Management – Provide convenient, well-maintained facilities, and arrange regular service and disposal of sanitary waste.
- CA 30 Vehicle and Equipment Cleaning – Use off-site facilities or wash in designated areas to reduce pollutant discharge into the storm drain facilities.
- CA 31 Vehicle and Equipment Fueling – Use off-site facilities or designated areas with enclosures or coverings to reduce pollutant discharge into the storm drain facilities.
- CA 32 Vehicle and Equipment Maintenance – Use off-site facilities or designated areas with enclosing or coverings to reduce pollutant discharge into the storm drain facilities. In addition, run a "dry site" to prevent pollution discharge into storm drains.
- CA 40 Employee and Subcontractor Training – Have a training session for employees and subcontractors to understand the need for implementation and usage of BMPs.
- ESC 2 Preservation of Existing Vegetation – Minimize the removal of existing trees and shrubs since they serve as erosion control.
- ESC 10 Seeding and Planting – Provide soil stability by planting and seeding grasses, trees, shrubs, vines, and ground cover.
- ESC 11 Mulching – Stabilize cleared or freshly seeded areas with mulch.
- ESC 20 Geotextiles and Mats – Natural or synthetics material can be used for soil stability.
- ESC Dust Control – Reduce wind erosion and dust generated by construction activities by using dust control measures.
- ESC 23 Construction Road Stabilization – All on-site vehicle transport routes shall be stabilized immediately after grading and frequently maintained to prevent erosion and control dust.
- ESC 24 – Stabilized Construction Entrance – Stabilize the entrance pad to the construction area to reduce amount of sediment tracked off-site.

- ESC 30 Earth Dikes – Construct earth dikes of compacted soil to divert runoff or channel water to a desired location.
- ESC 31 Temporary Drains and Swales – Use temporary drains and swales to divert off-site runoff around the construction-site and stabilized areas and to direct it into sediment basins or traps.
- ESC 40 Outlet Protection – Use rock or grouted rock at outlet pipes to prevent scouring of soil caused by high velocities.
- ESC 41 Check Dams – Use check dams to reduce velocities of concentrated flows, thereby reducing erosion and promoting sedimentation behind the dams. Check dams are small and placed across swales and drainage ditches.
- ESC 50 Silt Fence – Composed of filter fabric, these are entrenched, attached to support poles, and sometimes backed by wire fence support. Silt fences promote sedimentation behind the fence of sediment-laden water.
- ESC 51 Straw Bale Barrier – Place straw bales end to end in a level contour in a shallow trench and stake them in place. The bales detain runoff and promote sedimentation.
- ESC 52 Sand Bag Barriers – By stacking sand bags on a level contour, a barrier is created to detain sediment-laden water. The barrier promotes sedimentation.
- ESC 53 Brush or Rock Filter – Made of 0.75 to 3-inch diameter rocks placed on a level contour or composed of brush wrapped in filter cloth and staked to the toe of the slope provides a sediment trap.
- ESC 54 Storm Drain Inlet Protection – Devices that remove sediment from sediment laden storm water before entering the storm drain inlet or catch basin.
- ESC 55 Sediment Trap – A sediment trap is a small, excavated, or bermed area where runoff for small drainage areas can pass through allowing sediment to settle out.

IMPLEMENTATION AND VERIFICATION:

1) The applicant shall submit a copy of the Notice of Intent and SWPPP to the Santa Ana Regional Water Quality Control Board for review and approval and a copy of the approved Notice of Intent and SWPPP to the County Building and Safety Division.
2) The Santa Ana Regional Water Quality Control Board and the County Building and Safety Division shall verify compliance with the Notice of Intent and SWPPP.

COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to grading permit issuance. 2) Prior to grading permit issuance.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	DATE:

MITIGATION MEASURE:

GEOLOGY AND SOILS

5.11-4a Prior to Grading Permit issuance, a Water Quality Management Plan shall be developed and shall include both Non-Structural and Source Control BMPs. The WQMP shall conform to the San Bernardino County Draft NPDES permit and WQMP standards. The following are the minimum required controls to be implemented as a part of the *Water Quality Management Plan (WQMP) for Urban Runoff*.

- Education for Property Owners, Tenants and Occupations – The Property Owners Association is required to provide awareness educational material, including information provided by San Bernardino County. The materials shall include a description of chemicals that should be limited to the property and proper disposal, including prohibition of hosing waste directly to gutters, catch basins, storm drains or the lake.
- Activity Restrictions – The developer shall prepare conditions, covenants and restriction of the protection of surface water quality.
- Common Area Landscape Management – For the common landscape areas on-going maintenance shall occur consistent with County Administrative Design Guidelines or city equivalent, plus fertilizer and pesticide usage consistent with the instructions contained on product labels and with regulation administered by the State Department of Pesticide Regulation or county equivalent.
- Common Area Catch Basin Inspection – Property Owners Associations shall have privately owned catch basins cleaned and maintained, as needed. These are intended to prevent sediment, garden waste, trash and other pollutants from entering the public streets and storm drain systems.
- Common Area Litter Control – POAs shall be required to implement trash management and litter control procedures to minimize pollution to drainage waters.
- Street Sweeping Private Streets and Parking Lots – Streets and Parking lots shall be swept as needed, to prevent sediment, garden waste, trash and other pollutants from entering public streets and storm drain systems.

The following controls from the *California Storm Water Best Management Practice Handbook - Municipal* shall be employed:

- SC10 Housekeeping Practices – This entails practices such as cleaning up spills, proper disposal of certain substances and wise application of chemicals.
- SC32 Used Oil Recycling – May apply to maintenance and security vehicles.
- SC72 Vegetation Controls – Vegetation control typically includes chemical (herbicide) application and mechanical methods. Chemical methods are discussed in SC10. Mechanical methods include leaving existing vegetation, cutting less frequently, hand cutting, planting low maintenance vegetation, collecting and properly disposing of clippings and cuttings, and educating employees and the public.
- SC73 Storm Drain Flushing – Although general storm drain gradients are sufficiently steep for self-cleansing, visual inspection may reveal a buildup of sediment and other pollutants at the inlets or outlets, in which case flushing may be advisable.

IMPLEMENTATION AND VERIFICATION:

1) The applicant shall submit a Water Quality Management Plan to the County Building and Safety Division to review compliance with the County NPDES.
2) The County Building and Safety Division shall verify compliance with the Water Quality Management Plan.

COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to the issuance of a grading permit. 2) Prior to the issuance of a grading permit.

SUBMITTED:	DATE SUBMITTED:
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	DATE:	INSPECTED BY:	DATE:

CORRECTION REQUIRED: (attach copies of correspondence)	DATE:

MITIGATION MEASURE:

GEOLOGY AND SOILS

5.11-4b The Water Quality Management Plan (WQMP) shall include Structural or Treatment BMPs. The structural BMPs utilized shall focus on meeting potential TMDL requirements for noxious aquatic plants, nutrients, sedimentation and siltation. The structural BMPs shall conform to the San Bernardino County NPDES permit and the San Bernardino WQMP standards.

Consistent with the WQMP guidelines contained in the Draft National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for San Bernardino County, Structural BMPs shall be required for the proposed Project. They shall be sized to comply with one of the following numeric sizing criteria or be considered by the permittees to provide equivalent or better treatment.

Volume Based BMPs shall be designed to infiltrate or treat either:

- The volume of runoff produced from the 85th percentile 24-hour storm event, as determined from the local historical rainfall record; or
- The volume of the annual runoff produced by the 85th percentile 24-hours rainfall event, determined as the maximized capture storm water volume for the area, from the formula recommended in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87 (1998); or
- The volume of annual runoff based on unit basin storage volume, to achieve 80% or more volume treatment by the method recommended in California Stormwater Best Management Practice Handbook – Industrial/Commercial (1993); or
- The volume of runoff, as determined from the local historical rainfall record, that achieves approximately the same reduction in pollutant loads and flows as achieved by mitigation of the 85th percentile 24-hour runoff event.

OR

Flow – based BMPs shall be designed to infiltrate or treat either:

- The maximum flow rate of runoff produced from a rainfall intensity of 0.2 inch of rainfall per hour; or
- The maximum flow rate of runoff produced by the 85th percentile hourly rainfall intensity, as determined from the local historical rainfall record, multiplied by a factor of two; or
- The maximum flow rate of runoff, as determined from the local historical rainfall record that achieved by mitigation of the 85th percentile hourly rainfall intensity multiplied by a factor of two.

The following are the minimum required controls to be implemented as a part of the *Water Quality Management Plan (WQMP) for Urban Runoff*.

- Control of Impervious Runoff – Surface runoff shall be directed to landscaped areas or pervious areas.
- Common Area Efficient Irrigation – Physical implementation of the landscape plan consistent with County Administrative Design Guidelines or city equivalent, which may include provision of water sensors, programmable irrigation timers, etc.
- Common Area Runoff-Minimizing Landscape Design – Group plants with similar water requirements in order to reduce excess irrigation runoff and promote surface filtration.
- Catch Basin Stenciling – "No Dumping – Flows to Lake" or equivalent effective phrase shall be stenciled on catch basins to alert the public as to the destination of pollutant discharging into storm drain.
- Debris Posts – These shall be installed to prevent large floatable debris from entering the storm drains. They shall be placed upstream of the cross culverts.
- Inlet Trash Racks – These shall be installed where appropriate to reduce intake and transport through the storm drain system of large floatable debris. Trash racks shall be provided where drainage from open areas enters storm drain or cross culverts.

IMPLEMENTATION AND VERIFICATION:			
1) The applicant shall submit a Water Quality Management Plan to the County Building and Safety Division to review compliance with the County NPDES, TMDLs and other WQMP standards. 2) The County Building and Safety Division shall verify compliance with the Water Quality Management Plan.			
COMPLIANCE RECORD:			
WHEN REQUIRED:	1) Prior to the issuance of a grading permit. 2) Prior to the issuance of a grading permit.		
SUBMITTED:		**DATE SUBMITTED:**	
1.		1.	
2.		2.	
APPROVED BY:		**DATE APPROVED:**	
INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**
CORRECTION REQUIRED: (attach copies of correspondence)			**DATE:**

MITIGATION MEASURE:

GEOLOGY AND SOILS

5.11-4c Storm water treatment under the NPDES Permit and the future TMDL requirements shall include the construction of treatment BMPs. Treatment BMPs appropriate for on-site use shall include infiltration trenches and basins, swales, inlet filtration, and/or water quality basins. All storm water runoff shall be treated before leaving the site to reduce pollutants in Big Bear Lake.

Infiltration Trenches and Basins

Infiltration Trenches and/or Basins shall be used on site to meet potential future TMDLs for noxious aquatic plants and nutrients. Infiltration trenches and basins treat storm water runoff through filtration. A typical infiltration trench is essentially an excavated trench that is lined with filter fabric and backfilled with stones. Depth of the infiltration trench shall range from three to eight feet and shall be located in areas with permeable soils, and water table and bedrock depth situated well below the bottom of the trench. Trenches shall not be used to trap coarse sediments since large sediment would likely clog the trench. Grass buffers may be installed to capture sediment before it enters the trench to minimize clogging. Infiltration basins shall be used for drainage areas between five and 50 acres. Infiltration basins shall be either in-line or off-line, and may treat different volumes such as the water quality volume or the 2-year or 10-year storm.

Swales

The project shall implement either vegetative swales, enhanced vegetated swales utilizing check dams and wide depressions, a series of small detention facilities designed similarly to a dry detention basin, or a combination of these treatment methods into a treatment train (series of Structural BMPs). The Water Quality Management Plan shall address treatment for the Project to assure that runoff from the site is treated to the "maximum extent practicable".

The swales shall be treated as water quality features and shall be maintained differently than grass areas. Specifically, pesticides, herbicide, and fertilizers, which may be used on the grass areas, shall not be used in the vegetation swales.

Filtration

Filtration shall be implemented as a treatment method and shall use drop-in infiltration devices or inline devices. Drop-infiltration devices at all curb inlets within the internal parking lots shall be implemented to provide potential pollutant removal. Existing examples of these filtration devices include the Drain Pac Storm Drain Inserts and Fossil Filters. These types of devices are efficient at removing oil and grease, debris, and suspended solids from treated waters. Some of these devices have also exhibited high efficiencies at removing heavy metals and other pollutants.

Inline devices suggested for use onsite include the Continuous Deflection Separator (CDS® unit). Once the runoff has entered the storm drain, an in-line diversion would direct the treatment flow to a CDS® unit. The CDS® unit is a non-blocking, non-mechanical screening system, which would provide a second line of defense for solids removal. Adsorption materials can be added within the CDS® unit to aid in the removal of oil and grease. The treated flow will exit the CDS® unit and continue downstream.

To assure the efficiency of these filtration devices, monitoring shall be conducted. The use of street sweeps on the parking lots and streets shall aid in reducing the amounts of sediment and debris that flow through the devices. This will extend the effectiveness of the devices during a storm and will lower the frequency of required maintenance. The devices shall be checked and cleaned, if necessary, once a month during the rainy season, following any precipitation and at the end of the dry season prior to the first precipitation event of the rainy season.

	Consideration shall be given to using these filtration units in other areas besides the parking lot inlets. Another potential location is at the downstream end of the tributary pipes that feed the discharge point. Siting these units at a downstream point would allow for the treatment of a greater amount of runoff.
IMPLEMENTATION AND VERIFICATION:	
1) The applicant shall submit a copy of the Stormwater treatment BMPs to the County Building and Safety Division for review. 2) The County Building and Safety Division shall review BMPs to verify compliance with NPDES and TMDL requirements.	
COMPLIANCE RECORD:	
WHEN REQUIRED:	1) Prior to the issuance of grading permits. 2) Prior to the issuance of grading permits.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

14.0 Comments and Responses

14.0 COMMENTS AND RESPONSES

14.1 CEQA REQUIREMENTS

In accordance with Section 15088, 15089 and 15132 of the California Environmental Quality Act (CEQA) Guidelines, the County of San Bernardino has prepared the Environmental Impact Report (EIR) for the Moon Camp Tentative Tract #16136 Residential Subdivision Project (SCH #2002021105).

This Comments and Responses section combined with the Draft EIR, which was circulated from March 30, 2004 to May 13, 2004, make up the Final EIR. CEQA requires a 45-day public review period for a project of this nature. Although the public review period ended on May 13, 2004, the County did accept comment letters after this date, as late as July 2, 2004, to which responses will be provided. Any additional County recommendations or requirements during the certification process will make up the final components of this EIR.

The following is an excerpt from the CEQA Guidelines, Section 15132:

"The Final EIR shall consist of:

(a) The Draft EIR or a version of the draft.

(b) Comments and recommendations received on the Draft EIR either verbatim or in summary.

(c) A list of persons, organizations and public agencies commenting on the Draft EIR.

(d) The responses of the Lead Agency to significant environmental points raised in the review and consultation process.

(e) Any other information added by the Lead Agency."

This Comments and Responses section includes all of the above-required components and shall be attached to the revised Draft EIR to make up the Final EIR. Each comment letter is followed by the corresponding responses. A response is provided for each comment raising significant environmental issues, as received by the County during the Draft EIR review period. Added or modified text is double underlined (<u>example</u>) while deleted text is struck out (~~example~~).

14.2 LIST OF COMMENTORS: 45-DAY DRAFT EIR REVIEW

FEDERAL, STATE AND LOCAL GOVERNMENT AGENCIES

1. Wes Reeder, County of San Bernardino
2. Greg Holmes, Department of Toxic Substances Control
3. Leslie MacNair, California Department of Fish and Game
4. Dennis Castrillo, California Governor's Office of Emergency Services
5. Jeffrey M. Smith, Southern California Association of Governments
6. Allison L. Stewart, United States Department of Agriculture
7. Terry Roberts, California Governor's Office of Planning and Research: State Clearinghouse and Planning Unit

PRIVATE/SPECIAL INTEREST GROUPS

8. Rogelio A. Rawlins, The Gas Company
9. Janet Davidson, Friends of Fawnskin
10. Sandy Steers, Friends of Fawnskin
11. Kassie Siegel, Center for Biological Diversity
12. Thomas Brandau, Friends of Fawnskin
13. Sandy Steers, Friends of Fawnskin
14. Ervin Nichols, The Sierra Club
15. Phillip R. Goode, William H. Marquette, and John R. Varsik, Big Bear Solar Observatory
16. Dorothy Myers, San Bernardino Audubon Society

INDIVIDUALS

17. Betty Conroy
18. Peg Allen
19. Barbara J. Finlayson-Pitts, Ph.D. and James N. Pitts, Jr., Ph. D.,
20. Herbert V. Clotts
21. Robert R. Henrich
22. Donald L. Eads, M.D.
23. Mary Lu Drake
24. Christine Florio
25. Everett H. Greenberg
26. Robert S. Drake
27. Joseph and Barbara Francuz
28. Jane E. MacNett
29. James C. McGrew and Lola E. McGrew
30. Roman M. Silberfeld
31. William C. Hazewinkel
32. Robert R. Henrich
33. Lindi Holland
34. Anne Browning McIntosh, AICP
35. James C. McGrew
36. Ervin Nichols

37. Peter J. Tennyson
38. Nancy Walker
39. Joseph and Barbara Francuz
40. Martha Brown
41. Robin and Scott Eliason
42. Marla J. Henrich
43. Dr. Gerald and Natalie Marks
44. William Hazewinkel and Nancy Walker
45. Beverly Ornelas
46. Sandy Steers
47. R. Lee and Marilyn Whitney
48. Thomas and Kimberly Brickley
49. Roman Silberfeld
50. Peter J. and Mary Tennyson
51. Gary and Judith Schkade
52. Stephen Youngerman
53. Marc and Mildred Mandel

COMMENT NO. 1

INTEROFFICE MEMO

DATE April 15, 2004

PHONE (909) 387-4240
MAIL CODE 0181

FROM WES REEDER, County Geologist
Building and Safety Division

TO MATT SLOWIK, Senior Associate Planner
Advance Planning Division

SUBJECT COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT REPORT, MOONCAMP DEVELOPMENT PROJECT, FAWNSKIN

Comments were previously provided for the Administrative Draft Environmental Impact Report (Interoffice memorandum dated September 12, 2002) and the Screencheck Draft Environmental Impact Report (August 5, 2003). Many of those previous comments are still applicable to the Draft Environmental Impact Report (DEIR).

Generally, there are two areas of concern, which include groundwater and the need for geotechnical and geologic design-level investigations.

Groundwater

The DEIR concludes that impacts related to water are considered as significant and unavoidable. The mitigation listed in table 2.2 of the DEIR includes a requirement for a video inspection of the existing on-site water wells prior to issuance of building permits. However, it is unclear just what "impact" this is intended to mitigate. The way this issue is presented in the DEIR is inconsistent with my understanding of the nature of the anticipated impacts and inconsistent with our previous discussions. 1-1

The water issue includes several subissues that appear to have been lumped into one overall impact. These subissues are: 1-2

- Current lack of a designated water purveyor
- Overdraft of the underlying aquifer
- Possible connection of the on-site wells with the waters of Big Bear Lake
- Need for additional off-site wells and/or construction of a new water reservoir

As you are aware, release of the DEIR was delayed several months pending publication of the Focused Geohydrologic Evaluation by Geoscience Support Services, Inc. for the City of Big Bear Lake Department of Water and Power (DWP). The report, dated December 3, 2003 was intended to supercede a previous Geohydrologic Investigation conducted by Geoscience in July 2000. However, the DEIR spends much time discussing the older report. In addition, page 5.11-6 states that the western one-third of the site lies within the Grout Creek Hydrologic Subunit and references the 2000 Geoscience report. This is incorrect. The DEIR then continues to discuss groundwater conditions within the Grout Creek Hydrologic Unit, although no project-related wells are currently proposed there. 1-3

The conclusion of the recently released 2003 study is simple and clear. The entire Moon Camp site is located within Subunit A of the North Shore Hydrologic Subunit. Subunit A is estimated to have an average groundwater recharge of 29-acre feet per year. According to page 5.3-16 of the DEIR, the DWP has estimated an Average Daily Demand for project water at 41,400 gallons. This equates to approximately 46 acre-feet per year. Therefore, there is a net deficit of 12-acre feet (46-29=12). The DEIR misses this point altogether. 1-4

The DEIR is inconsistent with respect to the overdraft discussion. Page 5.11-20 states "*the proposed project may result in groundwater overdraft*". Page 5.11-23 states that the groundwater basin "*is in a state of overdraft*". Page 8-15 states that "*a potential groundwater overdraft condition would occur*" due to the project. To indicate that groundwater overdraft may occur, would occur and is occurring is inconsistent. 1-5

The possible connection between the on-site wells and the waters of Big Bear Lake was mentioned in both of the Geoscience reports and in the DEIR. However, it is not treated as a separate issue. It should be considered independent from the impact of groundwater overdraft in that it may be possible to mitigate this impact by relocating wells up slope and away from the lake. 1-6

Page 5.3-16 of the DEIR states that the project applicant "*would be required to deposit funds with the DWP for new well construction unless a proven source of supply is provided by the developer at locations satisfactory to DWP and not exceeding sub-basin safe yields*". However, it is unknown whether DWP will be the water purveyor. In addition, if new wells are considered as part of the project description (on or off site) their potential impacts should be included in the environmental analysis. 1-7

Page 5.3-17 of the DEIR indicates that the existing Cline Miller Reservoir is not capable of serving the project. Apparently, a new reservoir 300% to 400% larger would be required. In addition, a 12-inch transmission pipeline would be required to connect the project to the new reservoir. It is unclear why these are not considered part of the project description. 1-8

Geotechnical/Geologic Design Criteria

To date, only a geologic feasibility study has been submitted and approved through the Building and Safety Division. Design-level geologic and geotechnical investigations are required prior to recordation and prior to issuance of grading or building permits. The need for additional studies was indicated in the DEIR but placed as mitigation for expansive soils (see Section 5.10-5 on page 5.10-15 and elsewhere in the DEIR). The requirement for an engineering geology investigation and a liquefaction analysis has nothing to do with the potential for expansive soils. 1-9

The DEIR implies that specific design has been recommended and approved for this project. Section 5.10-1 on page 5.10-15 (and elsewhere) states "*south facing cut slopes **shall** utilize 2:1 buttressed slopes using on site native materials, or by constructing geotextile-reinforced soil buttresses where cut slopes are planned*". (Emphasis added.) The design and methods utilized for cut slope stability must be approved by Building and Safety. As stated, no design-specific reports have been submitted for technical review. The DEIR should simply state that there is a potential for instability of south facing cut slopes and that this instability can be mitigated through standard engineering design as recommended in the required geologic and geotechnical reports. 1-10

WR:ljg

cc: Randy Scott, Division Chief, Advance Planning Division

Response to Commentor No. 1
Wes Reeder, County of San Bernardino
April 15, 2004

1-1 The purpose of the video logs is to determine if any modifications to the existing non-operative wells are necessary prior to use. Analysis and Mitigation Measure 5.3-6a of the Draft EIR have been updated to reflect the nature of the video inspection logs and requirement for step-drawdown and constant rate pumping tests.

Page 5.3-16, Paragraph 5 of the Draft EIR has been revised in the Final EIR as follows:

> Potential Water Supply Wells FP-2 and FP-3. As stated above, the project site includes two existing on-site water wells located within the North Shore Hydrologic Subunit that could potentially supply water to the project. ~~The two wells referenced may have potential to meet the Moon Camp area demand requirements.~~ The wells, which were drilled in 1987, are located on the Moon Camp property and are not currently in operation. The most recent data available regarding the wells was collected in 1987 and is summarized in Table 5.3-2, *Summary of Data on Wells FP-2 and FP-3*.

Page 5.3-17, Paragraph 1 of the Draft EIR has been revised in the Final EIR as follows:

> Although the yields indicate that the wells show adequate potential to supply water to the project, the North Shore Hydrologic Subunit has been identified to likely be in a state of overdraft and more specifically, subarea A is estimated to have a recharge rate of approximately 29-acre feet per year, which is not enough to meet the 46 acre-feet per demand of the proposed project. ~~Although overdraft conditions have been noted for the groundwater basin, the yield of the wells (as tested in 1987), show adequate water supply potential. However, prior to use, video logs should be run on each well to examine the condition of the casing and screen. Based on review of the video logs, it can be determined if any modifications are necessary prior to use. Following the video inspection (and redevelopment if necessary), updated values of production rates and pumping levels should be obtained through step-drawdown and constant rate pumping tests. Water samples should also be taken during testing and analyzed in accordance with standard requirements for a potable water supply.~~

Page 5.3-23, Mitigation Measure 5.3-6a of the Draft EIR has been revised in the Final EIR as follows:

5.3-6a	~~Prior to approval of building permits, a video inspection of water supply casings and screen shall be conducted in order to update~~ Values of production rates and pumping levels for on-site water supply wells shall be obtained through step-drawdown and constant rate pumping tests. Water samples shall be taken during the inspection for testing and analysis in accordance with standard requirements.

1-2 The sub-issues identified by the Commentor are addressed in Section 5.3, *Public Services and Utilities*, and Section 5.11, *Hydrology and Drainage*. Also, refer to Response to Comment Nos. 1-3 to 1-6.

1-3 Section 5.11, *Hydrology and Drainage*, of the Draft EIR has been revised to state the applicable use of data included within the 2000 and 2003 reports prepared by Geosciences (GSS). The GSS 2003 report includes current data on groundwater supplies in the North Shore and Grout Creek Hydrologic Subunits. The findings in the GSS 2003 report regarding groundwater supplies are assumed to supercede the GSS 2000 report findings. However, the data regarding groundwater quality and well operations in the GSS 2000 report are still applicable and cited in the Final EIR, where appropriate. The Final EIR text has been updated to cite that the project is located entirely within tributary subarea A of the North Shore Hydrologic Subunit. Although the project is located within subarea A of the North Shore Hydrologic Subunit, groundwater conditions are also analyzed for the Grout Creek Hydrologic Subunit because water resources from this area could potentially be utilized as a water resource for the project. The EIR concludes that future studies and analysis will be required to provide proof of a proven water supply source for the project, regardless of whether the water resources come from the North Shore and/or Grout Creek Hydrologic Subunits or any other source.

Page 5.11-6, beginning with Paragraph 5 of the Draft EIR has been revised in the Final EIR as follows:

As stated above, ~~T~~the groundwater conditions cited in this EIR are based on two separate reports prepared by Geoscience Support Services, Inc. (GSS). The GSS 2000 report includes data on the groundwater quality, on-site well operations (Wells-FP-2 and FP-3) and groundwater supply potential. ~~in 2000 and a~~ The GSS 2003 report ~~Focused Geohydrologic Evaluation of the Maximum Perennial Yield for the North Shore and Grout Creek Hydrologic Subareas, prepared in 2003~~ includes current data on groundwater supplies in the North Shore and Grout Creek Hydrologic Subunits. The findings in the GSS 2003 report regarding groundwater supplies are assumed to supercede the 2000 findings. The GSS 2003 report presents a focused geohydrologic evaluation of the maximum perennial yield of the North Shore and Grout Creek Subunits that includes dividing each subunit into smaller tributary subareas. However, the data regarding groundwater quality and well operations in the GSS 2000 report are still applicable and cited in this section.

It is also noted that the wells analyzed in the GSS 2000 report are not included in the GSS 2003 report, as they are non-operational. Well FP-2 is located on the Moon Camp project site.

Although the project area is located entirely within tributary subarea A of the North Shore Hydrologic Subunit, potential groundwater resources are analyzed for both the North Shore and the Grout Creek Hydrologic Subunits as they are both considered potential sources to supply water to the project.

~~According to the 2000 report, the entire project site is within subunit A of the North Shore subarea of Big Bear Lake. The western one-third lies within the Grout Creek subarea. The North Shore subarea is similar in several respects to the Grout Creek subarea. For example, a considerable amount of the water bearing (older alluvial) material present is above the known groundwater surface. Only a band of these materials adjacent to Big Bear Lake are continuously saturated.~~

~~According to a recent geohydrologic investigation of the Moon Camp Area by Geoscience Support Services (GSS, 2000), the older alluvial deposits represent the main water-bearing formation beneath the site. Groundwater level data from two U.S. Forest Service wells located within the project area suggest that Big Bear Lake provides recharge to the aquifer beneath the project area. Additional groundwater recharge emanates from gravity drainage from the higher elevations north of the Moon Camp area.~~

~~Based on studies by GSS (2000), the main water-bearing zones within the older alluvial deposits consist of intermixed and interlayered sand and gravels. However, lithologic data from the two U.S. Forest Service wells indicate that these sand and gravel aquifers are not continuous over wide areas and tend to follow subsurface channels (GSS, 2000). In mid 2000, groundwater beneath the southern margin of the site was approximately 5 to 10 feet below the level in the lake. More recent groundwater level observations from the three exploratory borings drilled for the liquefaction analysis appears to be similar with respect to the level of the lake.~~

~~The results from GSS 2000 geohydrologic investigation indicate the recoverable amount of groundwater in the Moon Camp area is estimated at 230 acre-feet per year. Based on the nature of the aquifer materials, thickness of the aquifer and the discharge rate of existing wells in the Moon Camp area is estimated at 230 acre-feet per year. Based on the nature of the aquifer materials, thickness of the aquifer and the discharge rate of existing wells in the Moon Camp area, the potential to develop a 100 gallon per minute (gpm) water well supply is considered by GSS (2000) to be good. Chemical analyses of the groundwater from the two on-site water wells indicate that the groundwater is of superior quality. However, the iron concentration (0.69 mg/l) in one well exceeds the state maximum concentration limit for iron (0.3 mg/l) (GSS, 2000).~~

The following insert, to be added following Paragraph 3 on Page 5.11-8 of the Draft EIR, is included in the Final EIR:

NORTH SHORE HYDROLOGIC SUBUNIT

Groundwater in the North Shore Hydrologic Subunit generally occurs in the unconsolidated alluvial deposits on the lower slopes of the surrounding mountains and in the fractures and weathered portions of the bedrock. Groundwater in the alluvium occurs at depths ranging from approximately 5 feet (ft) in the western portions of the Subunit and near the RV Park wells to approximately 50 ft near Division Well Nos. 6 and 7 (refer to Figure 2 in the GSS 2003 report for well location in the North Shore and Grout Creek Subunits).

Groundwater flows by gravity drainage from areas of high elevation (the mountain slopes) into areas of low elevation, ultimately collecting in the sediments beneath Big Bear Lake. Groundwater recharge likely occurs as deep percolation of runoff through the younger alluvium and fractures in the bedrock during periods of prolonged precipitation.

The primary sources of groundwater discharge from the North Shore Subunit are underflow and groundwater pumping from wells within the Subunit. The DWP currently operates four vertical production wells within the North Shore Subunit (RV Park Well Nos. 1 and 2 and Division Well Nos. 6 and 7). Combined average annual groundwater production from DWP wells between 1993 and 2002 is 282 acre-feet per year acre-ft/yr. Pumping data for the 20 private wells in the Subunit were not available. However, assuming that they are domestic sources and that an average single family home uses approximately 200 gallons per day per year (gpd/yr), it is estimated that production from these wells is approximately 4.5 acre-ft/yr.

Groundwater levels in the central portion of the North Shore Hydrologic Subunit, as measured in RV Park Well No. 1, have declined approximately 20 feet between 1996 and 2002. The groundwater level in this well is relatively stable, however, with most of the decline occurring after year 2000, a period of relatively dry climatic conditions. Groundwater levels in Division Well No. 6, located in the eastern portion of the Subunit, have declined approximately 80 ft between 1992 and 2003. Recent groundwater level declines in the eastern portion of the Subunit can also be correlated with dry climatic conditions, although the greater degree of decline is also a reflection of higher groundwater production in the area.

Estimates of Average Annual Groundwater Recharge (North Shore Subunit)

Estimates of average annual groundwater recharge were assigned to each tributary subarea using the watershed model. Required input parameters for the watershed model for which no measured data were available were obtained from the EPA database of hydrologic parameters. Based on the watershed modeling results, the estimates of average annual groundwater recharge for the North Shore Hydrologic Subunit range from approximately 150 to 430 acre-ft/yr with a midpoint of approximately 290 acre-ft/yr. This range of recharge is approximately 2 to 7 percent of average annual precipitation for the Subunit, which is within the range of accepted recharge estimates for other groundwater basins in southern California (3 to 7 percent) determined by the Metropolitan Water District of Southern

California (MWD). The midpoint of the range is approximately 4.5 percent of precipitation for the Subunit.

Estimates of average annual groundwater recharge for the six tributary subareas range from 27 acre-ft/yr (subarea E) to 73 acre-ft/yr (subarea B) (refer to Table 5.11-3, *Summary of Groundwater Recharge Results North Shore Tributary Subareas*). These groundwater recharge estimates represent the average of the watershed model output range, which is based on the average of typical and possible input values. The data suggests that the RV Park wells are producing groundwater at a rate (approximately 14 acre-ft/yr), which is well within their subarea's (subarea B) average annual groundwater recharge. Combined average annual groundwater production from Division Well Nos. 6 and 7 is exceeding that subarea's (subarea F) average annual groundwater recharge. However, it is important to note that these wells are in the alluvial portion of the subarea, which is in hydraulic continuity with the alluvial portions of the adjacent hydrologic subunit (i.e. the Division Subunit to the south). Accordingly, production from these wells should be evaluated in the context of the groundwater basin in this area and not the watershed tributary to the wells.

Maximum Perennial Yield (North Shore Subunit)

According to the GSS 2003 report, the midpoint of the estimated range of average annual groundwater recharge (approximately 290 acre-feet per year) is considered a good estimate of maximum perennial yield for the North Shore Hydrologic Subunit, given the available data.

The following insert, to be added below Table 5.11-3 on Page 5.11-8 of the Draft EIR, is included in the Final EIR:

GROUT CREEK HYDROLOGIC SUBUNIT

Groundwater within the Grout Creek Subunit occurs in both the bedrock and alluvium. The Cedar Dell slant wells (located in subarea C) are drilled into the Mesozoic granitic rock and typically produce approximately 20 gallons per minute, collectively. Groundwater in the alluvium occurs at depths ranging from approximately 20 to 90 ft and flows to the south toward Grout Bay (Big Bear Lake) at a gradient of 0.024 to 0.043 ft/ft. Pumping test and lithologic data from the Barbara Lee Lane Well and specific capacity data from Wells 12P01, 13C01, and Northshore Well Nos. 1, 2, and 3 were used to estimate aquifer transmissivity. Estimates range from 700 to 1,900 gpd/ft.

Groundwater recharge likely occurs within the Grout Creek streambed during periods of extended runoff, near the contact between the bedrock and alluvium and, to a lesser extent, as percolation of precipitation directly on the alluvium. Groundwater recharge also occurs through fractures in the bedrock formations.

The primary sources of groundwater discharge from the Grout Creek Subunit are underflow and groundwater pumping from wells within the Subunit. DWP currently

operates two vertical production wells, two slant wells in bedrock, and one spring within the Grout Creek Subunit. Average annual groundwater production from DWP wells within the Subunit from 1989 to 2002 has been approximately 134 acre-ft/yr. With the exception of pumping from Barbara Lee Lane Well No. 1, all of the municipal groundwater production in the Grout Creek Hydrologic Subunit is from tributary subarea C. Pumping data for the 29 private wells in the Subunit were not available. However, assuming that they are domestic sources and that an average single family home uses about 200 gpd/yr, it is estimated that production from these wells is approximately 6.5 acre-ft/yr.

Estimates of Average Annual Groundwater Recharge (Grout Creek Subunit)

Groundwater level elevations in North Shore Well Nos. 1 and 3, both located at the discharge end of tributary subarea C, have been relatively stable between 1995 and 2003, with seasonal fluctuations and a minor decline during the relatively dry climatic cycle from 1999 to December 2003. The average annual groundwater recharge of the Grout Creek Subunit was estimated using the underflow method and the watershed model.

The underflow method indicated an average annual groundwater recharge estimate of approximately 200 acre-ft/yr. It should be noted, however, that the underflow calculation only accounts for outflow in the alluvial aquifer and does not account for outflow through the bedrock in the Subunit. It is assumed that some outflow occurs within the bedrock aquifer, which is one reason why the underflow estimate for the Grout Creek Subunit is lower than the perennial yield estimate from the watershed model (described below).

Based on the watershed modeling results, the average annual groundwater recharge for the Grout Creek Hydrologic Subunit (subareas A through D) is estimated to range from approximately 260 to 840 acre-ft/yr with a midpoint of approximately 550 acre-ft/yr (refer to Table 5.11-4, *Summary of Groundwater Recharge Results Grout Creek Tributary Subareas*). This range of recharge is approximately 2 to 8 percent of average annual precipitation for the Subunit. The midpoint of the range is approximately 5 percent of precipitation for the Subunit. Assumed input parameters for the watershed model are based on the average of EPA' s suggested parameter ranges.

The relative disparity between the average annual recharge estimates obtained from the underflow analysis and watershed model is partly due to the estimated nature of the input parameters used in each analysis. In the case of the underflow analysis, the transmissivity parameter is estimated based on review of lithologic logs and pumping tests in wells within the Big Bear area that are perforated in similar aquifer materials. More representative values can be obtained via formal aquifer pumping tests using the wells in the Subunit. For the watershed model, 18 of the 20 required input parameters are estimated from the EPA' s database, which is not specific to the mountains of Southern California. Additionally, the underflow analysis does not account for all of the recharge within the bedrock. As data is collected in the future, the range of recharge will become less.

Estimates of average annual groundwater recharge for the four tributary subareas range from 66 acre-ft/yr (subarea D) to 217 acre-ft/yr (subarea C). These average annual recharge values represent the average of the watershed model output range, which is based on the average of typical and possible input values. These data suggest that average annual groundwater production from the Grout Creek Hydrologic Subunit (approximately 134 acre-ft/yr), which occurs almost entirely from tributary subarea C, is within the average annual recharge for both the tributary subarea and the hydrologic subunit.

Maximum Perennial Yield (Grout Creek Subunit)

The maximum perennial yield of the Grout Creek Hydrologic Subunit is within the range of average annual groundwater recharge specified by the watershed model, but is more likely to be in the lower end of the range than the upper end. As mentioned previously, by definition, maximum perennial yield is the amount of water that can be developed economically, legally and politically. In consideration of this, subareas A and B of the Grout Creek Subunit are remote and are located on land under the jurisdiction of the United States Forest Service (USFS). There is no established distribution system in subareas A and B of the Grout Creek Subunit. Furthermore, access to the area would likely require a lengthy negotiation process with the USFS. Given these factors, developing groundwater resources in these subareas is not currently practical.

At this time, it is recommended to use the sum of the midpoint recharge estimates for tributary subareas C and D (217 acre-ft plus 66 acre-ft; see Table 5.11-4) as the maximum perennial yield for the Grout Creek Subunit (total of 283 acre-ft/yr). It should be emphasized that as groundwater production is initiated in each subarea, it will be very important to monitor groundwater levels in dedicated non-pumping monitoring wells (i.e., "key wells") located in each tributary subarea from which groundwater is extracted. As was recommended for the North Shore Hydrologic Subunit, future management of the groundwater resources in each tributary subarea should rely more on established groundwater level thresholds than the perennial yield estimates.

The results of the groundwater recharge analysis for the Grout Creek Subunit are as follows:

Table 5.11-4
Summary of Ground Water Recharge Results
Grout Creek Tributary Subareas

Tributary Subarea	Area (acres)	Annual Precipitation	Average Annual Ground Water	Average Annual Ground Water	Average of Ground Water
A	1,074	33.44	74	249	161
B	850	29.01	50	160	105
C	1,668	29.93	104	331	217

D	592	26.74	32	99	66
Total (A to D)	4,184	119	260	839	549
Total (C and D only)	2,260	56.67	136	430	283
Tributary subareas A and B are excluded from the totals because they are not currently practicable to developed due to their remote locations and are located on land under the jurisdiction of the U.S. Forest Service.					

1-4 Section 5.11, *Hydrology and Drainage*, of the Draft EIR has been revised to compare the water demand generated by the proposed project and the recharge rate of tributary subarea A of the North Shore Hydrologic Subunit in which the project area is located. According to the 2003 GSS report, the groundwater recharge rate of the subarea A is approximately 29-acre feet per year and the anticipated water demand for the proposed project is approximately 46 acre-feet per year. Thus, the Commentor is correct in their evaluation that there is a net deficit of 17-acre feet per year (46-29=17) in tributary subarea A in regards to the anticipated water demand of the project.

Page 5.11-23, Paragraph 2 of the Draft EIR has been revised in the Final EIR as follows:

As stated in Section 5.3, *Public Services and Utilities*, the project would require approximately 46 acre-feet per year of water to meet the average daily water demand for the proposed residential uses. If water was obtained from existing well(s) (FP-2 and/or FP-3), which are located in subarea A of the North Creek Hydrologic Subunit, subarea A alone would not have the requisite water resources to meet the ADD over the course of a one-year period, as it only averages approximately 29 ac-ft/yr of groundwater recharge. Thus, it can be concluded that additional water resources beyond what is available from on-site wells or wells located within subarea A of the North Shore Hydrologic Subunit would need to be obtained to meet the water demands of the project.

~~Regarding the two existing wells located within the Moon Camp Project site, no mention was given in the latest GSS report as to the potential hydrologic interconnection of the groundwater aquifer with Big Bear Lake. Given the proximity of these wells to the lake, it appears highly probably that the water extracted from one or both of these wells could include some component of lake water.~~

Based upon the conclusions rendered by GSS and subsequent peer review, additional review is necessary to conclude hydrologic subunit effects. Although mitigation measures requiring further testing are referenced, based upon the evidence presented to date, it is concluded that impacts to groundwater resources are~~overdraft is~~ a significant adverse effect and until additional technical review is conducted to verify conditions, the Project would result in an unavoidable impact.

1-5 Section 5.11, *Hydrology and Drainage*, of the Draft EIR has been revised to state that based upon the information/studies available as of the publication of the Draft EIR, there is the potential that the groundwater basin is in a state of overdraft. This conclusion is based upon the available data from the 2003 GSS report and the necessity to conduct additional studies to determine the state of groundwater conditions in the North Shore and Grout Creek Hydrologic Subunits.

Page 5.11-23, the first bullet point of the Draft EIR has been revised in the Final EIR as follows:

> It is stated that the reason for the recent groundwater level declines in the eastern portion of North Shore can be correlated with dry climatic conditions although the greater degree of decline is also a reflection of higher groundwater production in the area. Based on Mr. Magorien's review of the data, the production rate from Division Well No. 6 (see report Table 4) is the much more correlatable with the drop in water levels. Based upon information/studies available as of the publication of the Draft EIR, there is the potential that~~It appears~~ the North Shore Subunit is in an overdraft situation given ~~their~~the analyzed pumping rates.

Page 5.11-23, Paragraph 1 of the Draft EIR has been revised in the Final EIR as follows:

> Based on the information presented in the 2003 GSS report, as well as the 2000 report, it is concluded by Mr. Magorien in the peer review that the groundwater basin associated with the North Shore Hydrologic Subunit in which the Moon Camp Project area is situated~~, is in~~ has the potential to be in a state of overdraft. Any additional groundwater withdrawals from this Subunit will only exacerbate this potential overdraft condition. Considerably more investigative studies involving exploratory drilling and aquifer testing to assess the actual nature of the groundwater regime in the vicinity of the Moon Camp Project are is warranted. Furthermore, although there appears to be groundwater resources available within the neighboring Grout Creek hydrologic unit, a more thorough hydrogeologic investigation is also warranted for this hydrologic unit before additional groundwater resources can be exploited for a project the size of Moon Camp.

Page 5.11-27, Mitigation Measure 5.11-2 of the Draft EIR has been revised in the Final EIR as follows:

> **GROUNDWATER**
>
> Refer to Mitigation Measures 5.3-6a and 5.3-6b for mitigation regarding operations and groundwater quality from existing on-site wells.
>
> ~~5.11-2 Based upon the technical analysis presented, a potential groundwater overdraft condition would occur and no additional mitigation measures~~

~~have been identified.~~

5.11-2a Within three months of project approval, the Project Applicant shall submit a plan for a detailed geohydrologic investigation. The plan must present the possible sources of groundwater selected for the project and the methodology proposed to investigate those sources. If the on-site wells are to be utilized to serve this project, it must be determined if either could draw water from Big Bear Lake. The plan must be prepared by a California Registered Geologist.

5.11-2b Within six months of plan approval, the Project Applicant shall submit the results of the geohydrologic investigation. The report must be prepared by a California Registered Geologist.

5.11-2c Concurrently or within three months of approval by the geohydrologic report, the Project Applicant shall submit a groundwater monitoring plan in accordance with San Bernardino County's "Guidelines for Preparation of a Groundwater Monitoring Plan." The plan must be prepared by a California Registered Geologist.

1-6 According to the GSS 2000 and 2003 reports, there exists a potential connection between groundwater levels of the on-site wells and water of Big Bear Lake.

The following paragraph, to be added below Paragraph 3 on Page 5.11-23 of the Draft EIR, will be included in the Final EIR:

Interference with Big Bear Lake Water Levels

Regarding the two existing wells located within the Moon Camp Project site, no mention was given in the latest 2003 GSS report as to the potential hydrologic interconnection of the groundwater aquifer with Big Bear Lake. The GGSS 2000 report states that the water level in the lake is approximately 5 to 10 feet higher than the water level elevation of Well FP-2, indicating that there is the potential for recharge from the lake. Thus, given the proximity of the existing on-site wells to the lake, it appears highly probable that the water extracted from one or both of these wells could include some component of lake water. It may be possible to mitigate this impact by relocating wells up slope and away from the lake. However, further study is necessary to determine the interconnection of lake water to the subareas of the North Shore and Grout Creek Subunits.

1-7 The Commentor is correct is his comments. Section 5.3, *Public Services and Utilities*, of the Draft EIR has been revised to clarify that the Big Bear Department of Water and Power (DWP) and/or the County Special District could be the water purveyor for the project and that funds would be deposited to the appropriate agency, as necessary.

Page 5.3-16, Paragraph 2 and the proceeding text of the Draft EIR has been revised in the Final EIR as follows:

Water Demand. The DWP has estimated the ADD for the Fawnskin area to be approximately ~~450~~ 250 gallons per day per EDU (gpd/EDU). [Note to Reviewer: The updated calculation is based upon further analysis by SO & Associates Engineers, dated September 7, 2004.] The letter report has been incorporated in to the EIR Appendix.] The MDD considers water usage over an 8 to 10-hour period each day. The Project's ADD and MDD are as follows:

Average daily demand (ADD) = 92 EDU x 250 gpd/EDU
= 25.77 AF/year

Maximum day demand (MDD) = 2.5 x ADD/1,440 minutes per day
= 57,500 gpd (about 40 gpm)

Assuming the ADD calculated above, the project would require approximately 25.77 acre-feet of water per year to supply the proposed residential uses.

Fire Flow Requirements. The existing water distribution system was originally designed for approximately 750-gpm fire flow for two hours. The current requirement per the County Fire Department for the Fawnskin area is between 1,000 gpm and 1,500 gpm depending on the building square footage. The fire flow may be further increased in the future. As such, the water distribution system was analyzed to handle the maximum day demand of the proposed development plus fire flow up to 1,500 gpm.

Water Supply and Storage Requirements. The State Health Department requires storage to account for one peak day usage. The DWP typically experiences one peak day during a summer holiday when tourists and part-time residents become full-time users. The coefficient of ~~450~~ 250 gpd/EDU and corresponding MDD is representative of that day and is the basis for calculating the water demand and storage requirement for the proposed Project as presented in prior discussions and outlined below:

Domestic Water Supply requirement (max day) = 40.0 gallons per minute

Operational Storage = (0.3 x MDD)	=	17,250 gallons
Emergency Storage = (1.0 x MDD)	=	57,500 gallons
Subtotal (without fire storage)	=	74,750 gallons

Fire Storage (1,500 gpm x 2 hours) = 180,000 gallons
Total Storage Requirement = 255,000 gallons

Based on proposed development requirements (at MDD), ~~two new wells would be required~~ the project would need to have a water supply that~~to~~ could provide a minimum of 72.0 gallons per minute. As discussed below and in Section 5.11, *Hydrology and Drainage*, two existing on-site wells could potentially supply a portion of the water demand to the project. The project site is located within tributary subarea A of the North Shore Hydrologic Subunit. The groundwater recharge for subarea A is estimated to be approximately 29 acre-feet per year. Since the project would require approximately 46 acre-feet per year, it is concluded that on-site wells alone could not supply the necessary water resources to support the proposed residential uses. If the on-site wells were utilized to supply a portion of the water supply to the project, ~~T~~the Project Applicant would be required to deposit funds with the DWP and/or BBCSD to equip the wells to meet the appropriate water agency's standards.~~for new well construction unless a proven source of supply is provided by the developer at locations satisfactory to DWP and not exceeding sub basin safe yields.~~ As stated in Section 5.11, ~~Hydrology and Drainage, the testing of overdraft conditions for~~ the groundwater basin associated with the North Shore Hydrologic Subunit ~~is inconclusive~~has the potential to be in an overdraft situation, thus, it has been concluded that impacts to groundwater resources are significant and unavoidable. Therefore, additional studies and analysis will need to be provided by the Project Applicant to indicate a proven source of water supply for the project.

1-8 The modifications necessary to the water distribution system, including the Cline Miller Reservoir and associated piping, were identified as recommendations in the Water Feasibility Study (March 2002) to accommodate the necessary water storage and distribution requirements for the project. Although the Project Applicant would fund the identified improvements, any modifications to the water distribution system would be subject to approval by the appropriate water agency. The water agency would conduct any additional environmental review, as required by CEQA, for the identified water system improvements. These improvements to the water distribution system were incorporated into the EIR as mitigation measures.

1-9 The Commentor is correct in his comments. Currently, there is insufficient information concerning the expansive nature of the alluvial soils beneath the project site. This impact would need to be evaluated in design-level geotechnical analysis/studies, which include a quantitative geotechnical analysis and a design-level geotechnical engineering report. Implementation of the recommended mitigation measures from the design-level geotechnical engineering report would reduce potential impacts regarding expansive soils to less than significant levels.

Page 5.10-14, Paragraph 2 of the Draft EIR have been revised in the Final EIR as follows:

Currently, there is insufficient information concerning the expansive nature of the alluvial soils beneath the project site. This impact will need to be evaluated in ~~additional~~ design level geotechnical analysis/studies~~.~~, which include ~~1)~~ a quantitative geotechnical analysis~~,~~ ~~2), a design level geotechnical engineering report,~~ and ~~3)~~ a design-level engineering geology report. Implementation of the

recommended mitigation measures ~~of~~ from the design-level geotechnical engineering report ~~the recommended mitigation measure and conclusions rendered in the referenced reports~~ would reduce impacts to less than significant levels.

Page 5.10-15, Mitigation Measure 5.10-5 of the Draft EIR have been revised in the Final EIR as follows:

EXPANSIVE SOILS

5.10-5 Prior to grading permit issuance, ~~geologic analysis/studies shall be required including 1)~~ a quantitative geotechnical analysis and~~of liquefaction, 2) a~~ design-level geotechnical engineering report shall be required and submitted to the County of San Bernardino Department of Building and Safety for their approval. ~~and 3) a design level engineering geology report.~~

1-10 The Commentor is correct in his comments. Section 5.10, *Geology and Soils*, of the Draft EIR has been revised to state that the potential for instability of south facing cut slopes can be mitigated by standard engineering design as recommended in the geologic and geotechnical reports.

Page 5.10-15, Mitigation Measure 5.10-1 of the Draft EIR has been revised in the Final EIR as follows:

SLOPE STABILITY

5.10-1 The stability of ~~S~~south facing cut slopes shall be analyzed as part of the design-level geotechnical investigation. ~~u~~Utilize~~e~~ing 2:1 buttressed slopes using on site native soil materials, or ~~by~~ constructing geotextile-reinforced soil buttresses ~~where~~for planned unstable cut slopes ~~are planned~~ are typical engineering designs for stabilizing slopes. Either of these methods, or other methods must be approved by the San Bernardino County Department of Building and Safety~~Geologist for slope reinforcement may be utilized~~.

COMMENT NO. 2

Department of Toxic Substances Control

Terry Tamminen
Agency Secretary
Cal/EPA

Edwin F. Lowry, Director
5796 Corporate Avenue
Cypress, California 90630

Arnold Schwarzenegger
Governor

Clear
5-13-04
e

April 30, 2004

Mr. Matthew W. Slowik
Senior Associate Planner
Land Use Services, Planning Division
County of San Bernardino
385 North Arrowhead Avenue, First Floor
San Bernardino, California 92415-0182

NOTICE OF COMPLETION OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE MOON CAMP RESIDENTIAL SUBDIVISION TT NO. 16136 PROJECT (SCH #2002021105)

Dear Mr. Slowik:

The Department of Toxic Substances Control (DTSC) has received your Notice of Completion (NOC) of a draft Environmental Impact Report (EIR) for the above-mentioned Project.

Based on the review of the document, DTSC's comments are as follows:

1) A copy of the NOC should be filed with the State Clearinghouse, 1400 Tenth Street, P.O. Box 3044, Sacramento, California 95812-3044, telephone number (916) 445-0613. 2-1

2) DTSC's comments dated March 11, 2002, regarding the Notice of Preparation of a draft EIR have not been properly addressed in the currently submitted draft EIR. If a DTSC comment in the aforementioned letter is not applicable to the project site, it should be stated in the draft EIR. 2-2

3) The Initial Study Environmental Checklist Form, Section VII, Hazards and Hazardous Materials, subsection (d) of the NOP states that the project site is not identified by the County of San Bernardino as a hazardous waste site (December 1, 1994). It also states that the County Fire Department HazMat Division responded to a Project Notice for Tentative Tract No. 16136 that "No hazardous materials conditions apply to this project" (July 24, 2001). The draft EIR needs to identify any known or potentially contaminated sites within the proposed Project area. For all identified sites, the draft EIR should evaluate 2-3

whether conditions at the site pose a threat to human health or the environment. A Phase I Assessment may be sufficient to identify these sites. Following are the databases of some of the regulatory agencies:

- National Priorities List (NPL): A list is maintained by the United States Environmental Protection Agency (U.S.EPA).
- CalSites: A Database primarily used by the California Department of Toxic Substances Control.
- Resource Conservation and Recovery Information System (RCRIS): A database of RCRA facilities that is maintained by U.S. EPA.
- Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS): A database of CERCLA sites that is maintained by U.S.EPA. 2-3
- Solid Waste Information System (SWIS): A database provided by the California Integrated Waste Management Board which consists of both open as well as closed and inactive solid waste disposal facilities and transfer stations.
- Leaking Underground Storage Tanks (LUST) / Spills, Leaks, Investigations and Cleanups (SLIC): A list that is maintained by Regional Water Quality Control Boards.
- Local County and City maintain lists for hazardous substances cleanup sites and leaking underground storage tanks.

4) The draft EIR should identify the mechanism to initiate any required investigation and/or remediation for any site that may be contaminated, and the government agency to provide appropriate regulatory oversight. If hazardous materials/wastes were stored at the site, an environmental assessment should be conducted to determine if a release has occurred. If so, further studies should be carried out to delineate the nature and extent of the contamination, and it will be necessary to estimate the potential threat to public health and/or the environment posed by the site. It may also be necessary to determine if an expedited response action is required to reduce existing or potential threats to public health or the environment. If no immediate threat exists, the final 2-4

remedy should be implemented in compliance with state regulations and policies. 2-4

5) All environmental investigation and/or remediation should be conducted under a workplan which is approved by a regulatory agency that has jurisdiction to oversee hazardous waste cleanup. 2-5

Prior to approving the draft EIR, please address all of DTSC's comments. As the lead agency, it is your responsibility to ensure that all of DTSC's concerns are properly addressed.

DTSC provides guidance for preparation of a PEA, and cleanup oversight, through its Voluntary Cleanup Program (VCP). For additional information on the VCP, please visit DTSC's web site at www.dtsc.ca.gov.

If you have any questions regarding this letter, please contact Mr. Johnson P. Abraham, Project Manager, at (714) 484-5476.

Sincerely,

Greg Holmes
Unit Chief
Southern California Cleanup Operations Branch
Cypress Office

cc: Governor's Office of Planning and Research
State Clearinghouse
P.O. Box 3044
Sacramento, California 95812-3044

Mr. Guenther W. Moskat, Chief
Planning and Environmental Analysis Section
CEQA Tracking Center
Department of Toxic Substances Control
P.O. Box 806
Sacramento, California 95812-0806

Response to Commentor No. 2
Greg Holmes, Department of Toxic Substances Control (DTSC)
April 30, 2004

2-1 A copy of the Notice of Completion (NOC) has been filed with the State Clearinghouse. The State Clearinghouse has indicated that they submitted the Draft EIR to selected state agencies for review (refer to Comment Letter Number 7, dated May 14, 2004).

2-2 In a letter dated March 2002, the DTSC provided the following comments regarding the Notice of Preparation (NOP) for the Draft EIR:

- The Draft EIR needs to provide the site history and past operations of the site.
- The Draft EIR should identify and determine whether current and/or historic uses at the site have resulted in any release of hazardous wastes/substances at the project site.
- If any past uses have resulted in the release of hazardous materials, appropriate mechanisms and/or remediation of the site needs to be identified.
- The site may fall under the "Border Zone of a Contaminated Property" if the site is located within 2,000 feet of an adjacent contaminated site.
- Project implementation may require soil excavation and filling, which will require appropriate sampling prior to the disposal of the excavated soil.
- If the project requires modifications or demolition to any existing structures, appropriate measures need to be taken regarding potential contaminates.
- If during construction activities, soil and/or groundwater contamination are suspected, construction in the project area should cease and the appropriate health and safety procedures should be implemented.

The Initial Study prepared for the proposed project in February 2002 addressed the potential impacts associated with Hazards and Hazardous Materials. The Initial Study concluded that the project would include hazardous materials that are typical of residential developments (i.e., household chemicals, pesticides, etc.). It is also stated that the project would include the storage of fuels associated with the marina facility. All hazardous materials would be subject to all local, state and federal regulations pertaining to the transport, use and storage of such material, which would ensure that any potentially significant impact regarding hazardous materials would be reduced to less than significant levels (please refer to Response VII (a-c) in the Initial Study).

Response VII (d) in the Initial Study indicates that the project site is not identified as a hazardous waste site per the County of San Bernardino "Identified Hazardous Waste Sites" map, dated December 1, 1994. To confirm that the project site is not

located on a hazardous waste site, RBF Consulting conducted a government records search via the California State Water Resources Control Board GeoTracker website on June 15, 2004. No listed properties were located within the boundaries of the project site. One (1) listed leaking underground storage tank (LUST) site was reported off-site to the east. However, the potential for a recognized environmental condition within the boundaries of the subject site caused by surrounding off-site properties is considered to be low due to the groundwater flow direction from the subject site, the distance from the subject site, and/or the status of the identified sites.

Additionally, it is noted that the project site has historically been undeveloped and consists of native forestlands. Based upon the March 15, 2002 field visit conducted by RBF Consulting, review of available aerial photographs, and interviews, the potential that adverse environmental conditions have been created by historical on-site activities is considered to be low. Per review of these field observations and records review, no recognized environmental conditions have been noted within the boundaries of the project site.

It is also recognized that if during construction activities, unknown wastes or suspect materials are discovered during construction by the contractor, which they believe may involve hazardous waste/materials, the contractor would implement typical operating procedures that would involve the following:

- Immediately stop work in the vicinity of the suspected contaminant, removing workers and the public from the area;
- Notify the Project Engineer of the implementing Agency;
- Secure the area as directed by the Project Engineer; and
- Notify the implementing agency's Hazardous Waste/Materials Coordinator.

The above is typical protocol in such in an instance when hazardous materials are suspected, however, the Contractor would consult with the appropriate implementing agency to determine the site-specific procedures in dealing with a suspected hazardous material.

2-3 Please refer to Response to Comment No. 2-2. RBF Consulting conducted a records search via the California State Water Resources Control Board GeoTracker website on June 15, 2004. No listed properties were located within the boundaries of the project site. One (1) listed leaking underground storage tank (LUST) site was reported off-site to the east. However, the potential for a recognized environmental condition within the boundaries of the subject site caused by surrounding off-site properties is considered to be low due to the groundwater flow direction from the subject site, the distance from the subject site, and the status of the identified sites.

2-4 Please refer to Response to Comment No. 2-2. Since the proposed project site and the adjacent properties are not recognized as having the potential for creating a significant risk to the public or the environment, it is not necessary to identify any contaminated sites.

2-5 Please refer to Response to Comment No. 2-4. No further environmental investigation and/or remediation are necessary to implement the project.

STATE OF CALIFORNIA - THE RESOURCES AGENCY ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF FISH AND GAME
http://www.dfg.ca.gov
Eastern Sierra-Inland Deserts Region
4775 Bird Farm Rd.,
Chino Hills, California 91709
Phone (909) 597-9823
Fax (909) 597-0067

May 11, 2004

Mr. Matthew Slowik
San Bernardino County Land Use Services Department
385 N. Arrowhead, 1st Floor
San Bernardino, CA 92415-0182

Re: Draft Environmental Impact Report - SCH No. 2002021105
Moon Camp Tentative Tract No. 16136 Residential Subdivision

Dear Mr. Slowik:

The California Department of Fish and Game (Department) appreciates this opportunity to comment on the Draft Environmental Impact Report (DEIR) for the above-referenced project with regards to impacts to biological resources. The Department has some concerns with the proposed project with regards to impacts to biological resources. The project proposes a 95-lot residential subdivision with lots ranging in size from 0.17 acres (7,292 square feet) to 2.11 acres. Other components include access roads and a proposed boat dock with 100 boat slips. State Route 38 (also known as North Shore Drive) will be relocated to allow development of the lakeshore lots. The proposed project is located on the northwest shore of Big Bear Lake, in the community of Fawnskin, San Bernardino County, California. The site is situated between Flicker Road to the north, Big Bear Lake to the south, Polique Canyon Road to the east, and Oriole Lane/Canyon Road to the west. State Route 38 currently bisects the property.

The Department is responding as a Trustee Agency for fish and wildlife resources [Fish and Game Code sections 711.7 and 1802 and the California Environmental Quality Act Guidelines (CEQA) section 15386] and as a Responsible Agency regarding any discretionary actions (CEQA Guidelines section 15381), such as a Lake and Streambed Alteration Agreement and/or California Endangered Species Act Incidental Take Permit.

Jurisdictional Waters

The Department is concerned that the jurisdictional map (Exhibit 5.8-2) and the corresponding discussion (on Pages 5.8-7 through 5.8-8) did not include the areas along the lake shore as jurisdictional areas to the Department. The lake shore would be included within our jurisdiction, pursuant to Section 1600 *et seq.* of the Fish and Game Code. This area should be identified as jurisdictional even if no impacts will occur to this area. Under Section 1600 *et seq.* of the Fish and Game Code, the Department requires the project applicant to notify the Department of any activity that will substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or

3-1

lake or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake. The lake level will vary considerably from one time to the next due to water availability in a given year (rainfall, drought etc.). The jurisdictional area along the lake edge should be based on current as well as historical lake levels and should include the area up to the ordinary high water mark. Also, the existing habitats along the lake shore indicate they are associated with the lake. Therefore, any areas along the lake shore that contain wet meadow, marsh, and/or riparian habitat should also be included as jurisdictional pursuant to Section 1600 *et seq.* of the Fish and Game Code. In addition, if any impacts will occur within the jurisdictional areas along the lake shore, then these impacts will need to be included in a notification to the Department for a Lake and Streambed Alteration Agreement, along with appropriate mitigation for its loss. The Department recommends the Jurisdictional Map be revised to include jurisdictional areas along the lake shore as well as the corresponding discussion on Pages 5.8-7 and 5.8-8. 3-1

Pages 5.8-59 through 5.8-60 also need to be revised to reflect the lake as a jurisdictional area to the Department. On Page 5.8-60, under the heading "California Department of Fish and Game", the text should also be revised to incorporate the Departments new timelines for processing a notification package, pursuant to Section 1600. The Department now has 30 days to review the package. Once the Department has determined the notification to be complete, the Department has another 60 days to prepare a draft Lake and Streambed Alteration Agreement, if deemed necessary. 3-2

The Department is also concerned that mitigation for impacts to the streams, lakes, and associated habitat was not included in the DEIR. Instead, mitigation was deferred to the regulatory permit processes for a 404, 401, and Lake and Streambed Alteration Agreement by the U.S. Army Corps, the Regional Water Quality Control Board, and the Department, respectively. The Department believes it is not appropriate to defer mitigation to another permitting process during CEQA. Impacting a lake and/or stream and associated habitat is considered a significant impact under CEQA. Therefore, mitigation is required under CEQA to reduce the impact to less than significant.

3-3

The Guide to the California Environmental Quality Act 1999 discusses the responsibility of the lead agency to mitigate potential project impacts and not defer this responsibility to other agencies with regulatory powers if potentially feasible mitigation measures are within its authority and power (*Citizens for Quality Growth*). The Department believes that it is well within the Lead Agency's authority to identify project impacts, present alternatives, and propose mitigation measures to offset these impacts. Section 15002 of the CEQA Guidelines defines the purpose of CEQA to:

1) Inform governmental decision makers and the public about the potential, significant environmental effects of proposed activities,
2) Identify ways that environmental damage can be avoided or significantly reduced,
3) Prevent significant, avoidable damage to the environment by requiring changes in project through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible, and
4) Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

Section 151370 of the CEQA guidelines includes a definition of mitigation. It states that mitigation includes:

1) Avoiding the impact altogether by not taking a certain action or parts of an action,
2) Minimizing impacts by limiting the degree or magnitude of the action and its implementation,
3) Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment,
4) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action,
5) Compensating for the impact by replacing or providing substitute resources or environments. 3-3

Nowhere in this list of definitions does it state that conformance with regulatory requirements is mitigation.

Permit negotiations conducted after and outside of the CEQA process deprive the public of its rights to know what project impacts are and how they are being mitigated in violation of Section 15002. Also, because mitigation to offset the impacts were not identified in the CEQA document, the Department does not believe that the Lead Agency can make the determination that "impacts to jurisdictional water present on the project site would be reduced to a less than significant level through compliance with the regulatory process (i.e. 404 permit, CDFG agreement, 401 certification)", without knowing what the specific mitigation measures are that will reduce those impacts. Therefore, the Department recommends the Lead Agency include the following mitigation measure in the DEIR.

Mitigation Measure for Lake and Stream and Associated Habitat Impacts:

All unavoidable impacts to State jurisdictional lakes, streams, and associated habitat shall be compensated for with the creation and/or restoration of in-kind habitat on-site or off-site at a 3:1 replacement-to-impact ratio. 3-4

Additional mitigation requirements through the Department's Lake and Streambed Alteration Agreement process may be required depending on the quality of habitat impacted, proposed mitigation, project design, and other factors. We recommend submitting a notification early on, since modification of the proposed project may be required to avoid or reduce impacts to fish and wildlife resources. To obtain a Lake and Streambed Alteration Agreement notification package, please call (562) 590-5880 or obtain on-line at the Department's website "www.dfg.ca.gov".

Special Status Plants

Mitigation Measure 5.8-1a on Page 5.8-63 of the DEIR indicates that, at a minimum, 11.8-acres of pebble plain and open Jeffrey pine forest in the western half of the project site that is known to be occupied by the federally-listed Threatened ash-gray Indian paintbrush, would need to be mitigated for by funding the purchase of 35.4 acres of offsite habitat from the California Wildlife Foundation (if the agreed mitigation ratio is 3:1). The Department agrees that 3:1 replacement-to-impact ratio would be acceptable if the habitat value of the land to be preserved is equal to or of greater importance biologically than the habitat being impacted. The 3-5

Department is also concerned that the mitigation requirement only requires the funding of the purchase of land. The Department believes since the mitigation area is large, the project proponent needs to identify appropriate land, purchase the land, and preserve it in perpetuity through a conservation easement in the name of an approved entity. An endowment account also needs to be provided to ensure long-term monitoring and management of the preserved area. We recommend that the mitigation requirement for the compensation for loss of habitat doesn't limit the funding to the CA Wildlife Foundation. The Department recommends the project proponent actually identify and purchase the land to be preserved prior to commencing project activities and supply the entity to manage the habitat with a non-wasting endowment for the monitoring and management of the preservation site in perpetuity. The Department recommends revising Mitigation Measure 5.8-1a accordingly. 3-5

The Department believes the intention of Mitigation Measure 5.8-1a was to provide compensation for the loss of special status botanical resources. In the last paragraph of Measure 5.8-1a, it states that "the applicant is responsible for the mitigation of a minimum of 11.8-acres of pebble plain and open Jeffrey pine forest". The Department recommends revising the Mitigation Measure to clarify that the project applicant shall purchase and preserve a minimum of 35.4 acres (3:1 replacement-to-impact ratio) of open Jeffrey Pine and pebble plain habitat, that contains sensitive plant species, including Ash-gray Indian paintbrush as well as others know to occur on the site. It is the Department's understanding that this would be additional to any pebble plain habitat purchased to meet the requirement in Mitigation Measure 5.8-1g. Please clarify and revise accordingly. 3-6

Bald Eagles

The Department is concerned with potential impacts to bald eagles. The bald eagle is a species listed as State Endangered and Federally Threatened. Bald eagles are known to utilize the site, especially along the lake shore. They were observed using several trees on the project site for perch and roost locations. The DEIR indicated that a records search demonstrated that some of the most utilized perch and roost trees on the north shore of the lake are located on the project site. In 2002 surveys conducted by Bon Terra Consulting, bald eagles were observed utilizing nine trees on the project site. In Exhibit 5.8-3 of the DEIR, locations of nine perch trees on the project site are shown, of which seven are located along the lakeshore south of the proposed relocation of Lake Shore Drive. In surveys conducted in 1989-1990, it was found that 80 of the 176 mapped eagle sightings (45%) were located on the project site. The highest recorded use of a single perch tree was tree number 886, which had 51 sightings. The surveys found that this tree is the most important perch tree on the property and is potentially the most important on the north shore of Big Bear Lake. Based on the DEIR, it appears that approximately 31 lots are proposed for development along the lakeshore, one of which will be a parking lot and the others will have homes constructed on them. The Department believes that due to the sensitivity of the area and importance of the area to bald eagles, the amount of development within the lake shore portion of the site should be greatly reduced. The Department agrees that the proposed noise mitigation measures will help reduce, to some extent, the impacts on the eagles, but due to the amount of development in the area of these perch locations, the measures are not enough to prevent impacting the eagles. The Department believes that impacts to the bald eagles will be significant even with the measures proposed. 3-7

Therefore, we recommend looking at alternatives that would reduce the number of homes along the lake shore and avoid development in areas around the perch trees. 3-7

Thank you for this opportunity to comment. Please contact me at (949) 458-1754, if you have any questions regarding this letter or need further coordination on these issues.

Sincerely,

Leslie MacNair
Staff Environmental Scientist
Habitat Conservation Planning

cc: Nancy Ferguson, USFWS, Carlsbad
State Clearinghouse, Sacramento

Response to Commentor No. 3
Leslie MacNair, California Department of Fish and Game (CDFG)
May 11, 2004

3-1 The Delineation of Jurisdictional Waters referenced in the Draft EIR has been updated to include the areas along the lakeshore as jurisdictional areas to the CDFG. The jurisdictional area along the lake edge is reflective of the ordinary high water mark. The updated analysis cites the requirement for the project to obtain a 1602 Streambed Alteration Agreement from the CDFG.

Page 5.8-7 of the Draft EIR, Paragraph 5 has been revised in the Final EIR as follows:

> Vegetation within the drainages of the Project site consisted of upland habitat, dominated by Jeffery pines. Soils within the drainage were documented to be silty-sand (large grain). Soil samples taken on-site were generally dry and lacked characteristics of hydric soils (i.e., odor, streaking, mottling). ~~No flow within the on site drainages was observed during the March 15, 2002 field visit. However, evidence of an OHWM was observed within the drainages, primarily indicated by sediment deposits.~~ No flow within the on-site drainages was observed during the March 15, 2002 field visit. However, evidence of an OHWM was observed within the drainages, primarily indicated by sediment deposits. It should also be noted that Big Bear Lake adjoins the project site to the south. Based on discussions with the Big Bear Municipal Water District, the current water level of Big Bear Lake (as of June 28, 2004) is 6,727.8-feet above mean sea level (msl). The high water mark is reported to be 6,743.2 feet above msl.

Page 5.8-8, Paragraphs 4 and 5 of the Draft EIR, has been revised in the Final EIR as follows:

> Based on the results of the field observations and data collection, 0.15-acre of Corps jurisdictional "waters of the U.S." were identified within the Project site. ~~The drainages are ephemeral.~~ In addition to on-site ephemeral drainages, the Corps considers Big Bear Lake jurisdictional. The Corps' jurisdictional limits are delineated at the high water line, which is reported to be at 6,743.2-foot elevation (and below).
>
> California Department of Fish and Game (1602) Jurisdiction. Based on the results of the field observations and data collection, 0.15-acre of CDFG jurisdictional streambed~~waters~~ was~~were~~ identified within the Project site. As with the Corps, Big Bear Lake would be considered jurisdictional by the CDFG, including the approximate 4.14-acre lake shoreline.

3-2 As stated in Response to Comment No. 3-1, the Delineation of Jurisdictional Waters has been updated to reflect the CDFG comments. The CDFG discussion now reflects the most current lake and streambed alteration program, including Sections 1600-1616 and the timelines/thresholds contained therein.

Page 5.8-59, Paragraphs 3 and 4 of the Draft EIR have been revised in the Final EIR as follows:

WATERS OF THE U.S. (NON-WETLAND) DETERMINATION

Based on the results of the field observations and data collection, RBF identified 0.15-acre of Corps jurisdictional "waters of the U.S." within the proposed Project site. The drainages are ephemeral; Big Bear Lake, although not included in the acreage calculation, is also considered jurisdictional by the Corps. Utilizing the most current development plans, it was determined that ~~roadway~~ the proposed improvements would impact approximately 0.2~~0~~4-acre of Corps jurisdiction. Discharges include approximately 0.04-acres to ephemeral drainages and approximately 0.20-acres of impact as a result of fill material associated with the proposed marina.

CALIFORNIA DEPARTMENT OF FISH AND GAME (1602~~3~~) JURISDICTION

Based on the results of the field observations and data collection, RBF identified 0.15-acre of CDFG jurisdictional streambed~~waters~~. Utilizing the most current development plans, it was determined that ~~roadway~~ the proposed improvements would impact 4.38~~0.04~~-acres of CDFG jurisdiction (includes streambed, shoreline, and lake impacts) (refer to Exhibit 5.8-2, *Jurisdictional Map)*.

Page 5.8-60, Paragraph 1 of the Draft EIR, has been revised in the Final EIR as follows:

California Department of Fish and Game

~~As noted above, the drainage within the proposed Project area meets the CDFG's definition as streambed and thus would be regulated by the CDFG. An agreement from the Department would be required. The CDFG agreement requires a fee and approximately 45 days processing time.~~ As noted above, areas within the Project site meet the CDFG's definition as streambed and lakebed. Since improvements associated with the proposed project would impact CDFG Jurisdiction, a 1602 Streambed Alteration Agreement (SAA) must be obtained prior to construction. A processing fee and CEQA c~~C~~ompliance is necessary in order for the Agreement to be issued.

Page 5.8-60, Paragraph 3 of the Draft EIR, has been revised in the Final EIR as follows:

~~Overall, impacts to the jurisdictional water present on the Project site would be reduced to a less than significant level through cojpliance with the regulatory process (i.e., 404 permit, CDFG agreement, 401 certification.)~~ Implementation of the recommended mitigation measure (Mitigation Measure 5.3-8a) regarding a 3:1 replacement-to-impact ratio for all unavoidable impacts to jurisdictional areas would ensure that significant impacts to jurisdictional waters are reduced to a less than significant level. Compliance with the regulatory process (i.e., 404 permit, CDFG agreement, 401 certification) would ensure the enforcement and implementation of the recommended mitigation measure. It is also noted that additional mitigation requirements may be required through the permitting process depending on the quality of habitat impacted, project design and other factors.

Page 5.11-6, Paragraphs 1, 2 and 3 of the Draft EIR, have been revised in the Final EIR as follows:

WATERS OF THE U.S. (NON-WETLAND) DETERMINATION

~~The unnamed drainages within the Project site exhibited evidence of flow (i.e., sediment/silt deposition) sufficient to document the Ordinary High Water Mark (OHWM) (i.e., channel bed and bank lines), thus meeting the criteria for jurisdictional waters.~~ Evidence of an Ordinary High Water Mark (OHWM) was observed within the on-site ephemeral drainages, primarily indicated by sediment deposits. It should also be noted that Big Bear Lake adjoins the project site to the south. Based on discussions with the Big Bear Municipal Water District, the current water level of Big Bear Lake (as of June 28, 2004) is 6,727.8-feet above mean sea level (msl). The high water mark is reported to be 6,743.2 feet above msl. Refer to ~~Appendix 15.10, *Jurisdictional Delineation*, and~~ Exhibit 5.8-2, *Jurisdictional Map*, for an illustration of jurisdictional boundaries.

Based on the results of the field observations and data collection, RBF identified 0.15-acre of Corps jurisdictional "waters of the U.S." within the proposed project site. ~~The drainages are ephemeral.~~ In addition to on-site ephemeral drainages, the Corps considers Big Bear Lake jurisdictional. The Corps' jurisdictional limits are delineated at the high water line, which is reported to be at 6,743.20-foot elevation (and below).

CALIFORNIA DEPARTMENT OF FISH AND GAME (1602~~3~~) JURISDICTION

Based on the results of the field observations and data collection, RBF identified 0.15-acre of CDFG jurisdictional streambed~~waters~~ located within the boundaries of the Project site (refer to Exhibit 5.8-2, *Jurisdictional Map)*. As with the Corps, Big Bear Lake would be considered jurisdictional by the CDFG, including the approximate 4.14-acre lake shoreline. Utilizing the most current development plans, it was determined that the proposed improvements would impact 4.38-acres

of CDFG jurisdiction (includes streambed, shoreline, and lake impacts). Refer to Section 5.8, *Biological Resources*, for further discussion regarding jurisdictional waters.

3-3 Rather than deferring to the regulatory process to reduce impacts to jurisdictional waters to less than significant levels, the analysis has been updated to include mitigation that all unavoidable impacts to State jurisdictional lakes, streams, and associated habitat be compensated for with the creation and/or restoration of in-kind habitat on-site or off-site at a 3:1 replacement-to-impact ratio. Additionally, the analysis of jurisdictional waters has been updated to reflect the definition of mitigation, per Section 151370 of the CEQA guidelines.

Page 5.8-58, Impact Statement 5.8-3 of the Draft EIR has been revised in the Final EIR as follows:

JURISDICTIONAL WATERS

5.8-3 *Development of the proposed Project ~~does not have~~has the potential to impact jurisdictional waters. Analysis has concluded that potentially significant impacts would be reduced to a less than significant level~~impact would occur in this regard after regulatory compliance~~ with implementation of the recommended mitigation measures.*

The following paragraph, to be added below Paragraph 1 on Page 5.8-59 Draft EIR, will be included in the Final EIR:

Mitigation may be required by the regulatory agencies during the permit process. Compensatory mitigation for the loss of jurisdictional function and values is a fundamental component of the applicant regulatory programs. Mitigation can take several forms. It can consist of (1) avoidance or minimization of impacts, (2) compensation in the form or habitat creation, restoration and enhancement, or (3) compensation through participation in a mitigation bank. The first type of mitigation is preferred by the agencies. For any project that impacts jurisdictional areas, it is also preferred by the agencies that compensation through the creation of habitat be performed on-site and in-kind (i.e., riparian woodland for riparian woodland). Conceptual mitigation will be discussed during the Pre-Application Field Meeting with the regulatory agencies. However, the exact requirements of any special permit conditions and mitigation established for this project would be dictated by the regulatory agencies following the review of the formally submitted project applications.

Page 5.8-66, Mitigation Measure 5.8-3 of the Draft EIR, has been revised in the Final EIR as follows:

JURISDICTIONAL WATERS

5.8-3 ~~No mitigation measures are recommended.~~ Per the direction of the California Department of Fish and Game, all unavoidable impacts to State and Federal jurisdictional lakes, streams, and associated habitat shall be compensated for with the creation and/or restoration of in-kind habitat on-site and/or off-site at a minimum 3:1 replacement-to-impact ratio. Additional requirements may be required through the permitting process depending on the quality of habitat impacted, project design and other factors.

3-4 As stated in Response 3-3, mitigation has been incorporated to include a requirement for a 3:1 replacement-to-impact ratio for all unavoidable impacts to State jurisdictional lakes, streams, and associated habitat.

3-5 Mitigation Measure 5.8-1a has been updated in accordance with the CDFG's comments.

Page 5.8-47, Paragraph 3 of the Draft EIR, has been revised in the Final EIR as follows:

Pebble Plains. A total of 0.69 acre of pebble plain habitat would be impacted by Project implementation. Approximately 379 acres of pebble plain are known to exist in the San Bernardino Mountains, 60 percent (227 acres) of which occurs on public lands. Development of the Project site would remove 0.18 percent of the remaining acreage of pebble plain known to occur on both public and private lands. Although the proposed Project would impact a small area of pebble plain habitat relative to the amount of this vegetation type within the San Bernardino Mountains, Mitigation Measure 5.8-1ga ~~is recommended to~~ would ensure that impacts are reduced to less than significant levels.

Page 5.8-63, Mitigation Measure 5.8-1a of the Draft EIR, has been revised in the Final EIR as follows:

SPECIAL STATUS PLANTS AND VEGETION TYPES

5.8-1a ~~Prior to vegetation clearing, grading, or other disturbance, the project site shall be surveyed during a year with precipitation at least 40 percent of average for the area to determine presence or absence of special status plant species and vegetation types. Surveys shall focus on listed special status vegetation types, and Threatened or Endangered, and CNPS List 1B and 2 species whose presence could~~

~~not be determined during surveys due to lack of rainfall. The location and extent of special status species populations shall be mapped and the size of the populations accurately documented.~~

~~The project applicant shall pay compensation for the loss of special status botanical resources identified on the project site by the survey by funding the purchase and management of off-site habitat through contributions to a fund established by the California Wildlife Foundation on behalf of the CDFG. The California Wildlife Foundation is an independent 501(c)3 nonprofit corporation founded to assist the CDFG and other governmental agencies in the management of funds and mitigation banks designed to offset the impact of development on California's native flora and fauna. Off-site habitat containing the same species as those identified within resources impacted by the proposed project shall be purchased at a ratio agreed upon by the County of San Bernardino, San Bernardino National Forest, USFWS, and CDFG. The typical mitigation ratio is 3:1 (i.e., three acres of habitat purchased for preservation for each acre impacted by development).~~

~~If additional surveys during a year with precipitation at least 40 percent of average do not encounter additional special status plant resources, the project applicant is responsible for the mitigation of a minimum of 11.8 acres of pebble plain and open Jeffrey pine forest in the western half of the project site that is known to be occupied by the federally-listed Threatened ash-gray Indian paintbrush (i.e., would be required to fund the purchase of 35.4 acres of offsite habitat from the California Wildlife Foundation if the agreed mitigation ratio is 3:1).~~

Prior to vegetation clearing, grading, or other disturbance, the project site shall be surveyed during a year with precipitation at least 40 percent of average for the area to determine presence or absence of special status plant species and vegetation types. Surveys shall focus on special status vegetation types, and Threatened or Endangered, and CNPS List 1B and 2 species whose presence could not be determined during surveys due to lack of rainfall. The location and extent of special status species populations shall be mapped and the size of the populations accurately documented. Pebble plain habitat acreages will be recalculated following the survey using criteria established by the Habitat Management Guide for Pebble Plain Habitat on the National Forest System (2002).

The Project Applicant shall pay compensation for the loss of special status botanical resources identified on the project site during the survey by funding the purchase, establishment of a conservation easement, and management of off-site habitat within the conservation easement by an entity approved by the CDFG. Off-site habitat containing the same species as those identified within resources impacted by the proposed project shall be purchased at a ratio of 3:1 (i.e., three acres of habitat purchased for preservation for each acre impacted by development). Prior to the initiation of clearing or grading

activities on the project site, the conservation easement will be established, the management entity will be approved by the CDFG, and a non-wasting endowment will be established for the monitoring and management of the preservation site by the management entity in perpetuity.

If additional surveys during a year with precipitation at least 40 percent of average do not encounter additional special status plant resources, the Project Applicant is responsible for mitigating impacts to a minimum of 11.8-acres of pebble plain and open Jeffrey pine forest in the western half of the project site that is known to be occupied by the Federally-listed Threatened ash-gray Indian paintbrush. As such, the applicant would be required to fund the purchase and maintenance of 35.4-acres of offsite pebble plain and open Jeffrey pine forest habitat that contains special status plant species, including Ash-gray Indian paintbrush and others known to occur on the site.

3-6 Mitigation Measure 5.8-1g has been deleted. Mitigation Measure 5.8-1a has been revised to reduce impacts to special status vegetation types to less than significant levels. The Draft EIR text has been modified to reflect this change (refer to Response to Comment No. 3-5).

Page 5.8-65, Mitigation Measure 5.8-1g of the Draft EIR, has been deleted in the Final EIR as follows:

~~**SPECIAL STATUS VEGETION TYPES**~~

~~5.8-1g Exterior construction shall be prohibited between the dates of December 1 and April 1 (of each year). Significant impacts to pebble plain habitat can be mitigated to a less than significant level through off-site preservation. The project applicant shall pay compensation for the loss of special status botanical resources identified on the site, by the survey, by contributing to the funding of purchase and management of off-site habitat. The Applicant shall acquire habitat in the Big Bear Valley and dedicate to the CDFG or suitable conservation organization. The California Wildlife Foundation is an independent 501(c)3 nonprofit corporation founded to assist the CDFG and other governmental agencies in the management of funds and mitigation banks designed to offset the impact of development on California's native flora and fauna. Off-site habitat shall be purchased at a ratio agreed upon by the County of San Bernardino, San Bernardino National Forest, USFWS, and CDFG. The typical mitigation ratio is 3:1 (i.e., three acres of habitat purchased for preservation for each acre impacted by development. An area containing no less than 2.1 acres of pebble plain habitat in an area located adjacent to other open space areas within the project vicinity shall be preserved in perpetuity. The preserved areas shall be protected from future development through a conservation easement or other appropriate mechanism.~~

3-7 The County shall consider the Commentor's opinion and comments during their deliberation on the project. It is also noted that the "Reduced Density, Without Road Widening and Without Marina" Alternative would eliminate the widening of SR-38 and all development along the shore to the south of SR-38. This alternative would reduce the intensity of many of the impacts to biological resources on the project site, including perching and roosting bald eagles. Direct impacts to the tree most commonly used by perching bald eagles (i.e., tree number 886) would most likely be avoided. However, based upon available references, this alternative would directly impact bald eagle perch trees and indirectly impact the remaining recorded bald eagle perch trees. Therefore, although environmentally superior to the proposed project, the "Reduced Density, Without Road Widening and Without Marina" Alternative would nonetheless result in a significant impact to the bald eagle.

COMMENT NO. 4

STATE OF CALIFORNIA ARNOLD SCHWARZENEGGER, Governor

GOVERNOR'S OFFICE OF EMERGENCY SERVICES
DISASTER ASSISTANCE PROGRAMS BRANCH
POST OFFICE BOX 419023
RANCHO CORDOVA, CALIFORNIA 95741-9023
PHONE: (916) 845-8101 FAX: (916) 845-8381

May 12, 2004

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STATE CLEARING HOUSE

Clear 5.13.04 e

Tracy Creason
San Bernardino County Land Use Services Department
385 N. Arrowhead Ave, Third Floor
San Bernardino, CA 92415-4147

Tracy Creason:

RE: Moon Camp Residential Subdivision, TT16136 Draft Environmental Impact Report SCH2002021105

We have reviewed the Draft Environmental Impact Report (DEIR) for the above referenced project. Several significant environmental issues have been identified in the DEIR that are of concern to OES. In reviewing the DEIR and other information available, we noted that the following conditions exist in the project area:

- The property is located adjacent to San Bernardino National Forest Service lands. In addition, the proposed project is located in a coniferous forest, creating an urban/wildland interface.
- The EIR indicates that the Insurance Service Organization (ISO) rating for Fawnskin is a 9 based on a scale of 1 to 10. This rating indicates that due to circumstances related to fire protection and terrain, this area is a high risk for fire.
- The National Forest Service Remote Sensing Laboratory GIS files show the project site to be in an area of high tree mortality (between 11%-100% mortality rate).
- The project site is located in an area where bark beetle infestation has been a problem and may over time increase the risk of fire.
- The project site is also located within a Fire Safety Overlay District, also indicating that there is a risk of fire in the area.

These conditions indicate a high probability that the project site could be impacted by wildfires and pose a significant fire threat. In addition, there are several elements of the proposed subdivision that are of a concern in regard to public safety.

Public Safety Concerns Identified in the DEIR

According to the DEIR, the County of San Bernardino Fire Department provides fire protection to the Fawnskin area. The project area is served by Fire Station No. 49, approximately three quarters (3/4) of a mile northwest of the project site. The local fire station consists of only two full time personnel and eight to ten volunteer fire fighters. The DEIR states that this lack of man power must be mitigated through increased fire flow, the installation of individual sprinkler systems in the homes, and a 100-foot fuel modification zone extended beyond property lines and a 300-foot modification zone in areas of steeper slopes. This fuel modification zone will

4-1

encroach upon forest service land and will require a permit from San Bernardino National Forest. There is no indication in the DEIR if the National Forest Service will grant this request. 4-1

The DEIR states that the project will extend water supply capacities beyond existing limits. Project developers propose to examine and rehabilitate if necessary two existing wells that should supply adequate yield. In addition, a new 300,000 – 400,000 gallon water storage reservoir has been proposed. The applicant also proposes measures to mitigate the limited water availability by restricting individual wells within the proposed subdivision and strict water conservation measures. However, there is no explanation of how these water conservation measures will be enforced. 4-2

All water supplies for the area are derived from groundwater sources. There has been inconclusive testing of potential overdraft conditions with the North Shore Hydrologic Subunit. As a result, the DEIR concludes that the project will have impacts that are significant and unavoidable due to inconclusive testing of the potential overdraft conditions for the North Shore Hydrologic Subunit. 4-3

Public Safety Mitigation

OES is concerned with using increased fire flow and individual sprinkler systems as mitigation when there are serious concerns about long-term water supply availability from groundwater sources. OES is also concerned about the ability of the fire department to initially respond to a major fire in the area given the conditions noted previously, the lack of adequate water supply, and the size and makeup of the fire department. Additionally, other development projects are also planned in the area that will compound the water supply and public safety issues. 4-4

To improve public safety, the Final EIR should explore other mitigation measures that will reduce the water supply and fire safety impacts noted in the DEIR. These mitigation measures could include but are not limited to: 4-5

- Requiring that a homeowners association be formed to fund additional permanent fire fighting positions or improving the fire fighting equipment that serves the proposed subdivision.

- Requiring the developer to retrofit existing residential or commercial development in the area with water conservation devices that would provide additional water supply to the proposed subdivision.

- Requesting the fire department to determine how surface water from Big Bear Lake could be used for fire fighting purposes. This may involve the purchase of specialized equipment such as pumps or hoses that the proposed subdivision would fund.

Thank you for the opportunity to comment on your DEIR. If you have any questions regarding our comments, please contact Mary Ann Hadden, Associate Environmental Planner at (916) 845-8269.

Sincerely,

Dennis Castrillo

Dennis Castrillo
OES Environmental Officer

Response to Commentor No. 4
Dennis Castrillo, California Governor's Office of Emergency Services
May 12, 2004

4-1 In their letter dated May 14, 2004, the San Bernardino National Forest Service (NFS) Mountaintop District indicated that it would not support the issuance of a permit or easement on NFS land for the fuel modification zone that would extend beyond the project boundaries (refer to Comment Letter No. 6). Exhibit 3-4, *Site Plan*, has been updated to illustrate that the proposed project would include a fuel modification zone entirely located within the project's boundaries. Therefore, it would not be necessary for the project to obtain an easement or permit from the NFS to comply with the FS1 Fire Safety Overlay District requirements, as set forth in the County's General Plan (refer to Response to Comment No. 13-27).

Page 5.1-11 of the Draft EIR, Paragraph 4 and the proceeding text has been revised in the Final EIR as follows:

The Project site is located within the following four Overlay Districts: the Fire Safety (FR~~S~~) Overlay District; Geologic Hazard (GH) Overlay District; the Biotic Resources (BR) Overlay District; and the Scenic Resources (SR) Overlay District. The FR~~S~~ Overlay District is created to provide greater public safety in areas prone to wildland brushfires, by establishing additional development standards for these areas. ~~The FR Overlay District is created to provide greater public safety in areas prone to wildland brushfires, by establishing additional development standards for these areas. The FR Overlay District is divided into two review areas, each of which represents a different level of wildland hazard. A different set of requirements is applied in each review area. The provisions for these requirements are cumulative in that all of the requirements that are specified for Fire Safety Review Area 2 shall also apply to Fire Safety Review Area 1, in addition to those specified for only Fire Safety Review Area 1.~~ The project site is located within Fire Safety Area 1 (FS1).

- ~~Fire Safety Review Area 1 (FR1).~~ Fire Safety ~~Review~~ Area 1 includes wildland areas that are marginally developable, areas which are not likely to be developed, and the area of transition between wildlands and areas that are partially developed or are likely to be developed in the future. The area of transition is often characterized by an abrupt slope change. Natural hazards are prevalent throughout Area 1, especially in areas with natural ungraded slopes greater than thirty percent (30%). Area 1 includes areas of very high to extreme fire hazard.

- ~~Fire Safety Review Area 2 (FR2). Land within Area 2 is relatively flat, and is either partially or completely developed, or, if it is not developed, is usually suitable for development. Present and future development within Area 2 is exposed to the impacts of wildland fires and other natural hazards primarily due to its proximity to Area 1.~~

Since ~~T~~the ~~P~~project ~~site~~ is located within a FS1 designated area, it is ~~located~~

~~within Fire Safety Review Area 2 (RR2), therefore would be~~ subject to compliance with various requirements relative to construction, building separations, project design, and erosion and sediment control as specified in Section 85.020220, ~~Area FR1 and FR2 Requirements~~ *Building Standards for FS1*.

Page 5.3-1 of the Draft EIR, Paragraph 4 has been revised in the Final EIR as follows:

The Project site is located within a Fire Safety (FR~~2~~S) ~~Overlay District~~ Area ~~2~~1 (FR~~2~~S1), as designated by the County of San Bernardino General Plan Hazard Maps. FS1 areas are subject to compliance with various requirements relative to construction, building separations, project design, and erosion and sediment control as specified in Section 85.020220, ~~Area FR1 and FR2 Requirements~~ *Building Standards for FS1*, of the County Development Code. The provisions of the FR~~2~~S1 District apply to all phases of development. Refer to Section 5.1, *Land Use and Relevant Planning*, for further discussion of Fire Safety Overlay District requirements.

Page 5.3-11 of the Draft EIR, Paragraphs 1, 2 and 3 have been revised in the Final EIR as follows:

The San Bernardino County Fire Department has indicated that ~~the manpower demand as a result of the proposed project would need to be mitigated through increased fire flow~~ due to the size and scale of the proposed project, specific fire flow requirements would need to be met. Instead of 1,500 gpm at 2 hours (which is based on a maximum square foot house of 3,600 square feet), the fire flow requirement would be 1,750 gpm at 2 hours, based on homes in the range of 3,600 to 4,800 square feet, and 2,000 gpm at 2 hours, based on homes greater than 4,800 square feet. ~~Fire sprinklers would be required for each residence in lieu of additional manpower.~~ Homes above 5,000 square feet would have a larger sprinkler requirement.

A fuel modification area and plan program would be required ~~which would not terminate at a property line~~for the proposed project under the provisions of the FS1 Fire Safety Overlay District. ~~The 100 foot fuel modification requirement would extend beyond the property lines. Where such fuel modification zone extends on to U.S. Forest Service land, an easement or permit would be required. The 100 foot fuel modification zone may be greater in steeper areas (up to 300 feet), as determined by the fire agency.~~Per the requirements of the FS1 Overlay District, the project would require a 30-foot setback from the National Forest. The project proposes 100-foot fuel modification zone adjacent to National Forest land, located to the north and east of the project area. As shown in Exhibit 3-4, *Site Plan*, the fuel modification zone would be located within the project boundaries on Lots 15 to 16 and 20 to 29. A Fuels Management Plan would be established for the project to implement the fire safety requirements of the FS1 Overlay District. The Fuels Management Plan would be subject to review and approval by the San Bernardino

National Forest Service and the San Bernardino County Fire Department.

The fire flow requirements and ~~fuel modification~~Fuel Management Plan~~requirements~~ along with additional mitigation measures listed would reduce impacts to fire protection services to a less than significant level.

4-2 A Homeowners Association would enforce the water conservation measures identified in Mitigation Measure 5.3-6d.

Page 5.3-23, Mitigation Measure 5.3-6d of the Draft EIR, Paragraph 7 has been revised in the Final EIR as follows:

5.3-6d The following water conservation measures are the minimum measures that shall be complied with in conjunction with domestic water supply to the project. A Homeowners Association shall be responsible for enforcing the water conservation measures. Additional measures may be imposed as a result of a contract for water supply between CSA 53-C and the City of Big Bear Lake DWP:

4-3 Comment is noted.

4-4 The identified mitigation measures (5.3-1a to 5.3-1e) and project plans would be subject to review and approval by the Fire Department. The Fire Department has indicated that the recommended mitigation measures are appropriate to meet fire protection service needs for development of the project site. The project will also include a Fuels Management Plan, which will include a Fuel Modification Zone adjacent to National Forest Lands to the north and east of the project site (refer to Response to Comment Nos. 4-1 and 13-13). Water storage for fire fighting purposes would be provided through implementation of Mitigation Measure 5.3-6c, which states that Project Applicant would advance funds towards the expansion of the Cline Miller Reservoir. The EIR concludes that impacts to groundwater resources are significant and unavoidable and that additional technical review needs to be provided to prove that water resources are available to meet the long-term water demands of the project. It will be the responsibility of the Project Applicant to prove that water resources are available to meet the water demands of the project, which include fire flow requirements. The County will consider the Commentor's opinion and comments during their deliberation on the project.

Page 5.3-22 of the Draft EIR, Mitigation Measures 5.3-1b to 5.3-1f have been revised in the Final EIR as follows:

5.3-1b ~~Fire sprinklers for each residence shall be provided in lieu of additional manpower.~~ All residences less than 5,000 square feet shall be subject to the standard fire sprinkler requirement (NFPA 13D). Homes above 5,000 square feet shall be subject to the NFPA13R~~have a larger~~ sprinkler requirement ~~(FPA13R)~~.

5.3-1c A ~~f~~Fuels ~~modification program~~Management Plan, with specifications, shall be prepared and subject to approval by the County of San Bernardino Fire Department and San Bernardino National Forest Service. The Fuels Management Plan shall implement the fire safety requirements of the FS1 Fire Safety Overlay District, including a 30-foot minimum setback requirement from the National Forest. The fuel modification zone shall be located entirely within the project's boundaries. ~~The 100 foot fuel modification requirement shall not terminate at a property line. The 100 foot fuel modification requirement shall extend beyond property lines. Where such fuel modification zone extends onto U.S. Forest Service land, an easement or permit shall be required to be obtained.~~ The minimum~~100 foot~~ fuel modification zone requirements may be greater in steeper areas (up to 300 ft.), as determined by the Fire ~~Agency~~ Department.

5.3-1d Cul-de-sac lengths shall be no longer than 350 feet.

5.3-1e A Homeowner's Association or a Special District shall be established to ~~assure~~ implement the Fuels Management Plan. The Fuels Management Plan shall specify any professional assistance, if necessary, to implement the action portion of the plan. The Plan shall determine if a Registered Professional Forrester is necessary for professional guidance to implement the Plan. ~~Long-term vegetation maintenance. An annual vegetation maintenance program shall be included.~~ The HOA or Special District is to be responsible for fuel modification in common areas.

~~5.3-1f Fire resistance/drought tolerant landscaping shall be required and referenced in the Homeowner's Association or Special District Standards.~~

4-5 The identified mitigation measures in the EIR have been recommended to reduce potentially significant impacts to less than significant levels to the maximum extent feasible. However, the County may want to explore the recommended mitigation measures by the OES in future water and fire safety planning. The County will consider the Commentor's opinion and comments during their deliberation on the project.

SOUTHERN CALIFORNIA

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May 12, 2004

County of San Bernardino
Land Use Services Department, Planning Division
Attn: Matthew W. Slowik
385 N. Arrowhead Avenue, First Floor
San Bernardino, CA 92415-0182

RE: SCAG Clearinghouse No. I 20040198 Moon Camp Residential Subdivision TT No. 16136 DEIR

Dear Mr. Slowik:

Thank you for submitting the **Moon Camp Residential Subdivision TT No. 16136 DEIR** for review and comment. As areawide clearinghouse for regionally significant projects, SCAG reviews the consistency of local plans, projects and programs with regional plans. This activity is based on SCAG's responsibilities as a regional planning organization pursuant to state and federal laws and regulations. Guidance provided by these reviews is intended to assist local agencies and project sponsors to take actions that contribute to the attainment of regional goals and policies. 5-1

We have reviewed the **Moon Camp Residential Subdivision TT No. 16136 DEIR**, and have determined that the proposed Project is not regionally significant per SCAG Intergovernmental Review (IGR) Criteria and California Environmental Quality Act (CEQA) Guidelines (Section 15206). The proposed project is not a residential development of more than 500 dwelling units. Therefore, the proposed Project does not warrant comments at this time. Should there be a change in the scope of the proposed Project, we would appreciate the opportunity to review and comment at that time.

A description of the proposed Project was published in SCAG's **April 1-15, 2004** Intergovernmental Review Clearinghouse Report for public review and comment.

The project title and SCAG Clearinghouse number should be used in all correspondence with SCAG concerning this Project. Correspondence should be sent to the attention of the Clearinghouse Coordinator. If you have any questions, please contact me at (213) 236-1867. Thank you.

Sincerely,

Lawrence Jones for

JEFFREY M. SMITH, AICP
Senior Regional Planner
Intergovernmental Review

Response to Commentor No. 5
Jeffrey M. Smith, Southern California Association of Governments
May 12, 2004

5-1 The Southern California Association of Governments (SCAG) has reviewed the Draft EIR and has determined that the proposed project is not regionally significant per SCAG Intergovernmental Review Criteria and CEQA guidelines (Section 15206). No further response to this comment is necessary at this time.

United States Department of Agriculture | Forest Service | San Bernardino National Forest Mountaintop District | P.O. Box 290 Fawnskin, CA 92333 909-866-3437 (Voice) 909-866-2867 (FAX) 909-866-3233 (TTY)

File Code: 2670/5400
Date: May 14, 2004

Matthew Slowik
Senior Associate Planner
County of San Bernardino, Land Use Services Dept,
Planning Division
385 N. Arrowhead Ave., First Floor
San Bernardino, CA 92415-0182

Subject: Moon Camp DEIR

Dear Mr. Slowik:

Thank you for the opportunity to review and comment on the Draft Environmental Impact Report for the proposed Moon Camp Residential Subdivision and associated proposed actions (DEIR). The San Bernardino National Forest has several concerns regarding this proposed project, listed as follows:

1. The San Bernardino National Forest finalized a Habitat Management Guide for Pebble Plain habitat on National Forest System (NFS) lands in September, 2002. This document contains a set of habitat definitions for pebble plains that allow for consistent mapping standards. Important pebble plain habitat supporting multiple threatened, endangered, and sensitive plant species occurs on NFS land along the ridge immediately north of the proposed project. Based on species composition and the distribution of Morical soils described in the DEIR, substantially more pebble plain habitat occurs on the Moon Camp property than is presented in the DEIR. It is likely that most of the area described as "open Jeffrey pine forest", approximately 17 acres, falls within pebble plain habitat as currently defined. 6-1

2. We are concerned that the project will result in increased use and unplanned trail formation on NFS land to the north of the project, which supports pebble plains and other sensitive habitat. Under 'On-Site Recreation' on page 5.2-1, the DEIR states that the "site provides access to the San Bernardino National Forest to the north." However, mitigation measure 5.8-2c states that signs will be posted along the National Forest boundary "directing people to keep out..." We have found such signage to be ineffective in protecting sensitive areas while also providing a negative message to our visiting public. Therefore, we believe measure 5.8-2c will not effectively reduce potentially significant impacts to adjacent NFS lands and special status biological resources. 6-2

3. We are concerned about the conservation of bald eagle habitat in Big Bear Valley. As a federal land management agency, we are obligated to utilize our authorities to conserve bald eagles and other listed threatened and endangered species. Habitat loss along the Big Bear Lakeshore caused by developments such as the proposed project has become a significant cumulative impact to bald eagles as applied to management of NFS lands, thereby constraining our abilities to provide for public uses. We encourage the County to consider such effects beyond the Moon Camp property boundary when contemplating overriding considerations of significant impacts. 6-3

4. Under 'Public Access' on page 5.2-5, the DEIR states that the Forest Service has no plans to extend the Alpine Pedal Path through the project area. While there is no plan to do so currently, the SBNF has a longer term objective to extend the Pedal Path west through the Fawnskin area to NFS land near the Gray's peak trailhead and/or the Grout Bay picnic area. The project as proposed would foreclose potential routes to this end. We encourage the county to consider incorporating into the proposed project a public access path that could tie in to an extended Pedal Path on the east and the proposed Marina Point public lake access path on the west. 6-4

5. Mitigation measure 5.3-1c states that the required fuel modification zones will extend beyond property boundaries, including on to NFS lands. The SBNF would not support the issuance of such permits or easements and recommend that that project be designed to provide required fuel modification zones within the subject property. While the SBNF intends to treat NFS lands along the boundary with the community of Fawnskin to reduce ground fuels and ladder fuels, this treatment is not intended to fully meet the required fuel modification zone for residential structures. It has been SBNF policy to encourage new developments adjacent to NFS lands to provide all necessary infrastructure, including fuel modification zones, water tanks, and secondary access roads, within the development itself. 6-5

We appreciate the opportunity to provide these comments. Please feel free to contact us for additional information on biological resources, fire and fuels management, or National Forest lands management in general. With any questions or comments, please contact Gar Abbas on my staff at (909) 382-2807.

Sincerely,

Allison Stewart

ALLISON L. STEWART
District Ranger

Response to Commentor No. 6
Allison L. Stewart, United States Department of Agriculture, San Bernardino Forest Service
May 14, 2004

6-1 The area designated open Jeffrey pine forest was identified according to topography, soil types, and plant species composition observed during focused surveys in 2002. According to the 2002 Pebble Plain Habitat Management Guide, a point system to qualify pebble plain habitat was developed. To qualify as a pebble plain a given area must possess enough indicator species to attain a score of four points. Strong indicator species, each worth two points, often occur on pebble plains and rarely occur off pebble plains. Weak indicator species, each worth one point, often occur on pebble plains and frequently occur off pebble plains. The project site contains one strong indicator species, silver-haired ivesia, which was restricted to the 0.62 acre of pebble plain habitat mapped on Exhibit 5.8-3 of the EIR. Two weak indicator species, Parish's rock-cress and ash-gray Indian paint brush, were observed within the mapped pebble plain habitat and in scattered patches within the open Jeffrey pine habitat type. Therefore, the 0.62 acres of pebble plain attained the required four points and the area designated open Jeffrey pine forest attained only two points according to the 2002 Pebble Plain Habitat Management Guide point system. Implementation of Mitigation Measure 5.8-1a would ensure that botanical surveys are repeated prior to clearing or grading during a year of at least 40 percent average rainfall to more precisely map the concentration of special status plants and habitats. Following surveys, the habitat types and acreages will be revised according to the habitat definitions in the 2002 Pebble Plain Habitat Management Guide and mitigated appropriately at a 3:1 ratio. Please see the revisions to Mitigation Measure 5.8-1a in Response to Comment No. 3-5.

6-2 The proposed project would not provide access to National Forest Service (NFS) land to the north of the project site that is not already provided by existing roads (e.g., Flicker Road and Polique Canyon Road) and would not be expected to increase the human disturbance of surrounding areas by the general public. Since human disturbance would be expected to increase as a result of the proposed project, Mitigation Measure 5.8-2c was proposed to increase the awareness of the residents about the sensitive resources in surrounding areas. Mitigation Measure 5.8-2c has been revised in response to the concerns regarding the "negative message" to the visiting public.

Page 5.8-65, Mitigation Measure 5.8-2c of the Draft EIR has been revised in the Final EIR as follows:

5.8-2c	To limit the amount of human disturbance ~~to~~ on adjacent natural open space areas, signs shall be posted along the northeastern and eastern perimeter of the project site where the property boundary abuts open ~~space directing people to keep out of the adjacent natural open space areas and to keep dogs leashed in areas adjacent to natural open space areas. This requirement shall be published in the Homeowner Association CC&Rs~~ with the following statement: "Sensitive plant and wildlife habitat. Please use designated trails and keep pets on a leash

at all times."

In addition, a requirement stating that residents shall keep out of adjacent open space areas to the north with the exception of designated trails will be published in the Homeowner Association CC&Rs and a map of designated hiking trails will be provided to all residents.

6-3 The County will consider the Commentor's opinion and comments during their deliberation on the project.

6-4 The Forest Service has acknowledged that currently no plans have been prepared to extend the Alpine Pedal Path through the project area. However, the Forest Service does have a long-term objective to extend the Path west through Fawnskin to NFS land near the Gray's Peak trailhead and/or Grout Bay picnic area. As a result, the subsection pertaining to Public Access on Page 5.2-5 of the Draft EIR has been revised as follows:

PUBLIC ACCESS

5.2-2 *Implementation of the Moon Camp project would ~~not~~ affect public access along the north shore of Big Bear Lake. Mitigation requiring dedication of an easement along the south side of North Shore Drive has been incorporated. ~~The Project site is Private Property. Affects on public access are concluded as less than significant.~~*

The Moon Camp Project would include 31 residential/numbered lots south of the realignment of North Shore Drive. Additionally, the marina facilities, inclusive of Lot "C" would be located south of North Shore Drive. Lot "C", consisting of approximately 19,683 square feet (0.45 acres), would be the gated entrance to the marina facilities. Lot "C" would be situated between the "high water line" and the roadway improvements at the southwestern portion of the project site. The Lot "C" marina access ramp would affect public access from west to east along the shoreline of the Lake.

The County of San Bernardino General Plan Goal C-54 states the intention to "provide public access to all water bodies and water courses." Furthermore, Policy/Action OR-48 states that, "Because the County seeks to improve the ability of the public to enjoy water-related recreation, the County shall seek to improve public access to rivers, lakes, creeks, lakes and other bodies of water." Additionally, Policy/Action OR-49 states that "Because public access to water for recreational uses is important to the County, easements and dedications allowed in the Subdivision Map Act to acquire access to lakes, streams, public lands and other locally and regionally significant natural features shall be required for all new development." ~~However, since the Project site is private property, public access is not assured~~. As the project abuts existing homes to the east and the proposed Marina Point Development to the west, ~~P~~public access to the lakeshore would be maintained below the high water line of the lake.~~maintained at the eastern and~~

~~western boundaries of the site~~. Public access to the lakeshore also continues to be maintained at other locations along the perimeter of the lake. However, since the Project site is private property, public access is not assured.

~~It is further noted that~~ Although the U.S. Forest Service has indicated that there are no current plans to extend the Alpine Pedal Path through the project area, as a result of redesign of portions of the project area, south of North Shore Drive, a pedal path easement could be established. Thus, mitigation incorporating and easement has been incorporated for the project, to be conditioned, prior to recordation of a map. ~~Thus, it is concluded that access is provided to the lakeshore in close proximity to the project site resulting in a conclusion of less than significant impact.~~

In addition, Mitigation Measure 5.2-2, on Page 5.2-6 of the Draft EIR, has been revised in the Final EIR as follows:

5.2-2	~~No mitigation measures are recommended.~~ The proposed project shall be conditioned to incorporate a pedal path easement along the south side of North Shore Drive, prior to map recordation.

6-5 Commentor refers to lack of the SBNF lack of support for the proposed fuel modification zones. Please refer to Response to Comment No. 4-1, which addresses this concern.

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse and Planning Unit

Arnold
Schwarzenegger
Governor

Jan Boel
Acting Director

May 14, 2004

Matthew Slowik
San Bernardino County Land Use Services Department
385 N. Arrowhead Ave., 1st Floor
San Bernardino, CA 92415-0182

Subject: Moon Camp
SCH#: 2002021105

Dear Matthew Slowik:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on May 13, 2004, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

> "A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

7-1

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

Terry Roberts

Terry Roberts
Director, State Clearinghouse

Enclosures
cc: Resources Agency

Document Details Report
State Clearinghouse Data Base

SCH# 2002021105
Project Title Moon Camp
Lead Agency San Bernardino County Land Use Services Department

Type EIR Draft EIR
Description GPA/OLUD to establish a 95-lot residential subdivision, with 92 numbered lots and 3 lettered lots.

Lead Agency Contact

Name Matthew Slowik
Agency San Bernardino County Land Use Services Department
Phone 909-387-4147 **Fax**
email
Address 385 N. Arrowhead Ave., 1st Floor
City San Bernardino **State** CA **Zip** 92415-0182

Project Location

County San Bernardino
City
Region
Cross Streets Canyon Road and Polique Canyon Road
Parcel No. 0304-082-14, 0304-091-12, 13, 21
Township 2N **Range** 1W **Section** 13 **Base** SBBM

Proximity to:

Highways 38
Airports
Railways
Waterways Big Bear Lake
Schools
Land Use BV/RL-40 (Rural Living - 40 acre minimum lot size)

Project Issues Aesthetic/Visual; Air Quality; Archaeologic-Historic; Drainage/Absorption; Fiscal Impacts; Flood Plain/Flooding; Forest Land/Fire Hazard; Geologic/Seismic; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Sewer Capacity; Soil Erosion/Compaction/Grading; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Wildlife; Growth Inducing; Landuse; Cumulative Effects

Reviewing Agencies Resources Agency; Department of Fish and Game, Region 6; Department of Forestry and Fire Protection; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; Office of Emergency Services; California Highway Patrol; Caltrans, District 8; Regional Water Quality Control Board, Region 8; Department of Toxic Substances Control; Native American Heritage Commission; State Lands Commission

Date Received 03/30/2004 **Start of Review** 03/30/2004 **End of Review** 05/13/2004

Note: Blanks in data fields result ufficient information provided by lead agency.

Response to Commentor No. 7
Terry Roberts, California Governor's Office of Planning and Research: State Clearinghouse and Planning Unit
May 14, 2004

7-1 The Commentor acknowledges that the Draft EIR has complied with State Clearinghouse review requirements and has been forwarded to select state agencies for review. No further response to this comment is necessary at this time.

Southern California
Gas Company
1981 W. Lugonia Avenue
Redlands, CA 92374-9720
Mailing Address:
PO Box 3003
Redlands, CA 92373-0306

The Gas Company®

A Sempra Energy® utility

April 21, 2004

County of San Bernardino
Land Use Services Department, Planning Division
385 N. Arrowhead Avenue, First Floor
San Bernardino, CA 92415-0182

Attention: Matthew W. Slowik

Re: (EIR) MOONCAMP DEVELOPMENT PROJECT/RCK PROPERTIES INC.

Thank you for the opportunity to respond to the above-referenced project. Please note that Southern California Gas Company has facilities in the area where the above named project is proposed. Gas service to the project could be provided without any significant impact on the environment. The service would be in accordance with the Company's policies and extension rules on file with the California Public Utilities Commission at the time contractual arrangements are made.

You should be aware that this letter is not to be interpreted as a contractual commitment to serve the proposed project, but only as an informational service. The availability of natural gas service, as set forth in this letter, is based upon present conditions of gas supply and regulatory policies. As a public utility, The Southern California Gas Company is under the jurisdiction of the California Public Utilities Commission. We can also be affected by actions of federal regulatory agencies. Should these agencies take any action, which affects gas supply, or the conditions under which service is available, gas service will be provided in accordance with revised conditions. 8-1

Typical demand use for:

a.	Residential	(System Area Average/Use Per Meter)	Yearly
	Single Family		799 therms/year dwelling unit
	Multi-Family 4 or less units		482 therms/year dwelling unit
	Multi-Family 5 or more units		483 therms/year dwelling unit

These averages are based on total gas consumption in residential units served by Southern California Gas Company, and it should not be implied that any particular home, apartment or tract of homes will use these amounts of energy.

b. Commercial

Due to the fact that construction varies so widely (a glass building vs. a heavily insulated building) and there is such a wide variation in types of materials and, a typical demand figure is not available for this type of construction. Calculations would need to be made after the building has been designed. 8-1

We have Demand Side Management programs available to commercial/industrial customers to provide assistance in selecting the most effective applications of energy of our energy conservation programs, please contact our Commercial/Industrial Support Center at 1-800-GAS-2000.

Sincerely,

Rogelio A. Rawlins
Technical Services Supervisor

Response to Commentor No. 8
Rogelio A. Rawlins, The Gas Company
April 21, 2004

8-1 The Commentor acknowledges that gas service to the project could be provided without any significant impact to the environment. No further response to this comment is necessary at this time.

COMMENT NO. 9

Friends of Fawnskin

PO Box 422, Fawnskin, CA92333
Phone: 909-866-9682
FriendsofFawnskin@Yahoo.com

10 May 2004

VIA FAX (909-387-3223) AND U.S. MAIL

Mr. Matthew W. Slowik
County of San Bernardino
Land Use Services Department, Planning Division
385 N. Arrowhead Ave., First Floor
San Bernardino, CA 92415-0182

RE: DRAFT EIR FOR THE MOON CAMP DEVELOPMENT PROJECT/RCK PROPERTIES INC.: GENERAL PLAN AMENDMENT/OFFICIAL LAND USE DISTRICT CHANGE FROM BV/RL-40 TO BV/RS-7200 AND AMENDMENT TO COUNTY CIRCULATION ELEMENT FOR REALIGNMENT OF NORTH SHORE DRIVE; TENTATIVE TRACT MAP #16136, AND CONDITIONAL USE PERMIT FOR A BOAT DOCK.

Dear Mr. Slowik,

I am writing to request that the County extend the May 17 deadline for public responses to the DEIR for the Moon Camp Development Project. The DEIR is a huge document, difficult to read and requires extensive time to evaluate properly There are many very complex impacts presented and a long list of documents and reports referred to in the DEIR but not provided. We are spending a great deal of extra time finding and reviewing the information in these other documents, plus locating information on issues that were omitted from the DEIR. 9-1

Thank you for your consideration in this request. I look forward to hearing from you.

Sincerely,

Janet T. Davidson

a friend

Response to Commentor No. 9
Janet Davidson, Friends of Fawnskin
May 10, 2004

9-1 County Staff is not formally extending the public review period, which started on March 30, 2004 and ended on May 13, 2004. The California Environmental Quality Act (CEQA) requires a 45-day public review period for a project of this nature.

The Commentor is also referred to Section 15207 of the CEQA Guidelines which states that:

> *"If any public agency or person who is consulted with regard to an EIR or negative declaration fails to comment within a reasonable time as specified by the lead agency, it shall be assumed, absent a request for a specific extension of time, that such agency or person has no comment to make. Although the lead agency need not respond to late comments, the lead agency may choose to respond to them."*

Although the public review period ended on May 13, 2004, the County did accept comment letters received after this date, as late as July 2, 2004, to which responses are provided.

Friends of Fawnskin

PO Box 422, Fawnskin, CA92333
Phone: 909-866-9682
FriendsofFawnskin@Yahoo.com

10 May 2004

VIA FAX (909-387-3223) AND U.S. MAIL

Mr. Matthew W. Slowik
County of San Bernardino
Land Use Services Department, Planning Division
385 N. Arrowhead Ave., First Floor
San Bernardino, CA 92415-0182

RE: DRAFT EIR FOR THE MOON CAMP DEVELOPMENT PROJECT/RCK PROPERTIES INC.: GENERAL PLAN AMENDMENT/OFFICIAL LAND USE DISTRICT CHANGE FROM BV/RL-40 TO BV/RS-7200 AND AMENDMENT TO COUNTY CIRCULATION ELEMENT FOR REALIGNMENT OF NORTH SHORE DRIVE; TENTATIVE TRACT MAP #16136, AND CONDITIONAL USE PERMIT FOR A BOAT DOCK.

Dear Mr. Slowik,

I am writing to request that the County extend the May 17 deadline for public responses to the DEIR for the Moon Camp Development Project. The DEIR is a huge document, difficult to read and requires extensive time to evaluate properly. There are many very complex impacts presented and a long list of documents and reports referred to in the DEIR but not provided. We are spending a great deal of extra time finding and reviewing the information in these other documents, plus locating information on issues that were omitted from the DEIR. 10-1

Thank you for your consideration in this request. I look forward to hearing from you.

Sincerely,

Sandy Steers
for the Friends of Fawnskin

Response to Commentor No. 10
Sandy Steers, Friends of Fawnskin
May 10, 2004

10-1 Commentor refers to extending the deadline for providing comments on the Draft EIR. Please refer to Response to Comment No. 9-1, which addresses this concern.

CENTER FOR BIOLOGICAL DIVERSITY

CALIFORNIA AND PACIFIC OFFICE

protecting and restoring natural ecosystems and imperiled species through science, education, policy, and environmental law

VIA FACSIMILE AND U.S. MAIL

May 11, 2004

Mr. Matt Slowik, Senior Associate Planner
County of San Bernardino
385 N. Arrowhead Avenue, Third Floor
San Bernardino, CA 92415-0182
Facsimile: (909) 387-3223

Re: Request for Extension of Time to Prepare Comments on the Draft Environmental Impact Report for the Moon Camp Residential Subdivision Tentative Tract No. 16136, SCH # 2002021105

Dear Mr. Slowik,

I write on behalf of the Center for Biological Diversity ("the Center") to request an extension of time to submit comments on the Draft Environmental Impact Report for the Moon Camp Residential Subdivision Tentative Tract No. 16136, SCH # 2002021105 ("Moon Camp DEIR"). The Center is a non-profit, public interest environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center has over 9,000 members throughout California and the western United States, including in County of San Bernardino where the project is located. 11-1

The Moon Camp proposal is an extremely significant development proposal which will have grave environmental consequences, for example with regard to the bald eagle, a species listed as threatened under the federal Endangered Species Act, endangered under the California Endangered Species Act, and Fully Protected by the state of California. The Moon Camp DEIR consists of two large volumes that deal with a detailed and technical subject matter. Due to the importance of the environmental issues and the volume of documents to be reviewed, an extension of four weeks, to June 14, 2003, is warranted in this instance. Such an extension would give the Center and other organizations and individuals a fuller opportunity to prepare comments that should prove useful to the County in its review of this project.

Tucson • Phoenix • Silver City • San Diego • Berkeley • Shaw Island

Kassie Siegel, Staff Attorney
PO Box493, Idyllwild, CA 92549
TEL.: (909) 659-6053 x. 302 • FAX: (909) 659-2484
Email: ksiegel@biologicaldiversity.org • www.biologicaldiversity.org

Please notify me by phone at (909) 659-6053 x. 302 or by fax at (909) 659-2484 or by U.S. mail to the address on this letterhead as to whether the County will grant the requested extension of time. Thank you very much for your consideration of this very important matter. 11-1

Sincerely,

Kassie Siegel
Center for Biological Diversity

Response to Commentor No. 11
Kassie Siegel, Center for Biological Diversity
May 11, 2004

11-1 Commentor refers to extending the deadline for providing comments on the Draft EIR. Please refer to Response to Comment No. 9-1, which addresses this concern. Commentor also refers to impacts to the bald eagle. Please refer to Response to Comment Nos. 3-7, 13-88, 13-95 and 41-14, which address these concerns.

FRIENDS OF FAWNSKIN
P.O. Box 422
Fawnskin, California 92333
909-866-9682

May 11, 2004

County of San Bernardino
Land Use Services Department, Planning Division
385 North Arrowhead Avenue 1st Floor
San Bernardino, California 92415-0182

Attn: Matthew Slowik, Sr. Assoc. Planner

BY FAX & U.S. MAIL: 909-387-3223

RE: "DRAFT EIR FOR THE MOON CAMP DEVELOPMENT PROJECT/RCK PROPERTIES INC.: GENERAL PLAN AMENDMENT/OFFICIAL LAND USE DISTRICT CHANGE FROM BV/RL-40 TO BV/RS-7200 AND AMENDMENT TO COUNTY CIRCULATION ELEMENT FOR REALIGNMENT OF NORTH SHORE DRIVE; TENTATIVE TRACT MAP #16136, AND CONDITIONAL USE PERMIT FOR A BOAT DOCK."

Dear Mr. Slowik,

Due to the length and complexities of this DEIR we would like to request more time to respond and comment. It is an important but necessary task to research and substantiate our comments, and to do so properly and accurately, more time is needed. 12-1

Thank you for your consideration.

Yours truly,

Thomas Brandau
For Friends Of Fawnskin Adv. Committee

Response to Commentor No. 12
Thomas Brandau, Friends of Fawnskin
May 11, 2004

12-1 Commentor refers to extending the deadline for providing comments on the Draft EIR. Please refer to Response to Comment No. 9-1, which addresses this concern.

FRIENDS OF FAWNSKIN
P.O. Box 422
Fawnskin, California 92333
909-866-9682

May 15, 2004

HAND DELIVERED

County of San Bernardino
Land Use Services Department, Planning Division
385 North Arrowhead Avenue 1st Floor
San Bernardino, California 92415-0182

Attn: Matthew Slowik, Sr. Assoc. Planner

RE: "DRAFT EIR FOR THE MOON CAMP DEVELOPMENT PROJECT/RCK PROPERTIES INC.: GENERAL PLAN AMENDMENT/OFFICIAL LAND USE DISTRICT CHANGE FROM BV/RL-40 TO BV/RS-7200 AND AMENDMENT TO COUNTY CIRCULATION ELEMENT FOR REALIGNMENT OF NORTH SHORE DRIVE; TENTATIVE TRACT MAP #16136, AND CONDITIONAL USE PERMIT FOR A BOAT DOCK."

I. INTRODUCTION and SUMMARY

On behalf of the membership of Friends Of Fawnskin we would like to thank the San Bernardino County Land Use Services Department Planning Division for the opportunity to comment on the Draft Environmental Impact Report for the proposed Moon Camp residential development project, General Plan amendment, land use district change, circulation amendment, tentative tract map and conditional use permit for a boat dock (collectively, DEIR). Friends Of Fawnskin (FOF) represents a membership of over 600 local residents of Fawnskin, California, all of whom would be directly and adversely affected by the development of the proposed Moon Camp project. FOF has been working consistently to maintain and protect the historic small-town, nature-oriented atmosphere of Fawnskin on the north shore of Big Bear Lake. Residents and visitors who have chosen to come to Fawnskin have done so primarily because of the current character of the town. We feel that it is imperative to the rights of these individuals that the basic essence of this character be preserved. 13-1

The FOF is strongly opposed to this proposed Moon Camp development project because this project, as proposed, would have extensive adverse effects on surrounding properties, on the entire community of Fawnskin and on the Big Bear Valley as a whole. The FOF urges the County not to allow the significant impacts and multiple harmful effects that would occur should this proposed project be approved. We support the RL-40 designation of this property as it is currently zoned in the County's General Plan and strongly advocate the maintenance of this designation.

In reviewing the DEIR, the FOF has found it to be incomplete, inaccurate, and defective. The DEIR fails to adequately evaluate the severe adverse effects of the proposed project and grossly downplays and understates the significant and unavoidable impacts that would be caused should it be approved. FOF's objections to this proposed project and the inadequacies of this DEIR are set forth below. Please include this letter in its entirety as part of our formal CEQA comments to be

included in the Environmental Impact Report. In summary, we object to this development project, as proposed, for the following reasons: 13-1

II. GENERAL PROCEDURAL COMMENTS

- The DEIR Cumulative Analysis in all areas fails to adequately assess the cumulative effect of the subject project in the context of other past, present and proposed future projects. Section 4.0 omits two large projects—the Castle Glen development in Big Bear Lake and the tripling in size of the Big Bear Discovery Center to accommodate increased tourist traffic. Those, plus the ones listed (Cedar Dell, Marina Point and proposed moving of the Zoo—all in Fawnskin) add extensively to the already significant cumulative impacts of this proposed project on Fawnskin, the North Shore and the Big Bear Valley. In addition, two other parcels (one 30 acres and one 7.5 acres) very near the Moon Camp property are in the early stages of proposed development. And the cumulative impact of all the combined projects is underestimated and downplayed throughout every section of the document. 13-2

- The DEIR fails to consider that there is still no defined water supply for the site and as such, according to current **state law, this proposed project absolutely cannot be approved**. (Our comments under the section on water present details on this.) 13-3

- The DEIR in all sections fails to define how each mitigation item will be implemented and who would be accountable for the implementation of these measures. It also fails to mention who will monitor and enforce proposed mitigation. Without the specific and enforceable details, such mitigations cannot credibly or verifiably reduce the level of significant impacts. 13-4

- The DEIR analysis failed to consider input from California Department of Transportation (necessary to give input to the rerouting of the scenic highway), the United States Forest Service (the proposed development is adjacent on the north and east to the USFS which has needs to address eagle and biological concerns), the California Department of Fish and Game (input necessary for shoreline and streambed areas), the Army Corps of Engineers (input necessary for dredging to deepen a site for boat docks), and the Big Bear Lake Municipal Water District (input necessary for dredging and the marina). 13-5

- The DEIR fails to consider the "No Project/No Development" and the "No Project/ Existing Designation" Alternatives as viable alternatives in Section 7.5 and fails to state specifically which is the "Environmentally Superior" option. 13-6

- The DEIR fails to analyze the impacts that would be caused by the increasing percentage of full-time use of the homes, when across the mountains, more and more homeowners are moving full-time to their mountain retreat (with Crestline now up to 70% full time and climbing rapidly). The impact of full occupancy of the 92 proposed houses must be evaluated in each area of the analysis. 13-7

For each of the above reasons, and for the reasons that follow, the DEIR should be rejected.

III. LAND USE and RELEVANT PLANNING

- In Section 5.1.1 the DEIR fails to reference or consult the valuable study mandated in General Plan Ordinance OR-3-d. "Prepare a report outlining the economic effects of open space, focusing on potential tourism revenues, the effect of open space on adjacent property values and the relative costs of providing open space management or urban services for a site." Since this property is now open space and since the current zoning serves to leave it in primarily an open space state, this study must be completed. 13-8

- In section 5.1-2, the DEIR states that according to the General Plan, a Land Use District Change requires that: "The proposed land use District change is in the public interest, there will be a community benefit, and other existing and permitted uses will not be compromised." This proposed zoning change is absolutely not in the public interest and would have substantial adverse effects on the community. These adverse effects would include a dramatic change in the size and character of the Community of Fawnskin, water, views, etc. The most critical of these adverse effects would be the resulting threats to public safety and public health. In addition, the existing use of a large portion of open space, which has been shown in studies to have significant tangible value, would be compromised with the proposed zoning change. The proposed change would obstruct public lake views from the highway in one of the few places remaining where the public can view the lake from the highway, and views from the lake and south shore of the scenic North Shore. 13-9

- In section 5.1-2, the DEIR states that according to the General Plan, a Land Use District Change requires that: "The proposed land use District change is consistent with the goals and policies of the General Plan, and will provide a reasonable and logical extension of the existing land use pattern in the surrounding area. " The proposed zoning change would not be a logical extension of the existing land use pattern. Since only about 42% of the properties boundaries are homes, this is not at all a logical extension of the land use pattern. A "logical extension" following the argument used in the DEIR would be for this property to be made available for public use and enjoyment, as is the majority of the property surrounding it. (58% of the properties boundaries are National Forest and lake, all public open space.) 13-10

- In section 5.1-2, the DEIR states that according to the General Plan, a Land Use District Change requires that: "The proposed land use District change does not conflict with provisions of this Code, or any applicable specific code." This proposed zoning change conflicts with the County's General Plan Code C-56 "Restrict development along scenic corridors." This proposed change would serve to increase rather than restrict development along a designated scenic highway. 13-11

- In section 5.1-2, the DEIR states that according to the General Plan, a Land Use District Change requires that: "The proposed land use District change does not conflict with provisions of this Code, or any applicable specific code." This proposed zoning change conflicts with the County's General Plan Code C-55 "Preserve and protect outstanding scenic resources of San Bernardino County for their continued future enjoyment." This proposed change would serve to degrade, not protect the outstanding scenic resources of this area. 13-12

- In section 5.1-2, the DEIR states that according to the General Plan, a Land Use District Change requires that: "The proposed land use District change does not conflict with provisions of this Code, or any applicable specific code." This proposed zoning change conflicts with the County's General Plan Code OR-59 "Because public health and safety can be protected through the use 13-13

of open space, the County may maintain open space where flood, *fire*, geologic, seismic hazards, noise or other conditions endanger public health and safety." This proposed change would pose a substantial risk to the protection of the public's health and safety by reducing the supply of water available for fighting fire and increasing the number of people that would need to be evacuated from Fawnskin in the event of wildfire threatening the community. It would also increase the ratio of structures to wildland in this urban/wildland interface, which fire fighters recognize as the most difficult and costly to defend, while this area is already under a State Emergency Proclamation. This change would therefore be contrary to this ordinance and irresponsible on the part of the County. 13-13

- In section 5.1-2, the DEIR states that according to the General Plan, a Land Use District Change requires that: "The proposed land use District change does not conflict with provisions of this Code, or any applicable specific code." This proposed zoning change would conflict with the County's General Plan Code D-51 "Ensure that the quality of life of County residents is not depreciated by future growth." This proposed changes would in fact serve only to depreciate the quality of life of the surrounding Fawnskin residents, as well as County residents throughout Big Bear Valley by allowing for future development of this property, with attendant traffic, pollution discharge and other detrimental effects. 13-14

- In section 5.1-2, San Bernardino County Development Code, the DEIR states that according to the General Plan, a Land Use District Change requires that: "The proposed land use District change does not conflict with provisions of this Code, or any applicable specific code." This proposed zoning change conflicts with the County's General Plan Code in Section III C, Mountain Region, "The physical/natural constraints of the region and the lack of adequate water supply and infrastructure facilities needed to support higher density development preclude higher intensity uses." Since the General Plan wisely saw fit to zone this property RL-40 to preclude higher density uses, this proposed change is in direct conflict with the General Plan. 13-15

- In section 5.1-2, the DEIR states that according to the General Plan, a Land Use District Change requires that: "The proposed land use District change will not have a substantial adverse effect on surrounding property." The proposed zoning change in fact would have a substantial adverse effect on the surrounding property, by increasing public health and public safety risks and by substantially blocking views and decreasing property values. Existing property owners of surrounding properties bought their property and homes with the knowledge that this Moon Camp property was zoned RL-40 and the property rights of all these individuals must be protected by the County. 13-16

- The proposed project would not satisfy any of the requirements stated in the General Plan for allowing a zoning change. Therefore, the DEIR statements are false and the DEIR failed to adequately assess the collective or combined effect of both the project in question and other foreseeable projects. See Kings County Farm Bureau v. City of Hanford, 221 Cal.App. 3d 692. 13-17

- The DEIR states in Section 5.1-3 that this proposed project, combined with other future development, would increase the intensity of land uses in the area, but concludes that the impacts are less than significant. This is an erroneous conclusion. The direct and cumulative effects of this proposed zoning change in total with the proposed Marina Point development project, the proposed Brookside development project, the expansion of the Discovery Center and 13-18

the other projects currently in development in Big Bear Valley would cause a significant and unavoidable impact to Fawnskin and the surrounding communities. 13-18

- The proposed zoning change would have the potential to increase the population of the Community of Fawnskin by at least 34%. Such a substantial increase in the size of a community has a multitude of adverse impacts on the infrastructure and the character of the area and would be a significant and unmitigable impact. 13-19

- In section 5.1-2, San Bernardino County Development Code, the DEIR states that according to the General Plan, a Land Use District Change requires that: "The proposed land use District change does not conflict with provisions of this Code, or any applicable specific code." This proposed zoning change conflicts with the Land Use Element policy, which the DEIR states is "relevant to the proposed Project." This policy, LU-2, states that one of the actions that shall be implemented is "(a) Require that the design and siting of new residential development meet locational and development standards that ensure compatibility with adjacent land uses and community character." The proposed project is designed as a suburban residential tract with cul-de-sacs, street lighting, curbs, etc, which in no way matches the surrounding unique historic small town community. Thus, the associated proposed zoning change once again conflicts with the County's code and therefore cannot be allowed. 13-20

- In section 5.1 and Table 5.1-1, the DEIR states that the surrounding residential property is Improvement Level-1, but the surrounding properties in reality have Improvement Level-3 – there are no curbs and gutters, there are no sidewalks, there is nearly no street lighting at all. Nowhere in Fawnskin do any of the residential areas match the "high density development in urban areas" as specified by IL-1. Allowing the development of this proposed project at an IL-1 level is completely out of character with the rural, mountain character of the existing community and would be a significant unmitigable impact. 13-21

- Section 5.1 in the DEIR states that in the amendment to the Transportation/Circulations Maps with the changing in alignment of State Route 38, a less that significant impact would occur. Considering that this is a County designated Scenic Highway and that the views from this Scenic Highway would be completely lost and replaced with a view of the wall of a gated community, this analysis is invalid and this change would create a significant and unavoidable impact. 13-22

In summary, the DEIR statement that "No unavoidable significant impacts related to Land Use and Relevant Planning have been identified" only emphasizes the inadequacy of this DEIR. For all of the reasons stated above, there are many **significant and unavoidable impacts related to Land Use and Relevant Planning.** For the potential increases in public safety and public health risks alone, it would be completely irresponsible of the County to approve the proposed zoning change. 13-23

IV. RECREATION

- Section 5.2-1, Expansion and/or construction of Recreational Facilities, of the DEIR states on page 5.2-4 that the proposed construction of marina facilities may have an adverse impact on the physical environment, but that these potential impacts are concluded to be less than significant. This analysis is invalid and the impacts have been significantly understated since 1) construction of these facilities would require dredging of the lake in shallow-water bald eagle 13-24

foraging habitat, and 2) since no analysis has been done on storage of boats during the seven months of the year when they are not in use and since the use of these facilities with residents pulling boats and trailers in and out of the facility has not been accounted for in the traffic study. The permanent impact of additional traffic on the lake, with related noise, fuel emissions and loss of space on the lake for fishing and boating activities due to entrance and exit traffice has not been addressed. 13-24

- Section 5.2-1 of the DEIR bases all calculations on a weekend use factor of 9%, which is the yearly average. This use is actually seasonal and is closer to 60% during summer weekends, with 90% expected on holiday weekends. The impacts these proposed facilities would have has been underestimated, making the analysis invalid. 13-25

- In section 5.2-2 of the DEIR statement that "Public access to the lakeshore would be maintained at the eastern and western boundaries of the site" is erroneous since the proposed project maps and plans show no public access corridors designated and since the lakefront portion of the proposed project would abut to existing homes on the east and to the proposed Marina Point development project on the west. The DEIR also failed to consider that all land below the high water line of Big Bear Lake is open to public access. Even if this land remains technically open, the perception that the land is private will be created by the adjacent gated community, and access to this public resource will inevitably be restricted. 13-26

V. PUBLIC SERVICES AND UTILITIES

A. Fire Protection

- Under Section 5.3, the analysis of Fire Protection is based on Fire Risk level 2, but all mountains areas in the County have been upgraded to Fire Risk level 1. This makes the DEIR's entire analysis of Fire Protection invalid. 13-27

- Section 5.3.1a states that "The fire flow requirement shall be 1750 gpm @ 2 hours based on homes in the range of 3,600 to 4,800 square feet, and 2,000 gpm @ 2 hours for homes greater than 4,800 square feet" when nowhere in the DEIR does it explain where this water capacity will come from nor even that the findings are supported by County Fire. 13-28

- The DEIR in no way justifies how the fire sprinklers specified in Section 5.3.1b are an equivalent tradeoff for additional manpower. Especially in cases of forest fires, internal sprinklers would do nothing to stop the trees and brush around the homes from burning and spreading the fires. This mitigation completely underestimates the issue of fire risk in the mountains and ignores the risk created by additional sources of fire, such as chimneys, barbecues and potential traffic accidents or utility failures. 13-29

- Section 5.3-1c says that the fuel modification would not terminate at the property line, but nowhere in the DEIR is there an analysis of the likelihood of obtaining a permit from the U.S. Forest Service (and in fact, they were not even contacted during the analysis), so this mitigation has no merits unless the 100-foot fuel modification requirement is to be contained completely within the project boundaries. 13-30

- The mitigations listed in 5.3-1e and 5.3-1f are based on homeowners complying with HOA standards and offer no plan for enforcement. This is completely impractical and these mitigations do not reduce significance. 13-31

- The DEIR does not address Fire Evacuation plans for the area, so nothing was included in section 5.3-1 regarding the cumulative impact more houses will have on fire evacuations from Fawnskin and Big Bear Valley. In the October 2003 wildfire evacuation, with a few days of warning and with minimal tourists in the area, it still took 6 hours to get off the mountain. No analysis was done on the impact increasing the size and population of Fawnskin by 34% will have on fire evacuations, especially should a forest fire start in the Valley or near Fawnskin. A further analysis is required, which considers the situation in which access to either highway 18 or Highway 38 is impaired due to the location of a fire. 13-32

- 90% of all County (Fawnskin) Fire Department calls are for medical aide. The DEIR does not address what the cumulative impact of this additional proposed development will have on the local station (Station 49) regarding medical aide. 13-33

- No analysis was done on the how the additional homes of the proposed development would increase the urban/forest interface in Fawnskin and how much the fire risk will increase accordingly. 13-34

- The impact on fire risk from fuel storage and fuel spills at the proposed marina, and from fuel tanks on boats stored or parked at the proposed private marina have not been evaluated in the DEIR. 13-35

- The Insurance Service Organization (ISO) has stated that Fawnskin is in a high fire danger area (9 on a 1-10 basis). The EIR does not evaluate whether adding additional homes will increase the likelihood of fire insurance becoming unavailable for the Fawnskin residents and especially for second homeowners who already have a challenge in obtaining fire coverage. 13-36

For the reasons given above, the DEIR is incomplete, inaccurate, and defective in its analysis of fire protection and the development of the proposed project would clearly create **significant and unmitigable impacts to Fire Protection.** 13-37

B. Police Protection

- Section 5.3-2 uses the average response time for emergency calls to the entire unincorporated area is invalid – only average times to the Fawnskin area should be used due to its distance from the Sheriff's station compared with other unincorporated areas. This analysis should be required to address response time on summer and holiday weekends, the more likely time the proposed project will be most densely used. 13-38

- Section 5.3-2 uses the number of calls handled for the entire unincorporated area and not for calls within Fawnskin, nor does it evaluate the increase in calls to Fawnskin expected with an increase of 34% in Fawnskin's population that would be likely occur with the development of this proposed project. There is currently one officer for the entire area and police services are spotty at best and often non-existent. 13-39

- No analysis was done in the DEIR on police response times and abilities for "other than emergency" calls. 13-40

The conclusion that the impact police protection is less than significant is based on irrelevant and insufficient data. 13-41

C. Water

Although the DEIR does state that the water issue cannot be mitigated to below the level of significance, the analysis that is offered grossly understates the current water crisis.

- Section 5.3-6 incorrectly states that this proposed project is exempt from SB221 (which states adequacy of water supplies for the proposed project must be determined). As the DEIR points out, SB221 applies to any subdivision that increases connections by 10% or more. Since Fawnskin is actually a separate water system (we do not have water lines coming from the City of Big Bear Lake) and independent from the rest of the DWP's service area and the rest of the Valley it must be considered separately in the calculations. There are currently 673 connections in Fawnskin, 92 additional connections would be a 14% increase, so SB221 does apply. 13-42

- Section 5.3-6 bases potential water supply on 2 wells (FP-2 and FP-3) drilled on the property in 1987 and any assumption for potential water supply from these wells is inaccurate without further study. According to the Big Bear Lake Municipal Water District's Watermaster report (which was not utilized as reference material in the DEIR analysis) the average rainfall over the past 5 years compared to the 5 years prior to 1987 was 37% less at the dam and 51% less at the Big Bear Lake Fire Department. Without the presentation of this information and an associated analysis and evaluate of the potential well production, the DEIR is incomplete and inaccurate and understates the level of significance of the impact of this proposed project on water service. 13-43

- Section 5.3-6 fails to address the high potential for mineral contamination of the wells that were drilled in 1987. Many wells around the Valley are highly contaminated with fluoride, iron and other minerals and must be mixed with other water containing less minerals before it can be used. The DEIR does no evaluation of the potential mixing water requirements. 13-44

- Mitigation measure 5.3-6a states that water supply has to be proven prior to building permits. Given the current drought conditions in Fawnskin (and the mountains in general), with rate increases and water restrictions already in place, the County would be derelict in its duties of protecting the public health and resources available to current residents if it did not require **the water supply to be proven prior to approving any change in zoning and prior to approving this (or any) proposed development project.** 13-45

- Construction water has not been addressed in the DEIR. For construction work that would take place during the summer, which would be all work since the DEIR offers a mitigation measure in section 5.8-1g that prohibits exterior construction between December 1 and April 1 of each year, there would be a significant amount of water used. Although there are current requirements that construction water come from reclaimed sources, these requirements are routinely violated. The DEIR is incomplete in not addressing this impact. As a mitigation measure, the project sponsor should be required to pay for additional enforcement resources dedicated to the immediate area. 13-46

- The mitigations listed in Section 5.3-6d regarding landscape and outdoor watering are completely inadequate and illusionary. The mitigations listed are based on DWP's Stage 1 water restrictions, while we have already moved to Stage 2 water restrictions and DWP has announced that we could be moving to Stage 3 water restrictions before the end of summer. In addition, there is no information regarding how these mitigations would be enforced and current experience shows that the existing water usage restrictions already in force throughout the Valley are not being followed nor enforced. 13-47

- There is no analysis in the DEIR that takes into account the effect to the proposed water supply caused by of private wells recently dug in Fawnskin, so the water analysis once again is completely inadequate and understates the significant impact this proposed project would have on water service and availability. 13-48

D. Electricity

- Section 5.3-9 states that project implementation would result in an increased demand for electricity, but that impacts would be less than significant. We are currently facing increased rates to pay for system upgrades that Bear Valley Electric (BVE) is building, and this additional capacity is only calculated to handle peak period overloads. BVE says no more electricity can be brought up the hill, and we are already facing short supplies, so ANY additional development, including this proposed project, would create significant and unavoidable impacts on electricity service capabilities throughout Big Bear Valley. 13-49

- Section 5.3-9 states that an alternative for providing power to this proposed project would be to place a power source at the site. This alternative is totally unacceptable due to the extensive additional adverse impacts it would have on the community and environment in terms of noise, reduction in air quality, and harm to wildlife at a minimum, and none of these impacts were discussed or analyzed in the DEIR. 13-50

VI. Aesthetics/Light and Glare

Even though the DEIR states that there would be a significant and unavoidable impact that cannot be mitigated for the view areas on all sides of the proposed project, the DEIR analysis greatly understates and downplays the level of significance of the impacts regarding Aesthetics, Viewsheds, Light and Glare. 13-51

- Section 5.4 of the DEIR failed to consider the requirements of the San Bernardino County Light Ordinance, which has been adopted by CSA 53B, in who's area the proposed project is located. 13-52

- From the DEIR: "Implementation of the Moon Camp project would adversely impact scenic resources, scenic vistas and the visual character of the site and its surroundings. Analysis has concluded that a significant and unavoidable impact to the visual character and viewshed from the project site and surrounding areas would occur which cannot be mitigated to a less than significant level." The mitigation measures that follow are more a sales pitch and sugar-coating 13-53

for the proposed development than meaningful measures to correct or reduce the acknowledged impacts." 13-53

- The simulated views in Section 5.4 do not include the housing density that is proposed and they are not done to the correct scale. In addition, by choosing to show the views from an angle toward the east, the angle used seriously misleads as to how the view will appear from the houses above the proposed project. All of this serves to grossly understate the impacts this proposed project would have on the overall views. 13-54

- The views used in Section 5.4 show an exceptional number of full-grown trees (between and near the homes) when in actual construction it would be highly unlikely that these trees would survive and new trees would take 50-100 years to grow to that size. This downplays, distorts and misrepresents the overall impacts the proposed project would have. 13-55

- The DEIR in section 5.4 fails to consider the visual impact of a 100-boat marina and the cumulative visual impact of the adjoining proposed Marina Point 175-boat marina, nor does it makes plans for nor account for the visual impact of parking for usage of this proposed marina. 13-56

- The DEIR does not address off-site storage locations for the 100 boats and trailers associated with the proposed marina, nor does it include any mitigations to keep them from being stored at each of the homes, thus increasing the level of significance of the impacts of this proposed project to the aesthetics. 13-57

VII. Traffic and Circulation

The analysis of traffic and circulation in the DEIR is inadequate because it is based on false assumptions:

- The "project" and "baseline" traffic analysis in the DEIR is based on the constant growth rate of traffic over the past 10 years. This is not accurate, given the accelerating growth in Southern California, and particularly in San Bernardino and Riverside Counties. The growth rate within Big Bear Valley itself (as stated in the DEIR in section 6.3) shows that the annual average in population growth from in the 2 years 2000-2002 is 14 times the annual average from 1990-2000 and the annual average in number of houses built from 2000-2002 is over 8 times the annual average from 1990-2000. 13-58

- The DEIR also assumes that peak hour traffic in the area is the "standard" AM and PM peaks. Given the mix of residential and recreational traffic, it is not clear as to when the peak period actually is. 13-59

- In the intersection analysis (both the ICU and delay), the DEIR uses values of lane capacity that, although acceptable under ideal dry weather conditions, would be wildly optimistic (and practically unachievable) under snowy or slick road conditions. If a peak month is during the winter tourist season, the whole traffic analysis is in error, and grossly underestimates the negative impact generated by the proposed development. The analysis as it now stands assumes an intersection capacity based on the most ideal conditions (e.g., dry weather, 12-ft lane widths, no parking, fairly aggressive driving, perfect visibility, etc.) Both the existing level of 13-60

service (LOS) and negative impacts would be exacerbated if these conditions are not fully met; for example, recalculation of existing LOS using a reduced capacity might move some of the intersection approaches into a LOS category that has a different (*i.e.* lower) threshold for being designated as "significantly impacted." Also, such proposed mitigation measures as widening approaches might be rendered totally ineffectual if, for example, plowing only provides a limited travelway. 13-60

- Section 5.5.31: The DEIR failed to state why the developer is only paying a pro-rata share of a traffic signal at the Stanfield Cutoff. If this proposed project causes the impact, it should bear the full cost. Also, if traffic impacts from this proposed project are significant enough to require a signal at Standfield Cutoff, then the DEIR does not support its own conclusion that there is no significant impact to Fawnskin from this traffic. 13-61

- The DEIR does not consider alternate routes since all exits from the 92 residential sites funnel into a two-lane highway (Route 38), along with 134 sites at the adjacent proposed Marina Point development. 13-62

- The DEIR failed to correctly consider the impact that straightening Route 38 will create. A straightened Route 38 will become the "Gateway" to the Big Bear Valley; the most direct route to Stanfield Cutoff, the valley's central crossing, and will become the route of choice for all commercial traffic. This negates all traffic figures, trips, and volume studies assumed by the DEIR. By not considering this impact the DEIR analysis is completely inadequate and invalid. 13-63

- The DEIR does not take into account CalTrans information that Route 38 currently has a poor (congested) rating, and cannot adequately support the increased traffic ninety-two more homes and a marina would bring. 13-64

- The DEIR does not address the potential for an increase in accidents and traffic jams at both ends of the proposed straightened portion of State Route 38. Straightening this portion of the highway would substantially increase the average speed of traffic through this section, but curved portions of the roadway would still remain at both ends of this straight section, causing traffic to make sudden and hazardous reductions in speed. 13-65

Given all of the above information, the development of the proposed project **with or without the straightening of the highway** would cause **significant and unmitigable impacts regarding traffic and circulation** in the area. 13-66

VIII. Air Quality

- The DEIR fails to include either dispersion or photochemical modeling to predict the impact of the project on the concentrations of pollutants that will actually occur in the air in Big Bear Valley, nor the formation of toxic *secondary* pollutants *formed* by chemical reactions in air, e.g. ozone. It simply uses an emissions model to calculate the number of pounds per day of *primary* pollutants that will be emitted *directly* by the project, and compares these to regional threshold values given in South Coast Air Management District (SCAMD) "look-up tables". 13-67

- The DEIR fails to address emissions of three important air pollutants: SO_x, lead, and toxic air contaminants (TACs). In the latter case for example, the threshold specified by the SCAMD is a maximum incremental cancer risk that is $\geq$ 10 in 1 million. The EIR does not identify the increased carcinogens that will be associated with the project and does not assess their impact against such a standard. 13-68

- The DEIR does not adequately address the impacts of the increased wood smoke emissions from fireplaces and wood stoves. 13-69

- Table 5.6-1 does not include California's standard for visibility reducing particles, the current levels in Big Bear Valley, and how the project would impact this. In addition, it does not address these same issues with respect to the California annual standard for PM_{10} (20 $\mu g\ m^{-3}$ annual arithmetic mean). 13-70

- The serious impacts of the project on health are not adequately addressed in the DEIR. This is of particular concern with respect to fine particles ($PM_{2.5}$) from diesels and from wood combustion. 13-71

- The DEIR omits the most important effect which cannot be mitigated (at least for those impacted) and that is increased mortality. It is the increase in deaths due to particles that form the basis for the most recent particle standards [e.g. see Colburn and Johnson, *Science*, 299 665 (2003)]. 13-72

- Emissions of toxic air contaminants, TACs (California)/hazardous air pollutants, HAPs (federal) from all of the sources associated with the project, both mobile sources and stationary sources, are not treated adequately, despite existing standards for TACs/HAPs. 13-73

- The mitigation measures cited for air quality include the use of EPA certified fireplaces and the use of a catalytic converter on the chimneys. However, there is no legal mandate to do so and hence assuming that this will happen is highly dubious. The DEIR does not address the continuing cost of monitoring and enforcing the maintenance of such devices or the fact that enforcement resources are already inadequate. These mitigations are therefore illusionary. 13-74

- Page 5.6-18 describes future hydrocarbon emissions standards for watercraft. However, it is not clear if these were included in the emissions estimates, or if they were, if it was assumed that all watercraft associated with the project would meet these new standards. This would be equivalent to assuming that the project residents would be continuously purchasing new boats as the standards changed, a highly unlikely scenario. Furthermore, there is no treatment of emissions other than hydrocarbons from watercraft, and the associated impacts on air quality. 13-75

- Nothing has been included in the air quality analysis in section 5.6 to evaluate the effects of a local power generating plant that was suggested in the DEIR as a possible mitigation for impacts to electricity service. 13-76

Given the above reasons, the overall air quality analysis in the DEIR is completely inadequate and even though the DEIR has concluded that the development of this proposed project would cause significant and unavoidable impacts on air quality, those impacts have been grossly underestimated. 13-77

IX. Noise

- The noise section of this DEIR utilizes data which is decades old, making the analysis inadequate. The noise levels that would generated, both during construction and of a permanent nature, would have significant continuing negative impact to wildlife and recreational use as well as to neighboring residents. 13-78

- The statement in section 5.7-1 paragraph 3: "A 3 dBA change in sound pressure level is considered a "just detectable" difference in most situations" is incorrect. A 3-decibel increase doubles the sound pressure level of any signal. All of the conclusions that come from this flawed data are incorrect, and are the basis for much of the noise analysis of the DEIR. 13-79

- In Section 5.7.2: the DEIR failed to consider the funneling effect of noise from the highway into the adjacent residential areas. The proposed project site is at a crossroads in Fawnskin. The terrain rises sharply to the north and residences dot the hillside. The construction and permanent noise from the development will have a continuous negative impact to the quiet enjoyment of the lake, and the residents on the hills above, are, in some cases, less than 100 airborne feet from the project. 13-80

- Section 5.7-4 the last paragraph states "Existing sensors within the vicinity of the project...." In fact, the sensors used in the analysis are not in the vicinity of the proposed project and therefore are not registering correct SPL's. Most of the DEIR's noise data are from sensors that are completely out of the area of the site. No accurate measurement of current SPL levels is found in this document, so this analysis is flawed and inadequate. 13-81

- Per the chart 5.7-5: 85db, which is at the top end of "clearly unacceptable" as community noise exposure, will be exceeded by the construction and permanent noise from the proposed project. A realistic analysis of the gross noise generated from this project is in excess of what is labeled "clearly unacceptable." 13-82

- From 5.7-7 last paragraph: "The (computer) model does not account for ambient noise levels or topographical differences between the roadway and adjacent land uses". The steep rise of the terrain to the north is significant and does not factor into the DEIR's computer model. If the terrain were considered in the analysis, the noise levels would have been found to be undeniably significant. 13-83

- The data used in the Noise analysis using data from the Traffic Analysis report is completely inadequate and understates the noise impact, since the traffic analysis was flawed and invalid. 13-84

Even though Section 5.7-10, finds that: "This project will expose persons to noise levels in excess of the standards established in the general plan. It will create a substantial permanent increase in ambient noise above existing levels," it does so on a basis of underestimates of the true level of the significant impacts that the development of this project would have regarding noise. 13-85

X. Biological Resources

The DEIR's evaluation of the impacts on Biological Resources is incomplete and inadequate.

- In section 5.8, there is no analysis in the DEIR of the impacts that would be caused by removal of a substantial number of trees for moving the highway and creating internal roads, nor for the subsequent removal of additional trees for building houses. 13-86
- The DEIR analysis in section 5.8 fails to address the osprey, common visitors to the site. 13-87
- The mitigations proposed to protect the bald eagle habitat as proposed are impractical and ineffective, and the DEIR fails to recognize that in prior developments in the Big Bear valley, where the same bald eagle mitigations were instituted (e.g. Castle Glen), the bald eagles have been effectively driven from those projects. 13-88
- The potential removal of additional trees to support Section 5.3-1c mitigation for a 100-foot fuel modification is not analyzed anywhere in the Biological Resources section. 13-89
- In Section 5.8 drought-year botanical surveys yielded an incomplete assessment of rare plants. The result is an inaccurate document that clearly understates the expected extent and significance of impact to rare plants. 13-90
- The DEIR fails to include analysis of the impact to wildlife based on increases in road-kill from the increased traffic nor from the proposed highway realignment. 13-91
- Mitigation measure 5.8-1a which is supposed to reduce rare plant impacts to below significance relies on a process that has not been established or tested and is very vague and speculative. This measure as stated would not reduce impacts to special status plants and habitat to below significance. Plant surveys for areas that will be destroyed by road and other infrastructural construction need to be mitigated but this is not stated, again an incomplete measure. 13-92
- It is apparent from Highway 38 and properties on Flicker Road, that "open Jeffery pine forest" as characterized in the document meets the habitat definition of pebble plains, and supports special status species across 17.38 acres. As such, the impact is not just 0.69 acres as considered in the analysis, but the entire 17.38 acres. 13-93
- At a 3:1 mitigation ratio, it will be difficult if not impossible to find a willing seller of over 50 acres of pebble plains and associated rare plant habitat as 50 acres is approximately one quarter of the total available acreage on private land. The DEIR also fails to state that the cost of the parcel needs to be based on a current appraisal of Bear Valley acreage, plus a reasonable dollar amount for management. 13-94
- In 5.8-1c mitigation for eagles: the analysis understates expected impacts to trees and eagles. Removal of 655 trees (24% of 2,772) as stated under 5.4-1 and 5.4-10 are not analyzed or disclosed under biological resources. This impact would constitute the removal of substantial eagle roost habitat. While a mitigation for eagles states that all trees over 20 inches in diameter will be protected, it applies only on individual lots and does not hold the developer to that standard in road cutting and other structural changes required for the proposed project. In so doing, the DEIR fails to provide a credible plan for protecting the perch trees as required by 13-95

county code, which restricts removal of bald eagle perch trees "w/o adequate substitution", county code 89.0110(a). With normal exceptions to county code restrictions, the inevitability of tree cutting to create individual lots, and the removal of hazard trees and others to comply with fire clearance, this proposed project will significantly impact bald eagles and their habitat. The analysis is misleading in pretending that this mitigation will actually protect the bald eagle perch trees. 13-96

This DEIR analysis is inaccurate and inadequate and understates the level of significance of the impacts regarding wildlife and plants that would be caused by this proposed project.

XI. Hydrology and Drainage

- RBF consulting was directed by the County of San Bernardino to conduct a peer review of the 2003 "GSS Focused Geohydrologic Evaluation of Maximum Perennial Yield For the North Shore and Grout Creek Hydrologic Subunits" for incorporation into the DEIR. Engineering Geologist, D. Scott Magorien reviewed the report. He brought up six points (on pages 22 and 23) and did not think there was enough detail in the report to verify the water availability from the two wells on the tract. Magorien's conclusion is that the North Shore is in an overdraft situation, and that there should be a more thorough hydrolgeologic investigation to determine the water availability for this proposed project. None of this further analysis recommended by the County's own specialist was included in the DEIR. 13-97

- In the Technical Appendices report (page 33) of the 2003 GSS study of the perennial yield, it states that drought conditions will have a significant impact on ground water levels in the North Shore and Grout Creek Hydrologic Subunits. We are currently in the worst drought condition in history, but the EIR fails to include this in the analysis. 13-98

- The DEIR fails to include information and analysis on the degradation of water quality of the lake due to pesticides and chemical fertilizers being used and due to the increase in the dog population that would result from the development of this proposed project. 13-99

- In the Technical Appendices on Page 23 VIII. Hydrology and Water Quality under item (b) "Would the project substantially deplete groundwater supplies...," the box denoting "*no impact*" was marked, while in the Technical Appendices report on page 33 of the 2003 GSS study of the perennial yield they state "that drought conditions *will have a significant impact* on ground water levels in the North Shore and Grout Creek Hydrologic Subunits." The DEIR analysis contradicts even its own information; clearly a finding of significant unmitigable impacts is warranted. 13-10

- Section 5-11 on page 7: states the water is of superior quality. Then the DEIR states that one well exceeds the concentration allowed for iron--0.69 parts per million gallons when the state maximum is 0.3 parts per million gallons. Again the DEIR analysis contradicts itself. 13-10

With the current drought, and by the County's own hydrology expert's report, the impacts caused on hydrology and drainage created by the development this proposed project would have a higher level of significance than the DEIR states. 13-10

XII. CONCLUSION

Friends Of Fawnskin incorporates by reference any and all comments made regarding this project, even if made in the past or future, in order to enforce the non-discretionary requirements of the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). FOF has raised many critical issues in this response, but our concerns are not limited to only these specific items. Further, if this DEIR is revised, amended, or a supplemental document prepared, the entire document must be circulated once again so that the public and the decision-makers can be properly informed prior to making any decision on this project, as required by law.

We again formally request timely notification in advance of all meetings, documents, and decisions regarding this proposed project.

13-10

The Draft EIR for the proposed Moon Camp Project currently in circulation has failed to adequately assess the level of significance of the negative impact on aesthetics, fire protection, police protection, water, electricity, traffic and circulation, air quality, noise, biological resources and hydrology and drainage.

The DEIR is incomplete, inaccurate, and defective and must be rejected in its present form. It clearly fails to meet the requirements of CEQA. Furthermore, multiple significant impacts are understated and sugar coated in a thinly veiled attempt to convince the Board of Supervisors to approve this project with overriding considerations. The project, on the basis of the present proposal is so entirely contrary to the guidelines of the County's General Plan and the best interest of the tax-paying public that it warrants nothing less than a categorical denial. We urge the Board to carefully evaluate this project and select the No Project Alternative in the interest of the Public Trust.

Respectfully submitted,

Sandy Steers
for the Friends Of Fawnskin

Response to Commentor No. 13
Sandy Steers, Friends of Fawnskin
May 15, 2004

13-1 The County will consider the Commentor's opinion and comments during their deliberation on the project.

13-2 The Commentor states that Section 4.0, *Basis for Cumulative Analysis*, omits two large projects – the Castle Glen development in Big Bear Lake and the tripling in size of the Big Bear Discovery Center to accommodate increased tourist traffic. In addition, the Commentor mentions two other parcels (one 30 acres and one 7.5 acres) very near the Moon Camp site that are in the early stages of development. Table 4-1, *Cumulative Project List*, outlines seven projects in the vicinity of the project study area that were considered for the cumulative analysis. At the time the Notice of Preparation for the Draft EIR was distributed, the projects referenced by the Commentor were determined by the County of San Bernardino to not have the potential to interact with the proposed project to the extent that a significant cumulative impact may occur. However, those projects mentioned in the comment letter and not included in the cumulative impacts list, even if approved or probable at the time of the NOP, would be considered part of the background growth added to existing conditions to account for unknown future projects.

Also, in regards to the traffic analysis, the long-term future traffic conditions were not based upon the list of cumulative projects identified in Section 4.0, but rather an annual growth rate of 1.0 percent recognized by the County of San Bernardino. The annual growth rate approach was utilized to account for cumulative projects, since listing the individual cumulative projects typically can lead to double counted trips.

13-3 The EIR indicates that potential impacts to groundwater resources are significant and unavoidable (refer to Impact Statement 5.11-2 in the EIR). The County will consider the Commentor's opinion and comments during their deliberation on the project.

13-4 The Final EIR will include a Mitigation Monitoring Program that will identify the timing and responsibility for monitoring each mitigation measure. The Project Applicant will have the responsibility for implementing the measures, and the various County of San Bernardino departments and/or other governmental agencies would have the primary responsibility for monitoring and reporting the implementation of the mitigation measures.

13-5 Pursuant to the California Environmental Quality Act (CEQA), a Notice of Preparation (NOP) of the Draft EIR was distributed to appropriate governmental agencies, determined by the County of San Bernardino, which included California Department of Transportation (District 8), Department of Conservation, Department of Forestry and Fire Protection, U.S. Forest Service, Department of Fish and Game, California Highway Patrol, State Water Resources Control Board, and the Regional Water Quality Control Board (Region 9). The NOP comment period allowed the various governmental agencies to provide input regarding potential issues to be analyzed in the EIR. Furthermore, the Draft EIR was sent to the California State Clearinghouse to initiate the 45-day public review period. The State Clearinghouse is responsible to

distribute the Draft EIR to all responsible or other public agencies to review and comment on the environmental documentation. Thus, all appropriate reviewing agencies were able to provide input on the Draft EIR during the public review period. The California Department of Transportation did receive a copy of the Draft EIR and was consulted with during the preparation of the Draft EIR. Section 14.2, *List of Commentors*, identifies the Federal, State and local governmental agencies that provided comments on the Draft EIR. Responses have been provided in this section regarding the reviewing agencies comment letters.

13-6 In accordance with CEQA Guidelines Section 15126.6, Section 7.0, *Alternatives to the Proposed Project*, describes a range of reasonable alternatives to the proposed project, which could feasibly attain the basic project objectives and would avoid or substantially lessen any of the significant effects. The evaluation also reviews the comparative merits of each alternative. The analysis focuses on alternatives capable of eliminating significant adverse environmental effects or reducing significance, even if these alternatives would impede, to some degree, the attainment of the project objectives. In light of these objectives, Section 7.5, *Environmentally Superior Alternative*, concludes that the "Reduced Density, Without Road Alignment and Without Marina" Alternative is the environmentally superior alternative.

13-7 As stated in Section 6.3, *Growth Inducing Impacts*, growth inducing project impacts were based on an average household size multiplier of 2.31 persons per household, rather than vacancy/occupation rates. To determine growth-inducing project impacts, the average household size was applied to all proposed 92 dwelling units.

The analysis of project impacts in Section 5.0, *Description of Environmental Setting, Impacts and Mitigation Measures*, is based upon development of 92 dwelling units on the project site. Where applicable, impacts have been determined by the use of multiplier factors for single-family residences. For example, annual water consumption was based upon a consumption factor for a typical household in the Fawnskin area. This factor was applied to all 92 proposed dwelling units over the course of one-year. By applying a multiplier factor to all 92 residences, the identified impacts are representative of full-time occupancy.

13-8 Section 15131 of the CEQA Guidelines addresses the topics of economic and social effects.

> *"Economic or social information may be included in an EIR or may be presented in whatever form the agency desires.*
>
> *(a) Economic or social effects of a project shall not be treated as significant effects on the environment. An EIR may trace a chain of cause and effect from a proposed decision on a project through anticipated economic or social changes resulting from the project to physical changes caused in turn by the economic or social changes. The intermediate economic or social changes need not be analyzed in any detail greater than necessary to trace the chain of cause and effect. The focus of the analysis shall be on the physical changes."*

CEQA and the CEQA Guidelines state that effects analyzed must be related to a physical change in the environment. As such, economic effects are not considered environmental effects under CEQA, and should be considered in an EIR only if they would lead to a physical impact on the environment. The review of economic effects is optional by a lead agency. Section 15131 of the CEQA Guidelines defines the conditions under which economic effects should be reviewed in an EIR. The conditions outlined above do not apply to the project.

13-9 As discussed in Impact Statement 5.1-2 (and 5.1-1) of the EIR, analysis has concluded that the proposed District change is in the public interest based on the following factors:

- The project would be considered compatible with adjacent land uses and community character since it would be an extension of the existing land use pattern of RS Districts.
- The project would allow for a variety of housing types since the proposed 95-lot residential subdivision would provide 92 residential lots ranging in size from 0.17 acres (7,292 square feet) to 2.11 acres (refer to Exhibit 3-4, *Site Plan – Tentative Tract #16136*).
- The proposed project would offer an opportunity for a cohesively planned development, which would be subject to compliance with the County's administrative design guidelines, as well as the development standards specified for the RS District.
- The project would be required to comply with the mitigation measures specified in the EIR to avoid or lessen potential project impacts. The measures identified in this document have taken into consideration the property's setting, opportunities, and constraints. Following compliance with the specified development standards, design guidelines, and mitigation measures, project implementation would not compromise existing single-family residential and rural land uses.

Overall, the Draft EIR has identified and evaluated the potential adverse effects associated with implementation of the proposed project. As noted by the Commentor, the Draft EIR has concluded that project implementation would result in unavoidable significant impacts regarding water demand and views/viewshed alterations. The Commentor is not specific, as to how the project would result in critical adverse effects associated with public safety and public health. The County will consider the Commentor's opinion that the proposed zone change "is not in the public interest" during their deliberation on the project.

13-10 The project site is presently classified as Rural Living-40 (RL) District (refer to Section 84.0320 of the County Development Code). Permitted or conditionally permitted uses within the RS District include, but are not limited to, single dwelling units, accessory uses, mobile home parks and/or Planned Developments. Further, as indicated in Table 5.1-1, *Summary of Land Uses*, of the EIR, areas surrounding the subject site are designated Improvement Level 1 (IL1), which is applied to those areas planned for a higher intensity level of development. Thus, the County

Development Code anticipated that the subject property would be developed and not designated for public open space use. It should also be noted that due to the nature and environmental setting of the Community, National Forest and public open space exists adjacent to or nearby most properties.

13-11 As noted by the Commentor, County General Plan Code C-56 "restrict(s) development along scenic corridors." To clarify, this policy is intended to keep development within certain limits, rather than to prohibit it. The Draft EIR has concluded that project implementation would result in unavoidable significant impacts regarding views and viewshed alterations.

It should be noted that the project would be subject to compliance with the County's administrative design guidelines, as well as the development standards specified for the RS District. Additionally, future lot development would be required to comply with the 40 percent maximum building coverage and the 35-foot maximum building height, which would minimize potential aesthetic impacts. Further, the project would be required to comply with the mitigation measures specified in the EIR to avoid or lessen potential project impacts. The measures identified in the EIR have taken into consideration the property's setting, opportunities and constraints.

13-12 Commentor refers to the Project's consistency with the General Plan. Please refer to Response to Comment No. 13-11, which addresses this concern.

13-13 As acknowledged in Section 5.3, *Public Services and Utilities*, project implementation would increase development beyond existing conditions, thus increasing the demand for fire protection in the form of additional calls for service. The project site is located in a high fire hazard area and Fire Hazard Overlay District. Accordingly, project development would be subject to compliance with various policies and standards for adequate services and facilities. Additionally, the project would be required to meet the Peakload Water Supply System Guidelines (Figure II-5 of the General Plan, *Peakload Water Supply System Guidelines*) or be adequately served by water supplies for domestic use and community fire protection in accordance with standards, as determined by the County and the local fire protection agency/authority.

A fuel modification area and plan would be required under the provisions of the FS1 Fire Safety Overlay District (refer to Response to Comment No. 13-27). A Fuels Management Plan would be established for the project to implement the fire safety requirements of the FS1 Overlay District (refer to Response to Comment No. 4-4). The Fuels Management Plan would be subject to review and approval by the San Bernardino National Forest Service and the San Bernardino County Fire Department. The fire flow requirements and Fuel Management Plan requirements along with additional mitigation measures listed (Mitigation Measures 5.3-1a to 5.3-1e) would reduce impacts to fire protection services to a less than significant level.

13-14 As indicated by the property's existing RL District and IL1 designations (refer to Response to Comment No. 13-10), the County Development Code anticipated that the subject property would be developed. Additionally, the *Growth Management* section of the General Plan focuses on ways to monitor and manage future growth of the County in order to preserve valuable resources and maintain a high quality of life

for all residents. The General Plan divides the County into three broad development areas: urban, rurban (combination of urban and rural areas), and rural. These development area designations then define the types of uses that are allowed, enabling the County to anticipate the types of services they will need to provide. The project site is located within a designated Urban Area (UA). Urban Areas are areas that are committed or planned for higher density/intensity uses. According to the General Plan, a full range of public facilities and services (including water, sewer, roads, flood control/drainage, police and fire services, etc.) shall be focused on these areas. As previously noted, the project proposes a Land Use District Change to RS, which is a permitted land use District in an UA. Thus, growth commensurate with the proposed project was anticipated for the project site and the project would not be considered growth inducing in this regard.

Overall, the proposed development would not require the substantial development of unplanned/unforeseen support uses and services as is evidenced by the site's and the surrounding area's existing IL-1 and UA designations. As a result, the proposed project would not result in significant growth-inducing impacts.

Land use compatibility impacts associated with land development are a factor of quality of life issues, including, but not limited to traffic, noise, air quality and aesthetics (views/physical scale). While these may generally be perceived as subjective issues, the significance criteria detailed in each of the respective EIR issue sections provides a basis for assessing these quality of life factors.

13-15 Commentor refers to the Project's consistency with the General Plan. Please refer to Response to Comment No. 13-10, which addresses this concern.

13-16 The Commentor is not specific, as to how the project would increase public health and safety risks. The Draft EIR concluded that project implementation would result in unavoidable significant impacts regarding views and viewshed alterations. The County will consider the Commentor's opinion during their deliberation on the project.

13-17 The County will consider the Commentor's opinion during their deliberation on the project.

13-18 Commentor refers to the completeness of the cumulative impact analysis associated with project implementation. Please refer to Response to Comment No. 13-2, which addresses this concern. The County will consider the Commentor's opinion during their deliberation on the project.

13-19 As acknowledged in Section 6.3, *Growth Inducing Impacts*, the proposed project has the potential to increase Fawnskin's population by approximately 212 persons at buildout. The project's potential population growth would represent an approximately 52 percent increase over the Community's permanent population estimate of 409 persons (2000) and an approximately 15 percent increase over the Community's peak weekend/holiday period population of 1,428 persons. Project implementation would be considered growth inducing in as much as the proposed development would result in the construction of additional housing, consequentially fostering population growth. However, potential growth-inducing impacts are also assessed

based on a project's consistency with adopted plans that have addressed growth management from a local and regional standpoint.

According to the General Plan, the project site is designated Urban Area. Urban Areas (UA) are areas that are committed or planned for higher density/intensity uses. A full range of public facilities and services (including water, sewer, roads, flood control/drainage, police and fire services, etc.) shall be focused on these areas, according to the General Plan. As previously noted, the project proposes a Land Use District Change to RS, which is a permitted land use District in an UA. Thus, growth commensurate with the proposed project was anticipated for the project site and the project would not be considered growth inducing in this regard. The proposed development would not require the substantial development of unplanned/ unforeseen support uses and services as is evidenced by the site's and the surrounding area's existing IL-1 and UA designations. As a result, the proposed project would not result in significant growth-inducing impacts. Refer also to Response to Comment Nos. 13-10 and 13-14.

13-20 The project proposes single-family residential uses that are permitted within the RS District. The project also proposes a marina boat dock and associated parking lot, which may be permitted within the RS District, subject to an approved Conditional Use Permit (CUP). The proposed project would be consistent with the development standards for the Bear Valley Planning Area regarding minimum lot size, and maximum and minimum lot dimensions, since the project proposes a minimum lot size of 7,292 SF and the proposed residential lots meet the maximum and minimum lot dimensions. The proposed residential lots would be sold individually and development of lots and construction of dwellings would be by custom design. Through the site plan review process, future lot development would be required to comply with the 35-foot maximum structure height, 40 percent maximum lot coverage, and the front, side, rear, and street side yard setbacks. Additionally, future development would be required to comply with the County's administrative design guidelines and mitigation measures identified in this EIR to avoid or lessen potential impacts. Refer also to Response to Comment No. 13-10.

13-21 The designated Improvement Level (IL) for each area is illustrated on the County's *Infrastructure/Improvement Levels Overlay Map*. According to this Map, the project site and surrounding areas are designated IL1 (refer to Table 5.1-1, *Summary of Land Uses*).

13-22 As noted by the Commentor, the Draft EIR has concluded that project implementation would result in unavoidable significant impacts regarding views and/or viewshed alterations. From a transportation/circulation standpoint, the project would be required to construct State Route 38 (North Shore Drive) in compliance with the special standards and conditions specified by Caltrans. As indicated in Section 5.5, *Traffic and Circulation*, implementation of the proposed project would not overburden State Route 38, as it would result in a less than significant impact to the Level of Service (LOS) for the Highway. Also, as the proposed highway improvements would occur in two phases, the project would not impair emergency vehicle access or escape routes during emergencies. Highway construction would be subject to compliance with various development criteria and Caltrans standards relative to setbacks, prohibited direct access, the provision of left turn lanes (as

necessary), shoulder width requirements, and pedestrian crossing requirements. The project's proposed realignment of State Route 38 would be subject to County of San Bernardino and Caltrans policies and standards. With the proposed amendment to the Transportation/Circulation Maps, the project would be considered compatible and consistent with the General Plan. Thus, it is concluded that impacts would be less than significant in this regard.

13-23 The County will consider the Commentor's opinion during their deliberation on the project.

13-24 The Commentor is correct in the statement that the proposed project may have an adverse effect on the physical environment, but that these impacts are concluded to be less than significant. As stated in Impact Statement 5.2-1, compliance with the Big Bear Metropolitan Water District (MWD) standards and permit requirements (i.e., Mooring Plan, Shore Zone Alternation Permit, review of Storm Water Pollution Prevention Program (SWPPP)) would ensure that impacts in this regard are reduced to less than significant levels.

Section 5.2, *Recreation*, analyzes impacts that relate to the construction or expansion of recreational facilities that may have a physical effect on the environment. The Commentor refers to impacts to bald-eagle foraging habitat as a result of dredging the lake. As stated above, impacts to the physical environment (i.e., lake) would be reduced to less than significant levels through regulatory compliance. Impacts to bald eagles are addressed in Section 5.7, *Biological Resources*.

The Commentor refers to a lack of analysis of boat storage during the seven months of the year when they are not in use. Boat storage and use would vary for each boat owner. However, boat storage would not create an adverse physical effect on the environment, as all hazardous materials associated with boat storage would be subject all local, state and federal regulations.

The Commentor refers to a lack of analysis in the traffic study regarding residents pulling boats in and out of the marina facility. The traffic study analyzes impacts associated with traffic load and capacity of the street system. Although the traffic study does not specifically call out trips to the marina facility by the Moon Camp residents, the traffic study assigns a daily trip generation rate that includes an average of all daily trips generated by the proposed residential uses. As such, the traffic analysis appropriately identifies traffic-related impacts to the street system, including impacts as a result of trips generated by Moon Camp residences to/from the proposed marina facility. The traffic analysis concludes that with implementation of the recommended mitigation measures, all traffic-related impacts would be reduced to less than significant levels.

The Commentor also states that the permanent impact of additional traffic on the lake, with related noise, fuel emissions, and loss of space on the lake for fishing and boating activities due to entrance and exit traffic has not been addressed. First, the additional traffic on the lake has been addressed under Impact Statement 5.2-1, which concludes that the lake capacity would not be surpassed with implementation of the project based upon the Big Bear MWD Management Plan. Second, noise and

air emissions from vehicular traffic have been addressed in Sections 5.7, *Noise*, and Section 5.6, *Air Quality*, respectively. Analysis of noise and air quality impacts is based upon the traffic study, which assigns a daily trip generation rate for residential uses, as described above. Third, the loss of space on the lake due to the marina facility is addressed under Impact Statement 5.2-2 of the EIR. The EIR concludes that since the project site is private property, public access is not assured. However, public access to the lakeshore would be maintained at the eastern and western boundaries of the site. Public access to the lakeshore would also continue to be maintained at other locations along the perimeter of the lake. Refer also to Response to Comment No. 13-26.

13-25 The Big Bear Metropolitan Water District (MWD) Management Plan indicates that the average annual weekend use factor for docks on the lake is nine (9) percent. The Commentor states that the weekend use factor during the summer is 60 percent and 90 percent on holiday weekends. According to the Management Plan, the lake has a carrying capacity of 1,000 boats. The Management Plan states that during the summer peak season, from 1996 to 1999, the highest average daily use of boats was 262 during the 1996 season. Since these statistics were developed 2000, it is assumed that the current summer peak season average boat usage has incrementally increased over the past several years to closer to 300 boats per day. However, even if assuming all 100 boats are used during the summer peak season, the carrying capacity of the lake would not be surpassed. Additionally, it is acknowledged that during peak holiday periods, the boating usage numbers increases beyond the summer peak season. However, according to Management Plan, current lake use statistics show that it is unlikely that in the foreseeable future, the District would need to consider any restriction on the number of boats on the Lake. In fact, as long as the parking facilities remain at the current level, use of the Lake is somewhat self-restricting.

13-26 In consideration of the proposed residences along the lakefront and their proximity to existing residences to the east and proposed residential uses to the west, the EIR text has been updated to accurately reflect the nature of public access to the lakeshore.

Page 5.2-5, Paragraph 2 of the Draft EIR, has been revised in the Final EIR as follows:

> The County of San Bernardino General Plan Goal C-54 states the intention to "provide public access to all water bodies and water courses." Furthermore, Policy/Action OR-48 states that, "Because the County seeks to improve the ability of the public to enjoy water-related recreation, the County shall seek to improve public access to rivers, lakes, creeks, lakes and other bodies of water." Additionally, Policy/Action OR-49 states that "Because public access to water for recreational uses is important to the County, easements and dedications allowed in the Subdivision Map Act to acquire access to lakes, streams, public lands and other locally and regionally significant natural features shall be required for all new development." ~~However, since the Project site is private property, public access is not assured~~. As the project abuts existing homes to the east and the proposed Marina Point Development to the west, ~~P~~public access to the lakeshore would be

maintained below the high water line of the lake.~~maintained at the eastern and western boundaries of the site~~. Public access to the lakeshore also continues to be maintained at other locations along the perimeter of the lake. However, since the Project site is private property, public access is not assured.

13-27 As stated in Response to Comment Nos. 4-1 and 4-4, the Final EIR text will reflect that the project area is located within a Fire Safety Area 1 (FS1), as designated by the County of San Bernardino General Plan Hazard Maps. Thus, the project would be subject to all project design requirements for projects located within a FS1 area. The San Bernardino County Fire Department has indicated that due to the size and scale of the proposed project, specific fire flow requirements would need to be met. Instead of 1,500 gpm at 2 hours (which is based on a maximum square foot house of 3,600 square feet), the fire flow requirement would be 1,750 gpm at 2 hours, based on homes in the range of 3,600 to 4,800 square feet, and 2,000 gpm at 2 hours, based on homes greater than 4,800 square feet. Homes above 5,000 square feet would have a larger sprinkler requirement. Additionally, a fuel modification area and plan would be required for the proposed project under the provisions of the FS1 Fire Safety Overlay District. The project would include a 100-foot fuel modification zone located along the northern and eastern perimeter to provide a fuel break between the project area and the adjacent forestland. The fire flow requirements and Fuel Management Plan, along with the identified mitigation measures, would reduce impacts to fire protection services to less than significant levels.

Also, refer to Response to Comment Nos. 4-1 and 4-4.

13-28 In Section 5.3, *Public Services and Utilities*, the analysis of fire protection services is not intended to analyze availability of groundwater resources, but rather is intended to identify the necessary fire protection resources that are required to meet the fire protection needs of the project. Water resources are analyzed in Section 5.11, *Hydrology and Drainage*. As stated in the Section 5.11, it has been concluded that impacts to groundwater resources is a significant adverse effect and until additional technical review is conducted to verify conditions, the project would result in an unavoidable impact to groundwater resources. The Project Applicant will have the responsibility to prove that water resources are available to serve the project. The County will consider the Commentor's opinion and comments during their deliberation on the project.

13-29 The Commentor is correct in that the additional fire flow alone would not mitigate for additional manpower. The EIR text has been revised to reflect that fire flow requirements are only one component to be provided for adequate fire protection services to the project area. The project will be subject to all FS1 fire safety overlay district standards and requirements and would also include a fire modification zone adjacent to National Forest Lands, as discussed in Response to Comment Nos. 4-1, 4-4 and 13-27.

13-30 Commentor refers to fuel modification zones and associated permit requirements. Please refer to Response to Comment No. 4-1, which addresses this concern.

13-31 Please refer to Response to Comment No. 4-4. The recommended mitigation measures regarding fire protection services have been updated to reflect the FS1 standards and requirements, as well as to identify plans for implementation and enforcement.

13-32 According to the CEQA Guidelines, impacts regarding "hazards and hazardous materials" must analyze whether the project would impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The project would have access from State Route 38, which is the primary roadway serving all of the Big Bear Lake area. The traffic analysis has recommended mitigation measures to reduce all traffic-related impacts, including safety hazards and emergency access, to less than significant levels. Refer to Mitigation Measure Nos. 5.5-4a to 5.5-4g.

Additionally, should a fire occur to the east or west of the project, emergency access and/or evacuation routes would be provided from two directions to/from the site via State Route 38. Since State Route 38 provides two ways of reaching any point within the site, emergency access is determined to be adequate. Similarly, State Route 38 would provide two directions to evacuate the site. Local, State and/or Federal authorities would be responsible for conducting evacuation planning and timing in the event of a fire. It is the responsibility of residences to comply with evacuation timing and directions from local, State and/or Federal authorities should a fire occur in the project area. The development of the project site with the proposed residential uses would not result in changes to evacuation routes in the project area. Thus, the project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

13-33 As the project proposes 92 residences and a marina facility, medical aide calls to the Fire Department would increase beyond existing conditions. However, the increase in medical aide calls would not result require modifications to existing fire facilities, including Station 49. Thus, the project would not result in substantial adverse physical impacts associated with the provision of new or altered governmental facilities in regards to an increase in medical aide calls to the Fire Department.

13-34 Commentor refers to the urban/forest interface and the increased fire risk associated with the Project. Please refer to Response to Comment Nos. 4-1, 4-4, and 13-27, which addresses these concerns.

13-35 Future on-site uses, including fuel use and storage at the proposed marina, would be required to comply with all requirements of the San Bernardino County Fire Department Hazardous Materials Division for the storage and use of any hazardous materials utilized at a specific facility. Therefore, compliance with all permitting requirements and regulations set forth by local, State and Federal regulatory agencies would ensure that the project would not create a significant hazard to the public or the environment from associated fire risks.

13-36 The Commentor has stated that the EIR lacks analysis of whether fire insurance would be available with implementation of the proposed project. It is beyond the scope of the EIR to assess fire insurance coverage provided by private companies to

residences in the project vicinity. The County will consider the Commentor's opinion and comments during their deliberation on the project.

13-37 The County will consider the Commentor's opinion and comments during their deliberation on the project.

13-38 The Community of Fawnskin is located within the jurisdiction of the Big Bear Sheriff's Station. According to the Big Bear Sheriff's Station, the average response time to emergency type calls is 6.97 minutes within their jurisdiction, which includes the Community of Fawnskin. The average response time for all unincorporated areas is 28.59 minutes. Response times would be similar year around as police staffing would increase to correspond with increased visitors during peak weekend and holiday periods.

Page 5.3-2 of the Draft EIR, Paragraph 3 has been revised in the Final EIR as follows:

> The Big Bear Sheriff's Station provides police protection services to a population of approximately 15,800 persons in the unincorporated San Bernardino County areas of Big Bear Valley. The Community of Fawnskin is located within the jurisdiction of the Big Bear Sheriff's Station. The average response time for emergency calls ~~to the unincorporated county area~~ within the jurisdiction of the Big Bear Sheriff's Station is 6.97 minutes. The response times may vary, plus or minus, depending on the number of service calls received. According to the Sheriff's Crimes Analysis Unit, between January 1, 2000 and January 1, 2001, the Sheriff's Department handled 9,028 calls for service in the unincorporated area of Big Bear Valley.[1]

13-39 The project area would be served by the Big Bear Sheriff's Station, which serves an unincorporated population of approximately 16,000. The project would increase the population of Fawnskin by approximately 212 persons, which is an approximately 0.01 percent increase over the unincorporated population. Although police protection services would need to be nominally increased as a result of the project, it is anticipated that project implementation would not require any new police facilities or the alteration of existing facilities to maintain acceptable performance objectives. The project's increase in demand for police services would be offset through project related fees and taxes.

13-40 As stated in Response to Comment No. 13-39, the project would result in a nominal increase in service calls (emergency or non-emergency) to the project area. Similar to the increase in emergency type calls, any impact created by non-emergency calls would be offset through project related fees and taxes.

13-41 The County will consider the Commentor's opinion and comments during their deliberation on the project.

13-42 The EIR is correct to conclude that the project is not subject to SB221 reporting requirements. Additional text has been added to the Final EIR to clarify that based

upon the definition of a public water system being at least 3,000 connections; project implementation would not trigger the SB221 reporting requirements.

Page 5.3-8 of the Draft EIR, the second bullet point has been revised in the Final EIR as follows:

- Any proposed development that increases connections by 10 percent or more, if the PWS has fewer than 5,000 connections. Water Code 10912(7)(C) states that a "public water system" is defined as a system for the provision of piped water to the public for human consumption that has 3,000 or more service connections.

Page 5.3-18 of the Draft EIR, the second bullet point and proceeding text have been revised and text has been added in the Final EIR as follows:

- Any proposed development that increases connections by 10 percent or more, if the PWS has fewer than 5,000 connections. Water Code 10912(7)(C) states that a "public water system" is defined as a system for the provision of piped water to the public for human consumption that has 3,000 or more service connections.

Based on the "Guidebook for Implementation of Senate Bill 610 and Senate Bill 221 of 2001" the following excerpt shows that 300 dwelling units are necessary to qualify as a "subdivision," and therefore be subject to SB 221.

> *"Code 66473.7(a) provides that a "subdivision" for a public water system with fewer than 5,000 service connections is a proposed development that would increase the number of service connection for a public water system by 10% or more, a "subdivision" could be as few as 300 dwelling units. For example, a water utility that has 3,000 service connections would experience an increase in the number of service connections by 10% if it were required to serve a proposed residential development with 300 units, thus making the 300-unit development a "subdivision" under 221."*

As stated above, Water Code 10912(7)(C) states that a "public water system" is defined as a system for the provision of piped water to the public for human consumption that has 3,000 or more service connections. Therefore, if Fawnskin has only 673 connections it does not qualify as a "public water system," but rather a piece of a larger "overall system." Whether the project is under the jurisdiction of the DWP or the County Special Districts Department, each of these agencies "overall system" has more than 3,000 connections qualifying them as public water systems. Thus, the proposed 92 dwelling units would not exceed 10 percent of the 3,000 connections or 300 dwelling unit minimum dwelling unit threshold to be subject to SB 221 reporting requirements.

~~The proposed meets neither of the above scenarios.~~

13-43 The EIR concludes that based on the data available at the time of preparation of the Draft EIR, impacts to groundwater resources are significant and unavoidable. Further analysis and testing is required to prove that groundwater resources are available to serve the project. The County will consider the Commentor's opinion and comments during their deliberation on the project.

13-44 The GSS 2000 Report concluded that groundwater quality in the Moon Camp area is generally of superior water quality. All concentrations were below maximum contaminant levels (MCLs), with the exception of iron with a concentration of 0.69 mg/L. All potential water resources, including any wells utilized as a water resource for the proposed project, would be subject to all applicable local, State and/or Federal groundwater quality standards, which include potential for mineral contamination. Thus, analysis of any potential water resources would be required to verify compliance with all applicable water quality standards. Additionally, Mitigation Measures 5.3-6a and 5.3-6b have been modified to ensure groundwater water quality from existing wells meet all applicable groundwater standards.

The following paragraph, to be added below Paragraph 3 on Page 5.11-23 of the Draft EIR, will be included in the Final EIR:

GROUNDWATER QUALITY

As stated in the Existing Conditions section above, groundwater samples collected from Well FP-2 located on the southern portion of the Moon Camp site in 1987 were submitted for a full Title 22 analysis. The chemical analysis indicated that the groundwater quality in the Moon Camp area is generally of superior water quality, with the exception of iron concentration. Thus, if existing on-site wells are utilized for obtaining water resources for the proposed project, mitigation measures have been recommended to ensure that the wells are in acceptable operating condition and that groundwater does not exceed the maximum contaminant level (MCL) for iron concentrations (refer to Mitigation Measures 5.3-6a and 5.3-6b). However, it also acknowledged that all potential water resources, including the above referenced wells, for the proposed project would be subject to all applicable local, State and/or Federal groundwater quality standards.

Page 5.3-23 of the Draft EIR, Mitigation Measures 5.3-6b and 5.3-6c have been revised and text has been added in the Final EIR as follows:

5.3-6b If either or both of the two existing on-site wells are utilized as a water source for the project, ~~T~~the Project Applicant shall equip the~~two existing on-site~~ wells to meet DWP and/or County Special Districts Department standards and dedicate these facilities and water rights to the appropriate water purveyor~~County of San Bernardino~~. Within the proposed tract, no individual private irrigation wells shall be permitted.

5.3-6c ~~If served by CSA 53-C through a contract with the City of Big Bear Lake Department of Water and Power, t~~ After a determination has been

made regarding the water purveyor, the Project Applicant shall advance fair-share funds ~~or enter into a reimbursement agreement with the~~ to the appropriate water agency (CSA and/or DWP)~~(if required)~~ towards constructing a new reservoir and pipeline improvement at Cline-Miller Reservoir (with an estimated project cost at $481,100). These facilities would be dedicated to the appropriate water agency.

13-45 The County will consider the Commentor's opinion and comments during their deliberation on the project.

13-46 Water utilized for construction activities is considered a short-term impact and would cease upon project completion. However, since no water resources are currently available to the project site, water utilized during construction activities would need to be provided by the Project Applicant and/or Contractor. Proof of availability of water resources for construction activities would be provided by the Project Applicant and/or Contractor prior to grading activities associated with the project.

13-47 A Homeowners Association would enforce Mitigation Measure 5.3-6d. The water conservation measures in Mitigation Measure 5.3-6d were developed in consultation with the County of San Bernardino during the preparation of the Draft EIR. The water conservation measures are the minimum measures that shall be complied with in conjunction with domestic water supply to the project. Additional water conservation measures may be imposed as a result of a contract for water supply between CSA 53-C and/or the City of Big Bear Lake DWP. The County will consider the Commentor's opinion and comments during their deliberation on the project.

Also, refer to Response to Comment No. 4-2.

13-48 As shown in Response to Comment No. 1-3, the Final EIR text will include a discussion of water withdrawn from private wells for both the North Shore and Grout Creek Hydrologic Subunits. Pumping data for the 20 private wells in the North Shore Hydrologic Subunit was not available. However, assuming that they are domestic sources and that an average single family home uses approximately 200 gallons per day per year (gpd/yr), it is estimated that production from these wells is approximately 4.5 acre-ft/yr. Similarly, pumping data for the 29 private wells in the Grout Creek Hydrologic Subunit was not available. However, based upon the consumption factor, stated above, it is estimated that production from these wells is approximately 6.5 acre-feet per year. Although water withdrawn from private wells only comprises approximately 11 acre-feet per year in both of the subunits combined, it has been concluded that the North Shore Hydrologic Subunit is likely in a state of overdraft and further analysis and testing is required to prove that water resources are available to serve the project.

Also, refer to Response to Comment No. 1-3.

13-49 An increased demand for electrical service would occur at the project site as a result of the proposed development. According to Bear Valley Electric Service (BVES), it is anticipated that there would be a substantial loading increase upon build-out of the proposed project. However, BVES has indicated that electric service could be

provided with construction of new facilities. BVES would consider several alternatives to provide electricity to the site. One alternative would be to connect to existing power lines. Another alternative would be to investigate a distributed generation option. Distributed generation involves placing a power source (i.e., reciprocating engine that uses natural gas to power generator) on the site that would generate power on an as needed basis, such as during peak load times (i.e., winter, holiday weekends, etc.). As it is unknown whether a distributed generation will be considered as a feasible option by the BVES, the environmental impacts for the distributed generation option are appropriately not considered in this analysis. However, if the distributed generation option were considered by the BVES, future environmental documentation in accordance with the CEQA would be required, as necessary. In any case, the Project Applicant would be required to pay all costs/fees for the expansion of existing facilities and/or construction of new facilities to maintain the existing level of service to existing BVEC customers, while adding new load to the system.

13-50 Commentor refers to the potential impacts as a result of constructing an alternative electrical power source on the project site. Please refer to Response to Comment No. 13-49, which addresses these concerns.

13-51 The County will consider the Commentor's opinion during their deliberation on the project.

13-52 Section 5.4, *Aesthetics*, states that the proposed project would be required to comply with the glare and outdoor lighting provisions of the County of San Bernardino Development Code (i.e., Section 87.0921 et. seq.). The County of San Bernardino would assure compliance with the Development Code during the plan review process.

13-53 The County will consider the Commentor's opinion during their deliberation on the project.

13-54 The view simulations present an anticipated development scenario, thus, they are not representative of architectural design and final development plans for the placement of new residences. Although the architectural style may not be precisely representative of the final development plans, the visual simulations do illustrate the density of the proposed residential uses. The visual simulations are intended to illustrate the change in visual character of the site and the effects to scenic corridors/vistas. Utilizing the visual simulations, it has been concluded that due to the siting and density of the proposed residential uses, significant and unavoidable impacts related to "aesthetics/light and glare" would occur as a result of viewshed alterations involving existing residents to the north, east and west of the project site. Additionally, significant and unavoidable impacts have been identified for views from State Route 38, a scenic highway, to the south and from the south shore of Big Bear Lake.

13-55 The visual simulations include existing vegetation as well as anticipated ornamental landscaping. Comparing the existing versus the simulated views, the largest trees are the existing Jeffrey pine trees. The simulated views do not add large, mature Jeffrey pine trees to the views. Although ornamental landscaping would vary

between each proposed residence, it is likely that the ornamental landscaping would be fast growing vegetation and/or planted in a mature stage of growth. As stated in Response to Comment No. 13-54, the view simulations were utilized as an analytical tool to assess impacts associated with the change in visual character of the site and effects to scenic corridors/vistas. Although the ornamental landscaping may vary from the view simulations upon the initial completion of the project, the conclusion of significance of impacts will not change as a result of modifying the maturity of the ornamental vegetation in the simulated views.

13-56 Visual impacts to the lake associated with the marina facility are discussed in Impact Statement 5.4-2, *Long-Term Aesthetic Impacts*. "Views from west" of the project site acknowledges that the proposed marina facility would alter the visual character of the Lake by introducing a man-made structure on the lakefront and removal of several trees for parking facilities. Views from the west have been concluded as significant and unavoidable. The marina facility would also be visible from south of the project site. "Views from the south" of the project site have also been identified as significant and unavoidable. The EIR text has been revised to reflect that the marina facility would contribute to the significant and unavoidable long-term aesthetic impact for views from south of the project site.

Page 5.4-24, Paragraph 1 of the Draft EIR, has been revised in the Final EIR as follows:

> Views from the South. Views across the Lake from the south shore and the Lake itself to the north shore consist primarily of mountainsides covered in dense forest vegetation, with small areas of sporadic developed areas, such as the Community of Fawnskin. As shown in Exhibit 5.4-3, *Plan View*, the majority of the existing Jeffrey pine trees located between the high-water line of the Lake and immediately adjacent to or on the southern boundary of the project would remain. The lakefront residences, and residences to the north, would be partially screened by the existing trees when viewed from the south. The potential size and massing of residential buildings and change in visual character of the lake from the proposed marina facility (marina facility discussed in "views from west") would constitute a significant and unavoidable impact for views across the lake, from the south shore, and the lake itself to the north.

13-57 Boat storage would be the responsibility of the individual boat owner. It is unknown whether boats would be stored at an individual residence or a designated boat storage facility. Should boats be stored at an individual residence(s), the conclusion of significant and unavoidable impacts associated with the change in visual character of the site would not change.

13-58 Growth is very closely related to the economic cycle. As such, in times of a "good" economy, growth accelerates; and in a "poor" economy, growth contracts. Therefore, as the economy undergoes fluctuations that can be described as "good" and "poor" economies over time, it has been concluded that a 10-year time period is a reasonable approach to establish an annual growth rate. Also, refer to Response to Comment No. 13-2.

13-59 The weekday A.M. and P.M. peak hours in the mountains can be expected to occur between 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m., respectively.

13-60 Although the mountains are subject to wet weather conditions, the standard practice for preparing a traffic impact analysis is to use dry weather conditions.

13-61 Legally, there needs to be a nexus between fees paid and a traffic-related impact. A developer cannot be required to solve existing problems, particularly when a project has an insignificant traffic impact as with the proposed project. Thus, a developer is required to pay only a pro-rata share of future traffic growth toward an improvement. Also, refer to Response to Comment No. 26-13.

13-62 The County will consider the Commentor's opinion during their deliberation on the project.

13-63 There is no justification that the proposed straightening of State Route 38 within the project vicinity will materially affect existing traffic patterns. The entire stretch of State Route 38 along the north shore of Big Bear Lake consists of many curves and it is anticipated that the proposed straightening will make little difference in choice of route. The County will consider the Commentor's opinion during their deliberation on the project.

13-64 The traffic analysis was prepared in accordance with prescribed San Bernardino County Congestion Management Program procedures. This methodology is typical for an EIR level analysis of traffic-related impacts.

13-65 The proposed improvements (i.e., straightening) to State Route 38 would be designed in accordance with all applicable design standards regarding traffic flow and safety. This would include appropriate signage to identify maximum speed limits and any potential roadway hazards. Compliance with all applicable Caltrans design standards and regulations would that potential hazards due to a design feature are reduced to less than significant levels.

13-66 The County will consider the Commentor's opinion during their deliberation on the project.

13-67 Commentor refers to the modeling process used to analyze air quality impacts associated with the Project. Please refer to Response to Comment No. 19-3, which addresses this concern.

13-68 Commentor refers to the lack of analysis of SOx, lead and toxic air contaminates in the Draft EIR. Please refer to Response to Comment No. 19-4, which addresses this concern.

13-69 Commentor refers to potential air quality impacts associated with wood smoke emissions from wood stoves and fireplaces. Please refer to Response to Comment No. 19-6, which addresses this concern.

13-70 Commentor refers to potential impacts associated with visibility reducing particles. Please refer to Response to Comment No. 19-7, which addresses this concern.

13-71 Commentor refers to potential air quality impacts to health as a result of implementing the Project. Please refer to Response to Comment No. 19-8, which addresses this concern.

13-72 Commentor refers to air quality impacts to the mortality rate as a result of project implementation. Please refer to Response to Comment No. 19-9, which addresses this concern.

13-73 Commentor refers to air quality impacts associated with toxic air contaminates. Please refer to Response to Comment No. 19-10, which addresses this concern.

13-74 Commentor refers to practicality of enforcing mitigation requiring EPA certified fireplaces. Please refer to Response to Comment No. 19-13, which addresses this concern.

13-75 Commentor refers to hydrocarbon emissions from watercraft and affects to air quality. Please refer to Response to Comment No. 19-14, which addresses this concern.

13-76 The EIR discusses the possible use of distributed generation to support peak electrical demand for the project. Distributed generation involves placing a power source (i.e., reciprocating engine that uses natural gas to power generator) on the site that would generate power on an as needed basis, such as during peak load times (i.e., winter, holiday weekends, etc.). The distributed generator would be owned by the Project Applicant and/or BVES, depending on future agreements between the Applicant and BVES. Distributed generation is discussed as an alternative only, and will be investigated further by the BVES. Should this alternative become necessary, the Applicant will have to seek out permits from the SCAQMD for siting a stationary source. Should any adverse environmental effects arise during the permitting stage, mitigation measures would be adopted as a condition of approval for any such stationary sources. Also, refer to Response to Comment No. 13-49.

13-77 The County will consider the Commentor's opinion during their deliberation on the project.

13-78 Information within Section 5.7, *Noise*, was based on the most current and up-to-date information available. The Noise section was based on the *Traffic Analysis Report*, prepared by Kunzman Associates in September 2003. Trip generation rates utilized within the Traffic Report were from the *Institute of Transportation Engineers 6th Edition Trip Generation Rates, 1997*. Traffic volumes were obtained from the weekday peak hour intersection turning movement counts conducted by Kunzman Associates in March 2001. In addition, the noise analysis was conducted in accordance with the *Noise Guidelines* provided by the United States Department of Housing and Urban Development, prepared by the Environmental Planning Division of the Office of Environment and Energy. Traffic noise modeling was performed using the Federal Highway Administration's Highway Noise Prediction Model (FHWA RD-77-108), which is the current recommended model by the California department of Transportation, Federal Highways Administration and Federal Transit Administration.

13-79 In general, in an ambient outdoor noise environment, a 3-dBA change in sound pressure levels is considered a "just detectable" difference in most situations. In a laboratory-controlled environment, a 1-dBA change in sound pressure level is detectable. Per standard acoustical practices, a 10-dBA change is considered a doubling (or halving) of the subject loudness. In terms of human response to noise, a sound must be 10 dBA or higher to have a doubling effect.[1]

13-80 Sound from a small localized source (approximating a "point" source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level attenuates or drops-off at a rate of 6 dBA for each doubling of the distance (6 dBA/DD). This decrease, due to the geometric spreading of the energy over an ever-increasing area, is referred to as the *inverse square law*. However, highway traffic noise is not a single, stationary point source of sound and would not produce a funneling effect of noise. The movement of vehicles makes the source of the sound appear to emanate from a line (line source) rather than a point. This would result in a cylindrical spreading rather than the spherical spreading of a stationary point source. The change in surface area of a cylinder only increases by two times for each doubling of the radius compared to four times which is associated with spheres. The change in sound level is 3 dBA per doubling of distance (3 dBA/DD). The FHWA RD-77-108 program utilized in the analysis determined that noise from the highway would increase less than 1 dBA at a distance of 100 feet from the roadway centerline with future (Year 2006) project implementation. Additionally, refer to Response to Comment 13-82.

13-81 On page 5.7-4 of the Draft EIR, the discussion provided information regarding noise sensitive receptors within the project area and not sensors measuring sound pressure levels (SPL). According to the *General Plan Guidelines,* provided by the Office of Planning and Research, sensitive receptors include schools, hospitals, rest homes, long-term medical and mental care facilities and parks and recreation areas. Residential areas are also considered noise sensitive, especially during the nighttime hours. Section 5.7, *Noise*, indicated sensitive receptors located within a one-mile radius of the project site.

13-82 Table 5.7-2, *Land Use Compatibility for Community Noise Environments*, does not take into account noise resulting from construction. Under the County of San Bernardino Development Code, construction activities are exempt from adhering to County noise/vibration standards as long as construction is limited to the hours of 7:00 a.m. to 7:00 p.m. Monday through Saturday and prohibited on Sundays and Federal Holidays.

13-83 The noise model predicted vehicular noise in a perpendicular pattern from the roadway. Receptors located above roadways would potentially experience levels at or below the predicted noise values since a drop off effect would occur through atmospheric attenuation. In addition, the modeling for future scenarios predicted a less than 1 dBA increase in ambient noise levels for project related traffic noise. Additionally, refer to Response to Comment No. 13-80.

13-84 Please refer to Response to Comment Nos. 13-2 and 13-58 to 65. The County will consider the Commentor's opinion during their deliberation on the project.

[1] Cyril M. Harris, *Handbook of Noise Control,* 1979.

13-85 The Commentor's general comments are noted and will be considered by the County of San Bernardino. The statements used in the Draft EIR for gauging the significance of noise are based on widely accepted methodology and County Standards. These standards are considered appropriate, and even conservative.

13-86 The impact analysis within Section 5.8, *Biological Resources*, assumes removal of all vegetation types within the project site boundary. Table 5.8-4, *Vegetation Types Impacted*, states that 54.91 acres of Jeffrey pine forest would be impacted by project implementation. This acreage includes areas impacted by highway, road, residential unit construction, and fuel modification zones. Analysis of the impact of removing vegetation types, including Jeffrey pine forest, is also included in the second paragraph on page 5.8-53 of the Draft EIR. The impact to Jeffrey pine forest on the project was considered less than significant given that approximately 58,526 acres of Jeffrey pine forest presently exists in the San Bernardino National Forest and removal of 54.91 acres would not substantially reduce its range. However, impacts to individual trees used by bald eagles as perch or roosting trees were determined to be significant and unavoidable.

13-87 Comment noted. The analysis has been updated to acknowledge the osprey.

The following paragraph, to be added below Paragraph 3 on Page 5.8-39 Draft EIR, will be included in the Final EIR:

> Osprey (*Pandion haliaetus*). The osprey is a California Species of Special Concern. It is an uncommon winter visitor in southern California, but nesting has been documented at Lake Casitas near Ventura and Lake San Antonio in Monterey County (Garrett and Dunn 1981) and may occur elsewhere. The osprey would be expected to occur on the project site during spring migration or post-breeding wandering. The Project site provides roosting and foraging habitat for the osprey, but no potentially suitable nesting habitat. Therefore, its potential to occur on the Project site is considered to be low for foraging only.

Page 5.8-51 of the Draft EIR, Paragraph 4 has been revised and text has been added in the Final EIR as follows:

> Cooper's Hawk, Northern Goshawk, Sharp-shinned Hawk, Golden Eagle, Long-eared Owl, Ferruginous Hawk, Northern Harrier, White-tailed Kite, Merlin, American Peregrine Falcon, Osprey, Prairie Falcon, and California Spotted Owl. Project implementation would reduce the amount of foraging habitat for these species. This impact would contribute to the cumulative loss of foraging habitat for these raptor species. However, the loss of potential foraging habitat for these species would be considered adverse, but less than significant due to the limited amount of habitat loss relative to the availability of foraging habitat for these species in the San Bernardino Mountains and National Forest.

13-88 The EIR provides mitigation to reduce impacts to the bald eagle; however, it also maintains that impacts to the bald eagle cannot be reduced to a level considered less than significant with project implementation. No available mitigation measures could be identified that would reduce impacts to a level considered less than significant. The Draft EIR text has been revised to reflect that cumulative impacts to the wintering bald eagle population are concluded to be significant and unavoidable.

Page 5.8-62 of the Draft EIR, the Cumulative impact discussion has been revised and text has been added in the Final EIR as follows:

CUMULATIVE

5.8-6 *Cumulative development in the Project area may impact the area's biological resources. Analysis has concluded that ~~with implementation of the specified mitigation and compliance with all applicable County, State and Federal regulations concerning biological resources, a less than significant impact would occur in this regard.~~project implementation incrementally adding to impacts on bald eagle habitat in the Big Bear Valley would result in a significant and unavoidable cumulative impact to the wintering bald eagle population on Big Bear Lake.*

The proposed project contains some of the most utilized bald eagle roosting and perching habitat in the Big Bear Valley. Construction of the proposed project would diminish the habitat value of the project site for the species. When viewed in conjunction with other past, present, and reasonably foreseeable developments planned for the Fawnskin/Big Bear Lake area, the loss of bald eagle perch and roosting trees on the project site would significantly impact bald eagle habitat on the north shore of Big Bear Lake. Thus, cumulative impacts to the bald eagle are considered significant. Mitigation measures reflective of recommendations developed by scientific studies in the Big Bear Valley, including Kimball Garrett's study on the effects of human activity on wintering bald eagles (1981), are provided as part of the proposed project. However, implementation of these mitigation measures would not reduce direct or cumulative impacts to bald eagle habitat to a level considered less than significant.

~~t~~The loss of Jeffrey pine forest, pebble plain habitat and other native vegetation, as well as the loss of wildlife habitat could be considered a negative cumulative effect. However, with implementation of the recommended mitigation measures cumulative impacts to the Jeffrey pine trees would be mitigated to a less than significant level. ~~The proposed project would impact 0.69 acres of pepple plain habitat, however, implementation of the recommended mitigation measures would ensure that impacts would be reduced to less than significant levels.~~Additionally, implementation of the recommended mitigation measures would reduce impacts to 0.69 acre of pebble plain habitat to a less than significant level.

Potential impacts would be site specific and an evaluation of potential impacts would be conducted on a project-by-project basis. This would be especially true of those developments located in areas that contain sensitive species and habitat.

Each incremental development would be required to comply with all applicable County, State and Federal regulations concerning the preservation of biological resources. ~~In consideration of these regulations,~~ However, potential cumulative impacts upon ~~biological resources~~ wintering bald eagle populations would ~~not~~ be considered significant and unavoidable.

13-89 Commentor refers to removal of trees in the fuel modification zone and affects to biological resources. Please refer to Response to Comment No. 13-86, which addresses this concern.

13-90 The EIR indicates on page 5.8-49 that botanical surveys were conducted during a very low rainfall year and were inconclusive as to the presence or absence of most special status species plants with potential to occur. Additionally, the EIR states that surveys during a normal rainfall year would be required to make a determination as to the presence or absence of the species listed on page 5.8-49. Mitigation Measure 5.8-1a has been provided to ensure that a proper accounting of onsite botanical resources is completed and potential impacts are appropriately mitigated. Please also refer to Response to Comment No. 3-5.

13-91 The EIR addressed impacts to wildlife movement on page 5.8-60 and determined that impacts would be considered less than significant given that the site is not a regionally important wildlife movement corridor.

13-92 The proposed project may not proceed until implementation of Mitigation Measure 5.8-1a. The conservation easement must be purchased, the management entity approved by the California Department of Fish and Game (CDFG), and a non-wasting endowment established for the monitoring and management of the preservation site by the management entity in perpetuity prior to the initiation of clearing or grading activities on the project site. Refer to Response to Comment Nos. 3-5 and 13-86.

13-93 Commentor refers to the acreage assessment of pebble plain habitat. Please refer to Response to Comment No. 6-1, which addresses this concern.

13-94 Commentor refers to the recommended mitigation measures for impacts to pebble plain habitat. Please refer to Response to Comment Nos. 3-5, 13-86 and 13-92, which address this concern.

13-95 Mitigation Measures 5.8-1b and 5.8-1c apply to "any development that may occur within the project site," which includes road cutting and other structural changes required for the proposed project, including fuel modification. However, project-related and cumulative impacts to the bald eagle are identified as significant and unavoidable, even with implementation of the proposed mitigation. This conclusion takes into account the loss of trees for roosting and perching.

13-96 Commentor refers to impacts associated with tree removal and to the bald eagle. Please refer to Response to Comment No. 13-95, which addresses these concerns.

13-97 The Commentor is correct that Mr. Magorien has highlighted several deficiencies in the available data to indicate the presence of available water resources to serve the project. Since the available data regarding water resources at time of preparation of the EIR did not adequately prove that a reliable water resource exists to serve the project, impacts to groundwater resources have been identified as significant and unavoidable. The deficiencies highlighted by Mr. Magorien will need to be further analyzed and resolved; and a proven water resource will need to be identified to conclude that impacts to groundwater resources are reduced to a less than significant level.

13-98 The Commentor states that the EIR fails to acknowledge the conclusion in the 2003 GSS report that drought conditions will have a significant impact on groundwater levels in the North Shore and Grout Creek Hydrologic Subunits. This statement and the associated discussion in the 2003 GSS report are discussed on Page 5.11-22, Paragraph 1, of the Draft EIR. Based on the analyses presented in the 2003 GSS report, the following have been concluded regarding the maximum perennial yield of the North Shore Hydrologic Subunit:

- The North Shore Hydrologic Subunit can be conveniently subdivided into six tributary subareas (A through F) based on surface water drainage divides.
- The revised range of average annual ground water recharge for the North Shore hydrologic Subunit as a whole is approximately 150 to 430 acre-ft/yr with a midpoint of approximately 290 acre-ft/yr.
- The midpoint of the estimated range of average annual ground water recharge (290 acre-ft/yr) is considered a good estimate of maximum perennial yield for the North Shore Hydrologic Subunit, given the available data. The midpoint of the range is approximately 4.5 percent of precipitation for the subunit which is within the range of accepted recharge estimates for other ground water basins in southern California (three to seven percent; Metropolitan Water District of Southern California (MWD), 1999; Daniel B. Stevens, 1996).
- The revised perennial yield of 290 acre-ft/yr is slightly higher than the previous perennial yield value of 260 acre-ft/yr from the GEOSCIENCE, 2001 report, primarily as a result of the use of an updated EPA input parameter list for the watershed model and the consideration of the bedrock aquifer as a viable source of ground water supply.
- The maximum perennial yield for individual tributary subareas within the North Shore Subunit range from 27 acre-ft/yr (Subarea E) to 73 acre-ft/yr (Subarea B).
- Additional ground water monitoring and geohydrologic data collection are required in each individual subarea to manage the ground water resources in the area as it is developed in the future.

The results of the ground water recharge analysis for the Grout Creek Subunit are as follows:

Summary of Ground Water Recharge Results
Grout Creek Tributary Subareas

Tributary Subarea	Area (acres)	Annual Precipitation (inches)	Average annual Ground Water Recharge - Low Estimate (acre-ft/yr)	Average Annual Ground Water Recharge – High Estimate (acre-ft/yr)	Average of Ground Water Recharge Estimate Range (acre-ft/yr)
A	1,074	33.44	74	249	161
B	850	29.01	50	160	105
C	1,668	29.93	104	331	217
D	592	26.74	32	99	66

For the Grout Creek Hydrologic Subunit, the following is concluded:

- The Grout Creek Hydrologic Subunit can be conveniently subdivided into four tributary subareas (A through D) based on surface water drainage divides.
- The revised range of average annual recharge for the Grout Creek Hydrologic Subunit as a whole (Tributary Subareas A through D) is approximately 260 to 840 acre-ft/yr with a midpoint of approximately 550 acre-ft/yr. However, ground water resources in Subareas A and B of the Grout Creek Subunit are not currently practical to develop because they are remote and are located on land under the jurisdiction of the USFS.
- Due to the cost and political limitations associated with ground water development in Subareas A and B, it is currently recommended to use the sum of the midpoint recharge estimates for tributary Subareas C and D as the maximum perennial yield for the Grout Creek Subunit. This results in a maximum perennial yield for the Grout Creek Subunit of 283 acre-ft/yr.
- The revised perennial yield is higher than the previous perennial yield value of 200 acre-ft/yr from the GEOSCIENCE, 2001 report, primarily as a result of the use of an updated EPA input parameter list for the water shed model and the consideration of the bedrock aquifer as a viable source of ground water supply.
- The maximum perennial yield for individual tributary subareas within the Grout Creek Subunit range from 66 acre-ft/yr (Subarea D) to 217 acre-ft/yr (Subarea C).

Mitigation Measure 5.11-2 on Page 5.11-27 of the Draft EIR has been revised in the Final EIR as follows:

~~5.11-2 Based upon the technical analysis presented, a potential groundwater overdraft condition would occur and no additional mitigation measures have been identified.~~

5.11-2a Within three months of project approval, the Project Applicant shall submit a plan for a detailed geohydrologic investigation. The plan must present the possible sources of groundwater selected for the project and the methodology proposed to investigate those sources. If the on-site wells are to be utilized to serve this project, it must be determined if either could draw water from Big Bear Lake. The plan must be prepared by a California Registered Geologist.

5.11-2b Within six months of plan approval, the Project Applicant shall submit the results of the geohydrologic investigation. The report must be prepared by a California Registered Geologist.

5.11-2c Concurrently or within three months of approval by the geohydrologic report, the Project Applicant shall submit a groundwater monitoring plan in accordance with San Bernardino County's "Guidelines for Preparation of a Groundwater Monitoring Plan." The plan must be prepared by a California Registered Geologist.

13-99 Section 5.11, *Hydrology and Drainage*, discusses impacts associated with short- and long-term water quality. Overall, the project has the potential to violate water quality standards of the lake due to an increase in the level of activity on the project site. Without mitigation, the project would be expected to increase pollutant loadings, including hydrocarbons, fertilizers, and pesticides in the lake. However, the recommended mitigation that includes a comprehensive Water Quality Management Plan (WQMP) for Urban Runoff, including both Structural and Non-Structural BMPs, to comply with the requirements made by the Santa Ana Regional Water Quality Control Board, would reduce potential water quality impacts to the lake to a less than significant level.

13-100 The Commentor is correct that the Initial Study prepared for the project indicated that no impact to groundwater resources would occur as a result of project implementation. This conclusion was based upon available data (which was limited) at the time of preparation of the Initial Study (2001). Since that time, wells in the project vicinity have been considered as an option to supply the project with water. Thus, the EIR appropriately analyzes the potential impacts to groundwater resources in the North Shore and Grout Creek Hydrologic Subunits. The analysis concludes that significant and unavoidable impacts would occur to groundwater resources in the North Shore and Grout Creek Hydrologic Subunits, since no proven source of water supply has been provided in the technical analysis provided by the Project Applicant.

13-101 The EIR text has been revised to clarify that according to data from the 2000 GSS report, groundwater quality from Well FP-2 is "generally" of superior water quality. All concentrations were below maximum contaminant levels (MCLs), with the exception of iron with a concentration of 0.69 mg/L.

The following paragraph, to be added below Table 5.11-3 on Page 5.11-8 of the Draft EIR, will be included in the Final EIR:

GROUNDWATER QUALITY

According to the GSS 2000 Report, groundwater samples collected from Well FP-2 located on the southern portion of the Moon Camp site in 1987 was submitted for a full Title 22 analysis. The chemical analysis indicated that the groundwater quality in the Moon Camp area is calcium bicarbonate and is generally of superior water quality as all concentrations were below maximum contaminant levels (MCLs), with the exception of iron with a concentration of 0.69 mg/L. The MCL for iron is 0.3 mg/L. However, the iron concentration of Well-FP-3 (located approximately 800 feet to the northeast of Well FP-2) was only 0.06 mg/L, which suggest that iron concentrations are possibly lower elsewhere.

13-102 The County will consider the Commentor's opinion during their deliberation on the project.

13-103 The County will consider the Commentor's opinion during their deliberation on the project.

SIERRA CLUB
FOUNDED 1892

SIERRA CLUB
BIG BEAR GROUP

May 16, 2004

Matthew W. Slowik
Land Use Services Department
Planning Division
385 N. Arrowhead Ave., First Floor
San Bernardino, CA 92415-0182

RE: DRAFT EIR FOR THE MOON CAMP DEVELOPMENT PROJECT/RCK PROPERTIESS INC. GENERAL PLAN AMENDMENT/OFFICIAL LAND USE DISTRICT CHANGE FROM BV/RL-40 TO BVRS-7200 AND AMENDMENT TO COUNTY CIRCULATION ELEMENT FOR REALIGNMENT OF NORTH SHORE DRIVE; TENTATIVE TRACT MAP #1636, AND CONDITIONAL USE PERMIT FOR A BOAT DOCK.

Dear Mr. Slowick,

The Sierra Club , Big Bear Group, appreciates the opportunity to comment on the DEIR referred to above. The following are a just a few of the objections we have to the proposed project.

First and foremost, under "Land Use Element", section LU-2, (a), this project does not ensure compatibility with adjacent land uses and community character. The community of Fawnskin has no projects resembling anything of this size. The adjacent land is Forest Service single family lots and homes. The changing of zoning from R40 would alter the atmosphere of the whole community adversely. 14-1

Section 5.3-9 lists the alternative of a distributed generation option. This would require additional construction, and does not address the fact that such an option would create noise pollution as well as air pollution and be disruptive to neighbors and wildlife. 14-2

Section 5.3-10 states "The inability of water providers to confirm service on a project level would also result in significant and unavoidable cumulative impacts." This is a 14-3

problem that can't be solved or mitigated and should be reason enough for rejection of the project as proposed. 14-3

The conclusion in Section 5.4-2 is correct and good reason why the project should not be approved as proposed. 14-4

Section 5.8 has too many omissions to document here, but my biggest concern is that it did not properly address the Bald Eagle population and its impacts and completely omitted the Osprey, which in recent years has been returning to the area. 14-5

In conclusion, we feel the EIR is inaccurate and incomplete. Thank you for allowing us to express my concerns.

Sincerely,

Ervin Nichols, Chairman,

Big Bear Sierra Club Group

Response to Commentor No. 14
Ervin Nichols, The Sierra Club
May 14, 2004

14-1 Commentor refers to the Project's consistency with the County General Plan. Please refer to Response to Comment No. 13-20, which addresses this concern.

14-2 Commentor refers to the potential impacts as a result of constructing an alternative electrical power source on the project site. Please refer to Response to Comment No. 13-49, which addresses these concerns.

14-3 The County will consider the Commentor's opinion during their deliberation on the project.

14-4 The County will consider the Commentor's opinion during their deliberation on the project.

14-5 Commentor refers to impacts to the bald eagle and osprey. Please refer to Response to Comment Nos. 3-7, 13-87 (osprey), 13-88, 13-95 and 41-14, which address these concerns. The County will consider the Commentor's opinion during their deliberation on the project.

BBSO
Big Bear Solar Observatory

New Jersey Institute
of Technology
A Public Research University

Big Bear Solar Observatory
40386 North Shore Lane
Big Bear City, CA 92314
FAX: 909-866-4240

May 17, 2004

County of San Bernardino
Land Use Services Department
Planning Division
385 N. Arrowhead Ave. First Floor
San Bernardino, California 92415-0182
Attn: Matthew Slowik, Sr. Associate Planner

Dear Mr. Slowik:

RE: DRAFT EIR FOR THE MOON CAMP DEVELOPMENT PROJECT/RCK PROPERTIES INC.: GENERAL PLAN AMENDMENT/OFFICIAL LAND USE DISTRICT CHANGE FROM BV/RL-40 TO BV/RS-7200 AND AMENDMENT TO COUNTY CIRCULATION ELEMENT FOR RE-ALIGNMENT OF NORTH SHORE DRIVE; TENTATIVE TRACT MAP #16136, AND CONDITIONAL USE PERMIT FOR A BOAT DOCK.

Thank you for the opportunity to review and comment on the draft EIR for the proposed Moon Camp project. The Big Bear Solar Observatory, operated by the New Jersey Institute of Technology, a public research university of the state of New Jersey, is one of the leading solar observatories in the world. We have serious concerns that a number of aspects of the proposed Moon Camp project may adversely affect our research programs. We are somewhat surprised that during the preparation of the DEIR we were not contacted for input. Specifically, our concerns include the following: 15-1

- Dust generated during construction. We are primarily concerned with generation of PM_{10} and $PM_{2.5}$. Although these particles do remain in the air for long distances from a source, they are most prevalent near the source. PM_{10} particles will increase scattered light in our telescopes by settling on exposed lenses and mirrors, while $PM_{2.5}$ particles contribute to scattering ("haze") in the atmosphere. We are concerned that the mitigation measures listed in section 5.6-1 of the DEIR may not be adequate. 15-2
- Dust generated by traffic after project completion. Our concerns are basically the same as during construction. 15-3

40386 North Shore Lane
Big Bear City, CA 92314
(909) 866-5791

- Smoke from wood stoves and fireplaces. Again, our concerns are mainly due to the increased levels of PM_{10} and $PM_{2.5}$ in the vicinity of the project. It should be noted that the winter inversion layers already tend to trap smoke from the city of Big Bear Lake, across the lake from the proposed project, in the mornings. Mornings are particularly important for our observations since the air is less turbulent at that time. 15-4

- Thermal convection from house roofs. This is not addressed by the DEIR. The major limitation to the resolution of ground-based telescopes is distortion caused by air turbulence. In the daytime, the largest contribution to this is the heating of the ground and other surfaces by the sun. The reduction of this turbulence by large bodies of water is the main reason why the Observatory is located in Big Bear Lake. In general, building roofs and asphalt and concrete paved areas are the worst sources of ground heating. Replacement of a large forested area near the Observatory by homes is likely to have detrimental effects on our ability to see detail on the sun. 15-5

- Light pollution and trespass. The Observatory also operates a long term program monitoring the earth's climate by measuring the earth's reflectance by observing the earthshine, that is, the light reflected from the earth to the moon and back. This project is primarily concerned with measuring the overall reflectivity of clouds in the earth's atmosphere. Cloud reflectivity is an important factor in determining the nature and extent of global warming.
  Light pollution and trespass from the proposed Moon Camp project may adversely affect our ability to continue this project. The mitigation measures in section 5.4-4 may not be sufficient to prevent interference with our observations. We would recommend that in addition to the measures in 5.4-4, the following measures should be added: All outdoor light fixtures should be cutoff luminaires, and should only use high-pressure or low-pressure sodium lamps. 15-6

We would like to point out that Big Bear Solar Observatory represents an important non-tourist related contribution to the economy of the Big Bear Valley. Degradation of observing conditions here could have long-term effects on the economy of this area.

Thank you again for allowing us to comment on this proposed project.

Sincerely,

Philip R. Goode
Director
Big Bear Solar Observatory

William H. Marquette
Site Director
Big Bear Solar Observatory

John R. Varsik
Assistant Research Professor
Big Bear Solar Observatory
New Jersey Institute of Technology

Response to Commentor No. 15
Phillip R. Goode, William H. Marquette, and John R. Varsik, Big Bear Solar Observatory (BBSO)
May 17, 2004

15-1 The County will consider the Commentor's opinion during their deliberation on the project.

15-2 Per Impact Statement 5.6-1 – *Short Term Air Quality Impacts*, the analysis states that the project shall comply with the South Coast Air Quality Management District Rule 403, *Fugitive Dust*. Article (d)(1) states that:

> *No person shall cause or allow the emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area such that:*
>
> *(A) the dust remains visible in the atmosphere beyond the property line of the emission source; or*
> *(B) the dust emission exceeds 20 percent opacity (as determined by the appropriate test method included in the Rule 403 Implementation Handbook), if the dust emission is the result of movement of a motorized vehicle.*

Additionally, as the project site is in excess of 50 acres and construction would occur after January 2005, it must also comply with the Best Available Control Technology (BACT) measures outlined in Section 5 of Rule 403. Implementation of the above referenced measures during construction and operation would ensure that there would not be an abundance of particulate matter emitted beyond the property line. Therefore, particulate settlement beyond normal ambient conditions on the Big Bear Solar Observatory (BBSO) telescope lens is not anticipated.

15-3 Commentor refers to dust generated by traffic and affects to air quality. Please refer to Response to Comment No. 15-2, which addresses this concern.

15-4 Please refer to Response to Comment No. 15-2.

15-5 The enhanced greenhouse hypothesis indicates that thermal convection within a high altitude climate will manifest itself at higher minimum nocturnal and winter temperatures (effect on maxima is small to non-existent because pushing more energy into a warm air mass increases vibrational excitation, reduces air density to the point that overcomes earth's natural inversion layer and cooler, more-dense air above displaces less-dense warm air, convection takes over and, via a chaotic exchange, thermal energy is vented to space - i.e., hot air rises). However, to further reduce any adverse effects that may arise from thermal convection from roofs to homes, an additional mitigation measure has been proposed.

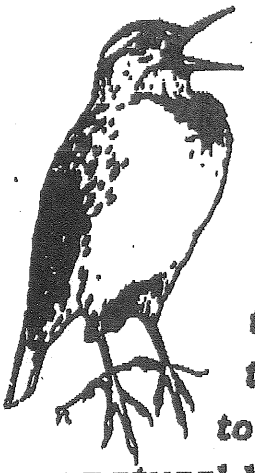
Page 5.4-29 of the Draft EIR, the following mitigation measure has been added in the Final EIR as follows:

5.4-4g	The Project Applicant/Developer shall install light colored, reflective roof products. Such roofs shall utilize light colored, reflective materials that meet the performance standards developed by the Energy Star Labeled Roof Program, as well as the American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) Standards 90.1 and 90.2 on energy efficient buildings. This condition shall be verified by the County of San Bernardino Building and Safety Division prior to issuance of building permits.

15-6 The BBSO has recommended that all outdoor light fixtures should be cutoff luminaries and should only use high-pressure or low-pressure sodium lamps. The EIR has been modified to include this suggestion as a recommended mitigation measure to further reduce potential light and glare impacts associated with the proposed project. Also, refer to Response to Comment No. 13-52.

Page 5.4-29 of the Draft EIR, the following mitigation measure has been added in the Final EIR as follows:

5.4-4f	All outdoor light fixtures shall be cutoff luminaries and shall only use high- or low-pressure sodium lamps.



San Bernardino Valley AUDUBON SOCIETY

P.O. Box 19973 San Bernardino, CA 92423

to enjoy
to study
to protect
our natural heritage

May 17, 2004

Matt Slowik, Senior Associate Planner
COUNTY OF SAN BERNARDINO
Land Use Services Department, Planning Division
385 N. Arrowhead Ave., First Floor
San Bernardino, CA 92415-0182

RE: Draft Environmental Impact Report for the MOON CAMP Development Project / RCK Properties Inc.; General Plan Amendment -Official Land Use District Change from BV/RL-40 to BV/RS-7200 and Amendment to County Circulation Element for Realignment of North Shore Drive; Tentative Tract Map #16136; and Conditional Use Permit for a Marina.

Dear Mr. Slowik,

The *San Bernardino Valley Audubon Society* appreciates the opportunity to comment on the Draft Environmental Impact Report referenced above for the Moon Camp Development Project and marina in Fawnskin plus the accompanying General Plan Amendment for increased density in land use designation and the proposed highway realignment.

The San Bernardino Valley Audubon Society represents approximately 2000 citizens living in the Inland Empire. Together with our members who actually reside in the mountains, all of us look to the San Bernardino National Forest as a monumental public asset, a one-of-a-kind forest sanctuary that offers refuge, recreation and spiritual renewal to anyone who wishes to enjoy its rare and valuable alpine qualities. When actions are proposed that threaten to sacrifice these advantages unnecessarily and unjustifiably, we feel an obligation to speak up on behalf of the general populace and against potential giveaways that primarily favor private gain at public expense.

We believe that the severity of adverse impacts resulting from the combined proposals of this project would be extremely detrimental to the community of Fawnskin, the Big Bear Valley, the San Bernardino National Forest and the general public. Given the present emergency crisis of severe fire hazard in the mountain region, overdraft of water resources, insupportable infrastructure, public safety risk from limited evacuation capability and excessive fragmentation of wildlife and National Forest resources, this project deserves to be denied so that a clear message is registered that important public values will not be compromised in the County of San Bernardino. 16-1

1

Major Adverse Impacts

Without going into extensive detail, there are several elements of this proposal that by themselves are sufficient to warrant denial due to overall inappropriateness, conflict with County General Plan guidelines and incompatibility with primary public values.

In this context we would like to address the proposed General Plan Amendment for a land use designation change, the proposed highway realignment, impacts to the bald eagle, cumulative effects and the unprecedented fire danger. 16-1

We acknowledge our gratitude to the Friends of Fawnskin, a local community organization, for sharing their research and a copy of their extensive comments with us. The County is indeed privileged when local citizens care enough to participate to such an earnest extent in the planning process. We find that their comments are thoroughly researched, valid and compelling. We concur wholeheartedly with their conclusion that the project is unsound and detrimental.

General Plan Amendment

As acknowledged in the Draft Environmental Impact Report, the proposed Moon Camp Project is in conflict with the County of San Bernardino's land use plan, policies and regulations set forth in the General Plan and requires a General Plan Amendment to offset the existing conflict and actively confer special advantages to the applicant. These special advantages can only be granted at significant expense and detriment to the public. For this reason the proposed General Plan Amendment should be denied. We strongly disagree with the analysis in the Draft EIR that changing the existing land use designation to accommodate a major development would result in a less than significant impacts to the surrounding community, the San Bernardino National Forest, environmental quality, public resources, public values and public rights. 16-2

The proposed General Plan Amendment to change the land use designation from BV/RL-40 to BV/RS-7200 is insupportable in view of the extreme fire danger in the San Bernardino Mountains. Right now there is a declared state of emergency in the mountain region due to the excessive fire hazard. The California Department of Forestry and Fire Protection indicate that these mountains face the most severe fire conditions in the world. The recent Old Fire vividly demonstrated that present firefighting capabilities are insufficient to defend existing structures on the mountains much less any additional structures, especially ones unauthorized by existing General Plan guidelines. 16-3

Fire danger cannot be expected to decrease in the foreseeable future. These facts ought to preclude any further mountain development that is not already prescribed in the General Plan. Each additional structure added to the hazardous mountain environment worsens the already out of balance ratio of urban-to-wildland intermix. Defending a disproportionate urban-to-wildland intermix is the most costly and difficult firefighting condition of all. Given such circumstances, a 16-4

hypothetical General Plan Amendment designed to enable only five additional structures where current provisions allow only 1.5 would be irresponsible and a tragic disservice to the public. The prospect of relaxing zoning restrictions to allow 60 or 90 units and the accompanying increase in population would be unconsciencable. 16-4

The owners acquired this land in full knowledge of its zoning restrictions. They have no right to expect a change when such a change would not be in the public interest. Depriving the public of their open space rights, General Plan protections, fire safety, aesthetics and other general rights conferred by existing planning would be unfair and unwarranted under the circumstances. Ceding to a private request solely for the purpose of private gain accomplished entirely at the public expense and loss should not be considered. 16-5

Moreover a change in the land use designation cannot be justified on the grounds that adjacent property is approved for higher residential densities. In actual fact the majority of the adjacent land is National Forest and shoreline within the scenic corridor of the scenic highway. Compatibility with such valuable open space values strongly argues for the maintenance of the existing zoning at one unit per 40 acres.

Proposed Highway Realignment

The scenic highway and lake view on the predominantly woodland north shore of Big Bear Lake in conjunction with the curving contour of the roadway conform to the rural character of the Fawnskin community's alpine setting. Straightening and realigning the highway to enable shoreline houses would nullify and defeat the purpose of the scenic highway and the protections of this public benefit upheld in the County General Plan. This would constitute an extreme adverse impact and should clearly be disallowed.

Furthermore, straightening the highway would likely create an unnecessary speed strip in an otherwise meandering alignment that encourages slow travel along the scenic shoreline. Public meetings held in the Big Bear Valley to gather community input for a new County General Plan Revision indicate an overwhelming preference for maintaining the open space and rural character of the mountain region by avoiding discretionary actions that compromise these qualities. Realigning the highway is counterproductive for maintaining these values. 16-6

By proposing the zoning change and the highway realignment, the applicant is essentially asking the County to conspire against the public interest by taking away long established public rights and bestowing upon the applicant vastly extended new rights and a major magnification of property values, which the applicant has no claim to unless the County dishonors its existing commitment to the public as upheld in the General Plan and the established land use designation.

By paying property taxes based on the existing land use designation of one unit per 40 acres with a scenic highway (protected by the County General Plan) traversing the land and no building sites obstructing the public's view of the lake, the applicant has duly acknowledged the

special public rights that adhere to this land. It would be inappropriate for the County to cancel these rights when the public has clearly demonstrated its interest in preserving them. The scenic open space land owned by the applicant is linked to the National Forest, which provides the main public value and major attraction of the north shore, and is also important bald eagle habitat. The larger value of the overall public forest, for which the County General Plan mandates compatible uses on adjacent private land, clearly ought not to be diminished so extensively and simply for the purpose of facilitating private gain as this proposal seeks. The applicant has no basis to expect the County to accede to such demands. That would be a major "taking" of significant public rights in the form of an unjustified giveaway, unduly bestowing extravagant favoritism and unfair advantages to a private party. It would be highly inappropriate for the County to allow the applicant to capitalize at public expense. The most reasonable response is for the County to deny this project. 16-6

Bald Eagles

Recent increased development in the Big Bear Valley has corresponded with a simultaneous decline in the population of wintering bald eagles that inhabit the area. In addition to being the national bird, the bald eagle has also come to symbolize the unique wildlife values of the Big Bear Lake area in the San Bernardino National Forest. Beyond its importance as a threatened species, the presence of the bald eagle in Big Bear is a popular attraction for the visiting public, widely featured in media publications. Such attention is a considerable benefit to the tourist economy that thrives on a major destination like the National Forest. The Forest Service Discovery Center on the north shore is the main visitor center for the local mountains. Eagle tours are the primary attraction in winter. The health and sustainability of the bald eagle is a critical indicator of the overall natural resource values of the National Forest in the Big Bear Lake area. 16-7

The Moon Camp site is important roosting habitat for the remaining bald eagle population in the Big Bear area. It is clear that the proposed project, dependent upon approval by the County of a radical zoning change and relocation of the scenic highway would have a significant adverse effect on this species. The quantity of trees that would need to be removed for the extensive building and road construction proposals would severely compromise the viability of the existing habitat and likely compound the factors causing the population of the bald eagle to decline. We strongly recommend that the project be denied as being incompatible to the established values of the site, among which we count the extraordinary presence of the magnificent bald eagle as one of the most exceptional and irreplaceable. It would be a tragic loss if the largest population of wintering bald eagles in Southern California were allowed dissipate due to unwarranted projects like this.

Cumulative Impacts

The mountain area of the San Bernardino National Forest and the general public has suffered enormously in prior years by the County failing to adequately take into consideration the 16-8

cumulative impacts of persistent development. This has led to overdraft of water supplies in the Big Bear Basin and water shortages in the Lake Arrowhead area. Waste water treatment facilities are routinely located on pubic lands of the National Forest. Infrastructure in general is pushed to insupportable levels so that taxpayers are eventually forced to underwrite the cost of improvements necessitated by poorly planned developments, which steadily downgrade the basic quality of life of the rural setting within the National Forest. The proposed project is no exception. 16-8

The Draft EIR for the Moon Camp Project raises many red flags, which are extensively referenced in comments from the Friends of Fawnskin. As is abundantly clear in the DEIR and the additional analysis of FOF, the project will generate serious adverse impacts to aesthetics, air quality, biological resources, hydrology, public services, traffic and fire hazard. It is surprising that the DEIR has failed to recognize the "No Project/Existing Designation" Alternative as the environmentally superior alternative, insofar as it clearly meets this criteria and the applicant clearly has no inherent right to develop the land to the extent that is proposed. 16-9

The cumulative impacts assessment in the DEIR, despite its deficiencies, particularly strikes a strong cautionary note in recognizing that the proposed project could result in increased demand for public services, which typically means higher taxes for existing residents. It also acknowledges that the inability of water providers to confirm services has a significant adverse effect. This fact in conjunction with the severe overdraft in the Big Bear Basin is ample reason to deny the project. This is especially true insofar as the County has never properly analyzed the potential for the increased conversion of second homes into full-time occupancy and the resulting impacts to existing infrastructure, which have hitherto been largely predicated on the basis of a second home resort community. Proposals such as the Moon Camp Project likely will have a significant impact in accelerating the overall conversion of the community to a primary resident population. This creates significant conflicts with prior planning assumptions, density projections and land use designations. None of this has been addressed by the County in relationship to growth inducing trends, impacts to the National Forest, carrying capacity of the mountain infrastructure, projected build-out and the previously unforeseen fire hazard crisis. In view of so many unpredictable variables and existing excessive demands on infrastructure, it is wise not to amend the General Plan in a way that would only make conditions worse. 16-10

Fire Hazard

To further elaborate on the existing fire hazard in the San Bernardino Mountains and the continuing emergency crisis of drought, excessive fuels and savage winds, it is one of the glaring deficiencies of land use planning for the mountain region that realistic precautions against a major fire catastrophe, which presents a much greater threat to public safety than the County recognizes, has been overly neglected. This is especially alarming in view of the fact that the County appears to accept no liability or accountability for decisions that compromise public safety on such a large scale. 16-11

The situation is rendered unreliable and unpredictable due to the overlap of firefighting jurisdictions and responsibilities. Although the County makes decisions placing excessive numbers of structures inside the urban-wildland intermix of the National Forest, the responsibility of fighting wildland fires largely falls to the Forest Service and CDF. To some extent the County accepts responsibility for defending structures from fire, but the overlapping jurisdictions are subject to many fluctuations. For example both the Forest Service and CDF have obligations to fight fires in other areas. That means there are times when the San Bernardino Mountains will be less protected than others. As more and more second homes convert to full-time occupancy, the population will significantly increase. More people mean more ignition sources, as the majority of fires are started by human actions. Incidence of arson is increasing for this reason. None of these considerations have been properly addressed by the County. Most fire professionals will attest that the likelihood of a major wildfire is all but inevitable. Elements such as extreme combustible fuels, annual gale force winds, dangerous roads subject to closure, arson activity and firefighters dispersed to cover other emergencies, make these mountains highly susceptible to a catastrophic incident that would overwhelm existing capabilities to defend existing communities, let alone build-out densities or a conversion from second homes to full-time populations. Given such extreme hazardous conditions, an existing emergency crisis and the recent harrowing example of the Old Fire, which caused unprecedented destruction, there can be no excuse for compounding this situation unnecessarily. Any action other than denying the proposed project would be irresponsible. 16-11

The County should not ignore the guidelines in the General Plan that prescribe the use of open space as a protective fire hazard reduction method. The existing land use designation for the project site fulfills that purpose and should not be removed.

Citizen Participation

The San Bernardino Valley Audubon Society again acknowledges the tremendous effort of the Friends of Fawnskin in thoroughly and accurately evaluating the significant impacts of the Moon Camp proposal. The high level of public participation and input focused on this inappropriate proposal represents an extraordinary demonstration of community concern and citizen democracy in action. The County should feel honored and humbled by such dedication and commitment by its residents. 16-12

The County would be remiss not to assign the highest consideration to the powerful message of the exceptional participatory democracy in this case. Such a level of involvement by ordinary citizens in today's world signals that a serious problem and concern is at stake. The enormous organizational efforts of dozens of active members and hundreds of supportive followers bespeaks of exceptional commitment to the values of the local community, the County and the National Forest. Citizens of this nature are a unique asset to any County that truly values its human resources and the best interests of the public.

The extraordinary amount of volunteer hours, research and consultation with experts that has been mustered to oppose the misguided proposals of the Moon Camp Project represent a far worthier and more reliable testimony to the adverse impacts of this project than does the Draft EIR. Certainly equivalent amounts of time, expertise and expense as went into the EIR have likewise been invested by citizens in the cause of placing before the County a strong and irrefutable case that the existing General Plan guidelines ought to be adhered to and not reversed, thus aiding the County in making the right decision. Maintaining the status quo is in the best interest of the public, for its safety, well-being and continued protections of a priceless National Forest. The County could not ask for better advocates and reminders of its highest duty. 16-12

For all of the above reasons, the San Bernardino Valley Audubon Society strongly encourages the County to deny the Moon Camp Project proposal.

We thank you for your consideration of these comments.

Sincerely,

Dorothy Myers
President

7

Response to Commentor No. 16
Dorothy Myers, San Bernardino Audubon Society
May 17, 2004

16-1 The County will consider the Commentor's opinion during their deliberation on the project.

16-2 Commentor refers to the Project's consistency with the General Plan. Please refer to Response to Comment Nos. 13-8 to 13-22, which address this concern.

16-3 Commentor refers to fire risks associated with project implementation. Please refer to Response to Comment Nos. 4-1, and 13-27 to 13-36, which address this concern.

16-4 Commentor refers to the urban/forest interface and the increased fire risk associated with project implementation. Please refer to Response to Comment Nos. 4-1, and 13-27 to 13-36, which address these concerns.

16-5 Commentor refers to the Project's consistency with the General Plan. Please refer to Response to Comment Nos. 13-9 to 13-22, which address this concern. The County will consider the Commentor's opinion during their deliberation on the project.

16-6 Commentor refers to impacts associated with the proposed highway realignment. Please refer to Response to Comment Nos. 13-12, 13-16, 13-20 and 13-21, which address land use concerns. Also, refer to Response to Comment Nos. 13-51 to 13-57, which address aesthetic concerns; refer to Response to Comment No. 13-65 for traffic concerns; and Response to Comment Nos.13-95 and 13-96, which address bald eagle concerns. The County will consider the Commentor's opinion during their deliberation on the project.

16-7 Commentor refers to impacts to the bald eagle. Refer to Response to Comment Nos. 3-7, 13-86, 13-88, 13-95 and 41-14, which address these concerns. The County will consider the Commentor's opinion during their deliberation on the project.

16-8 Commentor refers to water supply and cumulative affects to groundwater. Refer to Response to Comment Nos. 1-4 and 1-5, which address this concern. The County will consider the Commentor's opinion during their deliberation on the project.

16-9 The "No Project/Existing Designation" Alternative would eliminate and/or reduce all environmental impacts from those anticipated for the proposed project. However, this alternative is not being considered as the "Environmentally Superior Alternative" for the reason that it does not meet the objectives established for the proposed project.

16-10 The Commentor is not specific, as to how the project would impact public services and infrastructure. The Draft EIR concluded that project implementation would result in unavoidable significant impacts regarding groundwater resources. Full-time occupation of the proposed residences is addressed in Response to Comment No. 13-7. The County will consider the Commentor's opinion during their deliberation on the project.

16-11 Commentor refers to potential fire hazards associated with project implementation. Please refer to Response to Comment Nos. 4-1, and 13-27 to 13-36, which address these concerns. The County will consider the Commentor's opinion during their deliberation on the project.

16-12 The County will consider the Commentor's opinion during their deliberation on the project.

RECEIVED 4/11/94
APPT
LAND DEPT.
ADVANCE DIVISION

I am writing to protest
the Draft EIR for the
Mooncamp Development Project
RCK Properties Inc. I live
on Barbara Lee Lane and do
not see how "private enterprise"
can have the scenic hwy 38
realigned (North Shore Drive) on
the tentative tract map # 16136.
The boat docks go in just as
the road splits now - there
is a marina next to it
now which was Cluster Pines -
This is a small community
+ we cannot water our
lawns because of water shortages,
now + sewer problems now
crowed schools the Eagles line
in this area along with other
wild life. You should come up
here + see this beautiful little town
+ ya wouldn't want this - The Almighty
Dollar is that what it is Again
Betty Conroy (owner)

17-1

I have lived in Fawnskin 34 years & love it - Our North Shore Drive is beautiful to drive to Big Bear Lake we can see the lake in all its splender, Please do not let the "almighty Dollar" ruin a beautiful place.

17-1

Where is the water going to come from ? ? ?

Betty Conroy
39554 Barbara Lee Lane
P.O. 165
Fawnskin, Ca
92333

Response to Commentor No. 17
Betty Conroy
April 11, 2004

17-1 The Commentor has provided general comments regarding water shortage, schools, biological resources (eagles), and aesthetics (i.e., visual character, scenic highway) without specific references to the EIR analysis. Refer to Response to Comment Nos. 1-1 to 1-5 for impacts regarding water resources. The County will consider the Commentor's opinion during their deliberation on the project.

PEG ALLEN
P.O. BOX 23
FAWNSKIN, CA 92333
(909)878-4028

MR. MATTHEW W. SLOWIK
COUNTY OF SAN BERNARDINO
LAND USE SERVICES DEPARTMENT, PLANNING DIVISION
385 N ARROWHEAD AVE. FIRSR FLOOR
SAN BERNARDINO, CA 924105-0182

RE: DRAFT EIR FOR THE MOON CAMP DEVELOPMENT PROJECT/RCK PROPERTIES INC: GENERAL PLAN AMENDMENT/OFFICIAL LAND USE DISTRICT CHANGE FROM BV/RL-40 TO BV/RS-7200 AND AMENDMENT TO COUNTY CIRCULATION ELEMENT FOR REALIGNMENT OF NORTH SHORE DRIVE: TENTATIVE TRACT MAP #16136, AND CONDITIONAL USE PERMIT FOR A BOAT DOCK.

THANK YOU FOR THE OPPORTUNITY TO REVIEW THIS DOCUMENT. I, AS A HOME OWNER IN FAWNSKIN, OPPOSE THIS MOON CAMP PROJECT AS IT IS PRESENTLY PROPOSED BECAUSE THE DEIR FAILS TO ADEQUATELY EVALUATE THE TRUE IMPACT THIS PROPOSED PROJECT WOULD HAVE ON MY COMMUNITY.

MY HUSBAND AND I MOVED HERE TO GET AWAY FROM THE HUGE DEVELOPMENTS. THIS PROPOSED DEVELOPMENT WOULD TURN OUR SMALL FAWNSKIN INTO A NEWPORT BEACH. I HAVE SOME VERY BIG CONCERNS ABOUT THIS PROPOSED PROJECT.

WE ARE NOW AT STAGE 2 FOR WATERING. THERE ARE MILLIONS OF DEAD TREES ALREADY IN THE FOREST. IF THEY CONTINUE TO CUT OUR WATERING TIME, THE TREES ON MY PROPERTY WILL ALSO DIE. THERE ISN'T ADEQUATE WATER FOR THE PEOPLE WHO ALREADY LIVE HERE, HOW CAN THIS PROPOSED PROJECT ALOWING 92 MORE HOMES NOT MAKE OUR WATER SHORTAGE EVEN MORE SEVERE. THE DEIR IS DOWNPLAYING THE DROUGHT SITUATION. AS CURRENT HOME OWNERS WE ARE SUPPOSED TO JEPORDIZE OUR TREES SO A HUGE DEVELOPMENT CAN CONSUME THE WATER THAT SHOULD BE OURS. I DON'T THINK SO. A FEW HOMES BUILT AS SPECIFIED WITHOUT RE-ZONING WOULD BE ACCEPTABLE.
SPEAKING OF WATER, WHAT OF A FOREST FIRE. WATER IS NEEDED. THAT WATER WOULD COME FROM OUR DWINDLING WATER SUPPLY. 18-1

THE PROPOSAL TO STRAIGHTEN THE HIGHWAY FOR SAFETY SAKE IS RIDICULOUS. THE CURVED ROAD KEEPS THE SPEED DOWN. WITH A STRAIGHT HIGHWAY THERE WOULD BE A LOT MORE SPEEDING THROUGH THE AREA. 18-2

THERE ARE A COUPLE OF TREES IN THE MOON CAMP AREA THAT THE EAGLES SIT IN DURING THE WINTER. I LEAVE EARLY FOR WORK AND AT LEAST THREE TIMES A WEEK THE EAGLES ARE IN THESE TREES. THE NEW PROPOSAL DOWNPLAYS THE IMPORTANCE OF KEEPING THIS AREA IN TACT FOR THESE EAGLES. I WAS TOLD THAT AROUND 700 TREES WOULD BE ELIMINATED IN THE MOON CAMP AREA. THESE WOULD BE BOTH ALIVE AND DEAD TREES THAT WOULD BE FELLED. AS IT IS, THERE ARE 9 MILLION TREES IN OUR FOREST THAT ARE DEAD AND NEED TO BE ELIMINATED. FELLING TREES WHICH ARE NOT DEAD JUST TO SATISIFY SOMEONES GREED FOR BUILDING A HUGE DEVELOPMENT IS DISGUSTING. 18-3

WE IN FAWNSKIN WOULD NOT OBJECT TO KEEPING THE ZONING AS IS AND BUILD A FEW HOMES AS CURRENTLY ZONED FOR.
WE OBJECT TO THESE HUGE TRACTS WHICH DESTROYS THE PEACE AND TRANQUILITY OF OUR TOWN AS IT NOW IS. 18-4

WHEN THE ROAD IS CLOSED OVER THE DAM, ALL THE TRAFFIC WILL COME THROUGH FAWNSKIN. THIS WILL CAUSE MAJOR TRAFFIC PROBLEMS WITHOUT THE MOON CAMP DEVELOPMENT. I EXIT ONTO NORTH SHORE FROM CANYON. IF I HAD TO EVACUATE, IT WOULD BE NEXT TO IMPOSSIBLE TO GET OUT ONTO NORTH SHORE OR GET DOWN THE HILL. THE LAST EVACUATION TOOK 4 TO 5 HOURS TO GET TO LUCERNE VALLEY. WITH THIS MOON CAMP DEVELOPMENT, THERE WOULD BE MORE TRAFFIC AND IT WOULD TAKE LONGER TO EVACUATE. 18-5

WE ARE ALREADY HANDLING SHORTAGES IN ELECTRICITY. JUST LIKE THE WATER SITUATION, WE DO NOT RECEIVE ANY HELP FROM DOWN THE HILL. THE DEIR HAS DOWNPLAYED THE SIGNIFICANCE OF ADDED STRAIN ON OUR POWER SOURCE. WE HAVE HAD SEVERAL BROWN OUTS AND COULD EXPECT MANY MORE WITH THE ADDED STRAIN FOR MORE ELECTRICITY ON OUR LIMITED RESOURSES. 18-6

AS FAR AS POLICE PROTECTION, WE HAVE NONE OVER HERE AS IT IS. THERE ARE ONLY 3 OFFICERS FOR THE WHOLE VALLEY. BY THE TIME THE POLICE GOT THE CALL, IF THEY WEREN'T ALREADY ASSISTING IN BBL OR BBC, WHATEVER PROBLEM WAS OCCURING WOULD BE OVER WITH. WE ARE LAST ON THE LIST TO RECEIVE ASSISTANCE BECAUSE WE ARE FAR REMOVED DISTANCE WISE. 18-7

I LIVE ABOUT ½ MILE NORTH OF THE MOON CAMP AREA. RIGHT NOW IT IS VERY QUITE IN MY AREA. THERE ARE ONLY 2 FULL TIME RESIDENCES ON MY STREET. SINCE MOON CAMP IS DOWN THE HILL FROM ME, ALL THE NOISE WILL TRAVEL UP HILL AND MY QUITE WILL BE GONE. THERE WILL BE MORE DOGS BARKING AND PEOPLE NOISE. 18-8

TO SUM UP THE MOON CAMP DEVELOPMENT, IT WILL CAUSE UNDUE STREES ON EVERY ISSUE PRESENTED. UNFORTUNATELY

Peg Allen

Response to Commentor No. 18
Peg Allen
May 2004

18-1 It is the responsibility of the Project Applicant to prove that water resources are available to serve the project. Based upon the data available at the time of preparation of the EIR, the data suggested that there is not proof of water resources to support the proposed project. Thus, the EIR has concluded that impacts to groundwater resources are a significant adverse effect and until additional technical review is conducted to verify conditions, the project would result in an unavoidable impact. Although water conservation and/or drought–related measures to minimize water usage in Big Bear Valley have been implemented, if the Project Applicant provides future studies to indicate proof that water resources are available in the North Shore and/or Grout Creek Hydrologic Subunits and the Project Applicant has legal rights to the water, impacts to water resources could be determined to be less than significant. The project would be subject to all applicable water conservations measures per the direction of the water service provider (to be determined). Refer to Response to Comment Nos. 4-1, and 13-27 to 13-36 for impacts to fire protection services.

18-2 Commentor refers to safety hazards associated with the proposed highway realignment. Please refer to Response to Comment No. 13-65, which addresses this concern.

18-3 Commentor refers to impacts associated with tree removal and to the bald eagle. Please refer to Response to Comment No. 19-86, which addresses tree removal. Also, refer to Response to Comment Nos. 3-7, 13-88, 13-95 and 41-14, which address bald eagle concerns. The County will consider the Commentor's opinion during their deliberation on the project.

18-4 The County will consider the Commentor's opinion during their deliberation on the project.

18-5 Commentor refers to traffic impacts and affects to evacuation plans. Please refer to Response to Comment No. 13-32, which addresses this concern.

18-6 Commentor refers to current electric power shortages and the Project's impact to electric services. Please refer to Response to Comment No. 13-49, which addresses this concern.

18-7 Commentor refers to current police protection services and the Project's impact to police services. Please refer to Response to Comment Nos. 13-38 to 13-40, which address this concern.

18-8 Commentor refers to the proposed residential uses affecting current noise levels. Please refer to Response to Comment Nos. 13-80 to 13-85, which address this concern.

P.O. Box 409
Fawnskin, CA 92333
May 3, 2004

County of San Bernardino
Land Use Services Department, Planning Division
385 N. Arrowhead Ave, First Floor
San Bernardino, CA 92415-0182

ATTENTION: Matthew W. Slowik, Senior Associate Planner
Advance Planning Division

RE: Draft Environmental Impact Statement for the Mooncamp Development, Tentative Tract Map # 16136

Dear Mr. Slowick:

We have reviewed the draft EIR for the Moon Camp development, tentative tract map #16136 and wish to provide public comments on it. Our area of expertise is air quality, atmospheric chemistry and air pollution. Between us, we have almost 90 years of experience in this area, and have written two books on the subject in addition to hundreds of scientific articles in peer-reviewed scientific journals. Attached are comments on the air quality section of the EIR. We believe that it is seriously deficient in a number of respects as detailed there.

As just one example, we attach copies of two photographs taken from Fawnskin overlooking Moon Camp on a typical winter morning; note the substantial reduction in visibility due to wood smoke trapped beneath the inversion layer. There is a state standard for visibility, yet this is not addressed in the EIR. More important are the effects of the particles that are responsible for the visibility reduction, and the associated pollutants, on human health, again not treated in the EIR. 19-1

Even in its present deficient state, the EIR finds that there are both short and long-term air quality impacts of the project that are "....considered significant and cannot be mitigated to a less than significant level" (See Executive Summary of EIR). When the issues we have raised (see attached) are taken into account, it is clear that the impacts will be even more severe. We urge the Planning Commission and the Board of Supervisors **not** to approve this development. 19-2

Yours truly,

Barbara J. Finlayson-Pitts

Barbara J. Finlayson-Pitts, Ph.D.

James N. Pitts, Jr.

James N. Pitts, Jr., Ph.D.

cc: Planning Commission: T. Kwappenberg, E. Laning, M. Cramer, M. Dowling, A. Matthews
Board of Supervisors: D. Hansberger, B. Posthumus, P. Biane, P. Aguiar, C. Young

Trapping of Pollutants Below the Inversion in Big Bear

View from Flicker Dr. around 9 a.m.

- Note top of inversion layer is very low; this concentrates pollutants, leading to larger human exposures

- Loss of visibility is due to particles; other pollutants also trapped but are invisible

View of Particles Trapped Under Inversion Layer

- Note inversion covers entire valley
- Emissions of air pollutants in one location are distributed throughout the valley and beyond

From North Shore Drive West of Fawnskin around 8 a.m. on a typical winter morning

COMMENTS ON AIR QUALITY PART (SECTION 5.6) OF EIR FOR MOON CAMP (Tentative Tract Map #16136)

Barbara J. Finlayson-Pitts and James N. Pitts Jr.

May 3, 2004

The air quality analysis section is inadequate in a number of areas:

1. It does not include either dispersion or photochemical modeling to predict the impact of the project on the concentrations of pollutants that will actually occur in the air in Big Bear Valley, nor the formation of toxic *secondary* pollutants *formed* by chemical reactions in air, e.g. ozone. The EIR simply uses an emissions model to calculate the number of pounds per day of *primary* pollutants that will be emitted *directly* by the project, and compares these to regional threshold values given in South Coast Air Management District (SCAMD) "look-up tables". The EIR does not treat what this means in terms of increases in actual air pollutant concentrations in the air that people breathe. For example, it states that "CO tends to be a localized pollutant, dispersing rapidly at the source" (pg. 5.6-16). This is not correct, particularly if there is an inversion which occurs more often than not in the mornings at the project site. This would be readily apparent if dispersion modeling were carried out. This is not an esoteric argument; in fact, the South Coast Air Management District (SCAMD) states that "project-specific modeling is recommended for projects larger than five acres", which applies to the proposed project (see www.aqmd.gov/hb/031034a.html). Furthermore, the SCAMD states that the "look-up tables" [are to be used] only for projects that are less than or equal to five acres... [and]... are applicable only to projects with emissions sources at a fixed location.... are not applicable to mobile sources traveling over local roadways". 19-3

Furthermore, the EIR completely omits treatment of even the emissions of three important air pollutants: SO_x, lead and toxic air contaminants (TACs). In the latter case for example, the threshold specified by the SCAMD is a maximum incremental cancer risk that is $\geq$ 10 in 1 million. The EIR does not identify the increased carcinogens that will be associated with the project and does not assess their impact against such a standard. 19-4

Similarly, while the EIR acknowledges the importance of secondary pollutants (e.g. ozone) which have major health impacts, it does not quantitatively treat their formation and associated concentrations in air that arise due to the reactions in air of the emissions of organics and oxides of nitrogen from the project. Again this requires project-specific modeling to take into account such factors as increased UV at the high elevations, which will lead to enhanced photochemical activity. 19-5

2. The EIR does not adequately address the impacts of the increased wood smoke emissions from fireplaces and wood stoves. These include both health (discussed in the next point) and visibility. On page 5.6-3 for example, the "haziness" is being described as being due to "moisture, suspended dust and a variety of chemical aerosols emitted by trucks, automobiles, furnaces and other sources". Wood smoke, the major source in Big Bear Valley for much of the year, is not mentioned. The climate is very dry so that 19-6

particle growth into the light-scattering range by water uptake is not a major factor in this area, and there are relatively few sources of airborne dust particles. 19-6

Table 5.6-1 does not include California's standard for visibility reducing particles, the current levels in Big Bear Valley and how the project would impact this. In addition, it does not address these same issues with respect to the California annual standard for PM_{10} (20 $\mu g\ m^{-3}$ annual arithmetic mean). While California does not have a 24 hour $PM_{2.5}$ standard at this time (the EIR incorrectly shows one), it does have an annual arithmetic mean of 12 $\mu g\ m^{-3}$ which is not specifically addressed with respect to the impacts of the project. 19-7

3. The serious impacts of the project on health are not adequately addressed in the EIR. This is of particular concern with respect to fine particles ($PM_{2.5}$) from diesels and from wood combustion. For example, Table 5.6-2 shows a number of effects of PM_{10} but does not address the more important issue of $PM_{2.5}$. Impacts summarized in Table 5.6-3 to 5.6-5 and the associated discussion of impacts do not address $PM_{2.5}$ at all. $PM_{2.5}$ should be included in all of the assessments of short-term and long-term impacts. Not only the numbers in terms of pounds per day of emissions, but the projected increases in the actual concentrations in air and the impacts on health and visibility should be included. 19-8

Furthermore, the EIR omits the most important effect which cannot be mitigated (at least for those impacted) and that is increased mortality. It is the increase in deaths due to particles that form the basis for the most recent particle standards [e.g. see Colburn and Johnson, *Science*, 299 665 (2003)]. In addition to increased mortality from all causes, there are a number of studies that show increased rates of lung cancer mortality [e.g., Pope et al, *J. Am. Med. Assoc.* 287 1132 (2002)]. This is particularly relevant for the proposed project because the increase in particles is projected to come from diesels during the construction phase and wood smoke after the homes are built. The EIR acknowledges the health effects of wood smoke on page 5.6-17: "The U.S. EPA estimates the cancer risk from wood smoke is twelve times greater than that from equal amounts of tobacco smoke". However, this is not translated into a quantitative assessment of the impacts of the proposed project. In addition, while increased emissions of toxic air contaminants associated with wood smoke and diesel exhaust are briefly acknowledged, these are again not treated in the EIR, despite a significant scientific literature on this subject. 19-9

5. Emissions of toxic air contaminants, TACs (California)/hazardous air pollutants, HAPs (federal) from all of the sources associated with the project, both mobile sources and stationary sources, are not treated adequately, despite existing standards for TACs/HAPs. 19-10

6. The EIR acknowledges the issue of "sensitive receptors" such as children at schools, patients in the hospital etc (page 5.6-11). However, the analysis of the impact of the project on such sensitive receptors is inadequate. For example, all eastbound traffic due to the project will unavoidably pass immediately adjacent to North Shore Elementary School at the intersection of North Shore Drive and Stanfield cutoff. The analysis in Table 5.6-6 is not at all clear. What would the increase in the concentration of CO be in air that the students actually breathe? Perhaps more important, what would the increase 19-11

be in PM_{10} and $PM_{2.5}$, particularly diesel particles which contain known carcinogens? What impact would changing the traffic assumptions have on these calculations? For example, the traffic analysis uses values for the lane capacity that represent ideal dry conditions; these are wildly optimistic for snowy or icy road conditions, or in the event of evacuations as occurred last fall during the fires. In addition, given the more rapid growth of the inland empire, the assumption of a constant rate of growth of traffic is dubious at best. 19-11

7. The use of "significant contribution to regional air pollution" (e.g. Table 5.6-3 to 5.6-5) is irrelevant to the impacts of the project on residents and visitors to Big Bear Valley. The project is located at high altitude in a valley that receives some air pollutants from transport from the much larger portion of the air basin at low elevations to the west. However, the local meteorology is such that the valley itself is a mini-air basin with frequent, low-level inversions over the valley itself, independent of what happens "down the hill". The comparison of projected emissions estimates in Table 5.6-7 to those of the entire basin is therefore irrelevant. Furthermore, as discussed above, SCAMD expects project-specific modeling for projects larger than 5 acres, not just total emissions estimates. In addition, the extrapolation to 2020 appears to be based on a linear extrapolation, which is not justified and is dubious at best. However, we note that even the comparisons to the SCAMD thresholds that the EIR did do shows they are exceeded for a number of pollutants both during construction and long term (Tables 5.6-4 and 5.6-5). 19-12

8. The mitigation measures cited include the use of EPA certified fireplaces and the use of a catalytic converter on the chimneys. However, there is no legal mandate to do so and hence assuming that this will happen is highly dubious. 19-13

9. Page 5.6-18 describes future hydrocarbon emissions standards for watercraft. However, it is not clear if these were included in the emissions estimates, or if they were, if it was assumed that all watercraft associated with the project would meet these new standards. This would be equivalent to assuming that the project residents would be continuously purchasing new boats as the standards changed, a highly unlikely scenario. Furthermore, there is no treatment of emissions other than hydrocarbons from watercraft, and the associated impacts on air quality. 19-14

10. The assumptions in the emissions calculations are not justified adequately. For example, a temperature range of 30 to 90^0 F appear to have been used; temperatures in the winter at the project site are frequently well below 30^0 F but rarely reach 90^0 F in the summer. 19-15

11. The description of the impact of temperature inversions on air pollutants (page 5.6-2) is not correct. While a low inversion height does prevent good vertical mixing and hence leads to higher concentrations at ground level, the mountain slopes actually provide a "chimney effect" in which the heated slopes cause the polluted air at the lower elevations to be sucked up along the mountain slopes to higher elevations. This leads to a significant impact of the South Coast air basin emissions on air quality in the mountains, and is why the data shown in Table 5.6-1 of the EIR shows that Crestline exceeds both 19-16

the state and federal air quality standards for ozone many days a year. The project impacts need to be viewed as being in addition to this effect. 19-16

12. Footnote 5 to Table 5.6-1 needs to be clarified. If particle standards are set for 24 hours, is the number of exceedances not based on the number of days in which the measured levels are above the standards, rather than the "number of samples exceeded"? If it were the latter and samples were taken once a week for example, then one could not obtain exceedances more than once a week, even if the levels were above the standard every day! 19-17

13. Footnote 2 to Table 5.6-5 is unclear. What does "25 % utilization of outdoor wood burning stoves" mean? 19-18

14. Page 5.6-3. The new 8 hour federal standard for ozone has been implemented. 19-19

Response to Commentor No. 19
Barbara J. Finlayson-Pitts, Ph.D. and James N. Pitts, Jr., Ph. D.
May 3, 2004

19-1 Visibility can be defined as the distance that atmospheric conditions permit a person to see at any given time. Technically, visibility is defined as the farthest distance an observer can distinguish a large black object against the horizon. Reduced visibility causes aesthetic impairment of surroundings and also interferes with aircraft operations. The State standard for Visibility Reducing Particulates is when the project "Reduces visual range to less than 10 miles at relative humidity less than 70 percent, 8-hour average (9:00 a.m. – 5:00 p.m.)." This criterion was stated within Table 5.6-2, *Air Pollution Sources, Effects and Standards.* The greatest contribution to visibility reduction in the Basin is from light scattering by "fine particle" aerosols with the size range of 0.1 to 2 microns (a micron is one-millionth of a meter). Additionally, refer to Response to Comment No. 19-7.

19-2 This comment does not raise a new environmental issue. Comment is noted and will be considered by the County of San Bernardino during their deliberation on the project.

19-3 The air quality analysis utilized the suggested methodology in the South Coast Air Quality Management District (SCAQMD) *CEQA Air Quality Handbook* (April 1993, as updated November 1993). Currently, the SCAQMD CEQA Air Quality Handbook Revision (Air Quality Analysis Guidance handbook) is still being developed by the SCAQMD. To estimate emissions from criteria pollutants, the analysis utilized the URBEMIS2002, EMFAC2002 and CALINE4 models, as recommended by the SCAQMD.[2] The results of the air quality computer modeling were then compared to the SCAQMD thresholds of significance, as contained within Chapter 6 of the *CEQA Air Quality Handbook*. The SCAQMD "look-up tables" were not utilized, as they are not recommended for Environmental Impact Reports, and are based on an outdated version of the Emissions Factor Model (EMFAC7G). The computer modeling utilized in the Moon Camp analysis was based on the latest iteration of the model (EMFAC2002).

By utilizing the SCAQMD methodology for computer modeling for primary criteria pollutants, secondary pollutants are innately addressed. The URBEMIS2002 computer model predicts concentrations of Sulfur Oxides (SO_x), Nitrogen Oxides (NO_x), Carbon Monoxide (CO), Reactive Organic Gases (ROG) and Particulate Matter (PM_{10}). The URBEMIS2002 model is also designed to predict criteria pollutant concentrations for particular climates and terrain (for example the modeling for Moon Camp utilized the "Mountain Counties and Rural Counties" option). The thresholds of significance, as outlined in Chapter 6 of the *CEQA Air Quality Handbook* are designed to limit the amount of primary pollutants, as well as the formation of secondary pollutants (i.e., the formation of ozone resulting from the presence of sunlight and oxygen (O_2) reacting with nitrogen oxides (NO_X) and volatile organic compounds (VOCs)). Additionally, it should be noted that most Ozone destruction takes place through catalytic processes rather than Chapman Reactions

[2] http://www.aqmd.gov/ceqa/models.html

(Ozone is a highly unstable molecule that readily donates its extra oxygen molecule to free radical species such as nitrogen, hydrogen, bromine, and chlorine). These compounds naturally occur in the stratosphere, released from sources such as soil, water vapor, and the oceans. Meanwhile, the destruction of ozone by the free radicals goes on continuously. That is why O_3 concentrations will be higher during the day and lower at night.

It should also be noted that localized dispersion modeling was conducted for Carbon Monoxide with the SCAQMD approved CALINE4 model. CALINE4 is the standard modeling program used by the California Department of Transportation (Caltrans) to assess Carbon Monoxide impacts near transportation facilities. It is based on the Gaussian diffusion equation and employs a mixing zone concept to characterize pollutant dispersion over the roadway. The other SCAQMD approved dispersion model, Industrial Source Complex Dispersion Model (ISCST3), provides options to model emissions from sources that might be present at a typical industrial source complexes. The basis of the model is the straight-line, steady-state Gaussian plume equation, which is used with some modifications to model simple point source emissions from stacks, emissions from stacks that experience the effects of aerodynamic downwash due to nearby buildings, isolated vents, multiple vents, storage piles, conveyor belts and the like. This type of use is not anticipated at the Moon Camp project site, thus it was not utilized in the analysis. Photochemical modeling, such as the Variable Grid Urban Airshed Model program, was not utilized in the analysis as the SCAQMD does not require this type of modeling for residential and recreational land uses.

19-4 Sulfur Oxide (SO_x) emissions were quantified in the URBEMIS2002 modeling. The results were not included in the text as the South Coast Air Basin has been in attainment for SO_x for many years. Additionally, SO_x levels have not exceeded the National or State Ambient Air Quality Standards (AAQS) at any of the SCAQMD monitoring stations in the past five years. SO_x levels arising for project related emissions would only be 0.11 pounds/day in the summer and 1.88 pounds/day in the winter, well below the SCAQMD threshold of 150 pounds/day.

Lead is not expected to be a pollutant of concern at the project site. The project does not propose any land uses that would typically utilize large amounts of lead (i.e., manufacturing or industrial facilities). The primary source of lead in the project area would be from vehicles. However, most vehicles in current operation utilize oxygenated unleaded gasoline, which has lead to the steady decrease of lead in the in the South Coast Air Basin. Thus the project is not expected to exceed the state threshold of 1.5 $\mu g/m^3$ per 30-day average.

As noted above, the project does not propose any uses that would release acute amounts of Toxic Air Contaminants (i.e. manufacturing or industrial facilities). California regulates toxic air contaminants through its air toxics program, mandated in Chapter 3.5 (Toxic Air Contaminants) of the Health and Safety Code (H&SC Section 39660 et. seq.) and Part 6 (Air Toxics "Hot Spots" Information and Assessment). However, as the project proposes 92 residential units and a marina slip configuration for recreational boater activity, Toxic Air Contaminants are not expected to be a significant source of pollution from project operations. Health Risk Assessments (HRA) for Diesel Particulate Matter (DPM) are typically conducted for

areas that would expose sensitive receptors to high concentrations of DPM over a long period of time. Per a telephone conversation with Steve Smith, the Program Supervisor of the CEQA Section at the SCAQMD (June 30, 2004), estimating cancer risk for DPM is not required for construction activities because construction activities would only occur for a short period of time and therefore would not measurably increase cancer risk. Estimating individual cancer risk from DPM would only be necessary if activities that result in the release of DPM would last for seven or more years. The proposed project would not require a Health Risk Assessment for DPM because it would not expose sensitive receptors to excessive DPM for a long period of time.

19-5 Commentor refers to secondary pollutants and affects to air quality. Please refer to Response to Comment No. 19-3, which addresses this concern.

19-6 Impact Statement 5.6-2, *Long-Term Operational Impacts*, discusses and quantifies emissions that are anticipated to result from the residential wood burning fireplaces at the project site. The URBEMIS2002 model conservatively estimated eight hours of wood burning use during the winter months for all 92 residential units using a fireplace and 23 units using an outdoor wood-burning stove. The assumptions are conservative and are considered worst case.

19-7 Table 5.6-2, *Air Pollution Sources, Effects and Standards*, identifies the state standard for visibility reducing particulates. The standard was not included in Table 5.6-1, *Local Air Quality Levels*, as neither the SCAQMD nor the California Air Resources Board (CARB) currently monitors visibility.[3] Page 5.6-7 specifically identifies the annual average standard of $PM_{2.5}$ as 12 $\mu g/m^3$. Additionally, refer to Response to Comment Nos. 15-2 and 19-8.

19-8 Currently, the SCAQMD does not have guidance on modeling techniques or thresholds of significance for fine particulate matter ($PM_{2.5}$).[4] The SCAQMD is in the process of developing a proposal that would outline specific thresholds of significance and recommended modeling techniques for fine particulate matter. Currently, the SCAQMD recommends modeling coarse particulate matter (PM_{10}), and assessing it against the thresholds of 150 pounds/day for the construction period and operations period. Additionally, per the SCAQMD, the current methodology is to assess $PM_{2.5}$ qualitatively until further guidance is issued.

19-9 The Commentor's general comments are noted and will be considered by the County of San Bernardino. The statements used in the Draft EIR for gauging the significance of air quality are based on widely accepted methodology, County Standards and the South Coast Air Quality Management District Rules and Regulations. These standards are considered appropriate, and even conservative. Additionally, please refer to Response to Comment Nos. 19-4, 19-6 and 19-13.

19-10 Commentor refers to air quality impacts associated with toxic air contaminates. Please refer to Response to Comment No. 19-4, which addresses this concern.

[3] http://www.arb.ca.gov/qaweb/sitelist_create.php

[4] Conversation with Steve Smith, SCAQMD on July 14, 2004.

19-11 The air quality analysis utilized the SCAQMD guidelines for assessing localized Carbon Monoxide hotspots, as well as the guidance contained in the *Transportation Project-Level Carbon Monoxide Protocol* from the University of California Davis Institute of Transportation Studies. Per these guidelines, the effects from project related carbon monoxide were found to be less than significant. For coarse particulate matter (PM_{10}), the analysis utilized the SCAQMD recommended modeling techniques and threshold of 150 pounds/day. Additionally, refer to Response to Comment No. 19-8.

19-12 The thresholds of significance reflected in Table 5.6-3, *SCAQMD Thresholds of Significant Contribution to Regional Air Pollution*, are recommended by the SCAQMD for analyzing a project's air quality impact in the South Coast Air Basin. The SCAQMD does not issue guidance for "microbasins" or issue project specific thresholds. The operational and cumulative impacts were assessed per the current SCAQMD *CEQA Guidelines* (November 1993) and the *Final Air Quality Management Plan* (August 2003). Additionally, refer to Response to Comment No. 19-3.

19-13 The EPA certified fireplaces were recommended as mitigation measures and are thus incorporated into the Mitigation Monitoring and Reporting Program. The developer is required to adhere to the MMRP and compliance is ensured through the County plan check and design review process. Additionally, refer to Response to Comment No. 13-4.

19-14 The operational air quality analysis qualitatively addresses the emissions from boating activity. As the emissions from operational sources are significant and unavoidable, the quantification of emissions from boats is not necessarily required and does not alter the conclusion. Boat engines are divided into classes of outboards or inboards. Outboard engines are mounted external to the boat structure. They typically hang on the rear wall of the boat. To minimize their weight, outboard engines have traditionally been two-stroke engines, thus personal watercraft (PWC), which are most commonly two-stroke jet-drives, are grouped together with them.

In 1998, the CARB approved emission reductions from outboard engines and personal watercraft by adopting exhaust emission standards for new engines. Starting in 2001, all new outboards sold in California were required to meet the EPA 2006 emission levels (approximately 75 percent reduction from uncontrolled levels).

The new California regulation requires that new outboard and PWC engines meet the EPA 2006 standards for hydrocarbon (HC) plus oxides of nitrogen (NOx) in 2001. This level represents about a 70 percent reduction in HC emissions from the pre-1998 levels. In addition, the California regulation adds a very-low-emission tier for 2004 of about 77 percent reduction from pre-1998 levels, and an ultra-low-emission level for 2008 and later of about 90 percent reduction.

In an effort to quantify the emission from personal watercraft associated with the project, the SCAQMD provided emissions factors for two stroke engines. Utilizing the SCAQMD emission factors, as well as assuming a usage factor of 9 percent per the Big Bear Municipal Water District Management Plan (2000), the emissions were calculated on a daily basis. As the project includes a 100-slip small craft harbor, the

9 percent usage rate translates into 9 boats operating simultaneously. To calculate the emissions from these boats, the following assumptions are utilized:

Emissions Factor for 2-Stroke Engines (g/kW-hr)[5]

Engine Size (hp)	HC	NO_x	CO	PM_{10}
150-300	366	2.2	672	0.0053

Total Daily Emissions (lbs/day)

Engine Load factor = 40 percent
Percent Usage = 9
Hours/Day Operation = 4

Length(ft)	HP/Slip	Boats	HC	NO_x	CO	PM_{10}
<20	150	6	0.01	1.94	0.07	0.80
<30	300	3	0.01	1.94	0.06	0.80
Total (lbs/day)		**9**	**0.02**	**3.88**	**0.13**	**1.6**

As evidenced above, although the emissions would not exceed the thresholds developed by the SCAQMD, the operational emissions would still remain significant and unavoidable. Although the above calculations are representative of average weekend usage, the significance conclusion would remain the same during peak summer and holiday usage periods.

19-15 Temperature data is used in the URBEMIS2002 to estimate winter and summer pollutant concentrations. The value that is put into the model is the ambient temperature. Although, it is acknowledged that temperatures at the project site are frequently below 30°F, the model utilizes the ambient temperature instead of the lowest recorded temperature. Additionally, 90°F was utilized for the same purpose, as well as to present a conservative scenario.

19-16 Comment is noted. Commentor refers temperature inversions and affects to air quality. Please refer to Response to Comment No. 19-3, which addresses this concern.

19-17 Measurements are usually collected every six days. Measured days counts the days that a measurement was greater than the level of the standard, while estimated days mathematically estimates how many days concentrations would have been greater than the level of the standard had each day been monitored. State statistics are based on California approved samplers, whereas national statistics are based on samplers using federal reference or equivalent methods. State and national statistics may therefore be based on different samplers. State criteria for ensuring that data are sufficiently complete for calculating valid annual averages are more stringent than the national criteria.

19-18 Footnote 2, in Table 5.6-5, *Long Term Project Emissions,* means that that computer model default was changed to predict the pollutants arising from 25 percent of the

[5] Per Gordon Mize, South Coast Air Quality Management District Transportation Specialist, July 20, 2004.

homes (23 homes) using an outdoor wood stove and 100 percent of the homes (93 homes) would use an indoor wood burning fireplace. This scenario is highly conservative and was designed to be a worst-case scenario. Additionally, refer to Response to Comment No. 19-6.

19-19 Comment noted, on April 15, 2004 the Environmental Protection Agency formally replaced the 1979 1-hour ozone standard with a more stringent 8-hour standard as part of the Clean Air Rules of 2004.

May 5, 2004

945 Deertrail Ln. Fawnskin

MATTHEW W. SLOWIK
County of San Bernardino,
Land Use Services Department,
Planning Division,
385 N. Arrowhead Ave.,
San Bernardino, CA 92415-0182

Dear MATTHEW,

RE: ". DRAFT EIR FOR MOON CAMP DEVELOPMENT PROJECT/RCK PROPERTIES INC.: GENERAL PLAN AMENDMENT/OFFICIAL LAND USE DISTRICT CHANGE FROM BV/RL-40 TO BV/RS-7200 AND AMENDMENT TO COUNTY CIRCULATION ELEMENT FOR REALIGHMENT OF NORTH SHORE DRIVE; TENTATIVE TRACT MAP # 16136, AND CONDITIONAL USE PERMIT FOR A BOAT DOCK."

Thank you for the opportunity to review this document. As usual in a document such as this one the developer has played down most of the key issues by concluding, **"THAT THE IMPACTS ARE LESS THAN SIGNIFICANT."** For example

1. ZONING CHANGE SEC. 5.1-2 Statements 1 though 4 the proposed project is **NOT** a community benefit and **DOES** have an adverse effect on the surrounding property. So those statements are not true and a change from rural to residential is not a logical extension. **20-1**

2. CUMULATIVE IMPACT SEC. 5.13 this proposed project combined with the proposed Marina Point development, the Brookside project, plus expansion of the Discovery Center will have **extremely significant combined impact.** **20-2**

3. FIRE PROTECTION SEC. 5.3-1 New evaluations needed since **FIRE RISK** level upgraded from **FIRE RISK LEVEL 2 TO LEVEL 1** everything is invalid. **20-3**

4. WATER SEC.5.3-9 Current drought condition with no end in sight, and increase in rates and water restriction already in place. DWP declared a **WATER SHORTAGE EMERGENCY RESOLUTION ON April 27th, 2004.** Conservation Stage II now in effect with strong possibility that Stage III and IV could be in effect by the end of the summer. The water supply **MUST** be proven prior to changing the zoning. The ground water basin **is already in overdraft conditions.** **20-4**

These are only a few of the so-called conditions **"That the impacts are less than significant".** Others of importance and will have significant impact on the community are, Wastewater, Solid Waste, Electricity, Traffic, Noise, Tree Removal, Eagle Habitat, Sewer Capacity, Noise, Police Protection, and many others that are listed in the DEIR

All these environmental hazards associated with a development of this magnitude should be reviewed very carefully. **Hasty decisions on a complex issue such as the one before you should not be made.**

Yours Sincerely,

Herbert V. Clotts

Herbert V Clotts

Response to Commentor No. 20
Herbert V. Clotts
May 5, 2004

20-1 Commentor refers to the Project's consistency with the General Plan. Please refer to Response to Comment Nos. 13-9 to 13-16, which address this concern.

20-2 Commentor refers to cumulative impacts associated with other foreseeable projects. Please refer to Response to Comment No. 13-2, which addresses this concern.

20-3 Commentor refers to the accuracy of the current Fire Risk Level designation in the project vicinity. Please refer to Response to Comment No. 13-27, which addresses this concern.

20-4 Commentor refers to water supply and affects to groundwater. Please refer to Response to Comment Nos. 1-4, 1-5 and 18-1, which address this concern.

DRAFT

ROBERT R. HENRICH
P.O. BOX 282
FAWNSKIN, CA 92333
Phone 909-866-3300
Fax 909-866-4222
E-mail rileyh@hotmail.com

Wednesday, May 5, 2004

Matthew W. Slowik
Land Use Services Department
Planning Division
385 N. Arrowhead Ave., First Floor
San Bernardino, CA 92415-0182

RE: **DRAFT EIR FOR THE MOON CAMP DEVELOPMENT PROJECT/RCK PROPERTIES INC.,GENERAL PLAN AMENNDMENT/OFFICIAL LAND USE DISTRICT CHANGE FROM BV/rl-40 TO BVRS-7200 AND AMENDMENT TO COUNTY CIRCULATION ELEMENT FOR REALIGNMENT OF NORTH SHORE DRIVE;TENTATIVE TRACT MAP #1636, AND CONDITIONAL USE PERMIT FOR A BOAT DOCK.**

Dear Mr. Slowik:

Thank you for the opportunity to review the document and provide comments. I oppose this Moon Camp project as presently designed, because the DEIR fails to adequately evaluate the true impact on the Fawnskin area. The following are examples of my concerns:

Section 5.4 – Aesthetics - "Scenic Highway"
State Route 38 that runs though the proposed project is designated as a County Scenic highway and an "Eligible State Scenic Highway. The North Shore Improvement Association is providing input to the new county general plan. As part of this activity I have agreed to work on a proposal to obtain state designation for the county scenic highway.

At a county general plan meeting in Big Bear City on February 17, 2004. I asked that the county support state designation for the scenic highway. Terri Rahhal, the San Bernardino County Planning Representative, stated that the Route 38 was a county scenic highway, and she agreed to work with me on state designation. In a phone conversation after the meeting I told Terri that my contact on Scenic Highways at the State was Dennis Cad at Caltrans. Terri called Mr. Cad and reviewed what was needed to move forward. She called me back and stated that a letter of commitment from the county was the next step. In late March Terri informed me that she submitted the request to her supervisor. In May Terri stated that cannot send a letter of support until the general plan is completed.

21-1

Section 5.4 –Aesthetics – Cont.

I believe that this decision came from the San Bernardino Board of Supervisors not the planning department. I also believe that this project will change the scenic views to the point that highway 38 will not meet the standards for either a county or state designation as a scenic highway. This project will add houses on the water, eliminate many of the curves in the road, and block the views of the lake and the forset. This could be the reason that the county has not responded to the request for state designation for the county scenic highway. 21-1

Because of the above, this project as presented in the draft EIR will have a very detrimental impact on the aesthetics (Section 5.4) of the area.

Police Protection – Section 5.3-2

As President of North Shore Improvement Association, I have received a number of complaints regarding the response time from the Sheriff's Department. In every case the response time was two to three hours. This draft EIR does not take into account the negative impact of the Marina Point Development. This project will make a bad situation much worse. 21-2

Because of the above this draft EIR will provide a significant negative impact on police protection.

Water – Section 5.3-6

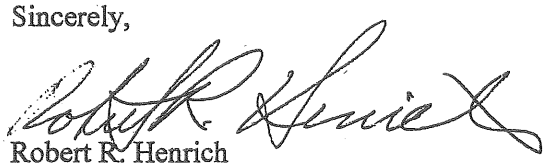
First SB221 does apply as 92 additional connections is a 14% increase. The next problem is the fact that the impact of the Marina Point Development on the ground water is not discussed in the draft EIR. 21-3

Two more issues are changes that have occurred in the last few months. New private wells have been drilled in the area including one within 20 feet of the West end of the Moon Camp property. Second, The Department of Water and Power under Water Code Section 351 has expanded the drought conservation regulation to stage II effective May 1, 2004. This includes a 30% reduction in outdoor water use and drop in water connections valley wide to from 200 to 180. The DWP notice also includes the following, "If the targeted 10%(indoor) reduction is not achieved by mid-summer, adoption of more restrictive water-use regulations may be considered. If the drought continues, will the hook ups be lowered to 50 valley wide? Will the Marina Point Development use up all the available hookups? 21-4

Because of the extreme drought situation, the approval of 92 water hook ups when they may not be available is not just a major negative impact it is unconscionable. 21-5

Thank you for the chance to respond to the Draft EIR.

Sincerely,



Robert R. Henrich

cc: Supervisor Dennis Hansberger
Congressman Jerry Lewis
Senator Jim Brulte
Assemblyman Russ Bogh
Senator Nell Soto

Response to Commentor No. 21
Robert R. Henrich
May 5, 2004

21-1 The County will consider the Commentor's opinion and comments during their deliberation on the project.

21-2 Commentor refers to current police protection services and the Project's impact to police services. Please refer to Response to Comment Nos. 13-38 to 13-40, which address this concern.

21-3 Refer to Response to Comment No. 13-42 for a discussion of the applicability of SB221. The discussion of groundwater resources in Section 5.11, *Hydrology and Drainage*, concludes that impacts to groundwater resources are a significant adverse effect and until additional technical review is conducted to verify conditions, the project would result in an unavoidable impact. This conclusion was based upon the 2003 GSS report that analyzed both the North Shore and Grout Creek Hydrological Subunits. It will be the responsibility of the Project Applicant to prove that water resources are available to serve the Moon Camp project. Similarly, it is the responsibility of the Project Applicant of the Marina Point Development to prove that water resources are available to serve that project. The Cumulative Impact analysis in Section 5.3, *Public Services and Utilities*, concludes that cumulative impacts are significant and unavoidable regarding water service since no water service provider has been identified.

21-4 Commentor refers to water supply and cumulative affects to groundwater. Please refer to Response to Comment Nos. 13-48, 18-1 and 21-3, which address this concern.

21-5 The County will consider the Commentor's opinion and comments during their deliberation on the project.

P O Box 368
Fawnskin CA 92333
May 7, 2004

County of San Bernardino
Land Use Services Department, Planning Division
385 N. Arrowhead Ave, First Floor
San Bernardino CA 92415-0182
Attn: MATTHEW W. SLOWIK

RE: Draft EIR for the Moon Camp Development Project/RCK Properties Inc.:
General Plan Amendment/Official Land Use District Change from BV/RL-40 to BV/RS-7200,
and Amendment to County Circulation Element for Realignment of North Shore Drive:
Tentative Tract Map #16136, and Conditional Use Permit for a Boat Dock

Dear Mr. Slowik:

Thank you for the opportunity to review the DEIR for the above proposed projects. We oppose this Moon Camp project as presently designed because the DEIR fails to adequately evaluate the true impact this proposed project would cause in the critical issues of zoning change, water supply, and fire protection. 22-1

First, zone change (Section 5.1.2). The proposed project could not be a community benefit with 92 houses obstructing spectacular views of the forest and lake from existing houses as well as from the highway (Currently the **only** highway views of the lake and mountains in the entire valley are at the site of the proposed project) (Moving the highway would not only destroy views but would lead to increased traffic and speeding.) The proposed project would entail removal of more than 25% of the trees (including some eagle perches.) More than half of the proposed houses would abut the National Forest and Big Bear Lake, and we do not believe the change from rural to residential could be considered an extension of the purpose of the National Forest or of the Lake. 22-2

Secondly, the issue of water shortage (Section 5.3.6d). Section 5.3.6a of the DEIR states that the water supply must be proven prior to building permits, and that clearly has not been done for the proposed project as a whole, much less for individual lots. Further, the DEIR states that the water issue cannot be mitigated to below significance. The DEIR evaluates water production of the two wells on the property of the proposed project **when they were dug in 1987** and not on the extensive drought conditions that exist today. Mitigation on 5.3.6d presupposes current water restrictions, even though they are not presently enforced on the existing houses in the valley, much less in a proposed new development. 22-3

Lastly, fire protection (Section 5.3.1e-f). All of the evaluations of this Section were based on Fire Risk level 2, but the entire mountain area has been upgraded to Fire Risk level 1, rendering all the findings of the DEIR invalid! The Steering Committee evaluating status of fire protection in Big Bear Valley has determined that Fawnskin fails to meet any of the National Fire 22-4

Protection Association standards now, and additional houses will only compound the problem. (See enclosed.) Section 5.3.1 says fire sprinklers would be added in lieu of additional manpower. Fire sprinklers often burst in winter and thus malfunction, leading to additional waste of water. In Section 5.3.1..e-f, fire resistant vegetation would be planted by homeowners. Who would monitor this to make sure they are enforcing the rules? How about evacuations from the valley? Unmentioned in the DEIR is the impact of more evacuees. (The roads were highly congested when we evacuated in October 2003.) 22-4

Thank you for your consideration of our opposition to this proposed Mooncamp project.

Very truly yours,

Donald L. Eads, MD

A. Claudia Eads, MD

Organizational Structure/Service Levels Task Group

Mission Elements and Service Levels

KEY:	High	Medium	Low	None

	Fire Prevention	Emergency Response	Training	Administration	Disaster Preparedness
	Fire Prev. Insps.	Fire Suppression	In-House Programs	Records Mgmt.	Operations Ctr
BBL	Medium	Medium	Medium	Medium	Low
BBC	Low	Medium	Medium	Medium	Low
County	Medium	None	Medium	High	~~High~~ Low
Merged Dept					
	Public Education	Emergency Medical	Specialized Outside	Payroll	Neighborhood Prepared.
BBL	Medium	High	Medium	High	Medium
BBC	Medium	High	High	High	Medium
County	Medium	High	High	High	~~High~~ Med
Merged Dept					
	Development Review	Hazardous Materials	Command/Leadership	Purchasing	Business Prepared.
BBL	High	Low	Medium	High	None
BBC	High	Low	High	High	None
County	High	High	High	Medium	~~High~~ None
Merged Dept					
	Plan Checking	PCF Firefighters	Tactics & Strategy	Equip. Maintenance	Disaster Eqpt/Supplies
BBL	High	Low	Medium	High	Low
BBC	High	Medium	Medium	High	Low
County	High	LT-High/PCF-Medium	High	High	~~Medium~~ Low
Merged Dept					

FIRE DEPARTMENT SERVICE-LEVEL ANALYSIS

Determining the correct level of fire department services is a very difficult task according to the National Fire Protection Association (NFPA) Fire Protection Handbook. The seventeenth edition of the NFPA Handbook, pages 10-43, "Fire Department Services levels" states, "Public, fire, and other government administrators, organized labor, and the fire service in general have for many years sought to find a generally accepted method for the evaluation of services provided to a community by its fire protection agency. The approaches have been as varied as the fire service agencies being evaluated and the parties doing the evaluation. This has resulted in the application of inconsistent methodology and criteria.

For many years, material developed by NFPA has been used in the analysis of services provided by fire protection organizations. However, the application of NFPA material has been inconsistent, and NFPA material existing in 1991 is not entirely adequate for the evaluation of the comprehensive services provided by comprehensive fire/rescue agencies."

In 1991, an NFPA committee determined that the best program for the analysis of services would:

- Consider the total scope of services provided by the fire service agency.
- Set forth uniform definitions.
- Be primarily performance-based and user-friendly.
- Be founded on consensus and other standards to the greatest possible extent.
- Include user input.
- Be designed for specific community application.
- Be capable of self-application
- Include a validation process.

Based on these recommendations, we are going to develop a uniform set of definitions that are based on recognized city, county, state, and national standards. Each definition will be followed by a level of service ranging from None to High. We will bring back to you a chart showing the current level of service provided by each department based on the service level definitions in this document.

EMERGENCY RESPONSE

The goals and Objectives of fire control response is to provide a fire control system capable of controlling unfriendly fires before they reach the flashover stage within a structure or of a size that cannot be controlled with mutual aid resources outside of a structure.

The Goals and Objectives of medical aid is to provide a medical aid system capable of providing advanced life support and emergency transportation to all areas of the community at the paramedic level.

The Goals and Objective of Hazardous Material Response is to provide First Responder Personnel on the scene of an hazardous materials spill to secure the scene or to mitigate the emergency depending on the material(s) involved.

2.1 FIRE SUPPRESSION:

NFPA recommends the following response levels to structure fires; High hazard occupancies - 6 apparatus and 26 firefighters, Medium hazard occupancies - 4 apparatus and 17 firefighters, Low hazard occupancies 3 apparatus and 13 firefighters, Rural operations - 2 apparatus and 13 firefighters.

High level of service meets all of the NFPA requirements for High hazard occupancies.

Medium level of service meets the NFPA requirements for Medium hazard occupancies.

Low level of service meets the NFPA requirements for Low hazard occupancies.

None fails to meet any of the NFPA standards.

Response to Commentor No. 22
Donald L. Eads, M.D.
May 7, 2004

22-1 The County will consider the Commentor's opinion and comments during their deliberation on the project.

22-2 Commentor refers to the Project's consistency with the County General Plan. Please refer to Response to Comment Nos. 13-9, 13-10, 13-12 and 13-16, which addresses this concern. Also, refer to Response to Comment Nos. 3-7, 13-88, 13-95 and 41-14, which address bald eagle concerns. The County will consider the Commentor's opinion during their deliberation on the project.

22-3 Commentor refers to current water restrictions and affects to water supply. Please refer to Response to Comment Nos. 1-3, 1-4, 1-5, 4-2 and 13-47, which addresses these concerns.

22-4 Commentor refers to fire hazards and affects to fire protection services. Please refer to Response to Comment Nos. 4-1, 4-4, and 13-27 to 13-36, which address these concerns.

County of San Bernardino, Land Use Dept./Planning Division
385 N. Arrowhead Ave., First Floor
San Bernardino, CA 92415-0182

Attn. Matthew W. Slowik

DRAFT EIR FOR MOON CAMP DEVELOPMENT PROJECT/RCK PROPERTIES INC.: GENERAL PLAN AMENDMENT/OFFICIAL LAND USE DISTRICT CHANGE FROM BV/RL-40 TO BV/RS-7200 AND AMENDMENT TO COUNTY CIRCULATION ELEMENT FOR REALIGNMENT OF NORTH SHORE DRIVE: TENATIVE TRACT MAP #16136, AND CONDITIONAL USE PERMIT FOR A BOAT DOCK.

I have had the opportunity to review the draft EIR and I oppose the Moon Camp project as presently designed because the DEIR fails to adequately evaluate the true impact to our community of Fawnskin. The critical issues I address are:

Aesthetics and Land Use

The EIR does not consider the cumulative impact of traffic which will exist onto Highway 38 within a 1/2 mile from the 92 Moon Camp residential sites, the l34 sites at adjacent Marina Point and the existing traffic off Canyon. Not included in the EIR is the additional traffic of cars and trailers for the100 dock marina at Moon Camp and the adjacent docks at Marina Point. 23-1

Cal Trans was not among the agencies consulted in this EIR yet the development as designed requires a rerouting of Highway 38. The road as proposed will not eliminate the traffic flow problem but allow the development of additional lake front parcels. Rerouting of Highway 38 will create a visual impact on this lakefront stretch of county scenic highway. 23-2

Before and after pictures from north, south, east and west are inadequate to neither show the development at build- out. Pictures do not depict the type of structures currently being built in the mountains nor show the loss of mature trees on the site. The visual impact cannot be mitigated. 23-3

The EIR fails to consider the cumulative visual impact of a100 dock boat marina adjoining Marina Points' marine. Parking spaces for the cars at the marinas does not take into consideration maximum weekend and holiday usage. Number of parking spaces needed should reflect county code for other marinas along the north shore. 23-4

EIR does not address off site storage locations for the 100 boats and trailers during approximately 7 months of the year. 23-5

EIR does not address the low lake level for the past several years and what the added boat capacity would do for safety and navigation 23-6

EIR does not adequately address public access to neither the lakeshore nor the loss of shoreline since 1999. Picnicking, fishing and hiking have been reduced due to residential structures and loss of public access. 23-7

Public Services:

EIR is premature and does not adequately address the cumulative impact of the water supply or lack there of for 95 additional residents with the 134 at Marina Point. On site wells have not proven to provide the water needed for build-out 23-8

EIR does not address the current water conservation measure in effect and how the project will add to the water problem as it now exists in the Big Bear Valley. 23-9

One-time developer fees assessed at construction would not mitigate the impact of new students at North Shore School. Consider 100 residences at Moon Camp and 134 at adjacent Marina Point. EIR 5.3-2 says the BVUSD schools are at maximum capacity and so do not have adequate school housing and replacement facilities are needed. With .02 students per household and the adjacent sites of Moon Camp and Marina Point with a combined capacity of 229 residences there would be approximately 45 new students generated. This impact to the already overcrowded conditions in our school is not mitigated. 23-10

The EIR doe not admit to consulting the following agencies for input. Was an EIR document circulated to them?

United States Forest Service (the development is adjacent to the USFS on the north and.east and needs to address eagle and biological concern.)

Department of Fish and Game (input necessary for shoreline Fish habitat.) 23-11

Cal Dept of Forestry and Fire Protection (harvesting and tree removal in Eagle habit.)

Army Corp of Engineers (input necessary for dredging to Deepen a site for boat docks.

Cal Trans (necessary to give input to the rerouting of our

Scenic highway. 23-11

The proposed land use District change will have a substantial adverse effect on the surrounding property and the community of Fawnskin. I propose that the zoning remain as is and consider those who purchased in the area based on the current zoning. 23-12

Thank you for the opportunity to comment on this Moon Camp DEIR.

Sincerely,

Mary Lee Drake

Mary Lu Drake
39722 Flicker Road/ PO Box 164
Fawnskin, CA. 92333

Response to Commentor No. 23
Mary Lu Drake
May 10, 2004

23-1 Commentor refers to cumulative traffic impacts associated with the Marina Point Development. Please refer to Response to Comment No. 13-2, which addresses this concern.

23-2 Section 5.4, *Aesthetics/Light and Glare*, analyses long-term scenic highway (State Route 38) impacts associated with the proposed project. As stated under Impact Statement 5.4-3, the analysis has concluded that significant and unavoidable impacts would occur in this regard as a result of project development. Also, refer to Response to Comment No. 13-5.

23-3 Commentor refers to the visual simulations not being reflective of build-out of the project area. Please refer to Response to Comment Nos. 13-54 and 13-55, which address this concern.

23-4 Cumulative visual impacts associated with the Marina Point development and the proposed marina facility are addressed in Response to Comment No. 13-56. Additionally, the project design must meet all County of San Bernardino parking code requirements or there must be a Parking variance granted by the County.

23-5 Commentor refers to off-site storage locations of boats and trailers and affects to the existing aesthetic character. Please refer to Response to Comment No. 13-57, which addresses this concern.

23-6 The Commentor refers to the low lake levels for the past several years and potential safety and navigation impacts associated with the added boat capacity. As stated in Section 5.2, *Recreation*, according to the Big Bear Municipal Water District Management Plan, the carrying capacity of the lake is 1,000 boats. Based upon boat use factors, project implementation would not exceed the boat carrying capacity of the lake. Thus, navigation of the lake would not be compromised by implementation of the proposed project. Boating safety would be ensured through individual boat users complying with boating regulations and procedures established by the Big Bear Municipal Water District. Also, refer to Response to Comment No. 13-35.

23-7 Commentor refers to decreased public access to the lakeshore. Please refer to Response to Comment No. 13-26, which addresses this concern. The County will consider the Commentor's opinion and comments during their deliberation on the project.

23-8 Commentor refers to water supply and cumulative affects to groundwater. Please refer to Response to Comment Nos. 1-3, 1-4, 1-5 and 21-3, which address this concern.

23-9 Commentor refers to existing water conservation measures and affects to water supply. Please refer to Response to Comment No. 18-1, which addresses this concern.

23-10 As stated under Impact Statement 5.3-3, based on correspondence with the Bear Valley Unified School District (BVUSD), the District anticipates that the Project may result in the need for additional facilities and may require modifications to schools of attendance. Although schools serving the Project are over capacity and replacement facilities are needed, the District has stated that it could serve the projected number of students that would be generated from the proposed Project following payment of school impact fees and compliance with all applicable requirements, codes, and ordinances. Currently, the District collects Developer's Fees for new construction. The current residential rate is $0.82 per square foot. The Developer's fees are determined by a Developer Justification Study commissioned by the District every two years. BVUSD is currently in year four of a modest enrollment decline. Currently, the District seeks modest enrollment growth and the proposed Project would contribute to modest enrollment growth. Thus, payment of Developer Fees in accordance with the latest Developer Justification Study would reduce impacts to less than significant levels. Additionally, it is noted that CEQA does not require any additional action above and beyond payment of this fee.

23-11 Commentor refers to lack of agency consultation with various governmental agencies. Please refer to Response to Comment No. 13-5, which addresses this concern.

23-12 The County will consider the Commentor's opinion and comments during their deliberation on the project.

May 10th, 2004

County of San Bernardino
Land Use Services Department
Planning Division
385 N. Arrowhead Ave. First Flr.
San Bernardino, CA 92415-0182
Attn: Matthew W. Slowik

RE: Draft EIR for the Moon Camp Development Project/RCK Properties Inc: General Plan Amendment/Official Land use district change from BV/RL-40 to BV/RS-7200 and amendment to county circulation element for realignment of North Shore Dr; Tentative tract map #16136, and conditional use permit for a boat dock.

Thank you for the opportunity to review this document.

As a layperson, reading and trying to wind your way through complicated and wordy material can be daunting. Trying to figure out what certain terms actually mean can be frustrating. But I feel my points are valid and well thought through.

After reading the information on the proposed projects I must state my opposition to the venture. The DEIR fails to adequately evaluate the true impact this project will cause the community in general and there will be very specific detrimental effects as well. 24-1

As a resident of Fawnskin for the last three years, I can state that I am *not* opposed to growth in this area, but the growth must be in line with the current values and environment that is already established. Timing is also crucial. The proposed project does not conform and is poorly timed.

Fire is the main problem facing all of the mountain properties and will be for the next decade. In section 5.3-1 all the evaluations were based on Fire Risk level 2, unfortunately for us all we are now at Level 1, which negates all of the findings. Also in regard to fire, the impact of a development of this size would greatly increase the amount of time to evacuate in case of a scenario like last October's. This is not addressed at all in the DEIR. It is significant and tremendously important to those of us who already live here. Last October was a frightening and dangerous situation. Let's not make the next time worse. 24-2

Water is already in short supply for the valley. This also will not get any better in the foreseeable future. No one is predicting an El Nino season anytime soon. 24-3

The DEIR in section 5.3-6 states that the project is exempt from SB221, but from all that I have read this is not true and should conform. It tremendously understates the crisis situation we are in and should be re-evaluated. No one can predict when the shortage will be reversed; we shouldn't overburden the system with ill proposed developments. 24-3

I purchased my home in Fawnskin for the beauty of the area and the proximity of the lake to my property. The expanding views and vistas of the lake greatly increase the value of the area. Everyone in Fawnskin currently shares the beauty of the scenery. The proposed project will greatly impact the rest of the residents in the area. It will change the topography significantly. The County designates state road 38 as a Scenic Highway. The DEIR already concludes that the impact to the aesthetics would be significant and unavoidable. The drawn views do not accurately show the impact on the area. They are not even drawn to scale. It must be revised to accurately show the damage to other resident's enjoyment of the area. 24-4

You must remember that Fawnskin is home to Bald Eagles and their rights must be protected. The growth in the area has been small and measured to keep the eagles safe and undisturbed. The proposed project does not take into consideration the destruction caused by construction and the noise and pollution that will be brought to Fawnskin. (section 5.8) The Eagle has been in danger because of man's misuse of land and chemicals. Do we think that this will be any less toxic to the creatures who call the area home? 24-5

Unfortunately I don't have the time to address every point that I found wanting or disturbing in the DEIR. I feel that this project is trying to be pushed through without the entire picture being viewed. 24-6

The Big Bear Valley is a beautiful place with many underlying problems, fire danger, water shortages, supply issues, electrical issues requiring the building of a new generator for peak overloads that we *already* have.

Please don't make it worse for the sake of a few dollars. We can have growth in the area that allows everyone to enjoy why we moved here in the first place. This project isn't it.

Sincerely,
Christine Florio

PO Box 84
1154 Chickasaw Lane
Fawnskin CA 92333

Response to Commentor No. 24
Christine Florio
May 10, 2004

24-1 The County will consider the Commentor's opinion and comments during their deliberation on the project.

24-2 Commentor refers to the accuracy of the current Fire Risk Level designation, increased traffic and affects to evacuation plans. Please refer to Response to Comment Nos. 4-1, 4-4 and 13-27 to 13-36, which address these concerns. The County will consider the Commentor's opinion and comments during their deliberation on the project.

24-3 Commentor refers to SB221 reporting requirements, water supply and affects to groundwater. Please refer to Response to Comment Nos. 1-3, 1-4, 1-5 and 13-42, which address these concerns. The County will consider the Commentor's opinion and comments during their deliberation on the project.

24-4 Commentor refers to development of the project area and affects to the existing aesthetic character. Please refer to Response to Comment Nos. 13-12, 13-54, 13-55, which address these concerns. The County will consider the Commentor's opinion and comments during their deliberation on the project.

24-5 Commentor refers to impacts to the bald eagle. Please refer to Response to Comment Nos. 3-7, 13-86, 13-88, 13-95 and 41-14, which address this concern. The County will consider the Commentor's opinion and comments during their deliberation on the project.

24-6 The County will consider the Commentor's opinion and comments during their deliberation on the project.

EVERETT H. GREENBERG
P.O. Box 130646
Big Bear Lake, CA 92315
(909) 585-3176

May 10, 2004

County of San Bernardino
Land Use Services Department, Planning Division
385 North Arrowhead Avenue, First Floor
San Bernardino, CA 92415-0182
Attn: Matthew W. Slowik

Re: DRAFT EIR FOR THE MOON CAMP DEVELOPMENT PROJECT/RCK PROPERTIES, INC.: GENERAL PLAN AMENDMENT/OFFICAL LAND USE DISTRICT CHANGE FROM BV/RL-40 TO BV/RS-7200 AND AMENDENT TO COUNTY CIRCULATION ELEMENT FOR REALIGNMENT OF NORTH SHORE DRIVE; TENTATIVE TRACT MAP #16136, AND CONDITIONAL USE PERMIT FOR A BOAT DOCK.

Sir,

Thank you for the opportunity to address some of the significant negative impacts this project would have on the community of Fawnskin and the Big Bear Valley.

SECTION 5.3.6 WATER: We are now in our sixth year of severe drought with no relief in sight. We do not import water from outside sources like most of the communities down the hill. The only water we receive is from precipitation in the form of rain and snow. The water company has established Conservation Stage II which mandates a ten percent reduction in water use, no new turf and a thirty percent reduction in outdoor water use. Additional development would have a severe adverse effect on an already stressed water system. 25-1

SECTION 5.1.3 CUMULATIVE IMPACT: If this zone change is approved it would have a significant negative impact on the area. We are presently facing water shortages and the need to build additional electric generating facilities just to meet the needs of the existing population. We also must face the immediate fire danger in our local mountains. Last 25-2

fall's fires pointed out the problems of evacuating this area. There are only three paved roads out of this valley. Also, additional fire and law enforcement resources would be required in order to serve the increased population and homes. I'm sure that by cutting down trees in order to re-route the Scenic Byway would reduce the highway to a Non-Scenic Byway. 25-2

As a long-time resident of this valley I urge you not to grant this zone change. It is my opinion that it would have a significant negative impact on this valley.

Again let me thank you for the opportunity to address this issue.

Sincerely,

Cc: Friends of Fawnskin

Response to Commentor No. 25
Everett H. Greenberg
May 10, 2004

25-1 Commentor refers to water supply and affects to groundwater. Please refer to Response to Comment Nos. 1-3, 1-4, 1-5, 13-47 and 18-1, which address this concern. The County will consider the Commentor's opinion and comments during their deliberation on the project.

25-2 The Commentor has provided general comments regarding water resources, electrical service, fire hazards, law enforcement services, evacuation plans and aesthetics. Impacts regarding evacuation of the area are discussed in Response to Comment No. 13-32. The County will consider the Commentor's opinion and comments during their deliberation on the project.

County of San Bernardino,
Land Use Department/Planning Division
385 North Arrowhead Ave., First Floor
San Bernardino, CA 92415-0182

ATTN: Matthew W. Slowik

RESPONSES/COMMENTS/OBJECTIONS TO DRAFT EIR FOR MOON CAMP EIR, TENATIVE TRACT MAP 16136

GENERAL COMMENTS

1. The EIR failed to adequately assess the collective or combined effect of both the project in question and other foreseeable projects (Marina Point and the 70 acres also in Fawnskin). See Kings County Farm Bureau v. City of Hanford, 221 Cal.App. 3d 692. 26-1
2. The EIR failed to consider that there is still no defined water supply for the project. 26-2
3. The EIR failed to consider the effect of recent fires on growth and development in the mountain areas. 26-3
4. The EIR failed to delineate mitigation factors. It also failed to mention who will monitor and enforce such mitigation. Counties are notorious for not monitoring and enforcing mitigation. The EIR does mention some mitigation as being subject to CC&R's. However, the County will not enforce those CC&R's. Such mitigations are therefore illusionary. 26-4
5. The EIR failed to consider input from California Department of Transportation, the United States Forest Service, and the California Department of Fish and Game, and the Army Corps of Engineers. Therefore, the EIR should be recalculated in order to receive input from those agencies. 26-5
6. The EIR does not adequately address the impact of changing the zoning from R-40 to R-1. The EIR failed to specify why this, and other impacts, would be less than significant. Who has determined that the proposed zone change would be in the "public interest"? 26-6

SPECIFIC COMMENTS

1. Section 1.6. The County of San Bernardino has a history of not following its own General Plan. 26-7
2. Section 5.2. The EIR failed to consider that all land below the high water line of Big Bear Lake is open to the public. Both Marina Point and Eagle Point had to provide for public access to the lake. Moon Camp should be required to likewise provide such public access. 26-8

3. Section 5.2. The EIR failed to consider the impact of traffic, parking, and storage at the proposed 100-slip marina. 26-9
4. Section 5.4. The EIR failed to consider the requirements of the San Bernardino County Light Ordinance, which has been adopted by CSA 53B. The proposed project is included in the CSA 53B area. 26-10

5. Section 5.4. The simulated views fail to adequately depict what the view shed will be if SR 38 is realigned. The depicted structures are not in proportion to the site, are not spaced according to the plot plan, and are not show at full buildout. Eagle Point and Castle Glen, both products of the same developer, are more realistic of the type of structures that are currently being built in the Big Bear Valley, and with six-foot side setbacks, there would be no effective view of the lake and beyond. 26-11
6. Section 5.4. The EIR failed to consider the impact the project would have on the view from the lake. At both Hamilton Ranch and Papoose Bay the view from the lake has been blighted by construction of houses along the shore. Recently, Lake Tahoe passed an ordinance prohibiting the construction of "monster homes" along the shoreline. This was done to protect the viewshed from the lake. 26-12
7. Section 5.5.31. The EIR failed to state why the developer is only paying a pro rata share of a traffic signal at Stanfield Cutoff. If their project causes the impact, why not should they bear the full cost? 26-13
8. Section 5.7.2 The EIR failed to consider funneling effect of noise from the highway into the adjacent residential areas. Noise from the highway is naturally amplified as it progresses up the hillside. 26-14
9. Section 5.7.2 also failed to the increased noise caused by higher speeds on the straightened highway. 26-15
10. In addition to the above sections and other traffic sections, the EIR failed to consider the cumulative impact of the proposed project, and other projects in the Big Bear Valley which will dump additional traffic onto the only three paved roads in and out of Big Bear Valley in the event of an emergency evacuation. 26-16
11. Section 5.8. Although mitigation measures are proposed to mitigate the impact on eagle habitat. The EIR failed to recognize that in prior developments in Big Bear, where eagle mitigations were instituted, the eagles were effectively driven from those projects. 26-17

Respectively Submitted,

Robert S.Drake
P.O. Box 164
Fawnskin, CA 92333
(909)866-2262

Response to Commentor No. 26
Robert S. Drake
May 11, 2004

26-1 Commentor refers to cumulative impacts associated with other foreseeable projects. Please refer to Response to Comment No. 13-2, which addresses this concern. The County will consider the Commentor's opinion and comments during their deliberation on the project.

26-2 Commentor refers to water supply and affects to groundwater. Please refer to Response to Comment Nos. 1-3, 1-4, and 1-5, which address this concern.

26-3 Commentor refers to fire risks associated with development of the project vicinity. Please refer to Response to Comment Nos. 4-1, 4-4, and 13-27 to 13-36, which address this concern.

26-4 Commentor refers to the enforcement process and procedures for implementation of mitigation measures. Please refer to Response to Comment No. 13-4, which addresses this concern.

26-5 Commentor refers to lack of consultation with various governmental agencies. Please refer to Response to Comment No. 13-5, which addresses this concern.

26-6 Commentor refers to the Project's consistency with the County General Plan. Please refer to Response to Comment No. 13-9, which addresses this concern.

26-7 The County will consider the Commentor's opinion and comments during their deliberation on the project.

26-8 Commentor refers to the decrease of public access along the lakeshore. Please refer to Response to Comment No. 13-26, which addresses this concern.

26-9 Commentor refers to the marina facility and affects to traffic, parking and the existing aesthetic character. Please refer to Response to Comment Nos. 2-2, 13-20, 13-24 and 13-56, which address these concerns.

26-10 Commentor refers to light and glare impacts associated with development of the project area. Please refer to Response to Comment No. 13-52, which addresses this concern.

26-11 Commentor refers to the visual simulations not being reflective of build-out of the project area. Please refer to Response to Comment Nos. 13-54 and 13-55, which addresses this concern.

26-12 Commentor refers to impacts to views from the lake as a result of development of the project site. Please refer to Response to Comment Nos. 13-54 and 13-56, which address this concern.

26-13 The pro-rata share of the off-site improvements represents a fair share contribution by the Project Applicant to pay for the identified traffic improvements. It is recognized that existing development, the proposed project and future development projects contribute to existing and/or future roadway system deficiencies. Thus, it is appropriate for the proposed project to pay for a portion of the identified traffic improvements, as it would contribute a portion of the future traffic to the street system. Also, refer to Response to Comment No. 13-61.

26-14 Commentor refers to the funneling noise effect from increased traffic. Please refer to Response to Comment No. 13-80, which addresses this concern.

26-15 Although high vehicle speeds are conceivable along the straightened State Route 38, the modeling utilized the highest maximum-posted speed. Modeling the posted maximum speed is widely accepted acoustical methodology, as using an empirical observation would vary based upon particular driving habits and could lead to a skew in the results. The modeling represents the worst-case scenario in the evaluation of potential traffic-generated noise impacts on noise sensitive land uses (e.g., schools, residential and assisted care facilities). As indicated in Section 5.7, *Noise*, a 3.0-dBA change in noise levels is considered to be the minimum change in noise levels that is discernable by human hearing. As the proposed project does not exceed the thresholds in Table 5.7-6, *Significance of Changes in Cumulative Noise Exposure*, or those developed by the County of San Bernardino, a less than significant impact would result.

26-16 Commentor refers to increased traffic and affects to evacuation plans. Please refer to Response to Comment No. 13-32, which addresses this concern.

26-17 Commentor refers to impacts to the bald eagle. Please refer to Response to Comment No. 13-88, which addresses this concern.

May 11, 2004
817 Coronado Terrace
Los Angeles, CA. 90026

Via U.S. Mail and Fax (909) 387-3223

Mr. Matthew W. Slowik
County of San Bernardino
Land Use Services Department, Planning Division
385 N. Arrowhead Ave., First Floor
San Bernardino, CA 92415-0182

RE: DRAFT EIR FOR THE MOON CAMP DEVELOPMENT PROJECT/RCK PROPERTIES INC.: GENERAL PLAN AMENDMENT/OFFICIAL LAND USE DISTRICT CHANGE FROM BV/RL-40 TO BV/RS-7200 AND AMENDMENT TO COUNTY CIRCULATION ELEMENT FOR REALIGNMENT OF NORTH SHORE DRIVE; TENTATIVE TRACT MAP #16136, AND CONDITIONAL USE PERMIT FOR A BOAT DOCK.

Dear Mr. Slowik,

We are writing to request that the County extend the deadline of May 17, 2004 for public responses to the DEIR for the Moon Camp Development Project. The DEIR is a very large complex document, which requires extensive time to research and evaluate.

27-1

RBF Consulting had two years to compile all of this information, giving the public a short six-week period to read, research and review the DEIR is not really fair to all involved and impacted by this proposed project. In addition, many reports and documents are referred to, but not included, in the DEIR, requiring additional time needed for research prior to comment.

We appreciate your considering our request for an extension. We may be reached at (213) 413-2460, fax (213) 413-6162, as well as the address above. Thank you for your consideration. We look forward to your response.

Sincerely,

Joseph Francuz

Barbara Francuz

Response to Commentor No. 27
Joseph and Barbara Francuz
May 11, 2004

27-1 Commentor refers to extending the deadline for providing comments on the Draft EIR. Please refer to Response to Comment No. 9-1, which addresses this concern.

May 11, 2004

County of San Bernardino
Land Use Services Department
Planning Division
385 N. Arrowhead Ave., First Floor
San Bernardino, CA 92415-0182

Attention: Matthew W. Slowik

To Whom It May Concern:

SUBJECT: DRAFT EIR FOR THE MOON CAMP DEVELOPMENT PROJECT/RCK PROPERTIES, INC.: GENERAL PLAN AMENDMENT/OFFICIAL LAND USE DISTRICT CHANGE FROM BV/RL-40 TO BV/RS-7200 AND AMENDMENT TO COUNTY CIRCULATION ELEMENT FOR REALIGNMENT OF NORTH SHORE DRIVE; TENTATIVE TRACT MAP #16136, AND CONDITIONAL USE PERMIT FOR A BOAT DOCK.

Thank you for the opportunity to review the Draft EIR.

I oppose this Moon Camp project as presently designed because the DEIR fails to evaluate the true impact this proposed project would cause to the critical issue of water. Section 5.3-6 states that the groundwater is already in overdraft condition. Why add to the environmental stress the North Shore is already feeling with water restrictions and the trees dying due to beetle infestation because of the drought? **28-1**

Section 5.7 states that short-term (construction), long term, watercraft and cumulative noise would be less than significant. Many residents and vacationers staying on the North Shore are buying property there explicitly to escape the noise of the south shore or the cities below. Fawnskin residents are able to hear motorboats from across the lake, air traffic from the airport, and traffic from route 38. The Moon Camp project would not only provide noise pollution for it's current residents but the proposed Moon Camp residents and South Shore residents would certainly be affected by the noise pollution. **28-2**

Sincerely,

Jane E. MacNett

402 MUSEUM DRIVE
LOS ANGELES, CA 90065

Response to Commentor No. 28
Jane E. MacNett
May 11, 2004

28-1 Commentor refers to water supply and affects to groundwater. Please refer to Response to Comment Nos. 1-3, 1-4, 1-5, 18-1 and 21-3, which address this concern.

28-2 Noise associated with the project would adhere to the standards and regulations set forth by the State of California and County of San Bernardino. Additionally, boating operations shall comply with the Big Bear Municipal Water District guidelines in regards to watercraft noise. According to the analysis conducted, vehicle noise generated from the proposed residential project would not increase noise levels within the area by more than 1dBA over "No Project" levels. In addition, air traffic from the airport is out of the scope of this DEIR since airports are not located within the vicinity of the project. Generally, residential neighborhoods are not a significant source of stationary noise pollution. Additionally, please refer to Response to Comment Nos. 13-85 and 26-15.

May 11, 2005

County of San Bernardino
Land Use Services Department, Planning Division
385 North Arrowhead Ave. 1st Floor
San Bernardino, CA 92415-0182

Attn: Matthew W. Slowik

RE: DRAFT EIR FOR THE MOON CAMP DEVELOPMENT PROJECT/RCK PROPERTIES INC.: GENERAL PLAN AMENDMENT/OFFICIAL LAND USE DISTRICT CHANGE FROM BV/RL-40 TO BV/RS-7200 AND AMENDMENT TO COUNTY CIRCULATION ELEMENT FOR REALIGNMENT OF NORTH SHORE DRIVE; TENTATIVE TRACT MAP #16136, AND CONDITIONAL USE PERMIT FOR A BOAT DOCK.

Dear Sir,

We would like to thank you for allowing us to review the Draft Environmental Impact Report. We have many issues with the proposed project and these are a few of them.

Section 5.1-2 Zoning Change. The DEIR states that according to the General Plan, a Land Use District Change requires that four statements listed be true. Number one and number four are not true. Number one states, the proposed land use district change be in the public interest. In the community of Fawnskin you will find that nine out of ten people are against this project. Number four states the proposed change will not have a substantial adverse effect on surrounding property. We think this project will change this community significantly. The property is now open space and much of it ties in with the National Forest. This supplies habitat for wild animals and gives them access to the lake. Changing the zoning to RS/7200 and building 92 houses with a gated community will block off this access. 29-1

Section 5.1-3 Cumulative Impact. There are other tracts Marina Point, one on Bruin Trail and the Big Bear Animal Park proposed for the North Shore area. These projects will have a major impact on the Fawnskin community. 29-2

Section 5.3-1 Fire Protection. This is one of our major concerns. The mitigations listed for Fire Protection is sprinkler systems in all the homes. This does not take into consideration that 90% of the calls are for medical aid. The Old Fire should teach us one thing. We are not prepared to evacuate people off the mountain in an emergency. We had four days warning and there were no tourists in the valley when we were told to evacuate. It still took some people over four hours to get off the mountain. That was with an alternate route opened up. Had the fire been near the Big Bear valley and only one route available there could have been many lives lost and extreme panic in the area. The county should not think of adding more people to the valley with the drought we are in and the condition of our forest. 29-3

Section 5.3-6 Water; The DEIR states this project is exempt from Senate Bill 221. Fawnskin water supply is independent from the rest of the Department Of Water And Power service area. We are only supplied by the wells in Fawnskin. The Fawnskin service area has 673 connections at this time. The addition of 92 connections is a 14% increase so this law applies. The potential wells to service this project were dug in 1987. Reviewing the historic rainfall tables this was in a normal rainfall cycle. We are in our sixth year of well below normal rainfall. There should be more tests of these wells and the entire North Shore agua system before any zone change could be considered. We have been warned of possible restrictions of water use including no outdoor watering this summer. We think the water issue is one of the most important issues of the DEIR and should be addressed before any zone change would be considered. 29-4

Sincerely

James C. McGrew

Lola E. McGrew

39760 Flicker Road
P. O. Box 493
Faenskin, CA 92333-0493

Response to Commentor No. 29
James C. McGrew and Lola E. McGrew
May 11, 2004

29-1 Commentor refers to the Project's consistency with the County's General Plan. Please refer to Response to Comment Nos. 13-9, 13-10, 13-16 and 13-91. The County will consider the Commentor's opinion and comments during their deliberation on the project.

29-2 Commentor refers to cumulative impacts associated with other foreseeable projects. Please refer to Response to Comment No. 13-2, which addresses this concern. The County will consider the Commentor's opinion and comments during their deliberation on the project.

29-3 Commentor refers to mitigation measures for fire protection services, increased traffic and affects to evacuation plans. Please refer to Response to Comment Nos. 4-1, 4-4, and 13-27 to 13-36, which address these concerns. The County will consider the Commentor's opinion and comments during their deliberation on the project.

29-4 Commentor refers to reporting requirements of SB221, water supply and affects to groundwater. Please refer to Response to Comment Nos. 1-3, 1-4, 1-5, which address groundwater conditions; refer to Response to Comment Nos. 13-42, which addresses SB221; refer to Response to Comment Nos. 13-43 and 13-48, which address wells in the project vicinity; refer to Response to Comment No. 13-44, which addresses well testing; refer to Response to Comment Nos. 13-47 and 18-1, which address water conservation measures; and refer to Response to Comment No. 21-3, which addresses cumulative water impacts. The County will consider the Commentor's opinion and comments during their deliberation on the project.

ROBINS, KAPLAN, MILLER & CIRESI L.L.P.

ATTORNEYS AT LAW

SUITE 3700
2049 CENTURY PARK EAST
LOS ANGELES, CA 90067-3211
TEL: 310-552-0130 FAX: 310-229-5800
www.rkmc.com

ROMAN M. SILBERFELD

May 11, 2004

VIA FACSIMILE AND U.S. MAIL (909) 387-3223

Mr. Matthew W. Slowik
County of San Bernardino
Land Use Services Dept., Planning Division
385 N. Arrowhead Ave., First Floor
San Bernardino, CA 92415-0182

Re: Draft EIR for the Moon Camp Development Project/RCK Properties, Inc.: General Plan Amendment/Official Land Use District Change from BV/RL-40 to BV/RS-7200 and Amendment to County Circulation Element for Realignment of North Shore Drive; Tentative Tract Map #16136, and Conditional Use Permit for a Boat Dock

Dear Mr. Slowik:

I am writing to request that the County extend the May 17 deadline for public responses to the DEIR for the Moon Camp Development Project. We request an extension of 90 days. The DEIR is a lengthy document, difficult to read and understand, and it requires extensive time to evaluate properly. There are many very complex impacts presented by this project and a long list of documents and reports referred to in the DEIR have not been provided. We are spending a great deal of extra time finding and reviewing the information in these other documents, plus locating information on issues that were omitted from the DEIR. 30-1

Thank you for your consideration in this request. I look forward to hearing from you.

Very truly yours

Roman M. Silberfeld

RMS:jt

Response to Commentor No. 30
Roman M. Silberfeld
May 11, 2004

30-1 Commentor refers to extending the deadline for providing comments on the Draft EIR. Please refer to Response to Comment No. 9-1, which addresses this concern.

WM. HAZEWINKEL & CO.

ay 12, 2004

t. Matthew W. Slowik
ounty of San Bernardino
nd Use Services Department, Planning Division
5 N. Arrowhead Ave., First Floor
n Bernardino, CA 92415-0182
a Facsimile and US Mail

E: DRAFT EIR for the Moon Camp Development Project/RCK
operties Inc.: General Plan Amendment/Official Land Use District
ange; Tentative Tract Map #16136, & conditional use permit for a
at dock.

ear Mr. Slowik,

espectfully request that the County extend the May 17th deadline for the public to comment
the Draft EIR for the Moon Camp Development Project. This document is extremely
ng and requires a huge amount of time to review and comment upon. In addition, it refers
a lot of documents that should be reviewed as well, but they are not provided in the Draft
R. 31-1

residents and business owners in Fawnskin, we are very concerned about the significant
pacts upon our community that a proposed project of this magnitude would have, and feel
should be given adequate time to review this document, and provide our comments.

ank you for considering our request.

William C. Hazewinkel

illiam C. Hazewinkel

PO BOX 378, FAWNSKIN, CA 92333-0378 PHONE (909) 878-5577 FAX (909) 878-2249

Response to Commentor No. 31
William C. Hazewinkel
May 12, 2004

31-1 Commentor refers to extending the deadline for providing comments on the Draft EIR. Please refer to Response to Comment No. 9-1, which addresses this concern.

DRAFT

ROBERT R. HENRICH
P.O. BOX 282
FAWNSKIN, CA 92333
Phone 909-866-3300
Fax 909-866-4222
E-mail rileyh@hotmail.com

Wednesday, May 12, 2004

Matthew W. Slowik
Land Use Services Department
Planning Division
385 N. Arrowhead Ave., First Floor
San Bernardino, CA 92415-0182

RE: **DRAFT EIR FOR THE MOON CAMP DEVELOPMENT PROJECT/RCK PROPERTIES INC.,GENERAL PLAN AMENNDMENT/OFFICIAL LAND USE DISTRICT CHANGE FROM BV/rl-40 TO BVRS-7200 AND AMENDMENT TO COUNTY CIRCULATION ELEMENT FOR REALIGNMENT OF NORTH SHORE DRIVE;TENTATIVE TRACT MAP #1636, AND CONDITIONAL USE PERMIT FOR A BOAT DOCK.**

Dear Mr. Slowik:

I am writing to request that the County extend the May 17th deadline for public responses to the to the DEIR for the Moon Camp Development Project. There is a long list of documents and reports referred to in the DEIR but not provided. We need time to find these documents and review them. 32-1

Thank you for your consideration.

Sincerely,

Robert R. Henrich

Response to Commentor No. 32
Robert R. Henrich
May 12, 2004

32-1 Commentor refers to extending the deadline for providing comments on the Draft EIR. Please refer to Response to Comment No. 9-1, which addresses this concern.

May 12, 2004

County of San Bernardino
Land Use Services Department
Planning Division
385 N. Arrowhead Ave
First Floor
San Bernardino, Ca 92415-0182
Attn: Mr. Matthew W. Slowik

Re: Draft EIR for the Moon Camp Development Project.RCK Properties Inc: General Plan Amendment/Official Land Use District Change From BV/RL-40 to BV/RS-7200 and Amendment to County Circulation Element For Realignment of North Shore Drive; Tentatvie Tract Map #16136, And Conditional Use Permit For A Boat Dock.

Dear Mr. Slowik:

Thank You for the opportunity to review this document. After review I oppose the proposed Moon Camp project because the DEIR fails to adequately evaluate the true impact this proposed project would cause to the following critical issues:

In section 5.1-2, the DEIR states that according to the General Plan, a Land Use District Change requires that each of the following statements be true:

1) The proposed land use change is in the public interest, there will be community benefit and other existing and permitted uses will not be compromised. **OBJECTION**: This proposed project is NOT a community benefit. This proposed change will benefit the developer exclusively. **33-1**

2) The proposed land use change is consistent with the goals and policies of the General Plan, and will provide a reasonable logical extension of the existing land use pattern in the surrounding area. **OBJECTION:** The majority of the property boundaries are bordered by National Forest Land or the Lake, the proposed change from rural to residential is not a logical extension. **33-2**

3) The proposed land use change will not have a substantial adverse effect on surrounding property: **OBJECTION:** The proposed change DOES have an adverse effect on surrounding property. The area is rural surrounded by National Forest and Lake; this proposed change will overburden this small parcel jeopardizing the surrounding properties by further depleting Fire Protection, Police Protection, Water Shortage, Wastewater, Noise & Lighting Glare. **33-3**

In section 5.2-3, the DEIR states that this proposed project, combined with other future development, would increase the intensity of land uses in the area, but concludes that the impacts are less than significant. **OBJECTION**: The cumulative effect of this proposed **33-4**

project, plus the proposed Marina Point development, plus the proposed Brook side project, plus the expansion of the Discovery Center to handle more visitors, plus all the developments on the other side of the lake, given the water shortage, electricity shortage, fire danger, lack of evacuation abilities all go together to create an Extremely Significant Impact. Analyzing this project alone is a completely invalid, misleading and understated option. Cumulative impacts are significant. 33-4

Section 5.8- Biological Resources. Although Biological Resources did not take into account the loss of trees in the evaluation. While a mitigation for eagles states that all trees over 20 inches in diameter will be protected, it does that only on individual lots and does not hold the developer to that standard for cutting roads and other structural changes required for the proposed project. Therefore, the analysis is misleading in pretending that this mitigation will protect the eagle perch trees. The analysis does not include ospreys, common visitors to the site. The bark beetle infestation coupled with the drought is destroying the forest. To further remove healthy trees for development will impact the wildlife. 33-5

The analysis is insufficient because it doesn't address the impact of the objections stated above. The negative impact should the proposed project be approved will be very significant to the community of human life and wildlife. In final, I close by saying "Cumulative Impacts are Significant" and further analysis is required to adequately address this proposed project. 33-6

Sincerely,

Lindi Holland
28081 Morro Court
Laguna Niguel, Ca 92677

100 Pine Oak Lane
Fawnskin, Ca

Response to Commentor No. 33
Lindi Holland
May 12, 2004

33-1 Commentor refers to the Project's consistency with the County's General Plan. Please refer to Response to Comment No. 13-9, which addresses this concern. The County will consider the Commentor's opinion and comments during their deliberation on the project.

33-2 Commentor refers to the Project's consistency with the County's General Plan. Please refer to Response to Comment No. 13-10, which addresses this concern. The County will consider the Commentor's opinion and comments during their deliberation on the project.

33-3 Commentor refers to the Project's consistency with the County's General Plan. Please refer to Response to Comment No. 13-16, which addresses this concern. The County will consider the Commentor's opinion and comments during their deliberation on the project.

33-4 The Commentor refers to Impact Statement 5.2-3, which regards cumulative impacts associated with adverse physical effects to the environment as a result of recreational facilities. As the proposed project includes a marina facility, all construction activities would be subject to review and approval by the Big Bear Municipal Water District, which includes obtaining a Shorezone Alteration Permit. Each of the proposed developments identified by the Commentor would be responsible to mitigate incremental impacts to recreational facilities to less than significant levels. Also, refer to Response to Comment No. 13-2. The County will consider the Commentor's opinion and comments during their deliberation on the project.

33-5 Commentor refers to impacts to biological resources from tree removal, as well as impacts to the bald eagle and osprey. Please refer to Response to Comment No. 13-87, which addresses impacts to the Osprey; refer to Response to Comment No. 13-86, which addresses tree removal; and refer to Response to Comment Nos. 3-7, 13-88, 13-95 and 41-14, which address impacts to the bald eagle.

33-6 The County will consider the Commentor's opinion and comments during their deliberation on the project.

Anne Browning McIntosh AICP
City Planning and Administration

May 12, 2004

County of San Bernardino
Land Use Services Department, Planning Division
385 N. Arrowhead Avenue, First Floor
San Bernardino, CA 92415-0182
ATTN: MATTHEW W. SLOWIK

RE: DRAFT EIR FOR THE MOON CAMP DEVELOPMENT- GPA, LAND USE CHANGE, TTM #16136, AND CUP

220 Highland Place
Monrovia, California 91016
Phone: (626) 357-9395
Fax: (626) 357-9286
Cell: (626) 665-3683

Dear Mr. Slowik:

I have read the Draft EIR for the Moon Camp development. This letter represents my comments on the Draft document.

Although I am concerned about all impacts of this project that may degrade the environment of the San Bernardino Mountains for years to come, I am particularly concerned about the inadequacy of the EIR in suggesting appropriate mitigation measures, which could mitigate the **LAND USE** and **AESTHETIC** impacts.

34-1

My overall concern is that the applicant and the EIR consultant believe that a 1970s suburban style subdivision development is appropriate for Fawnskin. The design of this project, from tract map to road design, to public improvements, to housing type reflect a development that is SO inappropriate for Fawnskin that it is difficult to even begin with suggestions. Architecture and land use planning has come so far in the past 30 years. A much more appropriate treatment of this land is possible with the right environmental analysis and design work.

Following are points that should be addressed:

- (Refer to p, 2-2: 5.1-1) The San Bernardino County General Plan was written in 1989 and updated in 2001. Even with both of these updates, the land use designation for this site was determined to be RL-40. The County apparently did not choose to redesignate this property during the preparation of the General Plan or during the recent update. General Plans are intended to establish long-range planning policies. Therefore, the adoption of such a radical amendment to the Land Use Element, not based on a long-term view, but rather in reaction to a tract map request for a much higher density, IS an **unavoidable, significant impact.** To say that the requested amendment to the General Plan mitigates the land use impacts is a circular argument and does not meet the intent of CEQA to evaluate land use policy impacts.

34-2

- (Refer to p 5.1-6) The County policy LU-2a requires that the "design and siting of new residential development **meet locational and development standards that**

34-3

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www.browningmcintosh.com

ensure compatibility with adjacent land uses and community character." This project does not meet this standard. This "residential subdivision" has been designed as a 1970s suburban, (NOT RURAL MOUNTAIN COMMUNITY) housing development complete with cul-de-sacs. It bears no resemblance to the development pattern of Fawnskin. Therefore, among the mitigation measures that should be included are:

- "redesign of the tract map to reflect the rural development pattern of the adjacent Fawnskin community including, but not limited to the prohibition of cul-de-sacs, gates, monument signs, and other features that reflect suburban rather than rural development." 34-3
- All properties on the south side of the highway shall be "through" properties – with frontage on the highway as well as the lakefront to be consistent with existing development patterns on North Shore Drive.
- "Imposition of development standards that maintain the character of a mountain community" (more on this below.)

(Refer to 5.4-2 and corresponding mitigation measures) I wholeheartedly agree with the conclusion that long-term impacts on aesthetics and scenic vistas would be significant and cannot be mitigated to a level of insignificance (except with a reduced density project). However, I believe that **there are a number of additional mitigation measures that CAN and SHOULD be required to reduce the impacts as much as possible**:

- "For properties located to the south of the scenic highway, no cul-de-sacs shall be permitted so that views to the lake from the scenic highway are not blocked and so that existing land use development patterns are maintained."
- **Remove** mitigation measure 5.4-2b. Two car garages with automatic openers do not say "mountain home" and should not be mandated. This requirement constitutes a project impact – NOT a mitigation measure! 34-4
- **Rewrite** mitigation measure 5.4-2c to require a view study for each lot, not a standard formula for all lots.
- **A mitigation measure should be written that defines specific property standards for each lot. These should be developed by a renowned land use designer, should be included in the environmental document as required mitigation measures and should require the following AT A MINIMUM:**
    - A minimum of 30 foot distances between residential structures (or whatever distance is deemed appropriate by the land use designer);
    - Traditional mountain architecture (i.e. log cabin, Maltby, chalet, etc.) must be used and cannot be uniform throughout the development.
    - Native materials such as wood, rock, log, tin, etc. shall be incorporated into all structures
    - There must be a range in housing sizes with a maximum of 2,500 square feet (or whatever is deemed consistent by the land use designer);
    - A conditional use permit shall be required for all structures located south of the highway;
    - Curbs, sidewalks and gutters shall be prohibited.

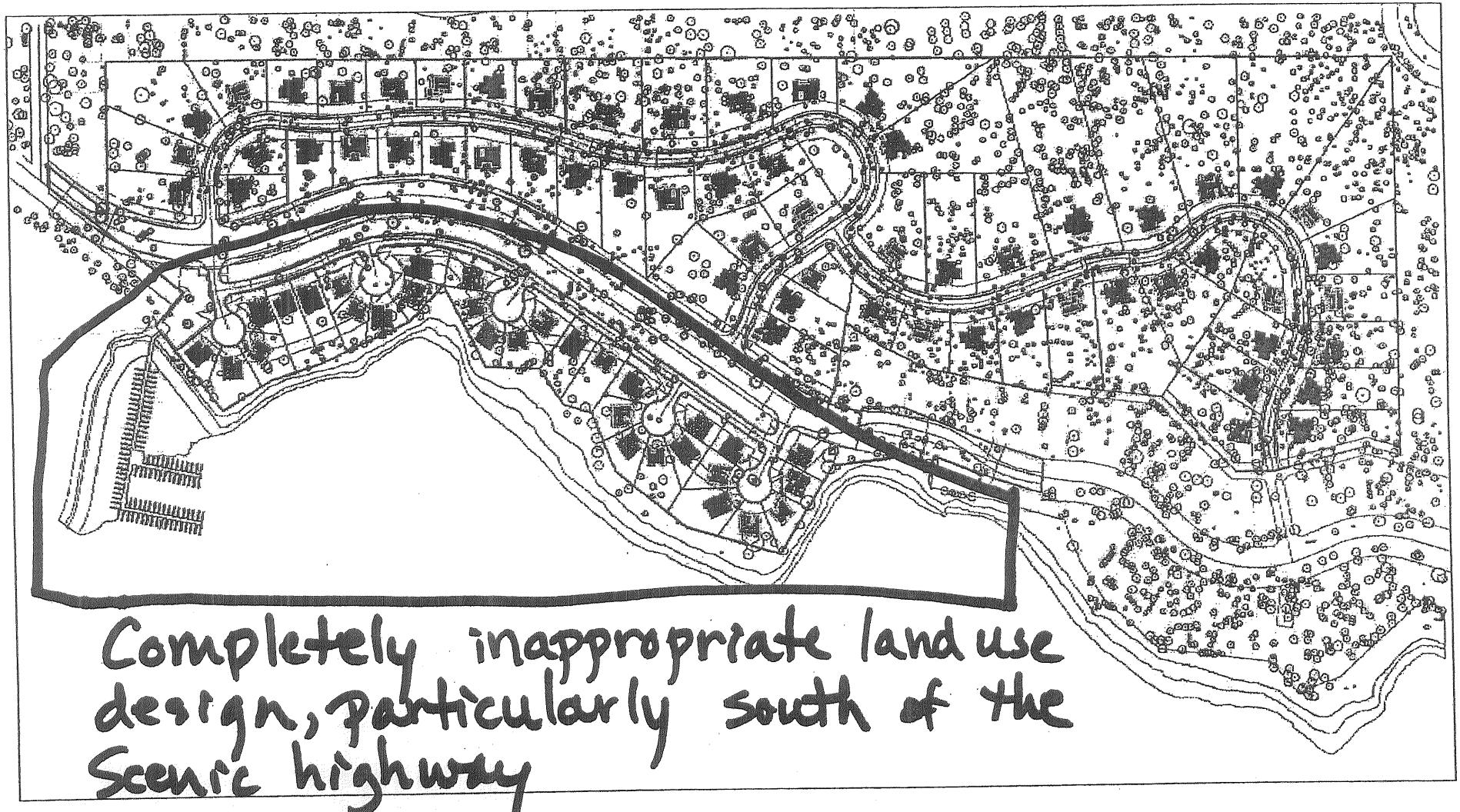
- Property line fences cannot be built as part of the development and will be discouraged subsequently. 34-4

- (Refer to 5.4-3 and corresponding mitigation measures) I wholeheartedly agree that impacts on views from a scenic highway will be impacted and will be significant and cannot be mitigated to a level of insignificance (except with a reduced density project). However, I do not believe the mitigation measures are appropriate and go far enough to mitigate what CAN be mitigated. **There are a number of additional mitigation measures that CAN and SHOULD be required to reduce the impacts as much as possible**: 34-5
  - Mitigation measure 5.4-3a should be rewritten to PROHIBIT "entry signs". There should be no "entry" because this development should not appear as a planned development or suburban subdivision as stated above. There should be no walls, no gates, no artificial barriers.
  - A mitigation measure should be added that specifies that lots should be left in their native condition with native plantings ONLY. Lawns and other high water usage landscaping should be prohibited. Reforestation must occur in areas where mature trees and native plantings are removed.
- (Refer to 5.4-4 and corresponding mitigation measures). There should be NO STREET LIGHTING permitted. Again, Fawnskin is rural in nature. 34-6
- (Refer to Chapter 7 – project alternatives). My belief is that the County must seriously consider a "Reduced Project" alternative because such a project can reduce impacts to a level of insignificance. However, this EIR does not adequately evaluate either of the two suggested reduced project alternatives so that the County can make an informed decision. Among other analyses, the view analysis conducted for the project (Exhibits 5.4-1 to 5.4-7) should be conducted for the reduced project alternatives. 34-7

In summary, the proposed project, as designed, is completely inappropriate. Further analysis must be conducted regarding appropriate mitigation measures in the areas of land use, aesthetics, scenic highways and reduced project alternatives for this project.

Sincerely,

Anne Browning McIntosh, AICP
Property Owner – 1053 Bruin Trail, Fawnskin



Completely inappropriate land use design, particularly south of the Scenic highway

Not to Scale

RBF CONSULTING PLANNING ▪ DESIGN ▪ CONSTRUCTION

03/04 JN 10-101901

MOON CAMP TT #16136
ENVIRONMENTAL IMPACT REPORT
Plan View

Exhibit 5.4-3

Response to Commentor No. 34
Anne Browning McIntosh, AICP
May 12, 2004

34-1 The County will consider the Commentor's opinion and comments during their deliberation on the project.

34-2 The County will consider the Commentor's opinion and comments during their deliberation on the project.

34-3 Commentor refers to the Project's consistency with the County's General Plan. Please refer to Response to Comment No. 13-20, which addresses this concern. The County will consider the Commentor's opinion and comments during their deliberation on the project. It is further noted that there is no "prohibition" of cul-de-sacs, gates, monument signs, etc., in the Big Bear Lake area. Please refer also to Section 7.0, *Alternatives to the Proposed Project*, of the EIR which presents reduced density alternatives.

34-4 It is noted that the Commentor agrees with the conclusion that long-term impacts on aesthetics and scenic vistas would be significant and cannot be mitigated to a level less than significant. The project is proposed to be designed to comply with mountain development standards.

34-5 Please refer to Mitigation Measure 5.3-6d regarding water conservation measures.

34-6 The street lighting is required to comply with the adopted Night Sky Ordinance and Mitigation Measure 5.4-4a refers to the incorporation of low intensity lighting.

34-7 The County will consider the Commentor's opinion and comments during their deliberation on the project.

May 12, 2004

County of San Bernardino
Land Use Services Department, Planning Division
385 North Arrowhead Ave., First Floor
San Bernardino, CA 92415-0182

Attn. Matthew W. Slowik

RE: DRAFT EIR FOR THE MOON CAMP DEVELOPMENT PROJECT/RCK PROPERTIES INC.: GENERAL PLAN AMENDENT/OFFICIAL LAND USE DISTRICT CHANGE FROM BV/RL-40 TO BV/RS-7200 AND AMENDENT TO COUNTY CIRCULATION ELEMENT FOR REALIGNMENT OF NORTH SHORE DRIVE; TENTATIVE TRACT MAP #16136, AND CONDITIONAL USE PERMIT FOR A BOAT DOCK.

Dear Sir,

I am writing in response to the May 17 cut off date for responses to the Draft Environmental Impact Report for the above named project. The report is written in language that is difficult for the average person to read. There are other documents that would be helpful to read in reviewing this DEIR. 35-1

Please consider extending the date for comments on the DEIR so that more people can comment on this project.

Thank You,

James C. McGrew

James C. McGrew
39760 Flicker Road
P. O. Box 493
Fawnskin, CA 92346-0493

Response to Commentor No. 35
James C. McGrew
May 12, 2004

35-1 Commentor refers to extending the deadline for providing comments on the Draft EIR. Please refer to Response to Comment No. 9-1, which addresses this concern.

ERVIN NICHOLS

P.O. Box 434
Big Bear Lake CA
92315
en1258@earthlink.net

May 12, 2004

Matthew W. Slowik
Land Use Services Department
Planning Division
385 N. Arrowhead Ave., First Floor
San Bernardino, CA 92415-0182

RE: DRAFT EIR FOR THE MOON CAMP DEVELOPMENT PROJECT/RCK PROPERTIESS INC. GENERAL PLAN AMENDMENT/OFFICIAL LAND USE DISTRICT CHANGE FROM BV/RL-40 TO BVRS-7200 AND AMENDMENT TO COUNTY CIRCULATION ELEMENT FOR REALIGNMENT OF NORTH SHORE DRIVE; TENTATIVE TRACT MAP #1636, AND CONDITIONAL USE PERMIT FOR A BOAT DOCK.

Dear Mr. Slowick,

I am opposed to the Moon Camp project as currently proposed for many reasons. Some of which I am listing below.

Under "Land Use Element", section LU-2, (a), this project does not ensure compatibility with adjacent land uses and community character. The community of Fawnskin has no projects resembling anything of this size. The adjacent land is Forest service or low-density single family lots and homes. This project would alter the atmosphere of the whole community adversely. 36-1

Section 5.3-2, Police Protection. The EIR states no mitigation measures recommended. This does not take into consideration the addition of 100's of residents, especially on holidays, that will need patrolling and crime prevention when, at present, there is already a lack of deputies available for these services. 36-2

Section 5.3-9 lists the alternative of a distributed generation option. This does not address the fact that such an option would create noise pollution as well as air pollution and be disruptive to neighbors and wildlife. 36-3

Section 5.3-10 states "The inability of water providers to confirm service on a project level would also result in significant and unavoidable cumulative impacts." This is a problem that can't be solved or mitigated and should be reason enough for rejection of the project as proposed. 36-4

Section 5.4, Scenic Corridors. This whole section is unmitigatable. For instance, Building and Structure Placement "The building and structure placement shall be compatible with and should not detract from the visual setting or obstruct significant views." The EIR does not address the fact that placing 93 homes on this property would not only obstruct the home owners views, but would impair or eliminate the views of residents on the hillsides above, lowering property values and nullifying why they built there in the first place. 36-5

The conclusion in Section 5.4-2 is correct and good reason why the project should not be approved as proposed.

Section 5.5. Nowhere in this EIR does it address the fact that neighboring (within an eighth of a mile) Serrano Campground has as many as 1600 guests on a summers' day or that the relocation of the Moonridge Zoo (1/2 mile from the project site) will bring hundreds of visitors daily to the North Shore or the fact that the Discovery Center (1/4 mile from the project site) has nearly doubled it's size and visitor capacity. 36-6

Section 5.8 has too many omissions to document here, but my biggest concern is that it did not properly address the Bald Eagle population and its impacts and completely omitted the Osprey, which in recent years has been returning to the area. 36-7

In conclusion, I feel the EIR is inaccurate and incomplete. Thank you for allowing me to express my concerns.

Sincerely,

Ervin Nichols

Response to Commentor No. 36
Ervin Nichols
May 12, 2004

36-1 Commentor refers to the Project's consistency with the County's General Plan. Please refer to Response to Comment No. 13-20, which addresses this concern. The County will consider the Commentor's opinion and comments during their deliberation on the project.

36-2 Commentor refers to current police protection services and the Project's impact to police services. Please refer to Response to Comment Nos. 13-38 to 13-40, which address this concern.

36-3 Commentor refers to the potential impacts as a result of constructing an alternative electrical power source on the project site. Please refer to Response to Comment No. 13-49, which addresses these concerns.

36-4 The County will consider the Commentor's opinion and comments during their deliberation on the project.

36-5 Although mitigation measures have been identified to reduce the significance of long-term aesthetic impacts, the EIR concludes that significant and unavoidable long-term impacts would occur regarding viewshed alterations to existing residents to the north, south, east and west of the project site. Additionally, significant and unavoidable impacts have been identified for views from State Route 38, a scenic highway, to the south and from the south shore of Big Bear Lake. Also, refer to Response to Comment No. 13-56. The County will consider the Commentor's opinion and comments during their deliberation on the project.

36-6 The Commentor identifies several projects that will bring visitors to the north shore, especially during the peak summer and holiday weekends. Each of these projects would be required to comply with the California Environmental Quality Act (CEQA) environmental review procedures during their project implementation. At that time, environmental impacts associated with each project would be analyzed and mitigation measures recommended, as necessary. Similarly, the Moon Camp EIR addresses impacts associated with implementation of the proposed project, as well as cumulative project impacts, which include related projects and other possible development in the area determined as having the potential to interact with the proposed project to the extent that a significant cumulative effect may occur. Also, refer to Response to Comment No. 13-2.

36-7 Commentor refers to impacts to the bald eagle and osprey. Please refer to Response to Comment No. 13-87, which addresses impacts to the Osprey; and refer to Response to Comment Nos. 3-7, 13-88, 13-95 and 41-14, which address impacts to the bald eagle.

COMMENT NO. 37

965 Deer Trail Lane
Fawnskin, California 92333

VIA FAX (909-387-3223) AND U.S. MAIL

May 12, 2004

Mr. Matthew W. Slowik
County of San Bernardino
Land Use Services Department, Planning Division
385 N. Arrowhead Ave., First Floor
San Bernardino, CA 92415-0182

Re: **Draft EIR for the Moon Camp Development Project /RCK Properties Inc.:**
General Plan Amendment/Official Land Use District Change from BV/RI-40 to BV/RS-7200 and Amendment to County Circulation Element for Realignment of North Shore Drive; Tentative Tract Map #16136, and Conditional Use Permit for a Boat Dock.

Dear Mr. Slowik:

I am writing to request that the County extend the May 17 deadline for public responses to the DEIR for the Moon Camp Development Project. The DEIR is a huge document, difficult to read and requires extensive time to evaluate properly. There are many very complex impacts presented and a long list of documents and reports which have been referred to in the DEIR were not provided, as far as I can tell. I have spent a good deal of time trying to find and review the information in the DEIR and these other documents, plus locating information on issues that were omitted from the DEIR. I would prefer to be able to make specific comments rather than just raise issues, or question items that may be addressed in a way that is not readily found, but this will require additional time. 37-1

Thank you for your consideration of this request. I look forward to hearing from you.

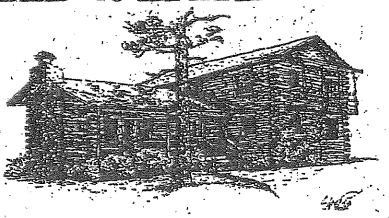
Yours very truly,

Peter J. Tennyson

Response to Commentor No. 37
Peter J. Tennyson
May 12, 2004

37-1 Commentor refers to extending the deadline for providing comments on the Draft EIR. Please refer to Response to Comment No. 9-1, which addresses this concern.

The INN at FAWNSKIN
BED & BREAKFAST



May 12, 2004

Mr. Matthew W. Slowik
County of San Bernardino
Land Use Services Department, Planning Division
385 N. Arrowhead Ave., First Floor
San Bernardino, CA 92415-0182
Via Facsimile and US Mail

RE: DRAFT EIR for the Moon Camp Development Project/RCK Properties Inc.: General Plan Amendment/Official Land Use District Change; Tentative Tract Map #16136, & conditional use permit for a boat dock.

Dear Mr. Slowik,

I would like to request that the County extend the May 17th deadline for the public to comment on the Draft EIR for the Moon Camp Development Project. Because of the length and complexity of this document, it will require an equally long amount of time to review and comment upon. In addition, it refers to a lot of documents that should be reviewed as well, but they are not provided in the Draft EIR. 38-1

As a resident and business owner in Fawnskin, I am very concerned about the significant impacts upon our community that a proposed project of this magnitude would have, and feel we should be given adequate time to review this document, and provide our comments.

Thank you for considering our request.

Nancy Walker

Nancy Walker

880 CANYON ROAD ~ POST OFFICE BOX 378 ~ FAWNSKIN, CA 92333 ~ (909) 866-3200
www.fawnskininn.com ~ innatfawnskin@charter.net

Response to Commentor No. 38
Nancy Walker
May 12, 2004

38-1 Commentor refers to extending the deadline for providing comments on the Draft EIR. Please refer to Response to Comment No. 9-1, which addresses this concern.

817 Coronado Terrace
Los Angeles, CA. 90026
May 13, 2004

County of San Bernardino
Land Use Services Department
Planning Division-1st Floor
Attn: Matthew W. Slowik
385 North Arrowhead Avenue
San Bernardino, CA. 92415-0182

RE: DRAFT EIR FOR THE MOON CAMP DEVELOPMENT PROJECT/RCK PROPERTIES INC.: GENERAL PLAN AMENDMENT/OFFICAL LAND USE DISTRICT CHANGE FROM BV/RL-40 TO BV/RS-7200 AND AMENDMENT TO COUNTY CIRCULATION ELEMENT FOR REALIGNMENT OF NORTH SHORE DRIVE; TENTATIVE TRACT MAP #16136, AND CONDITIONAL USE PERMIT FOR A BOAT DOCK.

Dear Mr. Slowik,

Thank you for the opportunity to review this document. As homeowners in Fawnskin, we oppose the proposed Moon Camp project as currently designed, because the DEIR fails to adequately evaluate the immense impact that this projected development would have on the region. Our reasons are as follows:

FIRE PROTECTION AND SAFETY

- Sections 5.3-1 of the DEIR evaluated the fire risk as Level 2. All mountain areas in the County have now been upgraded to fire risk Level 1. Therefore, this DEIR level risk statement and the entire fire protection analysis is invalid. **39-1**

- Nothing was included in the DEIR in the fire protection section that covered evacuations from the Valley in case of wildfire. We had a few days of warning for the October 2003 evacuation, with minimal tourists in the Valley due to the off-season, mid-week, non-holiday time frame. The addition of more houses is a Significant Impact. The DEIR totally understated the potential for the number of persons that could be in homes built within the proposed Moon Camp development, especially if a fire were to happen on a holiday weekend. The neighboring proposed Marina Point project would add substantially to these numbers, as would several on-going developments on the Big Bear side of the Lake. **39-2**
  Even without the panic of fire within the Valley itself during the October exodus, it took over 6 hours to get off the mountain.

- The potential for loss of human life in a fire emergency due to the potential increase in resident population and the much larger increase in weekend population was not addressed in the DEIR. Considering the numbers of dead and dying trees, upwards of 40% presently, this proposed development would create a significant and unavoidable impact on fire protection and safety. **39-3**

- Mitigation measures of fire sprinklers, fire-resistant vegetation and homeowner association requirements totally underestimate the danger and potential loss of human life that wildfire create and downplay the significant impact of this proposed development on fire protection and safety. 39-4

ZONING CHANGES

In section 5.1-2, San Bernardino County Development Code, the DEIR states that according to the General Plan, a Land Use District Change requires that each of the following statements be true:

- "Change is in public interest and there will be a community benefit and other existing and permitted uses will not be compromised." This proposed project would not be a community benefit nor would it benefit the public interest, and in fact would harm the community (for reasons detailed in the other sections of this document). Since this is not a benefit to the public, this proposed zoning change would be a significant and unavoidable impact. 39-5

- "The proposed zoning change is consistent with the goals and policies of the General Plan and will provide a reasonable and logical extension of the existing land use pattern in the surrounding area." The majority of the property boundaries are National Forest or lakeshore; therefore the change from rural to residential is not a logical extension and poses a very significant adverse impact to these surrounding areas. To go from I house per 40 acres (BV/RL40) to a higher density than the city of Los Angeles (BV/RS-7200) is a leap in logic for the area proposed. 39-6

- "The proposed land use change will not have a substantial adverse effect on surrounding property." When we purchased our Fawnskin property, we did due diligence and checked the County General Plan to see what the adjacent property was zoned. Knowing that it was zoned RL-40, we felt confident in purchasing our home. The proposed change to the zoning would affect our property value, destroy our view and permanently alter the characteristic small town ambience of Fawnskin. 39-7

CUMULATIVE IMPACTS

- In section 5.1-3, the DEIR states that this proposed project, combined with other future development, would increase the intensity of land use, but concludes that the impacts would be less than significant. We consider the proposed Moon Camp Development, the proposed Marina Point Development, the proposed Brookside Project, and the expansion of the Discovery Center and proposed Zoo relocation will exert stresses on the water, electric, sewer, traffic patterns, lake, light and air pollution, plant and animal populations, public services (ie. Sheriff and Fire), loss of lake public access and change of area ambiance, to create a sizable negative effect and therefore a significant impact. To analyze the proposed Moon Camp project alone is completely invalid, as cumulative impacts are more than significant. 39-8

RECREATION

- In Section 5.2-1 through 5.2-4, the annual basis of the lake use factor of 9% is very low considering the addition of 275 boats (Moon Camp and Marina Point). As the lake is closed half of the year, the DEIR figures are only half of the potential increase in usage. An annual usage average is not applicable in this circumstance. 39-9

AESTHETICS

- Section 5.4 (Aesthetics) downplays the impact that this proposed project would have on the entire area. The DEIR states that impacts are significant and unavoidable. The DEIR continues with a disclaimer stating that aesthetics is based on a subjective interpretation value. The statements and mitigation options are highly slanted in favor of the proposed development. 39-10

- In the DEIR statements and views in Section 5.4, Density and scale portray smaller, widely spaced homes, not as the proposed development would be in actuality. 39-11

- Roof angles are minimized in the graphics of Section 5.4. Mountain homes require a higher degree of slope for winter conditions. 39-12

- The Section 5.4 graphics do not show the lakeside wall that would make Moon Camp a private gated community. Downplay of this factor in the DEIR falsely understates the loss of views of the lake. 39-13

- The Section 5.4 statement that the proposed buildings would not be anticipated to incorporate reflective glass and also would minimize flat surfaces to reduce glare conditions in completely invalid. This suggests that decks would not be built or would be kept to a minimum. It is a widely known fact that decks are extremely popular on homes in the mountain community affording views. Also, non-reflective glass options would not be a reality due to costs, as windows would be maximized to take advantage of the privatized views. 39-14

All of the above statements and graphic depictions mislead the public as to the total negative visual impact of this proposed project and serve only to downplay the level of the significant and unavoidable impact on aesthetics.

LOSS OF BUSINESS

- At the DEIR scoping meeting held in March 2002, we brought up the loss of business the proposed project would have on the Valley lodge owners. This was not recorded at the meeting, nor was the impact analyzed in the DEIR. Homes purchased as vacation homes are frequently used as vacation rentals. This loss of revenue to lodge owners and restaurateurs needs to be considered in the overall economic well being of the Valley. 39-15

We have only touched on a small sampling of points of concern to us in this letter. Due to the short period of time we were allowed to comment, we were not able to adequately address the other topics we would like to cover. We would appreciate hearing from you and your department on any further action regarding this proposed project.

Sincerely,

Joseph L. Francuz

Barbara Francuz

Barbara Francuz
Fawnskin Homeowners
39787 Flicker Road

Response to Commentor No. 39
Joseph and Barbara Francuz
May 12, 2004

39-1 Commentor refers to accuracy of current Fire Risk Level designation. Please refer to Response to Comment No. 13-27, which addresses this concern.

39-2 Commentor refers to increased cumulative traffic and affects to evacuation plans. Please refer to Response to Comment No. 13-32, which addresses this concern.

39-3 Commentor refers to the urban/forest interface and the increased fire risk associated with project implementation. Please refer to Response to Comment Nos. 4-1, 4-4, and 13-27 to 13-36, which address these concerns.

39-4 Commentor refers to completeness of mitigation measures for fire protection services. Please refer to Response to Comment Nos. 4-1, 4-4, 13-39 and 13-31, which address these concerns. The County will consider the Commentor's opinion and comments during their deliberation on the project.

39-5 Commentor refers to the Project's consistency with the County's General Plan. Please refer to Response to Comment No. 13-9, which addresses this concern.

39-6 Commentor refers to the Project's consistency with the County's General Plan. Please refer to Response to Comment No. 13-10, which addresses this concern.

39-7 Commentor refers to the Project's consistency with the County's General Plan. Please refer to Response to Comment No. 13-16, which addresses this concern.

39-8 Commentor refers to cumulative impacts associated with other foreseeable projects. Please refer to Response to Comment No. 13-2, which addresses this concern.

39-9 Commentor refers to lake usage statistics and affects to recreational activities. Please refer to Response to Comment No. 13-25, which addresses this concern.

39-10 The County will consider the Commentor's opinion and comments during their deliberation on the project.

39-11 Commentor refers to the visual simulations not being reflective of build-out of the project area. Please refer to Response to Comment Nos. 13-54 and 13-55, which address this concern.

39-12 Commentor refers to the visual simulations not being reflective of build-out of the project area. Please refer to Response to Comment Nos. 13-54 and 13-55, which addresses this concern.

39-13 Project implementation would not include the construction of a lakeside wall along the project's southern perimeter. Thus, the view simulations appropriately do not illustrate a lakeside wall feature.

39-14 Mitigation Measure 5.4-4c recommends the use of "minimally" reflective glass, not "non-reflective" glass, to reduce the potential light and glare impacts associated with the proposed residential uses. This is considered a reasonable and feasible mitigation measure to reduce impacts in this regard. The proposed residential uses are anticipated to include potentially large decks. However, the decks would likely consist of wood or other minimally reflective surface material that parallels the ground. Thus, decking is not anticipated to be a significant source of light and/or glare.

39-15 Economic effects are not considered environmental effects under CEQA, and should be considered in an EIR only if they would lead to a physical impact on the environment. Thus, the loss of business as referenced by the Commentor was not addressed in the EIR. Also, refer to Response to Comment No. 13-8.

May 14, 2004

County of San Bernardino,
Land Use Services Department,
Planning Division
385 N. Arrowhead Ave.
First Floor
San Bernardino, CA 92415-0182
ATTN: MATTHEW W. SLOWICK

RE: DRAFT EIR FOR THE MOON CAMP DEVELOPMENT PROJECT/RKC PROPERTIES INC.: GENERAL PLAN AMENDMENT/OFFICAL LAND USE DISTRICT CHANGE FROM BV/RL-40 TO BV/RS-7200 AND AMENDMENT TO COUNTY CIRCULATION ELEMENT FOR REALIGNMENT OF
NORTH SHORE DRIVE; TENTATIVE TRACT MAP #13136, AND CONDITIONAL USE PERMIT FOR A BOAT DOCK.

Dear Mr. Slowick,

Thank you for the opportunity to review this letter. I live in Fawnskin where the proposed Moon Camp Development Project is to be built. I'm opposed to this Moon Camp Project as presently designed because the DEIR fails to adequately evaluate the TRUE impact this propsed project would cause to the critical issue of water. As you know, the Big Bear Lake region, including Fawnskin is experiencing the sixth year in a row of drought conditions. These include, but are not limited to: water restrictions being placed on businesses and residences, Big Bear Lake being about 15 feet from being full, the closure of public boat launch ramps especially on the North Shore where Fawnskin is located, not to mention the very real threat of a devastating forest fire like the ones we had last October, and the dead and dying trees due to the drought and beetle infestation. We get our water from wells and when the wells dry up we will have to find other more expensive means to bring water to the customers here. Water does not flow uphill so it would be impossible to pipe water in. I believe the development of this Moon Camp Project would put more strain on an already strained water issue up here. 40-1

State Route 38 runs through the proposed project is designated as a "Scenic Highway" by the county and as a "Scenic Byway" by the U.S. Forest Service. It does conclude that the impact with regards to aesthetics would be significiant and unavoidable if this project is approved. That conclusion is drawen even though the ENTIRE section on aesthetics (section 5.4) DOWNPLAYS and UNDERSTATES the impact that this proposed project would have on the entire area. The simulated views DO NOT include the housing density that is proposed, as they are not done to the correct scale. This way is so that they GROSSLY understate the effects on the views. They use views that are photographed and shot between the houses to MISLEAD how it will look from the houses above the proposed project. In addition, the view show an exceptional number of full-grown trees between and near the houses when in ACTUAL construction it would be HIGHLY UNLIKELY that those trees could be worked around rather than cut-therefore the simulated views must be for about 40-100 years in the future when new trees have grown that tall. Also by moving the highway farther back away from the lake, and putting in houses nearer to the lake, you will loose that lake view forever when you drive this "Scenic Highway/Byway" and it won't be scenic anymore. The glare from the lights of this project would block out the ability to get a clear unobstructed view of the stars and celestial formations during the year for those of us in Fawnskin who enjoy looking at the night sky. It would be like viewing the stars at night from a backyard in the Los Angeles area. It is hard to do because of the glare of lights. 40-2

THE DEIR in section 5.7 concludes that the short-term (construction), long-term, watercraft, and cumulative noise would be less than significant. **when we can hear every car pass from nearly everywhere in Fawnskin, this issue must be evaluated as significant. An example of this is the neighbors who live three blocks away were cutting firewood. I heard them cutting. Also when someone has a powerboat out on the lake, I can hear it from my house.** 40-3

As you can see the resulting imapcts on this proposed project would have many negative effects.

Sincerely,

Martha Brown

Martha Brown
P.O. Box 123
Fawnskin, CA 92333

Response to Commentor No. 40
Martha Brown
May 14, 2004

40-1 The County will consider the Commentor's opinion and comments during their deliberation on the project.

40-2 Commentor refers to the visual simulations not being reflective of build-out of the project area. Please refer to Response to Comment Nos. 13-54 and 13-55, which address this concern. The Commentor also refers to light and glare affects associated with project implementation. Please refer to Response to Comment Nos. 13-52, which addresses this concern. The County will consider the Commentor's opinion and comments during their deliberation on the project.

40-3 Commentor refers to short- and long-term noise impacts associated with project implementation. Please refer to Response to Comment No. 28-2, which addresses this concern.

Robin and Scott Eliason
PO Box 309
Fawnskin, California 92333
May 14, 2004

Matthew Slowik
County of San Bernardino
Land Use Services Department
385 N Arrowhead Ave. First Floor
San Bernardino CA 92415-0182

Re: Moon Camp Residential Subdivision TT16136 EIR

Dear Mr. Slowik,

Thank you for the opportunity to comment on the Draft Environmental Impact Report for the proposed Moon Camp residential development project, General Plan amendment, land use district change, circulation amendment, tentative tract map, and conditional use permit for a boat dock (collectively, DEIR). As residents of Fawnskin, California, we are strongly opposed to this proposed project. Development of Moon Camp, as proposed, would not be in the public interest and would have substantial adverse effects on surrounding properties and adjacent communities that rely on the same limited resources. We support the rights of the property owner to utilize the property consistent with current land use zoning, but we urge the County not to allow the significant impacts and dramatic adverse change in the character of the area that would occur should this proposed project be approved. Changing the zoning to allow this density of housing during current conditions in the mountains would be irresponsible. 41-1

As a professional biologist (Robin) and professional botanist (Scott) with recognized expertise on the wildlife and plants of Big Bear Valley, we also believe there would be significant impacts to biological resources not fully addressed in the DEIR. Significant impacts to biological resources are downplayed in the DEIR and many would continue to be significant after mitigation. Our comments focus on the errors, faulty assumptions, and omissions in the DEIR, specifically pertaining to biological resources. 41-2

In general, the DEIR understates the extent and significance of biological resource impacts that the proposed project would cause. Furthermore, the expected effectiveness of the proposed mitigation measures at reducing impacts to below significance is exaggerated and unsupported. Specific issues are as follows:

- Drought-year surveys yielded an incomplete assessment of rare plants. For example, *Ivesia argyrocoma* and *Mimulus purpureus* are widespread throughout the "open Jeffery pine" type, and are highly visible from Highway 38 and properties along Flicker Road. 41-3
- Most of the "open Jeffrey pine" type characterized in the DEIR should have been described as pebble plain habitat, based on soils and species composition; as defined in the Pebble Plain Habitat Management Guide developed by the San Bernardino National Forest in 2002. Therefore, approximately 17 acres of pebble plain habitat, not 0.69, would be destroyed. 41-4

Impacts to the entire pebble plains habitat area falls within the mandatory finding of significance for special status biological resources. 41-4

- Proposed mitigation for pebble plain habitat and special status plants is vague, speculative, untested, and probably untenable:
  - Vague: Measures 5.8-1a and g state that a 3:1 ratio is 'typical' but does not specify that this ratio would be required for this project. 41-5
  - Vague: Measures 5.8-1a and g also state that the "project applicant", which presumably includes the proponent as well as subsequent lot owners seeking to build, would pay compensation to fund the purchase and management of off-site habitat. The measure does not specify that this payment must be based on a current appraisal of Big Bear Valley habitat acreage, and an adequate endowment to provide for management in perpetuity. 41-6
  - Vague: It is not clear in the DEIR whether impacts to pebble plains habitat and other special status plants caused by initial construction of roads and infrastructure are subject to mitigation measures 5.8-1a and g. 41-7
  - Speculative: At 3:1, it would be difficult if not impossible to find a willing seller of approximately 50 acres of pebble plains and associated rare plant habitat. This would be about ¼ of the total remaining pebble plain habitat on private land. 41-8
  - Speculative: It would be difficult to find a qualified and willing manager for these conservation lands. The quality of management of private conservation (*i.e.,* mitigation) lands in Big Bear Valley over the last decade has been dismal. 41-9
  - Untested: The California Wildlife Foundation is willing to receive compensation funds and dispense these funds to parties who wish to purchase and manage conservation lands, but they have never done so at this scale or under these conditions. 41-10
  - Untenable: Because of the vague, speculative, and untested nature of 5.8-1a and g, impacts to pebble plains and other special status plants can not be reduced to below significance, nor can it reduce these significant impacts to any verifiable extent. 41-11
- Mitigation measure 5.8-1g fails to specify that the December 1 to April 1 seasonal restriction for bald eagles includes all vegetation clearing, grading, and exterior construction; following strong precedent from all projects on the shore of Big Bear Lake since at least the early 1980s. 41-12
- It is very confusing and misleading to combine in 5.8-1g the bald eagle seasonal restrictions with measures to mitigate impacts to pebble plains. 41-13
- The document understates the expected impacts to Bald Eagles and overstates the extent to which mitigation measures reduce the level of impacts.
  - The initial removal of approximately ¼ of the existing trees on the property, an estimated 655 out of 2,772 trees, is not analyzed with respect to bald eagles, and would apparently not be constrained or reduced by mitigation measure 5.8-1c. 41-14
  - The extent to which bald eagle perch trees can be protected under measures 5.8-1b and c are greatly exaggerated. Any trees that may pose a safety hazard to structures, power lines, telephone/cable lines, or roads can not be protected under the County Code or CC&R's. With the proposed density of lots and ultimately of structures, virtually every large tree within Moon Camp would be subject to future hazard tree removal. These would be hazards that do not exist under current land use and zoning. 41-15
  - The impacts to bald eagles that would be caused by the proposed project could harm bald eagles by removing habitat essential to the feeding and sheltering of this protected 41-16

species, and thereby may constitute "Take" as defined under the federal and state Endangered Species Acts. 41-16

  - While the DEIR concludes that impacts to bald eagles would remain significant with the proposed mitigation, the document understates the level and severity of impacts. 41-17

- The DEIR fails to address impacts to osprey, which frequently perch at Moon Camp in the Spring and Summer, and have similar habitat requirements and sensitivities to those of the bald eagle. 41-18
- Cumulative Effects: The cumulative effects of all of the existing developments, currently approved projects, and proposed developments are significant. It is not possible to mitigate for those significant effects. The cumulative effects analysis in the DEIR is not adequate and does not adequately address the drastic changes that have occurred in the Big Bear Basin especially over the last decade. 41-19
  - With the limited availability of water resources in the San Bernardino Mountains and the high fire risk (even in non-drought years), it would be unconscionable to allow further large-scale development in this area. This project combined with the proposed Marina Point project would at least double the population of the town of Fawnskin. The DEIR describes many significant impacts that would occur—including traffic, water utilization, etc. Those significant impacts cannot be mitigated. It is the County's responsibility and mandate to recognize this significance and determine that it would NOT be good for the communities of the Big Bear Valley. 41-20

When buying property, we researched the current zoning of property around the house and were comfortable with the R-40 zoning of the Moon Camp property. We never would have considered buying property at this Fawnskin location had we known that the Board of Supervisors would consider changing it, thereby adversely affecting our property. If it were this easy to change zoning, the County General Plan would be useless. Please use it as it was meant to be, as a planning document to guide the future of the County and its residents. Please do the right thing and smart thing for the environment, the residents, and visitors by denying this development proposal. 41-21

In closing, the DEIR presents a weak analysis of biological resources which consistently understates the expected level of impacts, and puts forward a set of mitigation measures that would not be effective in substantially reducing highly significant impacts. 41-22

We again urge the County to fulfill its responsibilities to protect the Public Trust and to meet your obligations to protect the quality of the environment. Please select the "No Project" alternative. 41-23

Sincerely,

Robin Eliason

ROBIN ELIASON and SCOTT ELIASON
Residents of Fawnskin and Experts on Biological Resources
1098 Canyon Road

Response to Commentor No. 41
Robert and Scott Eliason
May 14, 2004

41-1 The County will consider the Commentor's opinion and comments during their deliberation on the project.

41-2 The County will consider the Commentor's opinion and comments during their deliberation on the project.

41-3 Commentor refers to adequacy of biological resources surveys in drought years. Please refer to Response to Comment Nos. 3-5 and 13-90, which addresses this concern.

41-4 Please refer to Response to Comment No. 6-1. According to the 2002 Pebble Plain Habitat Management Guide, National Forest land currently supports approximately 3,473 acres of pebble plain habitat and private land supports approximately 736 acres, for an estimated total of approximately 4,209 acres. If the open Jeffrey pine on the project site is determined to be pebble plain during surveys required by Mitigation Measure 5.8-1a and the extent of pebble plain habitat on the project site equates to approximately 17.38 acres, impacts to this acreage would not be expected to substantially reduce the habitat type, threaten to eliminate a plant community, or result in a cumulatively considerable impact to pebble plain habitat. Therefore, impacts to this habitat type associated with the proposed project would not be expected to trigger the Mandatory Findings of Significance for biological resources.

41-5 Commentor refers to specific requirements in the special status plant and vegetation mitigation. Please refer to Response to Comment Nos. 3-5 and 3-6, which addresses this concern.

41-6 Commentor refers to specific requirements in the special status plant and vegetation mitigation. Please refer to Response to Comment Nos. 3-5 and 3-6, which addresses this concern.

41-7 Commentor refers to the applicability of the special status plant and vegetation mitigation. Please refer to Response to Comment Nos. 3-5, 13-86 and 13-95, which addresses this concern.

41-8 Commentor refers to likelihood of finding a property owner to sell land in accordance with the special status plant and vegetation mitigation. Please refer to Response to Comment Nos. 13-92 and 41-4, which address this concern. The County will consider the Commentor's opinion and comments during their deliberation on the project.

41-9 Commentor refers to management of conservation lands referenced in the special status plant and habitat mitigation. Please refer to Response to Comment Nos. 3-5 and 13-92, which address this concern. The County will consider the Commentor's opinion and comments during their deliberation on the project.

41-10 The Commentor refers to the nature of the special status plant and vegetation mitigation. Please refer to Response to Comment Nos. 3-5 and 13-92, which address this concern. The County will consider the Commentor's opinion and comments during their deliberation on the project.

41-11 Please refer to Response to Comment Nos. 41-5 to 41-11. The County will consider the Commentor's opinion and comments during their deliberation on the project.

41-12 Mitigation Measure 5.8-1g has been deleted. Please refer to Response to Comment Nos. 3-5 and 3-6.

Page 5.8-66, Mitigation Measure 5.8-2e of the Draft EIR has been revised in the Final EIR as follows:

5.8-2e ~~Garages with automatic door openers shall be required. No exterior construction shall occur between December 1 and April 1, when bald eagles are present~~. Garages with automatic door openers shall be required. No exterior construction, grading or vegetation clearing shall be permitted between December 1 and April 1, which is the wintering period for bald eagles (i.e., the season when bald eagles are present in the Big Bear area).

41-13 Commentor refers to Mitigation Measure 5.8-1g including requirements for both bald eagle populations and pebble plain habitat. Please refer to Response to Comment No. 41-12, which addresses this concern.

41-14 The impacts to bald eagle are considered significant and unavoidable by the EIR. The EIR does not attempt to quantify the extent to which mitigation measures reduce the levels of impacts; however, the mitigation measures do not reduce the impacts to a level considered less than significant. Removal of trees during clearing for construction would not be conducted while bald eagles are present on the site in accordance with Mitigation Measure 5.8-2e. Therefore, clearing of the trees would not result in a direct impact on bald eagles. However, on page 5.8-51 of the Draft EIR, impacts to bald eagle are addressed and it is indicated that removal of trees or construction of uses in proximity to trees used by the bald eagle such that "a loss of perching or roosting habitat value for wintering bald eagles would be considered a significant impact." This impact is identified as significant and unavoidable in the EIR.

Also, refer to Response to Comment No. 13-88, which addresses cumulative impacts to the bald eagle.

41-15 Commentor refers to impacts to bald eagles. Please refer to Response to Comment No. 41-14, which addresses this concern. The County will consider the Commentor's opinion and comments during their deliberation on the project.

41-16 The term "Take" means to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct" under the State and

Federal Endangered Species Acts. Mitigation Measure 5.8-2e (as revised) would insure that no vegetation removal or construction would occur on the project site while bald eagles are present. Removal of unoccupied habitat is not considered "Take" under the Federal and State Endangered Species Acts.

41-17 The County will consider the Commentor's opinion and comments during their deliberation on the project.

41-18 Commentor refers to impacts to Osprey. Please refer to Response to Comment No. 13-87, which addresses this concern.

41-19 Cumulative impacts to biological resources are discussed in Impact Statement 5.6-6 of the Draft EIR. The cumulative impact analysis has been modified to indicate that project implementation would result in significant and unavoidable impacts to the wintering bald eagle population. Please refer to Response to Comment No. 13-88. Also, Response to Comment No. 13-2 addresses the cumulative project analysis throughout the EIR. The County will consider the Commentor's opinion and comments during their deliberation on the project.

41-20 The County will consider the Commentor's opinion and comments during their deliberation on the project.

41-21 The County will consider the Commentor's opinion and comments during their deliberation on the project.

41-22 The County will consider the Commentor's opinion and comments during their deliberation on the project.

MARLA J HENRICH
P.O. BOX 282
FAWNSKIN, CA 92333
Phone 909-866-3300
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E-mail: marlajean@hotmail.com

Friday, May 14, 2004

Matthew W. Slowik
Land Use Services Department
Planning Division
385 N. Arrowhead Ave., First Floor
San Bernardino, CA 92415-0182

RE: DRAFT EIR FOR THE MOON CAMP DEVELOPMENT PROJECT/RCK PROPERTIES INC.,GENERAL PLAN AMENDMENT/OFFICIAL LAND USE DISTRICT CHANGE FROM BV/rl-40 TO BVRS-7200 AND AMENDMENT TO COUNTY CIRULATION ELEMENT FOR REALIGNMENT OF NORTH SHORE DRIVE;TENTATIVE TRACT MAP #1636, AND CONDITIONAL USE PERMIT FOR A BOAT DOCK.

Dear Mr. Slowik:

Thank you for the opportunity to review the document and provide comments. I oppose this Moon Camp project as presently designed, because the DEIR fails to adequately evaluate the true impact on the Fawnskin area. The following are examples of my concerns:

Section 5.3. 1 – Fire Protection
The evaluations for this section were based on Fire Risk level 2. This is invalid because all mountain areas in the County have now been upgraded to Fire Risk level 1. 42-1

Nothing was included in the EIR in this Fire Protection section regarding evacuations from the valley in case of wild fire and the impact adding more house would have on that. Since the last evacuation took 6 hours to get off the mountain when we had a few days warning and minimal tourists in the area, **the impact of more houses is VERY SIGNIFICANT.** The "Old Fire" last fall really was a wakeup call. With only 3 exits out of this valley and the possibility that all 3 may not be available for an evacuation is of great concern. It will be several years before we have a healthy forest and the threat of fire is a real danger. 42-2

The mitigations listed on page 5.3.22 for fire protection are completely inadequate. 5.3-1b says fires sprinklers will be added in each residence in lieu of additional manpower. 5.3-1e and 5.3-1f says the fire-resistant vegetation required in the project will be managed and enforced by the Homeowners Association for the project. Who will monitor the Homeowners Association to make certain they are enforcing the rules? These mitigations will have zero impact on improving the situation. We are in a high fire alert area. 42-2

Section 5.7 – Noise

The DEIR Section 5.7 concludes that the short-term (construction), long term, watercraft and cumulative noise would be less that significant. This is not the case. As of this time, highway noise can be heard in Fawnskin. The Marina Point project, the moving of the Moonridge Zoo to the North Shore, and this project would certainly increase the highway usage and create more noise. This project also includes a marina. This would impact the highway use noise as well the noise level from boat engines, people's voices, etc. The general noise associated with a marina would definitely impact the noise level in our homes. **The homes and marina in the Moon Camp proposal along with the proposed Marina Point development (which also includes a proposed marina) would have a significant negative impact in regards to the noise level in this area.** 42-3

Thank you for the opportunity to respond to the Draft EIR.

Sincerely,

Marla J Henrich

Marla J. Henrich

cc: Supervisor Dennis Hansberger
Congressman Jerry Lewis
Senator Jim Brulte
Assemblyman Russ Bogh
Senator Nell Soto

Response to Commentor No. 42
Marla J. Henrich
May 12, 2004

42-1 Commentor refers to the current accuracy of the Fire Risk Level designation. Please refer to Response to Comment No. 13-27, which addresses this concern.

42-2 Commentor refers to traffic impacts and affects to evacuation plans, as well as completeness of fire protection services mitigation measures. Please refer to Response to Comment Nos. 4-1, 4-4, and 13-27 to 13-34, which address these concerns.

42-3 Commentor refers to the short- and long-term cumulative noise impacts associated with proposed project and the adjacent Marina Point development. Please refer to Response to Comment Nos. 13-80, 13-83, 26-15 and 28-2, which address these concerns. The County will consider the Commentor's opinion and comments during their deliberation on the project.

May 14, 2004

County of San Bernardino, Land Use Services Department
Planning Division
385 N. Arrowhead Ave-First Floor
San Bernardino, CA 92415-0182

Attn: Matthew W. Slowik

Re:" DRAFT EIR FOR THE MOON CAMP DEVELOPMENT PROJECT/RCK PROPERTIES INC.:GENERAL PLAN AMENDMENT/OFFICIAL LAND USE DISTRICT CHANGE FROM BV-40 TO BV/RS-7200 AND AMENDMENT TO COUNTY CIRCULATION ELEMENT FOR REALIGNMENT OF NORTH SHORE DRIVE; TENTATIVE TRACT MAP #16136, AND CONDITIONAL USE PERMIT FOR A BOAT DOCK."

Dear Mr. Slowik,

We appreciate the opportunity to review this document. We are opposed to the Moon Camp project as presently designed because the DEIR has failed to evaluate adequately the true impact the project would cause for the home owners of Fawnskin. Although there are many issues we are in opposition, we will only list a few.

WATER- 5.3.6
It is stated that the proposed changes will not have an adverse effect on our community- In reality, the impact will be significant. Our lake is extremely low, we already have a water shortage. We face constant fire danger and the lack of water to fight it. Water measurement was done in 1987- DEIR does not evaluate the water supply in draught conditions. The water supply must be proven prior to changing zoning before allowing more than one house per 40 acres. We are already on odd/even watering days for the existing houses and these restrictions do not work. **43-1**

FIRE PROTECTION – 5.3.1
Last evacuation, it took over 6 hours to get Big Bear residents off the mountain. This was not a weekend or holiday which would have had a serious impact on the safety of the residents, tourists. The Discovery center is now being expanded which will bring up more tourists and create more congestion. The fire department already has limited access to some of the areas and increased population due to the new proposed projects is going to be a real disaster. **43-2**

ELECTRICITY-5.3.9
We will be receiving higher electricity rates due to the new generator Bear Valley Electric is building and it is designed to handle peak period overloads for the current residents and businesses. No more electricity can be brought up the mountain and we are already facing shortages. A power source on the proposed project would create additional pollution, additional noise, and a threat to wildlife. **43-3**

NOISE-5.7
We already have a significant rise in noise through Fawnskin . We hear every car that passes and the proposed new construction has plans to move the highway closer to the homes creating increased noise, and pollution. The new project also plans to add nearly 100 boat slips which will increase the noise level to Fawnskin homeowners. We already hear every boat on the lake and we believe that many will decide to leave because our peace and tranquility will be destroyed. We live in Fawnskin because it is quiet, peaceful and this new proposed project is taking away everything we came here to enjoy. **43-4**

Thank you for allowing us to express our feelings.

Dr. Gerald and Natalie Marks
39739 Flicker Road
Fawnskin,CA 92333/0229

Response to Commentor No. 43
Dr. Gerald and Natalie Marks
May 14, 2004

43-1 Commentor refers to water supply and affects to groundwater. Please refer to Response to Comment Nos. 1-3 to 1-6, 13-42, 13-43, 13-44, 13-47, 18-1 and 21-3, which address these concerns.

43-2 Commentor refers to increased traffic and affects to evacuation plans. Please refer to Response to Comment No. 13-32, which addresses this concern. The County will consider the Commentor's opinion and comments during their deliberation on the project.

43-3 Commentor refers to the potential impacts as a result of constructing an alternative electrical power source on the project site. Please refer to Response to Comment Nos. 13-49, which addresses these concerns. The County will consider the Commentor's opinion and comments during their deliberation on the project.

43-4 Commentor refers to long-term noise impacts associated with project implementation. Please refer to Response to Comment Nos. 13-80, 13-83, 26-15 and 28-2, which address this concern. The County will consider the Commentor's opinion and comments during their deliberation on the project.

May 15, 2004

Mr. Matthew W. Slowik
County of San Bernardino
Land Use Services Department, Planning Division
385 N. Arrowhead Ave., First Floor
San Bernardino, CA 92415-0182

RE: DRAFT EIR for the Moon Camp Development Project/RCK Properties Inc.: General Plan Amendment/Official Land Use District Change; Tentative Tract Map #16136, & conditional use permit for a boat dock.

Dear Mr. Slowik,

Thank you for allowing us to review the above referenced document. We believe that the resulting impacts of this proposed project would be very significant. Namely:

1) **Zoning change:** In section 5.1-2, San Bernardino County Development Code, the DEIR states that according to the General Plan, a Land Use District Change requires that each of the following statements be true:
   a. "The proposed land use District change is in the public interest, there will be a community benefit, and other existing and permitted uses will not be compromised." This is not true! 44-1
   b. "The proposed land use District change is consistent with the goals and policies of the General Plan, and will provide a reasonable and logical extension of the existing land use pattern in the surrounding area." This parcel has been one for one single family residence for years, and serves as a buffer between existing single family residences and the National Forest and the lake. 44-2
   c. "The proposed land use District change does not conflict with provisions of this Code, or any applicable specific code." This is doubtful, when one reads the first 100+ pages of the DEIR, statement after statement is made as to the negative impacts. 44-3
   d. "The proposed land use District change will not have a substantial adverse effect on surrounding property." It would have significant impacts in terms of traffic, air and noise pollution. 44-4

2) **Cumulative Impact:** In section 5.1-3 of the DEIR it states that combined with other future development, the proposed project would increase the intensity of land uses in the area. The cumulative effects of this proposed project, plus the proposed Marina Point development, plus the proposed Brookside project, plus the expansion of the Discovery Center to handle more visitors, plus all the developments on the south shore, given the water shortage, electricity shortage, fire danger, lack of evacuation abilities, all go together to create an 44-5

extremely significant impact. It is invalid, misleading, and understated to analyze this project alone. 44-5

3) **Recreation:** In section 5.2-1, the DEIR states that the proposed construction of marina facilities may have an adverse impact on the physical environment. 44-6

4) **Fire Protection:** All the evaluations in Section 5.3-1 were based on Fire Risk level 2, but all mountain areas in the County have now been upgraded to Fire Risk level 1, so all the comments here are invalid. Nothing was addressed in the document about evacuations from the valley, and how additional homes and residents will impact the already difficult evacuation plans. It would have a *significant impact!* The mitigations listed on page 5.3-22 for fire protection are completely inadequate. Our valley has unprecedented building, with a higher wildfire risk than anywhere else in the country, and questionable ability to evacuate the people who already live here. The view that the South shore residents and visitors enjoy would be irreparable damaged if two massive projects replace trees with walls, windows and marinas, as well as increasing boat and car traffic! 44-7

The Old Fire demonstrated that we can't defend what already exists in the mountains. Denial and complacency of the mountain fire danger has already placed too many people in jeopardy. Disasters will only get worse, if we ignore the lessons of the Old Fire and lapse again into forgetfulness and denial, further underestimating this dire problem. 44-8

Anyone who was in the Big Bear evacuation knows that it is highly irresponsible to add more people to these dangerous mountains. There comes a time when public safety and taxpayer protection must override high zoning densities and excessive profiteering on private lands in the mountains. The Old Fire indicates we've reached that point. 44-9

5) **Police Protection:** The DEIR says in section 5.3-2 that the project implementation could result in significant physical impacts but has concluded these would be less than significant. Additional rental properties would only increase the already significant problem that exists with owners not being held accountable for following rules, and the rules not being enforced. Fawnskin residents have had problems with slow response times and adding more residents would only add to the problem. 44-10

We, as residents of Fawnskin, respectfully request that you look at these and other significant impacts that this proposed project would have. Residents and visitors to Fawnskin are here precisely BECAUSE of the peaceful, quiet nature of the area. They are here because it IS mostly forest service land, because it IS NOT like the South shore. Let's not let yet another developer try to change the zoning in order to build more homes that are not needed or wanted.

Very truly yours,

William Hazewinkel
Nancy Walker
PO Box 378, Fawnskin, CA 92333

Response to Commentor No. 44
William Hazewinkel and Nancy Walker
May 15, 2004

44-1 Commentor refers to the Project's consistency with the County's General Plan. Please refer to Response to Comment No. 13-9, which addresses this concern.

44-2 Commentor refers to the Project's consistency with the County's General Plan. Please refer to Response to Comment No. 13-10, which addresses this concern.

44-3 The County will consider the Commentor's opinion and comments during their deliberation on the project.

44-4 Commentor refers to the Project's consistency with the County's General Plan. Please refer to Response to Comment No. 13-16, which addresses this concern.

44-5 Commentor refers to cumulative impacts associated with other foreseeable projects. Please refer to Response to Comment No. 13-2, which addresses this concern.

44-6 Commentor refers to the proposed marina facility and potential impacts to the environment from recreational facilities. Please refer to Response to Comment No. 13-24, which addresses this concern.

44-7 Commentor refers to impacts to fire protections services as a result of project implementation. Please refer to Response to Comment Nos. 4-1, 4-4, and 13-27 to 13-34, which address these concerns. The County will consider the Commentor's opinion and comments during their deliberation on the project.

44-8 The County will consider the Commentor's opinion and comments during their deliberation on the project.

44-9 Commentor refers to traffic impacts and affects to evacuation plans. Please refer to Response to Comment No. 13-32, which addresses this concern. The County will consider the Commentor's opinion and comments during their deliberation on the project.

44-10 Commentor refers to current police protection services and the Project's impact to police services. Please refer to Response to Comment Nos. 13-38 to 13-40, which address these concerns.

May 15, 2004

County of San Bernardino
Land Use Services Department
Planning Division
385 N. Arrowhead Ave., First Floor
San Bernardino, CA 92415-0182

Attn: Matthew W Slowik

Subject: Draft EIR for the Moon Camp Development Project/RCK Properties, Inc.: General Plan Amendment/Official Lane Use District change from BV/RL-40 to BV/RS-7200 and amendment to county circulation element for realignment of North Shore Drive; Tentative tract map #16136, and conditional use permit for a boat dock.

Thank you for the opportunity to review this document and give my thoughts on the problems that I see would be a result of this development. I oppose the Moon Camp project as presently designed because the DEIR fails to adequately evaluate the true impact this proposed project would cause to the critical issues of water and biological resources.

Water:

1. The DEIR in Section 5.3-6 states that this project is exempt from SB221 (which states adequacy of water supplies for the proposed project must be determined). It also says that SB221 applies to any subdivision that increases connections by 10% or more, if the water service has few than 5,000 connections. The Fawnskin water service is completely separate from the system that serves the rest of the Valley. Since there are currently 673 connections in Fawnskin, 92 additional connections is a 14% increase, so this law applies. 45-1
2. The DEIR in Section 5.3-6 bases potential water supply on two wells on the property drilled in 1987. It does not evaluate the well production based on extensive drought conditions much different from when the productions were measured in 1987. 45-2
3. Mitigation number 5.3-6 a, states that water supply has to be proven prior to building permits. Given the current drought conditions, the rate increases and water restrictions already in place, the water supply must be proven prior to changing the zoning to allow more than 1 house per 40 acres. 45-3
4. Mitigation number 5.3-6d states that all the current water restrictions for outdoor watering will continue, such as limited hours every other day, no run-off, etc. These restrictions already do not work effectively for the existing house, and pretending this mitigation would have any effect is completely misleading. 45-4

5. Section 5.3-6 states that the groundwater basin is already in overdraft conditions, but the overall analysis grossly understates the problem and current water shortages. 45-5

Biological

1. Loss of trees was not considered as part of the biological resources evaluation (section 5.8). 45-6
2. While a mitigation for eagles states that all trees over 20 inches in diameter will be protected, it does that only on the individual lots and does not hold the developer to that standard for cutting roads and other structural changes required for the proposed project. Therefore, the analysis is misleading in pretending that this mitigation will actually protect the eagle perch trees. 45-7
3. The analysis does not include ospreys, common visitors to the site. 45-8

Thank you for your attention to these items. I respectfully request that the Moon Camp project not be approved in its current form.

Sincerely,

Beverly Ornelas
Fawnskin Property Owner
1076 Fawnskin Drive
Fawnskin, CA 92333

Response to Commentor No. 45
Beverly Ornelas
May 15, 2004

45-1 Commentor refers to the applicability of SB 221. Please refer to Response to Comment No. 13-42, which addresses this concern.

45-2 Commentor refers the historical well data utilized in the analysis of groundwater. Please refer to Response to Comment Nos. 1-3, 1-4, 1-5 and 13-98, which address this concern.

45-3 The County will consider the Commentor's opinion and comments during their deliberation on the project.

45-4 Commentor refers to existing and proposed water conservation measures in place and their effectiveness. Please refer to Response to Comment No. 13-47, which addresses this concern. The County will consider the Commentor's opinion and comments during their deliberation on the project.

45-5 Commentor refers to water supply and the affects to groundwater supply. Please refer to Response to Comment No. 1-5, which addresses this concern.

45-6 Commentor refers to the loss of trees and the affects to biological resources. Please refer to Response to Comment No. 13-86, which addresses this concern.

45-7 Commentor refers to impacts to bald eagles. Please refer to Response to Comment Nos. 3-7, 13-86, 13-88, 13-95 and 41-14, which address this concern.

45-8 Commentor refers to impacts to osprey. Please refer to Response to Comment No. 13-87, which addresses this concern.

Sandy Steers
P.O. Box 423
Fawnskin, CA 92333
(909) 878-3091

May 16, 2004

HAND DELIVERED

County of San Bernardino
Land Use Services Department, Planning Division
385 North Arrowhead Avenue 1st Floor
San Bernardino, California 92415-0182

Attn: Matthew Slowik, Sr. Assoc. Planner

RE: "DRAFT EIR FOR THE MOON CAMP DEVELOPMENT PROJECT/RCK PROPERTIES INC.: GENERAL PLAN AMENDMENT/OFFICIAL LAND USE DISTRICT CHANGE FROM BV/RL-40 TO BV/RS-7200 AND AMENDMENT TO COUNTY CIRCULATION ELEMENT FOR REALIGNMENT OF NORTH SHORE DRIVE; TENTATIVE TRACT MAP #16136, AND CONDITIONAL USE PERMIT FOR A BOAT DOCK."

Dear Mr. Slowik,

Thank you for this opportunity to comment on the Draft Environmental Impact Report for the proposed Moon Camp residential development project, General Plan amendment, land use district change, circulation amendment, tentative tract map and conditional use permit for a boat dock (collectively DEIR). As a resident and homeowner in Fawnskin, California, I am strongly opposed to this proposed project. This Moon Camp project, as proposed, is completely contrary to the County's obligation to safeguard the public interests. Changing the zoning to allow for more dense housing in the midst of an emergency crisis in the mountains, and thereby increasing the public safety risks and public health risks, would be irresponsible on the part of the County. 46-1

This DEIR omits much essential information and analyses and downplays the extent and the significance of the impacts that would be caused by the development of this proposed project. Most importantly, it completely ignores how extensively the proposed zoning change goes against the County's General Plan ordinances, it downplays and misstates the importance of the current water shortage in the mountains and the lack of a proven water supply for this proposed project, and it fails to mention the key issue of fire evacuations from the 46-2

mountains in a time when the mountain communities have been declared by both the State and the County to be in a State of Emergency. 46-2

- There is nothing in the DEIR, not even in the Fire Protection analysis, Section 5.3, that discusses or analyzes the effect this proposed project would have on the already controversial and questionable ability to safely evacuate all residents and visitors from the mountains. With two days notice and a fire still a few miles from the Big Bear Valley, it took over 6 hours to get off the mountain during the October evacuations. The DEIR must include an evaluation of the impact on evacuations for similar circumstances, as well as for the possibility of a fire starting near Fawnskin. 46-3
- The DEIR states in Section 5.1-2 that according to the General Plan, a Land Use District Change requires that four statement be true – basically, that it is in the public interest and to the community benefit, that it does not conflict with any County codes, that it does not have an adverse effect on surrounding properties and that it provides a logical extension of the surrounding properties. As described in detail in the response letter to the County from the Friends of Fawnskin, **this zoning change does not meet even one of those requirements!** And yet, this DEIR concludes that the impact of this zoning change would be less than significant. 46-4
- The DEIR, in Section 5.3-6, seriously downplays the importance of the current water crisis in the Big Bear Valley and fails to mention that the area is currently on Stage 2 water restriction, with Stage 3 a possibility by the end of summer. The DEIR does not fully address nor adequately analyze the impacts this proposed project would have on this issue that is critical to the health and well-being of the entire Valley population. (again, reference the response letter from Friends of Fawnskin.) 46-5

In summary, this DEIR is incomplete and inaccurate and must be rejected. The many significant impacts are downplayed, sugar-coated or completely ignored. This proposed project, as presented, is totally contrary to the guidelines set forth in the County's General Plan and totally contrary to the best interest of the community. It threatens to further endanger the public safely and public health and warrants a denial. I strongly urge the County to select the No Project Alternative.

Sincerely,

Sandy Steers

Sandy Steers
Fawnskin resident and homeowner

Response to Commentor No. 46
Sandy Steers
May 16, 2004

46-1 The County will consider the Commentor's opinion and comments during their deliberation on the project.

46-2 The Draft EIR includes a comprehensive analysis for each subject area and fully complies with the requirements of CEQA, including Sections 15120 to 15132 of the CEQA Guidelines, which outline the "Contents of and Environmental Impact Report." The Commentor refers to the Project's consistency with the County's General Plan. Please refer to Response to Comment Nos. 13-9 to 13-20, which address this concern. Also, the Commentor refers to the Project's potential to impact evacuation plans. Please refer to Response to Comment No. 13-32, which addresses this concern. The County will consider the Commentor's opinion and comments during their deliberation on the project.

46-3 Commentor refers to traffic impacts and affects to evacuation plans. Please refer to Response to Comment No. 13-32, which addresses this concern.

46-4 The Commentor refers to the Project's consistency with the County's General Plan. Please refer to Response to Comment Nos. 13-9 to 13-16, and 13-20, which address this concern.

46-5 Commentor refers to water supply and the impacts to groundwater. Please refer to Response to Comment Nos. 1-3, 1-4, 1-5 and 13-47, which address this concern.

R. Lee Whitney
Marilyn Whitney
P.O. Box 37
Fawnskin, CA 92333
(909) 866-3818

May 16, 2004

County of San Bernardino
Land Use Services Department, Planning Division
385 N. Arrowhead Ave., First Floor
San Bernardino, CA 92415-0182
Attn: Matthew W. Slowik

RE: DRAFT EIR FOR THE MOON CAMP DEVELOPMENT PROJECT/RCK PROPERTIES INC.: GENERAL PLAN AMENDMENT/OFFICAL LAND USE DISTRICT CHANGE FROM BV/RL-40 TO BV/RS-7200 AND AMENDMENT TO COUNTRY CIRCULATION ELEMENT FOR REALIGNMENT OF NORTH SHORE DRIVE; TENTATIVE TRACT MAP #16136, AND CONDITIONAL USE PERMIT FOR A BOAT DOCK.

Dear Mr. Slowik:

We appreciate the opportunity to review this document. We oppose this Moon Camp project as presently proposed because the DEIR fails to adequately address the total impact of the zoning change.

Section 5.1-2 of the DEIR states that the proposed project "conflicts with the land use plan, policies and regulations of the San Bernardino County Development Code." Their highly subjective analysis concludes that the proposed project would have an insignificant impact on the General Plan Land Use policies. We strongly disagree with these assumptions. 47-1

In section 5.1-2, San Bernardino County Development Code, the DEIR states that according to the General Plan, a Land Use District Change requires that each of the following statements be true:

1. The proposed land use District change is in the public interest, there will be a community benefit, and other existing and permitted uses will not be comprised.
2. The proposed land use District change is consistent ...
3. The proposed land use District change does not conflict .....
4. The proposed land use District change will not have a substantial adverse effect on the surrounding property.

Item #1 is not true because the proposed project is not in the public interest of the residents of Fawnskin, and would not be a benefit to the existing community. The existing infrastructure cannot support the current population. Changing demographics, without any zone changes, will increase full-time occupancy rates because of the substantial increase in retirees in the next twenty years. 47-2

- Roads – All of the DEIR analyses are based on "average" traffic volumes. We have experienced peak volumes (evacuation for fire in October 2003) and the roads were jammed. It took seven hours to evacuate in "bumper-to-bumper" traffic conditions on a weekday. On summer weekends, Stanfield Cutoff has extremely long lines waiting to turn onto Big Bear Blvd. Adding additional housing units will only increase this problem. 47-3
- Water – We are currently experiencing a drought condition that has been going on for five to six years. Experts question whether the past 100 wet years might have been an anomaly, and that the coming years might continue to be much drier. If this dry condition continues, we believe that it is reckless to change zoning to provide for any additional residential units. The DEIR in Section 5.3-6 states, "Based upon the inability for providers to confirm services, coupled with potentially significant overdraft conditions cited in Section 5.11 of the EIR, impacts are concluded to be significant 47-4

and adverse." Given the current drought conditions, the rate increases, water restrictions for outdoor watering for existing houses, we believe that zoning must not be changed to allow more than 1 house per 40 acres. 47-4

Item #4 is not true because the proposed project will have a substantial adverse effect on surrounding property. 47-5

- Fire Protection – Section 5.3-1 of the DEIR based their analysis on Fire Risk level 2. All mountain areas in the County have been declared Fire Risk level 1. A new analysis is needed to address this situation.
- Aesthetics of the existing Scenic Byway - State Route 38 that runs through the proposed project is designated as a "Scenic Highway" by the County and as a "Scenic Byway" by the United States Federal Government. We, as residents of Fawnskin, are particularly appreciative of the natural beauty of that Highway. The proposed project would completely alter the natural setting/character and forever change scenic nature of the area. Simulated views shown in the DEIR (Section 5.4) are over-simplified in that they do not show potential effects of the new homeowner's probable tree plantings. From our experience, new trees will become a larger problem in changing/destroying lake views. Homeowners typically plant trees that will grow fast, like Poplars, Maples, and Flowering Crabapples (none native to the San Bernardino Mountains) that quickly grow and block views. Therefore the simulated highway views are likely to become nonexistent. (These trees will also contribute to the water shortage problem.) 47-6

Thank you for your consideration in this matter. We have been residents of Fawnskin for almost twenty-five years and believe that the proposed project would adversely affect our community.

Sincerely,

Lee Whitney
Marilyn Whitney

Response to Commentor No. 47
Lee and Marilyn Whitney
May 16, 2004

47-1 The Commentor refers to the Project's consistency with the County's General Plan. Please refer to Response to Comment Nos. 13-9 to 13-16, which address this concern.

47-2 The Commentor refers to the Project's consistency with the County's General Plan. Please refer to Response to Comment No. 13-9, which addresses this concern.

47-3 Section 5.5, *Traffic and Circulation*, presents data regarding average and peak month traffic volumes on the Existing Conditions section. However, the traffic analysis and identified impacts were analyzed for peak month traffic volumes, not average month traffic volumes. Also, refer to Response to Comment No. 13-32.

47-4 The County will consider the Commentor's opinion and comments during their deliberation on the project.

47-5 The Commentor refers to the Project's consistency with the County's General Plan due to the current Fire Risk Level designation. Please refer to Response to Comment No. 13-27, which addresses this concern.

47-6 Commentor refers to the visual simulations not being reflective of build-out of the project area. Please refer to Response to Comment Nos. 13-54 and 13-55, which address this concern. The County will consider the Commentor's opinion and comments during their deliberation on the project.

COMMENT NO. 48

May 17, 2004

Mr. Matthew W. Slowik
County of San Bernardino Land Use Services Department, Planning Division
385 N. Arrowhead Avenue, First Floor
San Bernardino, CA 92415-0182

RE: DRAFT EIR FOR THE MOON CAMP DEVELOPMENT PROJECT/RCK PROPERTIES, INC.: GENERAL PLAN AMENDMENT/OFFICIAL LAND USE DISTRICT CHANGE FROM BV/RL-40 TO BV/RS-7200 AND AMENDMENT TO COUNTY CIRCULATION ELEMENT FOR REALIGNMENT OF NORTH SHORE DRIVE; TENTATIVE TRACT MAP #16136, AND CONDITIONAL USE PERMIT FOR A BOAT DOCK.

Dear Mr. Slowik,

We are writing to request that the County extend the May 17, 2004 deadline for the public responses to the DEIR for the Moon Camp Development Project. We feel that six weeks is an unreasonably short amount of time to evaluate a document, which took RBF consulting two years to complete. The DEIR is a huge, complex document, which refers to other reports, and documents that are not included. We find that we require more time to review the existing information and locate and research the referred documents. 48-1

We appreciate your consideration in this request. We may be reached at 909-866-2839. We look forward to your response.

Sincerely,

Thomas and Kimberly Brickley
39745 Flicker Road
P.O. Box 88
Fawnskin, CA 92333

Response to Commentor No. 48
Thomas and Kimberly Brickley
May 17, 2004

48-1 Commentor refers to extending the deadline for providing comments on the Draft EIR. Please refer to Response to Comment No. 9-1, which addresses this concern.

Memorandum to Matthew Slowik

From Roman Silberfeld

Re - Draft EIR for Moon Camp Development Project

May 17, 2004

Although I wrote to you last week and requested an extension of time within which to respond to the draft EIR, I have not heard from you and therefore I submit this brief memorandum as my comments in opposition to the draft EIR. I hope that you will nevertheless grant my request for a 90 day extension of time within which to provide more fullsome comments on the draft EIR. 49-1

The draft EIR is defective in that it fails to adequately take into account, measure and evaluate the following:

> the cumulative impact of this project, if approved, on the entire valley and other projects, some of which have been approved and others of which are in various stages of development; 49-2

> the recreational impacts are simply wrong in that public access to the public lake would be extremely limited by the project in that access to the lake shore would be completely different than that stated in the draft EIR; 49-3

> fire protection would be compromised and existing precious resources would be stretched beyond the breaking point; 49-4

> police protection would likewise be negatively impacted as there is already an insufficient police presence on the north shore; 49-5

> we are in the 6th year of a drought and severe water use restrictions are currently in force and these restrictions may be expanded; 49-6

> traffic congestion and hazardous roadways are likely created by the impacts of new vehicles in large numbers and the change in the configuration of the roadway; 49-7

> air quality, light, noise and congestion are a certainty if the population of the area is substantially increased as proposed; 49-8

> *biological and protected species impacts have not received adequate study.* | 49-9

Please grant the request for additional time requested last week.

Please also continue to provide me with notice of any action on this project.

My mailing address, fax and phone are:

Roman Silberfeld
2049 Century Park East, Suite 3700
Los Angeles, Ca. 90067

Phone - 310 552 0130
Fax - 310 229 5865

Response to Commentor No. 49
Roman Silberfeld
May 17, 2004

49-1 Commentor refers to extending the deadline for providing comments on the Draft EIR. Please refer to Response to Comment No. 9-1, which addresses this concern.

49-2 Commentor refers to cumulative impacts associated with other foreseeable projects. Please refer to Response to Comment No. 13-2, which addresses this concern.

49-3 Commentor refers to decreased public access to the lakeshore. Please refer to Response to Comment No. 13-26, which addresses this concern. The County will consider the Commentor's opinion and comments during their deliberation on the project.

49-4 The County will consider the Commentor's opinion and comments during their deliberation on the project.

49-5 Commentor refers to current police protection services and the Project's impact to police services. Please refer to Response to Comment Nos. 13-38 to 13-40, which address this concern.

49-6 Commentor refers to the expansion of existing and proposed water conservation measures. Please refer to Response to Comment No. 13-47, which addresses this concern. The County will consider the Commentor's opinion and comments during their deliberation on the project.

49-7 Commentor refers to increased traffic and safety hazards associated with the proposed highway realignment. Please refer to Response to Comment No. 13-65, which addresses the safety hazards. The County will consider the Commentor's opinion and comments during their deliberation on the project.

49-8 The County will consider the Commentor's opinion and comments during their deliberation on the project.

49-9 The County will consider the Commentor's opinion and comments during their deliberation on the project.

COMMENT NO. 50

965 Deer Trail
Fawnskin, California 92333

May 17, 2004

VIA FACSIMILE (909) 387-3223

County of San Bernardino
Land Use Services Department, Planning Division
385 North Arrowhead Avenue 1st Floor
San Bernardino, California 92415-0182

Attn: Matthew Slowik, Sr. Assoc. Planner

RE: "DRAFT EIR FOR THE MOON CAMP DEVELOPMENT PROJECT/RCK PROPERTIES INC.: GENERAL PLAN AMENDMENT/OFFICIAL LAND USE DISTRICT CHANGE FROM BV/RL-40 TO BV/RS-7200 AND AMENDMENT TO COUNTY CIRCULATION ELEMENT FOR REALIGNMENT OF NORTH SHORE DRIVE; TENTATIVE TRACT MAP #16136, AND CONDITIONAL USE PERMIT FOR A BOAT DOCK."

I. INTRODUCTION AND SUMMARY

We thank the San Bernardino County Land Use Services Department Planning Division for the opportunity to comment on the Draft Environmental Impact Report (DEIR) for the proposed Moon Camp residential development project. We understand the project includes a proposed General Plan amendment, land use district change, circulation amendment, tentative tract map and conditional use permit for a boat dock. We own property which would be directly affected by the development of the proposed Moon Camp project. Residents and visitors who have chosen to come to Fawnskin have done so primarily because of the current character of the town. We feel that it is imperative to the rights of these individuals and to the well-being of the entire Big Bear Valley that the basic essence of this character be preserved.

This project, as proposed, would have extensive adverse effects on surrounding properties, on the entire community of Fawnskin and on the Big Bear Valley as a whole. Many of these significant impacts and multiple harmful effects that would occur should this proposed project be approved are not even proposed for avoidance or mitigation.

We find the DEIR to be incomplete, inaccurate, and defective. The DEIR fails to evaluate adequately the severe adverse effects of the proposed project and grossly downplays and understates the significant and unavoidable impacts that would be caused should it be approved. The misstatements and omissions are so pervasive as to suggest they are deliberate, requiring rejection of the DEIR. Please include this letter in its entirety as part of your formal record of comments to be included in the Environmental Impact Report.

II. GENERAL PROCEDURAL COMMENTS

The DEIR "Cumulative Analysis" in all areas fails to adequately assess the cumulative effect of both the subject project and other proposed projects. It uses Valley-wide data which distorts the impact of the project, but then conveniently omits consideration of two large projects—the Castle Glen development in Big Bear Lake and the tripling in size of the Big Bear Discovery Center to accommodate increased tourist traffic—that add to the already significant cumulative impacts of this proposed project on Fawnskin, the North Shore and the Big Bear Valley. In addition, two other parcels (one 30 acres and one 7.5 acres) very near the Moon Camp property are in various stages of proposed development. The cumulative impact of all the

50-1

combined projects is either ignored or underestimated and downplayed throughout every section of the document. 50-1

The DEIR does not point out that the project is likely to comprise second homes. This exacerbates traffic, noise and lake congestion issues because it concentrates use in summer, especially on weekends and holidays. It also renders proposed mitigation measures such as homeowner association procedures less effective. Homeowner associations comprised of part-time residents are less likely to be able to enforce rules about runoff, water use, outdoor fires, lighting, trash, etc. And vacation home renters are not likely even to know of such measures. This renders many proposed "mitigation" measures illusory and ineffective. Practical, realizable mitigation should occur, or else the DEIR should concede the adverse impacts are unavoidable. 50-2

The DEIR fails to address the current 6-year drought. There is still no defined water supply for the site and as such, according to current state law, this proposed project absolutely cannot be approved. The DEIR uses data almost 20 years old, which has not been brought current. 50-3

The DEIR in all sections fails to state how each mitigation item will be implemented and who will mitigate the impact. 50-4

The DEIR analysis failed to consider input from: 50-5

- California Department of Transportation (necessary to give input to the rerouting of the scenic highway)

- the United States Forest Service (the proposed development is adjacent on the north and east to the USFS which has needs to address eagle and biological concerns)
- the California Department of Fish and Game (input necessary for shoreline fish habitat).
- the Army Corps of Engineers (input necessary for dredging to deepen a site for boat docks).
- and the Big Bear Lake Municipal Water District (input necessary for dredging and the marina).

50-5

Consideration of air quality impact has been minimal.

The DEIR fails to consider the "No Project/No Development" and the "No Project/ Existing Designation" Alternatives as viable alternatives in Section 7.5 and fails to state specifically which is the "Environmentally Superior" option.

50-6

III. LAND USE AND RELEVANT PLANNING

The DEIR concedes the Project violates development codes and rules (see pages 2-2 and 2-3). Perhaps using this as a basis, in Section 5.1.1 of the DEIR fails to reference or consult the study mandated in General Plan Ordinance OR-3-d. "Prepare a report outlining the economic effects of open space, focusing on potential tourism revenues, the effect of open space on adjacent property values and the relative costs of providing open space management or urban services for a site." Since this property is now open space and since the current zoning serves to leave it in primarily an open space state, this study must be included.

50-7

According to the General Plan, a Land Use District Change requires that: "The proposed land use District change is in the public interest, there will be a community benefit, and other

50-8

existing and permitted use will not be compromised." The existing use of a large portion of open space, consistent with the current zoning would be compromised with the proposed zoning change. The proposed change would also obstruct public lake views from the highway in one of the few places remaining where the public can view the lake from the highway. 50-8

This proposed zoning change conflicts with the County's General Plan Code C-56 "Restrict development along scenic corridors." This proposed change would serve to increase rather than restrict development along a designated scenic highway. In fact it would destroy a scenic corridor and replace it with a project wall. This proposed zoning change conflicts with the County's General Plan Code C-55 "Preserve and protect outstanding scenic resources of San Bernardino County for their continued future enjoyment." This proposed change would serve to degrade, not protect the outstanding scenic resources of this area.

The County's General Plan Code OR-59 states that "Because public health and safety can be protected through the use of open space, the County may maintain open space where flood, *fire*, geologic, seismic hazards, noise or other conditions endanger public health and safety." This proposed change poses a substantial risk to the protection of the public's health and safety and points out the county's duty not to increase fire risk. 50-9

This proposed zoning change conflicts with the County's General Plan Code in Section III C, Mountain Region, "The physical/natural constraints of the region and the lack of adequate water supply and infrastructure facilities needed to support higher density development preclude higher intensity uses." (emphasis added). Since the General Plan saw fit to zone this property 50-10

RL-40 to **preclude** higher density uses, this proposed change is in direct conflict. The DEIR does not explain or justify ignoring the "physical/natural constraint's and the lack of an adequate water supply and infrastructure." 50-10

The proposed project does not satisfy any of the requirements stated in the General Plan for allowing a zoning change. Therefore, the DEIR statements are false and the DEIR failed to adequately assess the collective or combined effect of both the project in question and other foreseeable projects. See Kings County Farm Bureau v. City of Hanford, 221 Cal.App. 3d 692. 50-11

The DEIR states in Section 5.1-3 that this proposed project, combined with other future development, would increase the intensity of land uses in the area, but, without explanation concludes that the impacts are less than significant. This is an inaccurate and defective conclusion. The cumulative effects of this proposed zoning change in total with the proposed Marina Point development project, the proposed Brookside development project, the expansion of the Discovery Center and the other projects currently in development in Big Bear Valley create a significant and unavoidable impact to Fawnskin and the surrounding communities. In particular: 50-12

- The proposed zoning change would have the potential to increase the size of Fawnskin by at least 34%. Such a substantial increase in the size of a community has a multitude of adverse impacts on the infrastructure and the character of the area and would be a significant and unavoidable impact. 50-13
- The San Bernardino County Land Use Element policy, which the DEIR states is "relevant to the proposed Project," states that "new residential development [must] ensure compatibility with adjacent land uses and community character." The proposed project is designed as a suburban residential tract with cul-de-sacs, street lighting, curbs, etc, which in no way matches the unique, rural surrounding 50-14

community. The DEIR incorrectly states that the surrounding residential property is Improvement Level-1 (high density development in urban areas), but the surrounding properties in reality have Improvement Level-3 – there are no curbs and gutters, there are no sidewalks, there is no street lighting at all the intersections. 50-14

- Considering that State Route 38 is a County designated Scenic Highway and that the views from this Scenic Highway would be completely lost and replaced with a view of the wall of a gated community, stating impacts are not significant is invalid. 50-15

IV. RECREATION

Section 5.2-1, Expansion and/or construction of Recreational Facilities, of the DEIR states on page 5.2-4 that the proposed construction of marina facilities may have an adverse impact on the physical environment, but that these potential impacts are less than significant. This analysis is invalid and the impacts have been significantly understated.

- Construction of these facilities would require dredging of the lake in shallow-water eagle foraging habitat. No analysis has been done on storage of boats during the seven months of the year when they are not in use. Use of these facilities with residents pulling boats and trailers in and out of the facility has not been accounted for in the traffic study. 50-16

- The use and misuse of fuel has not been considered in either the fire safety discussions or water quality discussions. 50-17

- The DEIR bases all calculations on a weekend use factor of 9%, which is the yearly average. This use is actually seasonal and is closer to 60% during summer weekends, with 90% expected on holiday weekends. As a result, the impact these proposed facilities would have has been underestimated, making the analysis invalid. It should be redone focusing on weekend and summer impact. 50-18

- The DEIR statement that "Public access to the lakeshore would be maintained at the eastern and western boundaries of the site" is invalid. 50-19

- The proposed project maps and plans show no public access corridors designated. The lakefront portion of the proposed project would abut to existing homes on the east and to the proposed Marina Point development project on the west. 50-20

- All land below the high water line of Big Bear Lake is open to the public but the proposed plan affectively precudes access. 50-21

V. PUBLIC SERVICES AND UTILITIES

A. Fire Protection. Section 5.3 under Fire Protection does all of its analysis based on Fire Risk level 2, but all mountain areas in the County have been upgraded to Fire Risk level 1. This makes the DEIR's entire analysis of Fire Protection invalid. 50-22

Discussion of fire flow requirements is invalid without discussion of where this water capacity will come from. Further, the DEIR findings are not reflections of any comment from County Fire. 50-23

The DEIR in no way links the fire sprinklers it describes to the real hazard. Especially in cases of forest fires, internal sprinklers do nothing to stop the trees and brush around the homes from burning and spreading the fires. This alleged mitigation completely ignores the issue of fire risk in the mountains. 50-24

The DEIR fails to consider increased fire risk from marina operation and on-site boat storage. 50-25

The mitigations listed for fire risk are based on homeowners complying with HOA standards and offer no plan for enforcement. This is completely impractical, especially in a transient community and the mitigations are therefore illusionary. 50-26

The DEIR does not address Fire Evacuation plans for the area, so nothing was included regarding the cumulative impact more houses will have on fire evacuations from the valley. In 50-27

the October 2003 wildfire evacuation, with a few days of warning and with minimal tourists in the area, it still took 6 hours to get off the mountain. No analysis was done on the impact increasing the size and population of Fawnskin by 34% will have on fire evacuations. No analysis was done for peek weekend usage, locals on of the risk one or more existing evacuation routes will be blocked. 50-27

No analysis was done on the how the additional homes of the proposed development would increase the urban/forest interface percentage in Fawnskin and how much the fire risk will increase accordingly. Homes involve furnaces, fireplaces, barbecues, gas tanks for boats, and other sources of both fuel and ignition. 50-28

The Insurance Service Organization (ISO) has stated that Fawnskin is in a high fire danger area (9 on a 1-10 basis). The EIR does not evaluate whether adding additional homes will increase the likelihood of fire insurance becoming unavailable for the Fawnskin residents and especially for second homeowners who already have a challenge in obtaining fire coverage. 50-29

For the reasons given above, among others, the DEIR is incomplete, inaccurate, and defective in its analysis of fire protection and the development of the proposed project.

B. Police Protection. Section 5.3-2 using the average response time for emergency calls to the entire unincorporated area is invalid – only average times to the Fawnskin area should be used due to its distance from the Sheriff's station compared with other unincorporated areas. The DEIR does not mention that there is currently one officer for the entire area and police services are spotty at best and non-existent at worst. 50-30

No analysis was done in the DEIR on police response times and abilities for "other than emergency" calls. The one source cited, a letter written in 2002, lists no meaningful data. More data should be requested. 50-31

C. Water. The DEIR states that the water issue cannot be mitigated to below the level of significance. Even so, the analysis that is offered grossly understates the current water crisis. 50-32

This proposed project is not exempt from SB221 (which applies to any subdivision (with fewer than 5,000 connections) that increases connections by 10% or more.) Since Fawnskin is actually a separate system and independent from the rest of the DWP's service area and the rest of the Valley it must be considered separately in the calculations. There are currently 673 connections in Fawnskin, 92 additional connections would be a 14% increase, so SB221 does apply. 50-33

The DEIR does not address the fact that water use restrictions are an effort (and have been for several years). It does not focus on the impact on existing wells or disclose any projections if long-term drought continues. The DEIR projects a potential water supply on 2 wells drilled on the property in 1987. Any assumption for potential water supply from these wells is inaccurate without further study of current conditions. According to the Big Bear Lake Municipal Water District's Watermaster report (which was not utilized as reference material in the DEIR analysis) the average rainfall over the past 5 years compared to the 5 years prior to 1987 was 37% at the dam and 51% less at the Big Bear Lake Fire Department. Without the 50-34

presentation of this information and an associated analysis, the DEIR is incomplete and inaccurate and understates the level of significance of the impact of this proposed project on water service. 50-34

Mitigation number 5.3-6a states that water supply will be proven prior to building permits. But agencies tend to treat permits after a project is approved as "ministerial." The time to examine these issues is now. Given the current drought conditions in Fawnskin (and the mountains in general), with rate increases and water restrictions already in place, the County would be derelict in its duties of protecting the public health and resources available to current residents if it did not require the DEIR to demonstrate a proven water supply prior to approving any change in zoning. 50-35

The mitigations listed regarding landscape and outdoor watering are completely inadequate and illusionary. The mitigations listed are based on DWP's Stage 1 water restrictions, while we have already moved to Stage 2 water restrictions and DWP has announced that we could be moving to Stage 3 water restrictions before the end of summer. In addition, there is no information regarding how these mitigations would be enforced and current experience shows that the existing water usage restrictions are not being followed nor enforced. The DEIR should provide for the costs of enforcement. 50-36

D. Electricity. The DEIR states that project implementation would result in an increased demand for electricity, but that impacts would be less than significant. Bear Valley Electric (BVE) currently says no more electricity can be brought up the hill, and we are already 50-37

facing short supplies, so ANY additional development, including this proposal would create significant and unavoidable impacts on electricity service capabilities. This needs to be addressed. 50-37

Section 5.3-9 states that an alternative for providing power would be to place a power source at the site. This alternative does not describe the extensive additional impacts in terms of noise, air quality, and wildlife at a minimum. 50-38

VI. AESTHETICS/LIGHT AND GLARE

The DEIR states that there would be a significant and unavoidable impact that cannot be mitigated for the view areas on all sides of the proposed project. Even this analysis greatly understates and downplays the level of significance of the impacts on both adjacent properties and those across the lake.

The DEIR needs to address the requirements of the San Bernardino County Light Ordinance, which has been adopted by CSA 53B. 50-39

From the DEIR: "Implementation of the Moon Camp project would adversely impact scenic resources, scenic vistas and the visual character of the site and its surroundings. Analysis has concluded that a *significant and unavoidable* impact to the visual character and view shed from the project site, and surrounding areas would occur *which cannot be mitigated* to a less than significant level." (Emphasis added.) The obvious conclusion is that mitigation requires a far lesser density. 50-40

The simulated views in the DEIR do not include the housing density that is proposed and they are not done to the correct scale. They should be re-done. 50-41

The views used in Section 5.4 show an exceptional number of full-grown trees (between and near the homes) when in actual construction it would be highly unlikely that these trees would survive and new trees would take 50-100 years to grow to that size. This downplays the overall impacts the proposed project would have. 50-42

The DEIR in section 5.4 fails to consider the visual impact of a 100-boat marina, especially from the lake and from the ski areas, and the cumulative visual impact of the adjoining proposed Marina Point 175-boat marina, nor does it account for the visual impact of parking for usage of this proposed marina. The marina's impact on traffic, nighttime light impacting wildlife, and noise are not addressed 50-43

The DEIR does not address off-site storage locations for the 100 boats and trailers associated with the proposed marina, nor does it include any measures to keep them from being stored at each of the homes, with adjacent fuel spill risk thus increasing the level of significance of the impacts of this proposed project to the aesthetics. 50-44

VII. TRAFFIC AND CIRCULATION

The analysis of traffic and circulation in the DEIR is inadequate because it is based on some assumptions that are not justified:

- The "project" and "baseline" traffic analysis in the DEIR is based on a growth rate of traffic over the past 10 years. This is not accurate. 50-45

- The annual average in population growth for Big Bear from in the 2 years 2000-2002 is 14 times the annual average from 1990-2000. 50-46
- The annual average increase in number of houses built from 2000-2002 is over 8 times the annual average from 1990-2000. 50-47
- The DEIR also incorrectly assumes that peak hour traffic in the area is the "standard" AM and PM peaks. An actual analysis for this non-urban area, including weekend peaks, should be required 50-48

The DEIR needs to re-evaluate road and lane capacity under snowy or slick road conditions. For example, plowing only provides a limited pathway, but vacation use is intensified because of ski area traffic. 50-49

The DEIR failed to correctly consider the impact that straightening Route 38 will create and the likelihood that a straightened Route 38 will become the route of choice for all commercial traffic. This flow negates all traffic figures, trips, and volume studies assumed by the DEIR. 50-50

The DEIR does not take into account CalTrans information that Route 38 currently has a poor (congested) rating, and cannot adequately support the increased traffic ninety-two more homes and a marina would bring. 50-51

VIII. AIR QUALITY

The DEIR does not include either dispersion or photochemical modeling to predict the impact of the project on the concentrations of pollutants that will actually occur in the air in Big Bear Valley, nor the formation of toxic *secondary* pollutants *formed* by chemical reactions in air, e.g. ozone. It simply uses an emissions model to calculate the number of pounds per day of 50-52

primary pollutants that will be emitted *directly* by the project, and compares these to regional threshold values given in South Coast Air Management District (SCAMD) "look-up tables". This is a 6,600 square mile area and local impact studies are needed. 50-52

The DEIR completely omits treatment of even the emissions of three important air pollutants: SO_x, lead and toxic air contaminants (TACs). In the latter case for example, the threshold specified by the SCAMD is a maximum incremental cancer risk that is $\geq$ 10 in 1 million. The EIR does not identify the increased carcinogens that will be associated with the project and does not assess their impact against such a standard. The Big Bear Valley already has an inversion layer. 50-53

The DEIR does not adequately address the impacts of the increased wood smoke emissions from fireplaces and wood stoves. Again, SCAMC-wide figures are meaningless and studies of the Valley itself are needed. 50-54

Table 5.6-1 does not include California's standard for visibility reducing particles, the current levels in Big Bear Valley and how the project would impact this. 50-55

Emissions of toxic air contaminants, TACs (California)/hazardous air pollutants, HAPs (federal) from all of the sources associated with the project, both mobile sources and stationary sources, are not treated adequately, despite existing standards for TACs/HAPs. Specific studies of Big Bear Lake are needed for an informed decision. 50-56

The mitigation measures cited for air quality include the use of EPA certified fireplaces and the use of a catalytic converter on the chimneys. However, there is no legal mandate to do so and no analysis of the Country's ability to enforce such a rule. 50-57

The DEIR describes future hydrocarbon emissions standards for watercraft. However, it is not clear if these were included in the emissions estimates, or if they were, if it was assumed that all watercraft associated with the project would meet these new standards. This must be clarified and re-written. Furthermore, there is no treatment of emissions other than hydrocarbons from watercraft, and the associated impacts on air quality. On as revised report, the risk of emissions from spilled fuel are to be addressed. 50-58

Nothing has been included in the air quality analysis to evaluate the effects of a local power generating plant that was suggested in the DEIR. 50-59

The overall air quality analysis in the DEIR is completely inadequate and even though the DEIR has concluded that the development of this proposed project would cause significant and unavoidable impacts on air quality, those impacts have been underestimated and minimized substantially. They need to be addressed along with a cumulative impact study 50-60

IX. NOISE

The noise section of this DEIR utilizes data, which is decades old, making the analysis inadequate. The noise levels that would be generated, both during construction and of a permanent nature, would have significant continuing negative impact to wildlife and recreational 50-61

use as well as to the residents. The analysis needs to be redone, using current data and peak usage periods. 50-61

The statement in section 5.7-1 paragraph 3: "A 3 dBA change in sound pressure level is considered a "just detectable" difference in most situations" is incorrect. All of the conclusions that come from this flawed data are incorrect, and are the basis for much of the noise analysis of the DEIR. 50-62

The DEIR failed to consider the funneling effect of noise from the highway into the adjacent residential areas, and the impact the proposed wall would create. 50-63

The DEIR refers to "existing sensors within the vicinity of the project...." In fact, the sensors used in the analysis are not in the vicinity of the proposed project and therefore are not registering correct SPL's. No accurate measurement of current SPL levels is found in this document, so this analysis is flawed and inadequate. 50-64

Rather than measurements, the DEIR states "The (computer) model does not account for ambient noise levels or topographical differences between the roadway and adjacent land uses". The steep rise of the terrain to the north is significant and does not factor into the DEIR's computer model. If the terrain were considered in the analysis, the noise levels would become unacceptable. 50-65

The data used in the Noise analysis is in part from the Traffic Analysis report, which is completely inadequate and understates the noise impact, since the traffic analysis was completely invalid in ignoring (or not measuring) peak usage. This analysis needs to be re-done. 50-66

X. BIOLOGICAL RESOURCES

The DEIR's evaluation of the impacts on Biological Resources is incomplete and inadequate:

- There is no analysis in the DEIR of the impacts that would be caused by removal of a substantial number of trees for moving the highway and creating internal roads, nor for the subsequent removal of additional trees for building houses. 50-67
- The DEIR fails to recognize that in prior developments in the Big Bear valley, where the same eagle mitigations were instituted, the eagles have been effectively driven from those projects. It needs to explain why these failed factors will work. 50-68
- The potential removal of additional trees to support mitigation for a 100-foot fuel modification is not analyzed anywhere in the Biological Resources section. 50-69
- Drought-year botanical surveys yielded an incomplete assessment of rare plants. The result is an inaccurate document that clearly understates the expected extent and significance of impact to rare plants. 50-70
- The DEIR fails to include analysis of the impact to wildlife based on increases in road kill from the increased traffic and the loss of access to the lake due to construction of walls. 50-71

Plant surveys for areas that will be destroyed by road and other infrastructural construction need to be mitigated but this is not stated requiring further analysis. 50-72

At a 3:1 mitigation ratio for loss of pebble plains, it will be difficult if not impossible to find a willing seller of over 50 acres of pebble plains and associated rare plant habitat as 50 acres is approximately one quarter of the total available acreage on private land. The source needs to be identified. The DEIR also fails to state that the cost of the parcel needs to be based on a current appraisal of Bear Valley acreage, plus a reasonable dollar amount for management. 50-73

The analysis understates expected impacts to trees and eagles. Removal of 655 trees (24% of 2,772) is not analyzed or fully disclosed under "biological resources." This impact would constitute the removal of substantial eagle roost habitat. While the DEIR states that all trees over 20 inches in diameter will be protected, this applies only on individual lots and does not apply to road cutting and other structural changes required for the proposed project. Thus, the DEIR fails to protect perch trees as required by county code, which restricts removal of bald eagle perch trees "w/o adequate substitution". With normal exceptions to county code restrictions, the inevitability of tree cutting to create individual lots, and the removal of hazard trees and others to comply with fire clearance, this proposed project will significantly and negatively impact the bald eagle. The analysis is misleading and needs to be re-done. 50-74

XI. HYDROLOGY AND DRAINAGE

RBF consulting was directed by the County of San Bernardino to conduct a peer review of the 2003 "GSS Focused Geohydrologic Evaluation of Maximum Perennial Yield For the North Shore and Grout Creek Hydrologic Subunits" for incorporation into the DEIR. Engineering Geologist, D. Scott Magorien reviewed the report. He brought up six points (on pages 22 and 23) and did not think there was enough detail in the report to verify the water availability from the two wells on the tract. Magorien's conclusion is that the North Shore is in an overdraft situation, and that there should be a more thorough hydrogeologic investigation to determine the water availability for this proposed project. None of this recommended further analysis was included in the DEIR. 50-75

We are currently in the worst drought condition in history, but the EIR fails to include this in the analysis. The DEIR fails to include information and analysis on the degradation of water quality of the lake due to pesticides and chemical fertilizers being used. 50-76

With the current drought, and by the County's own hydrology expert's report, the impacts caused on hydrology and drainage created by the development this proposed project would have a higher level of significance than the DEIR states. It needs to be re-analyzed. 50-77

XII. CONCLUSION

The Draft EIR for the proposed Moon Camp Project currently in circulation has failed to adequately assess the level of significance of the negative impact on aesthetics, fire protection, police protection, water, electricity, traffic and circulation, air quality, noise, biological resources and hydrology and drainage. Further, once this DEIR has been revised, amended, or a supplemental document prepared, the entire document must be circulated once again so that the public and the decision-makers can be properly informed prior to making any decision on this project, as required by law. 50-78

The DEIR as it stands is incomplete, inaccurate, and defective and must be rejected in its present form. It clearly violates the requirements of CEQA.

Peter Tennyson Mary Tennyson

Response to Commentor No. 50
Peter and Mary Tennyson
May 17, 2004

50-1 Commentor refers to cumulative impacts associated with other foreseeable projects. Please refer to Response to Comment No. 13-2, which addresses this concern.

50-2 Commentor refers to the Project's impacts in regards to primary versus secondary homes. Please refer to Response to Comment No. 13-7, which addresses this concern.

50-3 Commentor refers to current drought conditions and affects to groundwater. Please refer to Response to Comment Nos. 1-3, 1-4, 1-5, 13-98 and 18-1, which address these concerns.

50-4 Commentor refers to the enforcement process and procedures for implementation of mitigation measures. Please refer to Response to Comment No. 13-4, which addresses this concern.

50-5 Commentor refers to lack of agency consultation with various governmental agencies. Please refer to Response to Comment No. 13-5, which addresses this concern.

50-6 Commentor refers to the analysis of Alternatives and conclusion of the "Environmentally Superior Alternative." Please refer to Response to Comment No. 13-6, which addresses this concern.

50-7 Commentor refers to the Project's consistency with the County's General Plan. Please refer to Response to Comment No. 13-8, which addresses this concern.

50-8 Commentor refers to the Project's consistency with the County's General Plan. Please refer to Response to Comment Nos. 13-9, 13-11 and 13-12, which address this concern.

50-9 Commentor refers to the Project's consistency with the County's General Plan. Please refer to Response to Comment No. 13-13, which addresses this concern.

50-10 Commentor refers to the Project's consistency with the County's General Plan. Please refer to Response to Comment No. 13-15, which addresses this concern.

50-11 Commentor refers to the Project's consistency with the County's General Plan. Please refer to Response to Comment No. 13-17, which addresses this concern.

50-12 Commentor refers to cumulative impacts associated with other foreseeable projects. Please refer to Response to Comment No. 13-2, which addresses this concern.

50-13 Commentor refers to increased population and affects to infrastructure. Please refer to Response to Comment No. 13-19, which addresses this concern.

50-14 Commentor refers to the Project's consistency with the County's General Plan. Please refer to Response to Comment Nos. 13-20 and 13-21, which addresses this concern.

50-15 Commentor refers to proposed highway realignment and affects to the existing aesthetic character. Please refer to Response to Comment No. 13-22, which addresses this concern.

50-16 Commentor refers to the proposed marina facilities and affects to the lake and traffic. Please refer to Response to Comment No. 13-24, which addresses these concerns.

50-17 Commentor refers to the use and storage of fuels and affects to fire safety and water quality. Please refer to Response to Comment No. 13-35, which addresses this concern.

50-18 Commentor refers to lake usage statistics and affects to recreational facilities/uses. Please refer to Response to Comment No. 13-25, which addresses this concern.

50-19 Commentor refers to decreased public access to the lakeshore. Please refer to Response to Comment No. 13-26, which addresses this concern.

50-20 Commentor refers to decreased public access to the lakeshore. Please refer to Response to Comment No. 13-26, which addresses this concern.

50-21 Commentor refers to decreased public access to the lakeshore. Please refer to Response to Comment No. 13-26, which addresses this concern.

50-22 Commentor refers to accuracy of current Fire Risk Level designation. Please refer to Response to Comment No. 13-27, which addresses this concern.

50-23 Commentor refers to water capacity and affects to fire protection services. Please refer to Response to Comment No. 13-28, which addresses this concern.

50-24 Commentor refers to utilization of fire sprinklers in the analysis of fire protection services. Please refer to Response to Comment No. 13-29, which addresses this concern.

50-25 Commentor refers to the marina facilities and affects to fire protection services. Please refer to Response to Comment No. 13-35, which addresses this concern.

50-26 Commentor refers to enforcement of mitigation measures identified for fire protection services. Please refer to Response to Comment No. 13-31, which addresses this concern.

50-27 Commentor refers to increased traffic and affects to evacuation plans. Please refer to Response to Comment No. 13-32, which addresses this concern.

50-28 Commentor refers to the urban/forest interface and the increased fire risk associated with the Project. Please refer to Response to Comment Nos. 4-1, 4-4, and 13-27, which address these concerns.

50-29 Commentor refers to increased fire risk potential and affects to fire insurance. Please refer to Response to Comment No. 13-36, which addresses this concern.

50-30 Commentor refers to current police response times and the Project's impact to police services. Please refer to Response to Comment Nos. 13-38 to 13-39, which address this concern.

50-31 Commentor refers to non-emergency call and affects to police protection services. Please refer to Response to Comment No. 13-40.

50-32 The County will consider the Commentor's opinion during their deliberation on the project.

50-33 Commentor refers to the applicability of SB 221. Please refer to Response to Comment No. 13-42, which addresses this concern.

50-34 Commentor refers to water supply and affects to future water service and groundwater. Please refer to Response to Comment No. 13-43, which addresses these concerns.

50-35 The County will consider the Commentor's opinion during their deliberation on the project.

50-36 Commentor refers to appropriateness of mitigation measures regarding water service. Please refer to Response to Comment No. 13-47, which addresses this concern.

50-37 Commentor refers to current electric power shortages and the Project's impact to electric services. Please refer to Response to Comment No. 13-49, which addresses this concern.

50-38 Commentor refers to the potential impacts as a result of constructing an alternative electrical power source on the project site. Please refer to Response to Comment No. 13-50, which addresses these concerns.

50-39 Commentor refers to light and glare affects conflicting with the San Bernardino County Light Ordinance. Please refer to Response to Comment No. 13-52, which addresses this concern.

50-40 The County will consider the Commentor's opinion during their deliberation on the project.

50-41 Commentor refers to the visual simulations not being reflective of build-out of the project area. Please refer to Response to Comment No. 13-54, which addresses this concern.

50-42 Commentor refers to the visual simulations not being reflective of future vegetation. Please refer to Response to Comment No. 13-55, which addresses this concern.

50-43 Commentor refers to the proposed marina facility and affects to the existing aesthetic character. Please refer to Response to Comment Nos. 13-52 and 13-56, which address this concern.

50-44 Commentor refers to off-site storage locations of boats and trailers and affects to the existing aesthetic character. Please refer to Response to Comment No. 13-57, which addresses this concern.

50-45 Commentor refers to the growth rate utilized in the traffic analysis. Please refer to Response to Comment No. 13-58, which addresses this concern.

50-46 Comment is noted. Also, please refer to Response to Comment No. 13-58 regarding the growth rate utilized in the traffic analysis.

50-47 Comment is noted. Also, please refer to Response to Comment No. 13-58 regarding the growth rate utilized in the traffic analysis.

50-48 Commentor refers to the determination of the peak hour referenced in the traffic analysis. Please refer to Response to Comment No. 13-59, which addresses this concern.

50-49 Commentor refers to snowy/wet roadway conditions and affects to traffic. Please refer to Response to Comment No. 13-60, which addresses this concern.

50-50 Commentor refers to the proposed highway realignment and the affects to traffic. Please refer to Response to Comment No. 13-63, which addresses this concern.

50-51 Commentor refers to Caltrans rating of State Route 38 and affects to traffic. Please refer to Response to Comment No. 13-64, which addresses this concern.

50-52 Commentor refers to the methodology utilized to analyze air quality impacts. Please refer to Response to Comment No. 19-3, which addresses this concern.

50-53 Commentor refers to the lack of analysis of SOx, lead and toxic air contaminates in the Draft EIR. Please refer to Response to Comment No. 19-4, which addresses this concern.

50-54 Commentor refers to potential air quality impacts associated with wood smoke emissions from wood stoves and fireplaces. Please refer to Response to Comment No. 19-6, which addresses this concern.

50-55 Commentor refers to potential impacts associated with visibility reducing particles. Please refer to Response to Comment No. 19-7, which addresses this concern.

50-56 Commentor refers to air quality impacts associated with toxic air contaminates. Please refer to Response to Comment No. 19-10, which addresses this concern.

50-57 Commentor refers to practicality of enforcing mitigation requiring EPA certified fireplaces. Please refer to Response to Comment No. 19-13, which addresses this concern.

50-58 Commentor refers to hydrocarbon emissions from watercraft and affects to air quality. Please refer to Response to Comment No. 19-14, which addresses this concern.

50-59 Commentor refers to the local power generating plant and affects to air quality. Please refer to Response to Comment No. 13-76, which addresses this concern.

50-60 The County will consider the Commentor's opinion during their deliberation on the project.

50-61 Commentor refers to modeling data utilized in assessing noise impacts. Please refer to Response to Comment No. 13-78, which addresses this concern.

50-62 Commentor refers to noise impact criteria utilized in the noise impact analysis. Please refer to Response to Comment No. 13-79, which addresses this concern.

50-63 Commentor refers to the funneling noise effect from increased traffic. Please refer to Response to Comment No. 13-80, which addresses this concern.

50-64 Commentor refers to sensitive receptors and affects to the noise environment. Please refer to Response to Comment No. 13-81, which addresses this concern.

50-65 Commentor refers to topographical differences and affects to the noise environment. Please refer to Response to Comment No. 13-83.

50-66 Commentor refers to the reliability of the traffic data utilized to conduct the noise impact analysis. Please refer to Response to Comment Nos. 13-2 and 13-58 to 13-65. The County will consider the Commentor's opinion and comments during their deliberation on the project.

50-67 Commentor refers to the loss of trees and the affects to biological resources. Please refer to Response to Comment No. 13-86, which addresses this concern.

50-68 Commentor refers to cumulative impacts to the bald eagle. Please refer to Response to Comment No. 13-88, which addresses this concern.

50-69 Commentor refers to the loss of trees within the fuel modification zone and the affects to biological resources. Please refer to Response to Comment No. 13-86, which addresses this concern.

50-70 Commentor refers to adequacy of biological resources surveys in drought years. Please refer to Response to Comment Nos. 3-5 and 13-90, which address this concern.

50-71 Commentor refers to increased traffic and affects to biological resources from increased amounts of road-kill. Please refer to Response to Comment No. 13-91, which addresses this concern.

50-72 Commentor refers to vegetation within the constriction zone and affects to biological resources. Please refer to Response to Comment No. 13-92, which addresses this concern.

50-73 Commentor refers to likelihood of finding a property owner to sell land in accordance with the special status plant and vegetation mitigation. Please refer to Response to Comment Nos. 3-5, 13-86 and 13-92, which address this concern.

50-74 Commentor refers to impacts to the bald eagle. Please refer to Response to Comment No. 13-95, which addresses this concern.

50-75 Commentor refers to water supply and impacts to groundwater. Please refer to Response to Comment No. 13-97, which addresses this concern.

50-76 Commentor refers to current drought conditions and affects to groundwater. Please refer to Response to Comment Nos. 13-98 and 13-99, which address this concern.

50-77 The County will consider the Commentor's opinion during their deliberation on the project.

50-78 The County will consider the Commentor's opinion during their deliberation on the project.

May 21, 2004

County of San Bernardino
Land use Services Department
Planning Division
385 N. Arrowhead Avenue, 1st Flr.
San Bernardino, CA 92415-0182

Attention: Matthew W. Slowik

RE: Draft EIR for the Moon Camp Development Project/RCK Properties, Inc.

Dear Mr. Slowik,

Thank you for this opportunity to review this document. My husband and I have been homeowners in Fawnskin since 1996. We have enjoyed the clean air, wildlife, and stress-free life living in a mountain atmosphere has afforded us during our retirement years.

Garry and I oppose the Moon Camp project as presently designed because the DEIR fails to adequately evaluate the true impact this project would cause mainly due to the shortage of water in Big Bear. Our own use of water has been restricted for another year with further reductions in usage to continue due to an ongoing draught. It makes no sense to allow this or any corporation to build housing on the hill when we have an extreme lack of water, the largest fire hazard in the country, trees dying by the millions in the forest, and only a two lane road if an evacuation occurs again this year. Most households have at least two cars, so that would mean a minimum of 400 more cars on the hill. Last year was frightening enough, taking four hours to get off the hill during the fires. The loss in lives could be enormous if fires hit the Big Bear area this season. 51-1

Please address these issues and reconsider allowing such a project to prevail.

Sincerely,

Garry and Judith Schkade
39334 Garden Place
Fawnskin, CA 92333-0133

Response to Commentor No. 51
Garry and Judith Schkade
May 21, 2004

51-1 Commentor refers to traffic impacts and affects to evacuation plans. Please refer to Response to Comment No. 13-32, which addresses this concern. The County will consider the Commentor's opinion during their deliberation on the project.

May 27, 2004

To Whom it May Concern,

In regards to the letter about the mooncamp development project on 62 acres in the Big Bear area (Fawnskin).

I have some concerns should the zone change be allowed. The proposal calls for 95 residential lots. I have concerns about water. There is already a shortage of water available for the homes and lots that are there now. What will happen when the already developed vacant lots get built upon? That will require even more water then the area is using now and that does not even include the proposed 95 lots. 52-1

What about the wildlife that lives in the area and needs the trees or the natural undisturbed ground to make their homes. 52-2

Also of concern is the lake. The proposal calls for a boat dock and that means more boats and polution into the lake. 52-3

I certainly think a consideration for all the unbuilt lots and what will happen when they all have homes on them should be thought about now, as those developments are already in but the burden to the water system, lake, wildlife, etc. has not occured as the houses are not all built yet. 52-4

With these things in mind "I do not think it would be a good idea to put in 95 more lots and take more forest away from the plants, animals, insects, and other things that need it.

52-5

Response to Commentor No. 52
Stephen Youngerman
May 27, 2004

52-1 Commentor refer to water supply and the affects to groundwater. Please refer to Response to Comment Nos. 1-3, 1-4, 1-5 and 18-1, which addresses this concern. The County will consider the Commentor's opinion during their deliberation on the project.

52-2 Impacts to biological resources are discussed in Section 5.8, *Biological Resources*, in the EIR.

52-3 Commentor refers to the proposed marina facility and affects to the water quality of the lake. Please refer to Response to Comment No. 13-99, which addresses this concern.

52-4 The County will consider the Commentor's opinion during their deliberation on the project.

52-5 The County will consider the Commentor's opinion during their deliberation on the project.

COMMENT NO. 53

MARC & MILDRED MANDEL
10446 LAKEWOOD BLVD., SUITE 104
DOWNEY, CA 90241-2763
(562) 861-0657

June 28, 2004

Matthew W. Slowik, Sr. Associate Planner
County of San Bernardine,
Land Use Services Dept., Planning Div.
385 N. Arrowhead Ave., 1st Floor
San Bernardino, CA 92415-0182

RE: Applicant: MOONCAMP DEVELOPMENT PROJECT / RCK PROPERTIES, INC.

Dear Mr. Slowik,

We are property owners in Fawnskin at 955 Deer Trail Lane, Parcel # 0304-422-05 and we are filing our comments referencing the draft ***EIR*** and objections to the above noted project. Please see the two (2) page attachment to this letter.

Also, this is a request for all regular and special notices regarding the noted project to be promptly sent to us at:

MARC & MILDRED MANDEL
10446 LAKEWOOD BLVD., SUITE 104
DOWNEY, CA 90241-2763

Thank you for your prompt attention to this request.

Sincerely yours,

Marc Mandel

Enclosures: Attachment pages 1 & 2

CC: F o F Advisory Committee

ATTACHMENT TO LETTER DATED 6/4/2004

THE FOLLOWING IS A LIST OF RESPONSES AND OBJECTIONS TO THE NOTED PROJECT AND THE ***DRAFT EIR*** THAT WE HAVE TO THE *GENERAL PLAN / LAND USE DISTRICT AMENDMENT* AND *TENTATIVE TRACT 16136.*

1. We are concerned about the project on the basis that the proposed lake front lots would destroy the lake-view from the existing highway and eliminate public access. 53-1

2. We are concerned about the project on the basis that the project would require the realignment of State Route 38 northward so as to provide adequate lake front lots. 53-2

3. We object to the project on the basis that currently there is insufficient water in Fawnskin to support 92 additional residences. In addition, the insufficient water supply, if further taxed, would create a greater problem in case of a major fire in the area of which there is a high potential due to the lack of rain and snow. As you are aware, the water problem in Big Bear is critical and reports are that this situation will continue for some years to come. We are on restricted watering use. 53-3

4. We object to the project on the basis that a 92 home subdivision will create serious light pollution in the Fawnskin area. 53-4

5. We are concerned about the project on the basis that the number of trees, approximately 750 or 25% of the trees in the project area that would have to be removed to: A) relocate the highway, B) create home sites, C) create roads within the project and D) create easements. 53-5

6. We are concerned about the project on the basis that any down-zoning would destroy the eagle winter habitat. As an example, on one tree in the project area there have been as many as three eagles seen perched on one tree. 53-6

7. We are concerned about the project on the basis that with people now building large houses on minimum-sizes lots in Big Bear, any down-zoning in Fawnskin would be inconsistent with the mountain character of Fawnskin. In addition, the density of lots projected is tighter than some major city lots including some areas of Los Angeles City. 53-7

8. We are concerned about the project on the basis that State Route 38 in the project area would not adequately support traffic flow in that area, creating traffic problems by increasing the current 300 trips per day to at least 900 trips per day. 53-8

9. We are concerned about the project on the basis that any proposed moving of State Route 38 would increase traffic noise levels to the existing residences above and near the development. 53-9

CONTINUED ON ATTACHMENT PAGE 2

10. We are concerned about the project on the basis that the increase of sewage would be beyond the capacity of the existing treatment plant. 53-10

11. We are concerned about the project on the basis that it would create air pollution due to: A) the increase vehicle traffic and B) the increase number of fireplaces. In winter we now experience an inversion layer due to the fireplaces and any increase would be intolerable. 53-11

12. We are concerned about the project on the basis that the increase in population in the project area would increase the noise pollution. 53-12

13. We object to the project on the basis that the development could cause an increase in various fees that the existing residents would have to pay, i.e. sewer, etc. 53-13

14. We object to the project on the basis that there are endangered species, both animal and plant life, in the project area that would be destroyed. 53-14

15. We are concerned about the project on the basis that the 100 private dock marina: 1) removes public access to the lake, 2) adds noise pollution, and 3) adds air pollution. 53-15

16. We object to the project on the basis that no zoning changes are acceptable. 53-16

17. We object to the project on the basis that the project area should be held as a controlled "Public Use Area" and a preserve for natural habitat. 53-17

18. We are concerned about the project on the basis that in addition to the various pollution items noted above, there is another pollution item and that is *light*. With all the proposed homes, the amount of light will create a great annoyance 53-18

Response to Commentor No. 53
Marc and Mildred Mandel
June 28, 2004

53-1 Section 5.4, *Aesthetics/Light and Glare*, concludes that project implementation would result in significant and unavoidable impacts for viewshed alterations involving existing residents to the north, south, east and west of the project site. Additionally, significant and unavoidable impacts have been identified for views from State Route 38, a scenic highway, to the south and from the south shore of Big Bear Lake. If the County of San Bernardino approves the project, the County shall be required to cite their findings in accordance with Section 15091 of CEQA and prepare a Statement of Overriding Considerations in accordance with section 15093 of CEQA. Public access is discussed in Response to Comment No. 13-26.

53-2 The Commentor refers to the realignment of State Route 38, but does not refer to any specific environmental impacts. No further response is necessary.

53-3 Commentor refers to water supply and affects to groundwater. Please refer to Response to Comment Nos. 1-3, 1-4, 1-5, 13-47 and 21-3, which address this concern.

53-4 Commentor refers to light and glare impacts associated with development of the project area. Please refer to Response to Comment No. 13-52, which addresses this concern.

53-5 Commentor refers to the loss of trees and the affects to biological resources. Please refer to Response to Comment No. 13-86, which addresses this concern.

53-6 Commentor refers to impacts to the bald eagle. Please refer to Response to Comment Nos. 3-7, 13-86, 13-88, 13-95 and 41-14, which address this concern.

53-7 The Commentor refers to the project's density and impacts to the existing aesthetic character. Please refer to Response to Comment No. 53-1, which addresses this concern. The County will consider the Commentor's opinion during their deliberation on the project.

53-8 Commentor refers to the density of the project and affects to traffic. Please refer to Response to Comment Nos. 13-58 to 13-65, which address this concern.

53-9 Commentor refers to the realignment of the highway and affects to the existing noise environment. Please refer to Response to Comment Nos. 13-80, 13-81 and 26-15, which address this concern.

53-10 As stated in the EIR and Sewer Feasibility Report, the existing Big Bear Area Regional Wastewater Agency (BBARWA) sewer system located to the east of the project site would be capable of handling wastewater flow from the proposed project. Thus, the proposed project would not result in the need to construct new wastewater facilities or require the expansion of new wastewater facilities. The proposed project would be required to comply with applicable BBARWA (and Collecting Agencies, if

required) rules and regulations pertaining to construction and operation of facilities, in addition to required payment of all new and modified facility fees. To ensure that impacts remain at less than significant levels, mitigation measures have been recommended. Mitigation for the project includes that the Project Applicant shall provide evidence to the County of San Bernardino that the BBARWA has sufficient transmission and treatment plant capacity to accept sewage flows from the project site.

53-11 Regarding vehicular emissions, the project would result in an overall increase in the local and regional pollutant load due to direct impacts from vehicle emissions. Combined mobile and area source emissions would exceed SCAQMD thresholds for ROG, CO and PM_{10}. These exceedances are considered significant and cannot be mitigated to a less than significant level. If the County of San Bernardino approves the project, the County shall be required to cite their findings in accordance with Section 15091 of CEQA and prepare a Statement of Overriding Considerations in accordance with Section 15093 of CEQA.

Please refer to Response to Comment No. 19-6 for impacts regarding fireplaces.

53-12 Commentor refers to the increase in population and affects to the noise environment. Please refer to Response to Comment No. 28-2, which addresses this concern.

53-13 The County will consider the Commentor's opinion during their deliberation on the project.

53-14 Section 5.8, *Biological Resources*, discusses impacts to biological resources as a result of project implementation. As stated in Response to Comment No. 13-88, the EIR analysis has been modified to conclude that project implementation would result in significant and unavoidable impacts to wintering bald eagle populations. If the County of San Bernardino approves the project, the County shall be required to cite their findings in accordance with Section 15091 of CEQA and prepare a Statement of Overriding Considerations in accordance with section 15093 of CEQA.

53-15 Commentor refers to the proposed marina facility and affects to public access, noise levels, and air quality. Please refer to Response to Comment Nos. 13-26, which addresses public access; refer to Response to Comment No. 28-2, which addresses noise; and refer to Response to Comment No. 19-14, which address air quality.

53-16 The County will consider the Commentor's opinion during their deliberation on the project.

53-17 The project site is private property and not designated for public use areas. However, the County will consider the Commentor's opinion during their deliberation on the project.

53-18 Commentor refers to light and glare impacts associated with development of the project area. Please refer to Response to Comment No. 13-52, which addresses this concern.

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14.3 LIST OF COMMENTORS: 45-DAY RECIRCULATION REVIEW

FEDERAL, STATE AND LOCAL GOVERNMENT AGENCIES

1. Mark Butala, Southern California Association of Governments
2. Kelly Rozich, County of San Bernardino
3. Terry Roberts, California Governor's Office of Planning and Research, State Clearinghouse and Planning Unit

PRIVATE/SPECIAL INTEREST GROUPS

4. Bryan Wilkie, The Gas Company
5. Timothy Krantz, San Bernardino Valley Audubon Society
6. Erv Nichols, Sierra Club
7. Sandy Steers, Friends of Fawnskin
8. David Goodward, San Bernardino Valley Audubon Society

INDIVIDUALS

9. Carol Enos
10. Betty Conroy
11. Diane Shattuck
12. Sandra Ellis
13. Rush Wallace
14. Loretta Gardner
15. Unknown
16. George Kast
17. Robert Drake
18. Mary Lu Drake
19. Sandy Steers
20. Donald Wheeler and Wheeler Family
21. Lisa Patterson
22. Roman Silberfeld
23. Nancy and Bill Hazewinkel
24. Daniel Levenick
25. James and Lola McGrew
26. Peter and Mary Tennyson
27. Bradley and Cathy Winch
28. B.J. Finlayson-Pitts and James Pitts
29. Michael Karp

COMMENT NO. 1

SOUTHERN CALIFORNIA
ASSOCIATION of GOVERNMENTS

Main Office
818 West Seventh Street
12th Floor
Los Angeles, California
90017-3435

t (213) 236-1800
f (213) 236-1825

www.scag.ca.gov

RECEIVED
APR 11 2005
LAND USE SERVICES DEPT.
ADVANCE PLANNING DIVISION

April 5, 2005

Mr. Matthew Slowick
County of San Bernardino, Planning Division
385 N. Arrowhead Avenue, First Floor
San Bernardino, CA 92415-0182

RE: SCAG Clearinghouse No. I 20050123 Moon Camp Residential Subdivision Projection, Revised Biological Resources Section, DEIR

Dear Mr. Slowik:

Thank you for submitting the **Moon Camp Residential Subdivision Projection** for review and comment. As areawide clearinghouse for regionally significant projects, SCAG reviews the consistency of local plans, projects and programs with regional plans. This activity is based on SCAG's responsibilities as a regional planning organization pursuant to state and federal laws and regulations. Guidance provided by these reviews is intended to assist local agencies and project sponsors to take actions that contribute to the attainment of regional goals and policies.

We have reviewed the **Moon Camp Residential Subdivision Projection**, and have determined that the proposed Project is not regionally significant per SCAG Intergovernmental Review (IGR) Criteria and California Environmental Quality Act (CEQA) Guidelines (Section 15206). Therefore, the proposed Project does not warrant comments at this time. Should there be a change in the scope of the proposed Project, we would appreciate the opportunity to review and comment at that time.

1–1

A description of the proposed Project was published in SCAG's **March 1-15, 2005** Intergovernmental Review Clearinghouse Report for public review and comment.

The project title and SCAG Clearinghouse number should be used in all correspondence with SCAG concerning this Project. Correspondence should be sent to the attention of the Clearinghouse Coordinator. If you have any questions, please contact me at (213) 236-1867. Thank you.

Sincerely,

MARK BUTALA
Senior Regional Planner
Intergovernmental Review

Response to Commentor No. 1
Mark Butala, Southern California Association of Governments
April 5, 2005

1-1 The Southern California Association of Governments (SCAG) has reviewed the Recirculated Public Review Draft EIR and has determined that the proposed project is not regionally significant per SCAG Intergovernmental Review Criteria and CEQA guidelines (Section 15206). No further response to this comment is necessary at this time.

COMMENT NO. 2

Slowik, Matt - Planning

From: Rozich, Kelly-DPW
Sent: Tuesday, April 12, 2005 3:25 PM
To: Slowik, Matt - Planning
Subject: RE: Comments on Revised Biological Resources Section of Draft EIR - Mooncamp Development

We have no comments. 2-1

Thank you,

Kelly A. Rozich (rose-itch)
(909) 387-8114
Senior Associate Planner
Environmental Management Division
San Bernardino County Public Works Department

Response to Commentor No. 2
Kelly Rozich, San Bernardino County Public Works Department
April 12, 2005

2-1 The San Bernardino County Public Works Department, Environmental Management Division has no comments on the Recirculated Public Review Draft EIR. No further response to this comment is necessary at this time.

COMMENT NO. 3

STATE OF CALIFORNIA

Governor's Office of Planning and Research

State Clearinghouse and Planning Unit

Arnold Schwarzenegger
Governor

Sean Walsh
Director

April 18, 2005

Matthew Slowik
San Bernardino County Land Use Services Department
385 N. Arrowhead Ave., 1st Floor
San Bernardino, CA 92415-0182

Subject: Moon Camp
SCH#: 2002021105

Dear Matthew Slowik:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. The review period closed on April 15, 2005, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

3-1

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Terry Roberts

Terry Roberts
Director, State Clearinghouse

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
TEL (916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH# 2002021105
Project Title Moon Camp
Lead Agency San Bernardino County Land Use Services Department

Type EIR Draft EIR

Description GPA/OLUD to establish a 95-lot residential subdivision, with 92 numbered lots and 3 lettered lots.

Lead Agency Contact

Name Matthew Slowik
Agency San Bernardino County Land Use Services Department
Phone (909) 387-4147 **Fax**
email
Address 385 N. Arrowhead Ave., 1st Floor
City San Bernardino **State** CA **Zip** 92415-0182

Project Location

County San Bernardino
City
Region
Cross Streets Canyon Road and Polique Canyon Road
Parcel No. 0304-082-14; 0304-091-12, 13, 21
Township 2N **Range** 1W **Section** 13 **Base** SBBM

Proximity to:

Highways 38
Airports
Railways
Waterways Big Bear Lake
Schools
Land Use BV/RL-40 (Rural Living - 40 acre minimum lot size)

Project Issues Cumulative Effects; Vegetation; Wetland/Riparian; Wildlife

Reviewing Agencies Resources Agency; Regional Water Quality Control Board, Region 8; Department of Parks and Recreation; Native American Heritage Commission; Department of Forestry and Fire Protection; Office of Emergency Services; Department of Health Services; Department of Fish and Game, Region 6; Department of Water Resources; California Highway Patrol; Caltrans, District 8; State Lands Commission

Date Received 03/02/2005 **Start of Review** 03/02/2005 **End of Review** 04/15/2005

Note: Blanks in data fields result from [illegible] information provided by [illegible]

Response to Commentor No. 3
Terry Roberts, California Governor's Office of Planning and Research, State Clearinghouse and Planning Units
April 18, 2005

3-1 The Commentor acknowledges that the Recirculated Public Review Draft EIR has complied with State Clearinghouse review requirements and has been forwarded to select State agencies for review. No further response to this comment is necessary at this time.

COMMENT NO. 4

The Gas Company

A Sempra Energy company

Southern California Gas Company
1981 W. Lugonia Avenue
Redlands, CA 92374-9720

Mailing Address:
PO Box 3003, SC8031
Redlands, CA 92373-0306

March 24, 2005

County of San Bernardino
Land Use Services Department, Planning Division
385 N. Arrowhead Avenue, First Floor
San Bernardino, CA 92415-0182

Attention: Matthew Slowik, Senior Associate Planner

Re: Notice of Availability of the Revised Biological Resources Section of the Draft Environmental Impact Report for the Mooncamp Development Project (Case No. TTM 16136)
City of Big Bear

Thank you for the opportunity to respond to the above-referenced project. Please note that Southern California Gas Company has facilities in the area where the above named project is proposed. Gas service to the project could be provided without any significant impact on the environment. The service would be in accordance with the Company's policies and extension rules on file with the California Public Utilities Commission at the time contractual arrangements are made.

You should be aware that this letter is not to be interpreted as a contractual commitment to serve the proposed project, but only as an informational service. The availability of natural gas service, as set forth in this letter, is based upon present conditions of gas supply and regulatory policies. As a public utility, The Southern California Gas Company is under the jurisdiction of the California Public Utilities Commission. We can also be affected by actions of federal regulatory agencies. Should these agencies take any action, which affects gas supply, or the conditions under which service is available, gas service will be provided in accordance with revised conditions.

4-1

Typical demand use for:

a. Residential (System Area Average/Use Per Meter) Yearly

Single Family	799 therms/year dwelling unit
Multi-Family 4 or less units	482 therms/year dwelling unit
Multi-Family 5 or more units	483 therms/year dwelling unit

These averages are based on total gas consumption in residential units served by Southern California Gas Company, and it should not be implied that any particular home, apartment or tract of homes will use these amounts of energy.

b. Commercial

Due to the fact that construction varies so widely (a glass building vs. a heavily insulated building) and there is such a wide variation in types of materials and , a typical demand figure is not available for this type of construction. Calculations would need to be made after the building has been designed.

4–1

We have Demand Side Management programs available to commercial/industrial customers to provide assistance in selecting the most effective applications of energy of our energy conservation programs, please contact our Commercial/Industrial Support Center at 1-800-GAS-2000.

Sincerely,

Bryan Wilkie
Technical Supervisor

BPW/ocf

Response to Commentor No. 4
Bryan Wilkie, The Gas Company
March 24, 2005

4-1 As indicated by The Gas Company during the 45-day public review period for the Recirculated Draft EIR (Comment Letter No. 8, dated April 21, 2004) it has been acknowledged that gas service to the project could be provided without any significant impact to the environment. No further response to this comment is necessary at this time.

COMMENT NO. 5

April 14, 2005

Subject: Comments on the Supplemental Biological Impact Assessment of the Proposed Moon Camp Residential Subdivision, T.T. 16136

ATTN: Mr. Matt Slowik, Sr. Assoc. Planner
County of San Bernardino
385 N. Arrowhead Avenue, Third Floor
San Bernardino, CA 92415-0182

FROM: Dr. Timothy Krantz
University of Redlands
1200 East Colton Avenue, Duke Hall
Redlands, CA 92373-0999

Dear Mr. Slowik:

Upon review of the Supplemental Biological Resources Impact Assessment (BRIA) circulated for the Moon Camp project, the following comments are respectfully submitted.

The BRIA identifies a long list rare plant species considered to have a high probability of occurring on site. In fact, several additional special status species are known to occur on the property (*Mimulus purpureus p., Pyrrocoma uniflora gossypina*, et al.) and others are likely to occur on site. Focused rare plant surveys were completed during July 2003 by BonTerra consultants. This was an exceptionally dry year and many annual species (ie. *Mimulus purpureus p.*) failed to flower in that season. Furthermore, July is too late to reliably see many of the earlier flowering species. For example, this year has been an unusually wet year and should be very good for plant surveys. However, I just completed a plant taxonomy field trip for a University of Redlands class and found many species already in full flower, and some already with mature fruits. The EIR as much as admits that **the previous survey for rare plants was inadequate** by drafting the newly proposed Mitigation Measure 5.8-1a, which calls for another focused survey prior to issuance of grading permits; and then off-site mitigation at a ratio of 3:1 for each acre of sensitive plant habitat destroyed by the development. 5-1

We believe that the focused rare plant surveys should be completed prior to certification of the Final EIR. In this good rainfall year, the survey could be completed by the end of June, and potential modifications to the development plan could be considered to avoid sensitive resources to the extent possible. 5-2

The DEIR and Supplemental BRIA minimize the significance of the impacts to pebble plains habitat. In fact, although the (inadequate) rare plant survey identified only 0.69ac of pebble plain habitat on site, the full extent of pebble plain habitat is most likely significantly greater than that. Even so, the DEIR then minimizes the relative degree of significance by saying that in comparison with the total distribution of this habitat type (379ac), the project site only contains 0.18% of the total distribution. **One should keep in mind that this is the entire distribution of this plant community in the world!** Furthermore, no other pebble plains are known to occur in the vicinity of the 5-3

project (Fawnskin area); a fact that will be borne out when the applicants attempt to identify mitigation acreage that is not already protected on public lands. 5–3

The DEIR and Supplemental BRIA identify nine bald eagle perch trees on site. These trees are occasionally used, primarily for perching with a direct line-of-sight to prey on the lake (foraging habitat). **Any proposed dredging, including the adjacent Marina Point project to the west, will result in deepening and, therefore, lessening the suitability of the shoreline habitat for foraging bald eagles.** 5–4

Mitigation 5.8-1b regards bald eagle perch trees. Simply identifying eagle perch trees on private lots has not been successfully implemented on several other residential subdivisions in Big Bear Valley, most notably the Eagle Point and Castle Glen subdivisions in the City of Big Bear Lake. In both of these cases, the Homeowners Association (HOA) was supposedly charged with enforcing the building restrictions for homes constructed on lots with bald eagle perch trees. The result, after 15 years, has been that homes have extended their irrigated (sod) landscaping under the trees, thereby weakening them. Jeffrey pines need no additional irrigation, and in fact may suffer root rot and other diseases when structures are built within the drip-lines of the trees, or if over-watered. 5–5

We believe the only tenable mitigation measure to protect wintering bald eagle perch trees is the establishment of non-salable letter lots to ensure that residences, driveways, roads, and irrigated landscaping do not encroach on them. In fact when one considers the presence of five of the perch trees ***and*** the pebble plain habitat occurring together in the west portion of the project site, it would appear that this may represent a dual-purpose conservation Letter Lot. Any letter lot, created for the purpose of conservation of bald eagle perch trees and/or pebble plain habitat should be conveyed to a natural resources management entity with a Conservation Easement, as called for in Mitigation Measure 5.8-1a. Any parcels acquired or set aside for mitigation of sensitive biological resources should also have conditions requiring funding to be set aside for the purpose of maintenance and stewardship of such resources in perpetuity. These funds should be placed in an escrow account for use by the designated conservation steward entity. 5–6

Thank you for this opportunity to provide comments. Should you have any further questions, please call me at (909)335-5149.

Sincerely,

Dr. Timothy P. Krantz, on behalf of the Board of Directors,
San Bernardino Valley Audubon Society

Cc: Adam Keats, Center for Biological Diversity

Response to Commentor No. 5
Timothy Krantz, San Bernardino Valley Audubon Society
April 14, 2005

5-1 Although the species referenced were not identified as occurring on the project site, they were identified in the Draft EIR section and biological technical report for the project and determined to have a high potential to occur on the project site. The EIR section and biological technical report stated that surveys for special status plants were inconclusive because they were conducted during an exceptionally dry year, necessitating an additional survey as required by Mitigation Measure 5.8-1a, and identified potential impacts to special status plants as significant.

5-2 Surveys were not conducted this year because the ultimate disposition of the project site has yet to be determined. Focused plant surveys will be scheduled if and when the project is approved by the County of San Bernardino. Mitigation Measure 5.8-1a requires that surveys shall be conducted during a spring with adequate rainfall to ensure proper identification of special status plants on the project site and appropriate mitigation acreage.

5-3 The area designated open Jeffrey pine forest was identified according to topography, soil types, and plant species composition observed during focused surveys in 2002. According to the 2002 Pebble Plain Habitat Management Guide, a point system to qualify pebble plain habitat was developed. To qualify as a pebble plain a given area must possess enough indicator species to attain a score of four points. Strong indicator species, each worth two points, often occur on pebble plains and rarely occur off pebble plains. Weak indicator species, each worth one point, often occur on pebble plains and frequently occur off pebble plains. The project site contains one strong indicator species, silver-haired ivesia, which was restricted to the 0.62 acre of pebble plain habitat mapped. Two weak indicator species, Parish's rock-cress and ash-gray Indian paint brush, were observed within the mapped pebble plain habitat and in scattered patches within the open Jeffrey pine habitat type. Therefore, the 0.62 acre of pebble plain attained the required four points and the area designated open Jeffrey pine forest attained only two points according to the 2002 Pebble Plain Habitat Management Guide point system. Implementation of Mitigation Measure 5.8-1a would ensure that botanical surveys are repeated prior to clearing or grading to more precisely map the concentration of special status plants and habitats. Following surveys, the habitat types and acreages will be revised according to the habitat definitions in the 2002 Pebble Plain Habitat Management Guide and mitigated appropriately at a 3:1 ratio. Furthermore, implementation of Mitigation Measure 5.8-1a requires that a mitigation site is identified prior to any vegetation clearing, grading, or other site disturbance on the project site. Therefore, the project would not be allowed to move forward until a mitigation site is identified and purchased.

5-4 The Draft EIR section and biological technical report identify project-related impacts to bald eagles and their perch trees as significant and unavoidable impacts and significant and unavoidable cumulative impacts.

5-5 Please refer to Response to Comment No. 5-4. Mitigation Measures 5.8-1b and 5.8-1c prohibit development that may occur within the project site and in the individual lots from impacting these trees and their root structures. Mitigation Measures 5.8-1b and 5.8-1c are hereby revised as follows:

5.8-1b Trees identified on Exhibits 3 and 4 of the Bald Eagle Survey Report (Appendix E, see attached) as eagle perch locations shall be preserved in place upon project completion and shall not be removed under any circumstances. Any development that may occur within the project site and in the individual lots must avoid impacts to these trees and their root structures. All construction or landscaping improvements, including irrigation, will be prohibited on or around the exposed root structures or within the dripline of these trees. These restrictions on development of the individual tentative tracts must be clearly presented and explained to any potential prospective developers and/or homeowners prior to assumption of title and close of escrow. This measure shall be identified as a Note on the Composite Development Plan.

5.8-1c Prior to vegetation clearing, grading, or other disturbance, the project site shall be surveyed to identify all large trees (i.e., greater than 20-inches in diameter at 4.5 feet from the ground) within 600 feet from the high water line. Trees identified on the project site as having a diameter in excess of 20-inches at four feet from the ground within 600 feet of the shoreline shall be documented and tagged. Any development that may occur within the project site and in the individual lots must avoid impacts to tagged trees and their root structures. All construction or landscaping improvements, including irrigation, will be prohibited on or around the exposed root structures or within the dripline of these trees. These restrictions on development of the individual tentative tracts must be clearly presented and explained to any potential prospective developers and/or homeowners prior to assumption of title and close of escrow. This measure shall be identified as a Note on the Composite Development Plan.

5-6 Comment is noted. The County will consider the Commentor's opinion and comments during the deliberations on the project.

COMMENT NO. 6

SIERRA CLUB
FOUNDED 1892

SIERRA CLUB
BIG BEAR GROUP

April 15, 2005

VIA FACSIMILE

County of San Bernardino
Land Use Services Department, Planning Division
385 North Arrowhead Avenue 1st Floor
San Bernardino, California 92415-0182
Attn: Matthew Slowik

RE: "Revised Biological Resources Section of the DEIR for the Moon Camp Development Project/RCK Properties Inc.."

The Big Bear Group of the Sierra Club, representing over 200 members in the Big Bear Valley, appreciates the opportunity to comment on the Revised Biological Resources Section of the DEIR for the proposed Moon Camp Development project in Fawnskin, California.

Our position is that this revised evaluation of the impacts to the biological resources still proves to be inadequate due to its underestimation of the impacts and its suggestion of mitigations that in the past have proven to be ineffective. In recent investigations regarding the mitigations required by the EIR's of completed projects around the Big Bear Valley, it has been shown that these mitigations, especially in the cases of those for bald eagles and for pebble plains habitat: 1) have often not been implemented by the developers; 2) have frequently not been enforced by the lead agencies involved; 3) have done little or nothing to stop the decline of these species throughout the Valley and 4) have been forgotten about over the long term. For the most part, all record of similar mitigations have been buried in the file archives of the lead agencies, including the County, with no steps taken to preserve the information and make certain that future generations of employees receive it or track, monitor and enforce the mitigations into perpetuity. These measures have thus proven to be impractical and ineffective in the mitigation of impacts from the projects. None of this has been accounted for in this revised section or anywhere else in this DEIR with regards to the resulting impacts on the biological resources. 6–1

This new biological resources section completely underestimates the impact on bald eagles in Big Bear Valley and throughout Southern California. The bald eagle population has been in steady decline throughout Southern California and in the Big 6–2

Bear Valley over the past two decades. One highly effective way for populations in this whole region to begin to recover would be for the eagles to once again begin nesting in this region as they had done in the past, prior to the human-caused impacts that drove them away. The north shore of Big Bear Lake is one of the last remaining areas where this nesting may be possible and the development of this project would most likely serve to eliminate that possibility. None of these larger range impacts on the bald eagle have been evaluated in this revised section or anywhere in this DEIR. 6–2

The pebble plains habitats and the montane meadow habitats are both declining throughout the valley, primarily due to human pressures. The actual size of both these habitats on the proposed project site have been severely underestimated. In addition, the relative size to the total of these habitats still remaining has been underestimated, resulting in a severe understatement in the impacts of this proposed project on the total range and viability of these habitats into the future. 6–3

Many sections and statements within the current General Plan for the County of San Bernardino focuses on the goals of maintaining and protecting the existing natural habitats within the County and especially within the Mountain areas. The revised biological resources section of this DEIR fails to evaluate how the adverse impacts that are defined will impact the County's ability to adhere to these goals. 6–4

The Big Bear Group of the Sierra Club finds that this revised Biological Resources section, and therefore the complete DEIR for this proposed Moon Camp project is inadequate and incomplete. In addition, even with the adverse impacts as currently stated in this section, especially regarding the bald eagle, this project should be rejected and the No Project option selected. 6–5

Respectfully submitted,

Bill Nichols
Executive Committee Member
Big Bear Group, Sierra Club

Response to Commentor No. 6
Erv Nichols, Sierra Club
April 15, 2005

6-1 The specialists responsible for preparation of the biological resources section of the EIR indicate that the mitigation measures are feasible as written and should be appropriately implemented by the lead agency. The County, as the lead agency, shall assume responsibility for implementation of the mitigation measures.

6-2 Direct, indirect, and cumulative impacts to the bald eagle have been identified in the Draft EIR as significant and unavoidable. Impacts to nesting bald eagles were not analyzed because bald eagles are not nesting at Big Bear Lake in the existing condition.

6-3 Please refer to Response to Comment No. 5-3.

6-4 The Draft EIR section identified plants considered by the County General Plan as Rare, Threatened, or Endangered. Projects potentially impacting County-listed species must prepare an environmental analysis in accordance with CEQA to determine the significance of impacts on these species. Two plant species identified within the General Plan, Parish's checkerbloom and bird's foot checkerbloom, have the potential to occur on the project site. Impacts on these species were assessed in the Draft EIR according to the presence of suitable habitat. Implementation of Mitigation Measure 5.8-1a would determine specific population impacts and reduce impacts to these species to less than significant levels. Other sections of the County General Plan applicable to the proposed project are discussed in the Land Use and Planning Section of the EIR.

6-5 Comment is noted. Section 7.0 of the Draft and Final EIR address the "No Project" alternative.

COMMENT NO. 7

FRIENDS OF FAWNSKIN
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909-866-9682

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1095 Market St., Suite 511
San Francisco, CA 94103
415-436-9682

April 15, 2005

Sent by FACSIMILE (909-387-3223), hard copy to follow via U.S. Mail

County of San Bernardino
Land Use Services Department, Planning Division
385 North Arrowhead Avenue 1st Floor
San Bernardino, California 92415-0182

Attn: Matthew Slowik, Sr. Assoc. Planner

RE: "REVISED BIOLOGICAL RESOURCES SECTION OF THE DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE MOON CAMP DEVELOPMENT PROJECT/RCK PROPERTIES INC.: GENERAL PLAN AMENDMENT/OFFICIAL LAND USE DISTRICT CHANGE FROM BV/RL-40 TO BV/RS-7200 AND AMENDMENT TO COUNTY CIRCULATION ELEMENT FOR REALIGNMENT OF NORTH SHORE DRIVE; TENTATIVE TRACT MAP #16136, AND CONDITIONAL USE PERMIT FOR A BOAT DOCK."

I. INTRODUCTION and SUMMARY

On behalf of the membership of Friends of Fawnskin and the Center for Biological Diversity, we would like to thank the San Bernardino County Land Use Services Department Planning Division for the opportunity to comment on this Revised Biological Section of the Draft Environmental Impact Report for the proposed Moon Camp residential development project, General Plan amendment, land use district change, circulation amendment, tentative tract map and conditional use permit for a boat dock (collectively, DEIR).

Friends of Fawnskin (FOF) represents a membership of over 600 local residents of and visitors to Fawnskin, California, all of whom would be directly and adversely affected by the negative impacts to the biological resources of this area that would result from the development of the proposed Moon Camp project. FOF has been working consistently to maintain and protect the historic small-town, nature-oriented atmosphere of Fawnskin on the north shore of Big Bear Lake. Residents and visitors who have chosen to come to Fawnskin have done so primarily because of the nature-surrounded atmosphere and current character of the town. We feel that it is imperative to the rights of these individuals that the basic essence of this character be preserved. 7-1

The Center for Biological Diversity (CBD) is a non-profit, public interest corporation with over 13,000 members across the country, including southern California and the Fawnskin area. CBD and its members are dedicated to protecting the diverse native species and habitats through science, policy, education, and environmental law.

FOF and CBD continue to be strongly opposed to this proposed Moon Camp development project because, even with the mitigations proposed in this revised biological resources section, this project would continue to have extensive adverse effects on surrounding properties, on the entire community of Fawnskin and on the Big Bear Valley environment as a whole. Especially in the area

of Biological Resources, this project goes against a large number of the goals set for the mountain areas in the County's own General Plan. Though an amendment to the General Plan to change the zoning is proposed, there is no amendment currently proposed to change the general goals in the area of biological and natural resources. In order to maintain those goals and support the existing biological resources at this site and throughout the Big Bear Valley, we support the RL-40 designation of this property as it is currently zoned in the County's General Plan and strongly advocate the maintenance of this designation. From visitor information collected by the Discovery Center, we believe that much of the economic viability of this entire Valley depends on the maintenance of the native habitats and natural surroundings currently in existence. The adverse impacts to those habitats, and especially to the bald eagle, that would result from the development of this proposed project would rapidly trickle down to adversely affect the economic well-being of the entire Big Bear Valley. 7-1

In reviewing this revised Biological Section of the DEIR, FOF and CBD have found it to still be incomplete, inaccurate, and defective. The DEIR fails to adequately evaluate the severe adverse effects of the proposed project and grossly downplays and understates the significant and unavoidable impacts that would be caused should it be approved. FOF and CBD's objections to this proposed project and the inadequacies of this revised Biological Resources section of the DEIR are set forth below. Please include this letter in its entirety as part of our formal CEQA comments to be included in the Environmental Impact Report. In summary, we continue to object to this development project, as proposed, for the following reasons:

II. Biological Resources

The revised Biological Section of the DEIR still has provided an incomplete and inadequate evaluation of the impacts on Biological Resources that grossly underestimates the resulting impacts of this project.

- The Standard Conditions of Approval (SCA-1) does not specify that the replanting of trees must be native trees nor the same type of trees that are being removed. The biological resources section does not evaluate the impact on the wildlife as a whole nor on the individual species of the area for a change in the species of trees that exists on the site. 7-2

- Nothing has been mentioned or taken into account in this revised biological resources section that the bark beetle infestation has long passed its peak and that the removal of the dead trees and logs on the site to reduce the bark beetles could have adverse impacts on the other species in this area. The counterbalance of these has not been evaluated to make recommendations for finding a middle-ground for the long-term health of the area in all conditions. 7-3

- The percentage used to define the pebble plains habitat of this site as a portion of the total in existence has been grossly underestimated. According to the biological resources section itself, the special-status plants associated with the pebble plains habitat "were found to be widespread throughout an approximately 11.8 acre area of open Jeffrey pine forest with an herbaceous layer of Wright's matting buckwheat in the western half of the Project site." There is no scientific evaluation or justification given for not including at a minimum the 11.8 acres nor more accurately the "western half of the Project site" in the calculations for the size of the actual pebble plains habitat. 7-4

- Once again, since the entire "open Jeffery pine forest" as characterized in the document meets the habitat definition of pebble plains and supports special status species across 17.38 acres, the impact is not just 0.69 acres as considered in the analysis, but the entire 17.38 acres. 7-5

- Many of the pebble plains habitat areas in other parts of the Valley have been very recently and very extensively damaged and thus potentially reduced in size. No evaluation has been done on the actual size of the entire pebble plains habitat, and therefore on the actual percentage represented by this proposed development site, with taking into account the large increase in off-road vehicle usage and resulting destruction of the existing habitat. **7-6**

- No scientific justification is given to define 40% rainfall as being a sufficient basis for obtaining an accurate survey of the extent of the pebble plains habitat nor any justification given for surveys being valid with anything less than full and normal rainfall. **7-7**

- No scientific justification is given to define 40% rainfall as being a sufficient basis for obtaining an accurate survey of the extent of the montane meadow habitat nor any justification given for surveys being valid with anything less than full and normal rainfall. **7-8**

- Since it would be difficult if not impossible to find a willing seller of sufficient acreage of pebble plains and associated rare plant habitat to in any way mitigate the loss of the actual size of these habitats at the proposed project site, this mitigation measure (paragraph 2 of 5.8-1a) is impractical and inadequate. **7-9**

- No mitigation measures have been defined to make up for the loss of montane meadow habitat with the development of this proposed project. **7-10**

- No evaluations have been done to define how much of the total montane meadow habitat in the Valley would be lost with the development of this proposed project. **7-11**

- The special status plant species listed on page 5.8-48 of the revised biological resources section that are likely to exist at the site but that were not detectable during the surveys have not been adequately evaluated nor their potential loss accounted for in this DEIR. Since their numbers have not been determined, no determination as to the full impact to their total populations could have been determined, nor are there any requirements set for making up for their loss once their actual numbers and extent of range have been determined. **7-12**

- Given all of the above points, the mitigation measures defined in 5.8-1a are grossly inadequate and would not serve to reduce impacts to a less than significant level. **7-13**

- Since the extent of the pebble plains habitat has been inadequately evaluated and grossly underestimated, the evaluation of the potential impact to the special-status Andrews' marble butterfly is inadequate and could underestimate the significance of the impacts on this species. **7-14**

- The analysis fails to evaluate the loss of a significant portion of the shoreline habitat for all the species that could be impacted, including not only shore-feeding species, but all species that use this portion of the shoreline for access to the lake. **7-15**

- The mitigations proposed to protect the bald eagle habitat as proposed continue to be impractical and ineffective. Similar mitigations in other parts of the Valley have often not been enforced or regulated so that they, in the end, proved to be neither practical nor effective. **7-16**

- This revised section fails to evaluate the adequacy of the special-status wildlife mitigations on the basis that similar bald eagle mitigations have been done in prior developments in the Big Bear Valley and when the mitigations were implemented, the bald eagle numbers have been significantly reduced over the past two decades, thus rendering the mitigations totally inadequate. 7-17

- Once again, the potential removal of additional trees to support Section 5.3-1c mitigation for a 100-foot fuel modification is not analyzed anywhere in the Biological Resources section. 7-18

- The DEIR still fails to include in the biological resources analysis the impact to wildlife based on increases in road-kill from the increased traffic nor from the proposed highway realignment. 7-19

- The evaluation of impacts to bald eagles fails to take into account that the eagles now can see the shoreline from the trees identified as bald eagle perches. There is no mention nor evaluation of the increased impacts when the views from those perch trees is degraded extensively by the visually obstructive intrusion of homes built between the trees and the shoreline. 7-20

- No mention nor evaluation has been done on the larger-range impacts to the entire population of Southern California wintering bald eagles. The bald eagle numbers in Southern California have been declining in spite of what's happening in other areas of the country. One of the only potential ways for this population to begin recovering is to increase the chances of these populations actually nesting in Southern California. This habitat on the north shore of Big Bear Lake is some of the last remaining likely areas for this nesting to occur and thus, this proposed project will very likely negatively impact the chances for overall recovery of the bald eagle populations in Southern California. 7-21

- No evaluation has been done on whether the drought in this area could have affected the existence of the wildlife on this site and whether more wildlife would be likely to be found at the site during years of normal rainfall. Therefore, the evaluation of the impact on all wildlife, including but not limited, to the yellow-blotched salamander, the silvery legless lizard, the southern rubber boa, the San Bernardino Mountain Flying Squirrel, and all species of bats is inadequate and potentially understated. 7-22

- The adverse impacts on the biological resources that would result from the development of this project would spread out to affect other arenas, such as the economy of the valley and the economic viability of its current dependence on tourism. None of these impacts have been evaluated in this section or throughout the remainder of the DEIR. 7-23

This revised biological resources section analysis continues to be inaccurate and inadequate and grossly understates the level of significance of the impacts regarding wildlife and plants that would be caused by this proposed project. It especially continues to underestimate the significant impacts on bald eagles and both the pebble plains and the montane meadow habitats. 7-24

III. CONCLUSION

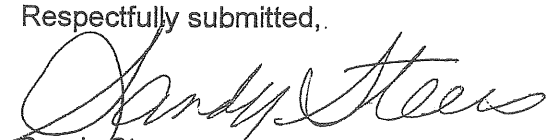
Friends Of Fawnskin and CBD hereby incorporate by reference any and all comments made regarding this project, even if made in the past or future, in order to enforce the non-discretionary requirements of the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). FOF and CBD have raised many critical issues in this response, but our concerns are not limited to only these specific items. Further, since a section of this DEIR was revised, the entire document must be circulated once again so that the changes and how they apply 7-25

from one section to another can be properly evaluated and the public and the decision-makers can be properly informed prior to making any decision on this project, as required by law. 7-25

We again formally request timely notification in advance of all meetings, documents, and decisions regarding this proposed project. 7-26

The Revised Biological Resources section of the Draft EIR, and thus the DEIR as a whole, for the proposed Moon Camp Project currently in circulation is incomplete, inaccurate and defective and must be rejected in its present form. It has failed to adequately assess the level of significance of the adverse impact on biological resources. Furthermore, multiple significant impacts continue to understate and sugar coat the project in a thinly-veiled attempt to convince the Board of Supervisors to approve this project with overriding considerations. The project, on the basis of the present proposal, is so entirely contrary to the guidelines of the County's General Plan and the best interest of the tax-paying public that it warrants nothing less than a categorical denial. We urge the Board to carefully evaluate this project and select the No Project Alternative in the interest of the Public Trust. 7-27

Respectfully submitted,



Sandy Steers
for the Friends Of Fawnskin
and Center for Biological Diversity

Response to Commentor No. 7
Sandy Steers, Friends of Fawnskin
April 15, 2005

7-1 Comment is noted. Section 7.0, Alternatives to the Proposed Project, includes a "No Project/No Development" alternative (RL-40) and an additional range of alternatives, concluding with the environmentally superior alternative.

7-2 Trees will be "replanted" on the site at a 2 to 1 ratio per the San Bernardino County Plant Protection and Management Ordinance requiring planting of trees of the same species removed. Direct and indirect impacts on wildlife are discussed beginning on page 5.8-54 of the Recirculated Biological Resources Section, under the heading "Wildlife Impacts/Indirect Impacts."

7-3 The impact analysis considered direct impacts to 61.87 acres of the 62.56 acre project site, which includes all native and non-native vegetation types, including developed areas. These impacts included the removal of all habitat on the project site, including dead trees and logs, and took into consideration impacts on wildlife dependent on the habitat provided by them.

7-4 Please refer to Response to Comment No. 5-3.

7-5 Please refer to Response to Comment No. 5-3.

7-6 Please refer to Response to Comment No. 5-3.

7-7 According to the Western Regional Climate Center (WRCC 2005), the Big Bear Lake area receives an average of 21.99 inches of precipitation annually, 13.63 inches or 60 percent of which is received by May when plant surveys would begin on the project site. Forty percent or 8.8 inches was considered a minimum average rainfall threshold at which surveys would be considered within an acceptable range. Mitigation Measure 5.8-1a of the Draft EIR has been updated for the Final EIR as follows:

5.8-1a	~~Prior to vegetation clearing, grading, or other disturbance, the project site shall be surveyed during a year with precipitation at least 40 percent of average for the area to determine presence or absence of special status plant species and vegetation types. Surveys shall focus on listed special status vegetation types, and Threatened or Endangered, and CNPS List 1B and 2 species whose presence could not be determined during surveys due to lack of rainfall. The location and extent of special status species populations shall be mapped and the size of the populations accurately documented.~~ ~~The project applicant shall pay compensation for the loss of special status botanical resources identified on the project site by the survey by funding the purchase and management of off-site habitat through contributions to a fund established by the California Wildlife Foundation~~

~~on behalf of the CDFG. The California Wildlife Foundation is an independent 501(c)3 nonprofit corporation founded to assist the CDFG and other governmental agencies in the management of funds and mitigation banks designed to offset the impact of development on California's native flora and fauna. Off-site habitat containing the same species as those identified within resources impacted by the proposed project shall be purchased at a ratio agreed upon by the County of San Bernardino, San Bernardino National Forest, USFWS, and CDFG. The typical mitigation ratio is 3:1 (i.e., three acres of habitat purchased for preservation for each acre impacted by development).~~

~~If additional surveys during a year with precipitation at least 40 percent of average do not encounter additional special status plant resources, the project applicant is responsible for the mitigation of a minimum of 11.8 acres of pebble plain and open Jeffrey pine forest in the western half of the project site that is known to be occupied by the federally-listed Threatened ash-gray Indian paintbrush (i.e., would be required to fund the purchase of 35.4 acres of offsite habitat from the California Wildlife Foundation if the agreed mitigation ratio is 3:1).~~

Prior to vegetation clearing, grading, or other disturbance, the project site shall be surveyed during a year with precipitation at least 40 percent of average for the area to determine presence or absence of special status plant species and vegetation types. Surveys shall focus on special status vegetation types, and Threatened or Endangered, and CNPS List 1B and 2 species whose presence could not be determined during surveys due to lack of rainfall. The location and extent of special status species populations shall be mapped and the size of the populations accurately documented. Pebble plain habitat acreages will be recalculated following the survey using criteria established by the Habitat Management Guide for Pebble Plain Habitat on the National Forest System (2002).

Should avoidance/retention on-site of the 4.91 acres of Pebble Plain habitat in permanent open space under a Conservation Easement Agreement not occur, the Project Applicant shall pay compensation for the loss of special status botanical resources identified on the project site during the survey by funding the purchase, establishment of a conservation easement, and management of off-site habitat within the conservation easement by an entity approved by the CDFG. Off-site habitat containing the same species as those identified within resources impacted by the proposed project shall be purchased at a ratio of 3:1 (i.e., three acres of habitat purchased for preservation for each acre impacted by development). Prior to the initiation of clearing or grading activities on the project site, the conservation easement will be established, the management entity will be approved by the CDFG, and a non-wasting endowment will be established for the monitoring and management of the preservation site by the management entity in perpetuity.

If additional surveys during a year with precipitation at least 40 percent of average do not encounter additional special status plant resources, the Project Applicant is responsible for mitigating impacts to a minimum of 11.8-acres of pebble plain and open Jeffrey pine forest in the western half of the project site that is known to be occupied by the Federally-listed Threatened ash-gray Indian paintbrush. As such, the applicant would be required to fund the purchase and maintenance of 35.4-acres of offsite pebble plain and open Jeffrey pine forest habitat that contains special status plant species, including Ash-gray Indian paintbrush and others known to occur on the site.

7-8 Please refer to Response to Comment No. 7-7.

7-9 Implementation of Mitigation Measure 5.8-1a requires identification of a mitigation site identified prior to any vegetation clearing, grading, or other site disturbance on the project site. Therefore, the project would not be allowed to proceed until a mitigation site is retained.

7-10 Vegetation type acreages would be recalculated following focused plant surveys in accordance with Mitigation Measure 5.8-1a. Therefore, Mitigation Measure 5.8-1a would mitigate for the loss of Montane Meadow habitat on the project site.

7-11 According to the Southern California Mountains and Foothills Assessment by the Forest Service (U.S. Department of Agriculture 1999), there are approximately 55,446 acres of montane meadow habitat in Southern California, 38 percent (21,070 acres) of which occurs on public lands. Approximately 4.4 acres of lake shoreline on the project site has the potential to support montane meadow habitat. The loss of 4.4 acres on the project site or approximately 0.00008% of the total acreage known to exist in its range would not likely be considered significant. However, because montane meadow is considered a special status vegetation type, it would be mitigated at a 3 to 1 ratio in accordance with Mitigation Measure 5.8-1a.

7-12 Impacts to special status plants were considered by assuming their presence on the project site and evaluating impacts to the total acreage of suitable habitat for these species on the project site. Mitigation Measure 5.8-1a would reduce impacts to these species to a less than significant level.

7-13 The lead agency will make a determination as to the adequacy of Mitigation Measure 5.8-1a after consideration of the Draft EIR section and Responses to Comments.

7-14 The Andrews' marble butterfly is not currently listed or proposed for listing as a Threatened or Endangered species or CDFG Species of Special Concern. This species is known to occur in pine and mixed conifer forests, particularly open forest areas, above 5,000 feet elevation. As discussed in the draft EIR section, there are approximately 58,526 acres of Jeffrey pine forest in the San Bernardino Mountains. Furthermore, there are approximately 124,652 acres of mixed conifer forest in the San Bernardino Mountains. Therefore, within the San Bernardino Mountains there are approximately 183,178 acres of montane conifer forest containing potential habitat for the Andrew's marble butterfly and its host plants. It is not anticipated that

impacts to approximately 54.91 acres of Jeffrey pine forest and 0.69 acre of pebble plain would result in a significant impact to this species. Furthermore, implementation of Mitigation Measure 5.8-1a would ensure that impacts to pebble plain habitat are mitigated to a level considered less than significant.

7-15 General wildlife impacts, including loss of foraging habitat, are discussed in the Recirculated Biological Resources Section, under wildlife impacts on page 5.8-52 and impacts to lake access are discussed under wildlife movement impact 5.8-4 on page 5.8-59 and 5.8-60.

7-16 Please refer to Response to Comment No. 6-2.

7-17 Please refer to Response to Comment No. 6-2.

7-18 Please refer to Response to Comment No. 7-3.

7-19 In the existing condition, State Route 38 represents a hazard to wildlife crossing to access the Big Bear Lake as a water source. There are several blind curves that represent a greater hazard than the proposed project improvements to State Route 38. The proposed project would result in an increase in traffic on State Route 38 from vehicle trips to and from the proposed development. However, the proposed project would reduce the amount of wildlife and available habitat on the project site, thereby resulting in a reduced likelihood for vehicle strikes on State Route 38 and on streets interior to the project. Additionally, the speed limit on State Route 38 would not be changed with project implementation.

7-20 It is not anticipated that construction of homes near the shoreline would affect bald eagle views of Big Bear Lake from perch sites. Nonetheless, direct, indirect, and cumulative impacts to the bald eagle are considered significant and unavoidable by the Draft EIR analysis.

7-21 Please refer to Response to Comment No. 6-2.

7-22 The project site is located adjacent to the Big Bear Lake. It is unlikely that the species mentioned, or their prey or food items would move away from such a large water source during drought conditions.

7-23 As stated in Section 15131(a) of the CEQA guidelines, economic or social effects of a project shall not be treated as significant effects on the environment. An EIR may trace a chain of cause and effect from a proposed decision on a project through anticipated economic or social changes resulting from the project to physical changes caused in turn by the economic or social changes. The intermediate economic or social changes need not be analyzed in any detail greater than necessary to trace the chain of cause and effect. The focus of the analysis shall be on the physical changes.

7-24 The Draft EIR identifies impacts to bald eagle as significant and unavoidable. Impacts to pebble plains are considered significant; however, implementation of Mitigation Measure 5.8-1a would reduce impacts to a level considered less than significant. Impacts to montane meadow habitat, if determined to be on the project

site would also be mitigated by implementation of Mitigation Measure 5.8-1a. Please refer to Response to Comment No. 7-10.

7-25 In accordance with Section 15088.5(c), which pertains to recirculation requirements, if the revision is limited to a portion of the EIR, the lead agency need only recirculate the chapters or portions that have been modified. In the case of this EIR review for the proposed Moon Camp Project, the revisions to the Draft EIR involved exclusively the Biological Resources Section.

7-26 Comment is noted.

7-27 Comment is noted. Section 5.1, *Land Use and Relevant Planning*, of the Draft and Final EIR includes a comprehensive review of land use and policy affects associated with the County General Plan.

SAN BERNARDINO VALLEY AUDUBON SOCIETY
P.O. Box 19973, San Bernardino, CA 92423

April 15, 2005

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Land Use Services Department, Planning Division
385 N. Arrowhead Ave., First Floor
San Bernardino, CA 92415-0182
FAX (909) 387-3223

By FAX and U.S. Mail

RE: REVISED BIOLOGICAL RESOURCES SECTION
Draft Environmental Impact Report *for the* **MOON CAMP Development Project** / RCK Properties Inc.; General Plan Amendment -Official Land Use District Change from BV/RL-40 to BV/RS-7200 and Amendment to County Circulation Element for Realignment of North Shore Drive; Tentative Tract Map #16136; and Conditional Use Permit for a Boat Dock.

Dear Mr. Slowik,

The *San Bernardino Valley Audubon Society* appreciates the opportunity to comment on the Revised Biological Resources Section of the Draft Environmental Impact Report referenced above for the Moon Camp Development Project and Boat Dock in Fawnskin, which are dependent upon a special General Plan Amendment for increased density in land use designation and an amendment to the County Circulation Element for realignment of the scenic highway.

The San Bernardino Valley Audubon Society represents approximately 2000 citizens living in the Inland Empire. In addition to our members who actually reside in the mountain region, all of us look to the San Bernardino National Forest as a monumental public asset, a one-of-a-kind forest sanctuary that offers refuge, recreation and spiritual renewal to everyone who wishes to enjoy its rare and valuable alpine qualities. When actions are proposed that threaten to sacrifice these advantages unwisely or unjustifiably, we feel a strong obligation to speak out on behalf of the general populace, especially when any proposal --such as the present case-- contains disproportionate County giveaways that unduly favor private gain at public expense. 8-1

The analysis provided in the Revised Biological Resources Section of the Draft Environmental Report reveals a prime example of the kind of development proposal where the County is being asked to sacrifice major public values in order to elevate private interests and private gain over and above reasonable County guidelines, which were established essentially to

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avoid such actions. The purpose stated in the Introduction of the Revised Biological Resources Section for the inclusion of additional biological information is that the "revisions are intended to clarify cumulative impacts to the bald eagle species and present modifications to mitigation measures." In clarifying the overall effect of the proposed project on the bald eagle species in the Big Bear Valley, the conclusion of the report is that the project would result in "significant and unavoidable impacts" to bald eagle populations, for which no offsetting mitigation can be provided. Given the importance of the Bald Eagle in the Big Bear Valley both biologically and economically, this is tantamount to saying that the project would be an extremely bad idea.

It is further stated that, "If the County of San Bernardino approves the project, the County shall be required to cite their findings in accordance with Section 15091 of CEQA and prepare a Statement of Overriding Considerations in accordance with section 15093 of CEQA." In past instances of biologically detrimental development proposals in the mountain area, where significant unmitigable impacts were present, the County has employed the Statement of Overriding Consideration to substitute housing needs and economic benefits as tenuous justifications to override the particular significant biological impacts.

However, recent fires, floods and other hazards have shown that excessive housing in the mountains does not equate to the same social benefits that ordinary urban planning or an urban-oriented mindset might generally assume in the instance of similar growth inducing situations in the flatlands. On the contrary, more housing is counter-productive to public safety. No longer can it be considered justifiable to sidestep critical biological resources on the claim that social, housing or economic benefits override the public value, the resources value or the economic value of the bald eagle habitat in the Big Bear Valley. The protection of natural resources on this site is clearly more in keeping with the highest public interest. This is especially true in the present case where a General Plan Amendment aimed specifically at increasing allotted densities would be necessary in order to implement the proposed project, even though the majority of the adjacent land is National Forest and lake frontage, fully within the viewshed of a scenic highway. 8-1

The Bald Eagle has become a major attraction and a prominent symbol for the Big Bear area as well as a critical indicator species of the overall biological health and integrity of the forest and alpine lake environment. Unwarranted commercial ventures that actively confer special advantages to the applicant at public expense ought not to be allowed in cases like this where they clearly jeopardize prominent resources.

As was pointed out in our prior comments of May 17, 2004, increased development in the Big Bear Valley has corresponded with a simultaneous decline in the population of wintering Bald Eagles that inhabit the area. In addition to being the national bird, the bald eagle has also come to symbolize the unique wildlife values of the Big Bear Lake area in the San Bernardino National Forest. Beyond its importance as a threatened species, the presence of the Bald Eagle in Big Bear has become a famous attraction for the visiting public, widely featured in a variety of publications and media exposure that confer a tremendous level of preciously high-profile advertising of this popular tourist destination. Such attention is of considerable benefit to the local economy that prospers from the prominence of the surrounding National Forest and the integrity of its wildlife. The Forest Service Discovery Center on the north shore is the main

visitor center for the local mountains. Eagle tours are the primary attraction in winter. The health and sustainability of the Bald Eagle is a critical factor for the overall natural resource values of the National Forest in the Big Bear Lake area.

The Revised Biological Resources Section strongly confirms that the Moon Camp site is a highly significant roosting and perching habitat for the remaining bald eagle population in the area. In fact the report stresses that the "proposed project contains some of the most utilized bald eagle roosting and perching habitat in the Big Bear Valley." But the revised assessment also points out that the proposed project, which is entirely dependent upon a discretionary approval by the County of a preferential zoning change, would have an extremely adverse effect on the Bald Eagle, which could not be mitigated. The quantity of trees that would need to be removed for the extensive building and road construction proposals would severely compromise the viability of the existing habitat and further compound the factors contributing to the significant population decline of the Bald Eagle in Big Bear Valley.

Therefore we continue to strongly encourage that the County Planning Department recommend that the project be denied as not conforming to the unique values of the site, particularly the extraordinary presence of the magnificent Bald Eagle as one of the most exceptional and irreplaceable natural resources of the region. It would be a tragic loss if the largest population of wintering bald eagles in Southern California were allowed to dissipate due to unwarranted projects like this.

8–1

The Bald Eagle is certainly a prime example of the kind of natural resource that the County General Plan fully intended to protect. Over 15 years ago the General Plan recognized on Page 11-C1-2 that, "In the Mountain region, many plant and animal species, including Bald and Golden Eagles, are losing habitat to residential land use along lake shores." Wildlife values are specifically highlighted in the General Plan on page 11-C5-57 under the Preservation of Natural Resources Section of the Open Space Element as having a collection of positive factors such as aesthetic, recreational, ecological, educational and scientific values as well as economic benefits, insofar as the wintering population of the Bald Eagle in particular is a popular tourist event in the Big Bear Valley. Also the San Bernardino Mountains as a whole are considered an "Area of Biotic Significance" (page 11-C5-66) and in particular all perennial and intermittent ("Blue-line") streams, lakes and reservoirs, conifer forests and large mammals and raptors are specifically identified as being key natural resources (pgs. 11-C5-70, 73). It is clear that the overall context of the mountain environment requires special attention to sustain a whole system of natural resources.

The supplemental Biological Resources Section of the DEIR has been helpful in its expanded assessment of these unique qualities and considerations as they relate to the proposed Moon Camp development project. But it is increasingly apparent to the San Bernardino Valley Audubon Society from monitoring development trends in the San Bernardino Mountains over the past decade that the full protection of the County General Plan pertaining to natural resources needs to be more strongly invoked and more strategically reinforced, if the highest and best attributes of the local National Forest and its exceptional biological resources are to be adequately sustained as a regional treasure into the rapidly urbanizing future. It is also important

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that applicants such as the Moon Camp proponents realize at the earliest possible stage that inappropriate projects ought not to be proposed in the first place.

The County General Plan fully recognizes many of the critical challenges inherent in protecting natural resources:

> These resources generally are not hardy nor capable of withstanding the adverse effects of increasing urbanization. Understanding these resources requires an understanding of certain principles. These include the concepts of: carrying capacity, threshold levels of impact, renewable versus nonrenewable kinds of resources, ecological viability, and long-term versus short-term deleterious effects.

8–1

> Natural resources are distinctly different from other concerns normally dealt with in the planning process because these resources are exhaustible and can be permanently damaged. In order to ensure the continued ability of these natural resources to function in their supportive roles in maintaining the quality of life for the urbanized portions of the County, it is crucial to identify and implement strong definitive actions to assure their long term survivability. Without strong direction and controls placed upon certain lands within the County, undesirable effects will result in:
>
> -- Extinction of species
> -- Depletion of groundwater aquifers
> -- Consumption of nonrenewable resources
> -- Loss of interpretive data
> -- Conversions of natural open space

There are numerous goals and policies of the General Plan that fully emphasize these biological and natural resource priorities. A survey of several of these policies strongly illustrates the special value and protections outlined in the General Plan:

Natural Resources Goals (pg. 11-C-2)

C-1 Natural Resources are a necessity to the quality of life within San Bernardino County and it is desirable to maintain them to the greatest extent possible.

8–2

C-2 Certain scarce natural resources are best managed for preservation. These include biological resources, cultural resources, air quality, groundwater supply and quality, and open space.

C-4 Maintenance of the natural resource base of the County requires prudent stewardship in coordination with appropriate agencies and interested groups.

C-6 Preserve rare and endangered species and protect areas of special habitat value.

C-7 Conserve populations and habitats of commonly occurring species.

C-8 Establish plans for long term preservation and conservation of biological resources.

Natural Resource Preservation Goals (pg. 11-C5-78)

C-34 Conserve as many of the County's natural resources as possible and ensure the protection and preservation of traditional regional park values for the benefit of future generations.

C-35 Provide and preserve large open-space areas for both active and passive resource values.

C-36 Include, protect and manage areas having natural values of regional significance.

C-38 Protect the alpine character and environment.

C-39 Protect the forest watersheds.

C-41 Throughout the County, protect natural slopes and topography.

Location, Distribution and Intensity of Land Uses Goals (pg. 11-D6-4)

D-47 Provide a compatible and harmonious arrangement of land uses in the rural area and encourage the conservation of natural and cultural resources for the benefit of residents and visitors.

D-49 Determine what the land is best suited for, match man's activities to the lands' natural suitability, and minimize conflict with the natural environment.

8-2

Natural Resources –Biological Policies/Actions (pg. 11-C1-4)

BI-4 Because the quality of life is related to the variety and abundance of all species, commonly occurring species shall be conserved. The following policies shall be incorporated into the conditions of approval for all proposed discretionary land use proposals:

d. Restrict encroachment of incompatible land uses on natural areas, including drainage courses and open space areas shown on the Resources Overlay.

General Open Space Policies/Actions (pg. 11-C5-7)

OR-1 Because preservation of open space lands will be facilitated through the application of land use standards, the County shall implement the following actions:

a. Utilize appropriate land use categories on the Land Use maps to provide for uses which respect open space values. Land Use districts appropriate for various types of open space preservation include: Agriculture (AG), Floodway (FW), Resource Conservation (RC), Institutional (IN).

b. Develop and apply development policies/standards to support retention of open space lands by: requiring large lot sizes, high percentage of open space or agricultural uses, and clustering.

5

c. Utilize the Hazard and Resources Overlay Maps to identify areas suitable or required for retention as open space. Resources and issues identified on the Overlays which indicate open space as an appropriate use may include: **flood, fire, geologic,** aviation, noise, cultural, prime soils, **biological, scenic resources,** minerals, agricultural preserves, utility corridors, water supply and water recharge.

OR-2 Because the County desires to protect open space lands, and since the County has a unique ability to implement open space programs countywide, the County shall acquire and develop public open space through the establishment of a long-term funding source for land purchase/lease and open space operations.

Open Space Action Programs: Implementation and Funding (pg. 11-C5-8)

OR-3 Because implementation of the open space policies and programs in this Element will require the application of specific policies and action programs and the availability of funding and other implementation mechanisms, the County shall:

d. Prepare a report outlining the economic effects of open space, focusing on potential tourism revenues, the effect of open space on adjacent property values, and the relative costs of providing open space management or urban services for a site.

8–2

Natural Resource Preservation Policies/Actions (pg. 11-C5-79)

OR-15 Because the County desires to protect and preserve natural habitat, areas shown on the Resources Overlay as "Policy Zone" and "Wildlife Corridors" shall be targeted for ministerial and discretionary actions, including purchase of some lands, in support of preserving the natural features and habitat present.

OR-17 Because preservation of natural systems requires the establishment of habitat areas larger than can be provided within individual developments, and since many habitat areas are at risk of being lost to urban encroachment, the County shall seek to establish a publicly owned open space system, purchasing land or development rights or transferring development rights or density, where necessary, to prevent development of important open space areas.

OR-18 Because preservation of natural resources cannot be accomplished only through the use of publicly owned land, the County shall apply the following policies to development and construction proposals on private lands.

a. Require that private lands which exhibit unique features, as identified on the Resource Overlay Map or discussed in this Open Space Element, shall maintain those features. Compensation by allowing the transfer of development rights will be the preferred mechanism for accomplishing this goal. "Unique features" may include *significant topographic features, ridgelines, habitats for threatened and* endangered species, and habitats of limited dispersion in the County.

6

b. Encourage donation or exchange of lands with sensitive biota resources (including, but not limited to, areas shown on the Resources Overlay) to non-profit environmental organizations or responsible agencies (USFS, County, the Nature Conservancy, etc.).

c. Promote common-interest Planned Developments requiring open space and allowing transfer of development rights.

d. Apply the Resource Conservation Land Use District in areas of public and private open space which by its location, access limitations, natural resources, terrain or scenic qualities is suited for low intensity use.

e. Direct growth away from areas containing fragile or erosion-prone soils, especially those which support natural habitats.

OR-20 Because preservation of threatened and endangered species requires the preservation of naturally occurring ecological systems containing plants and animals not considered threatened or endangered, the County shall include in its review of all development projects the total habitat value of a site, rather than simply the presence or absence of these species.

8–2

OR-24 Because preservation of rare, threatened, or endangered species depends on the preservation of habitat which supports populations of these species, the County shall implement the following policies:

a. Seek to protect and conserve rare or endangered flora and fauna with limited or specialized habitats as well as common habitats necessary to support these species.

d. Seek to provide protection and management to maintain habitat values where protection of natural areas and endangered species is not provided by another agency.

e. Review land use designations to ensure that planned land uses provide adequate protection for natural areas in areas containing known or potential biotic resources or designated as open space zones, corridors or active trail alignments on the Resources Overlay. This policy shall also apply to areas adjacent to zones, corridors or active trail alignments.

OR-25 Because the development of private lands can adversely affect the management strategies of the federal agencies which administer public lands within San Bernardino County, the County shall apply the following policies:

a. Support the transfer of private inholdings into public ownership through appropriate mechanisms to reduce "checkerboard" ownership.

7

b. Review the planning documents of the public agency to determine the intensity of uses allowed on surrounding public lands when examining private land uses which are surrounded by public lands.

OR-27 Because preservation of some natural resources requires the establishment of a buffer area between the resource and developed areas, the County shall review the Land Use Designations for unincorporated areas within ten (10) miles of any state or federally designated scenic area, national monument, or similar area, to ensure that sufficiently low development densities and building controls are applied to protect the visual and natural qualities of these areas.

OR-28 Because preservation of natural resources is a goal of the County, the County shall support land use and landscape strategies and standards which protect wildlife habitats and important vegetation.

Land Use Policies/Actions (pg. 11-D6-5)

LU-1 Because it is essential to locate new development in areas where the economic strength derived from agriculture, petroleum, rangeland or mineral resources is not impaired and in order to ensure that the value of the other resources which exist in the county is not diminished, the following policies/action shall be implemented:

8–2

f. Enact and enforce regulations which will limit development in ecologically sensitive areas such as those adjacent to river or streamside areas, (as shown on the Overlay maps) and hazardous areas such as flood plains, steep slopes, high fire risk areas and geologically hazardous areas.

g. Preserve and encourage the management of suitable land for greenbelts, forest, recreation, flood control, adequate water supply, air quality improvement, habitat for fish, wildlife and wild vegetation.

LU-10 Because the County wants to minimize land use conflicts between the County and other agencies that have jurisdictional control over lands located within the County, and because the County wants to cooperate and coordinate with adjacent municipalities and other regional agencies to address regional problems such as traffic congestion, air pollution, water quality, waste management and job/ housing imbalance, the following policies/ actions shall be implemented:

b. Solicit comments from the military and other Federal and State agencies that control land in the County on projects which are proposed near their facilities, as described in sub-policy (d) below.

Mountain Policies/ Actions
LAND USE/ GROWTH MANAGEMENT (pg. 111-C-6)

8

--The county shall regulate the density and configuration of residential development along the shore of all mountain lakes in order to protect their scenic qualities.

Bear Valley Policies/ Actions
Natural Resources BIOLOGICAL (pg. 111-C-14)

--Designate and protect unique habitats supporting rare and endangered species.

--Adopt a Biotic Resources overlay, and utilize the "Sensitive Biota Resources Management Plan" and related "target areas" as community (conservation) standards.

--Utilize the Forest Conservation Community Standards to distinguish between eagle perch trees and hazard trees relative to permitted removal.

8–2

OPEN SPACE/ RECREATION/ SCENIC (pg. 111-C-17)

--Because the Mountain region contains special issues and opportunities, as well as significant open space resources, the following directed policies shall apply:

The County shall encourage conservation and sound management of the mountain forest character and natural resources, including water, streams, vegetation soils, and wildlife.

All of the citations above illustrate how inconsistent the proposed project is with the biological guidelines of the County General Plan. On the other hand the currently designated zoning of one unit per 40 acres for the site is far more consistent with the intent of the General Plan as well as the best interest of the general public and the proper stewardship of the unique and valuable biological resources. The existing land use designation is decidedly more appropriate and ought not to be changed. The additional fact that the supplemental Biological Resources Section of the DEIR does not propose any off-site mitigation such as a conservation easement or offsetting purchase of alternative bald eagle habitat sadly indicates that no other bald eagle habitat on private land remains in the Big Bear Valley. This is a particularly disturbing fact, because it suggests that existing bald eagle habitat on private land in the mountains has been all but diminished to an absolute minimum. The further fact that the species population is declining in the Big Bear Valley indicates that prior mitigations have been insufficient and ineffective. If the guidelines of the General Plan are to be taken seriously and viable protection is to be afforded to the Bald Eagle in the San Bernardino Mountains, then the proposed Moon Camp project must be resolutely rejected. Such a conclusion is made even more emphatic by the fact that the bald eagle habitat on the Moon Camp site is judged by the biological assessment to be of distinctively superior and irreplaceable quality.

8–3

The often dismissive conclusions of the Revised Biological Resources Section of the DEIR regarding the extent of significant adverse impacts on various species and habitats also must be counterbalanced against the extremely narrow context of the rather hair-splitting legal definition of "significance criteria," which was used in determining what would be considered "significant". The statement on page 5.8-45 is an example:

8–4

9

> "Impacts are sometimes locally adverse but not significant because, although they would result in an adverse alteration of existing conditions, they would not substantially diminish or result in the permanent loss of an important resource on a population- or region-wide basis."

We interpret this to mean that only the most extreme criteria were used as a basis to determine whether an impact was "significant" or not, i.e. whether the impact represents "the permanent loss of an important resource." Using only "permanent loss" or "substantially diminish" (presumably to the point of non-sustainability) as the criteria of "significance" seems to be highly unreasonable. This leads to several conclusions that we would dispute, because higher standards of local criteria ought to have been applied. On page 5.8-14 the study states that, "As defined above, the Project site does not contain wildlife crossings or corridors." Under the section on Wildlife Movement, the report concludes that the project "would result in reduced connectivity between Big Bear Lake as a water source to the contiguous open spaces on and to the north..." and "would result in increased traffic on the project site by residents that would further impede movement of terrestrial wildlife currently crossing the site and Highway 38." Yet the final judgment is: "Although this impact is considered locally adverse, it is not considered significant because the impact does not substantially affect a regionally important wildlife movement corridor." Such dismissals of local impacts contradict admonitions in the County General Plan to better protect common wildlife and encourage restoration of corridors (see C-7 and OR-20 cited above). It is also the case that such casual dismissals of locally adverse impacts can lead later on to serious repercussions in adverse cumulative effects, which all too often have gone overlooked by equivalent short-sightedness in other projects. The total loss of deer fawning habitat in Running Springs is one example. Another is the prior underestimation of overall fire danger in the mountain area, which has resulted in a costly and worsened public safety hazard from the excessive urban-wildland intermix. **8–4**

It is clear from the biological report that there really are many additional significant adverse impacts from the proposed project that simply were not considered "significant" by virtue of the minimalist definition used in this assessment. As stated on page 5.8-55: "The loss of habitat, loss of wildlife, wildlife displacement, and habitat fragmentation that would result from construction of the proposed Project would not be considered significant because these impacts would not substantially diminish habitat for wildlife in the region nor reduce any specific wildlife populations in the region to below self-sustaining numbers." Similar kinds of conclusions must have been used on previous projects that have now led to the present critical decline in the bald eagle population. We consider this to be a serious flaw in the report in erring unduly on the side of devaluing biological resources and underestimating cumulative impacts to the point where unsustainable numbers seem to be encouraged rather than strategically avoided. **8–5**

It is apparent from the guidelines of the County General Plan that the County and the local general public recognize substantially higher standards of significance than were used in the biological assessment. Given this rather stilted bias in the report, it is even more compelling to realize that the conclusions of the study still firmly establish that there would be extensive and major adverse impacts resulting from the approval of the proposed project. **8–6**

In regard to various mitigations proposed for impacts to special status plants and vegetation types as well as nesting raptors and jurisdictional waters, we find that most of the proposals are conscientious and sound with the exception of basing future plant studies on minimal criteria of 40% annual rainfall. This figure appears to be arbitrarily and inappropriately low. However, the overall dependence of this project upon extensive mitigations serves to further underscore the inescapable fact that the project itself is heavily burdened with excessive adverse impacts. The preponderance of adverse impacts once more argues forcefully for denying any change to the County General Plan that would unwisely condone increased densities on this site. 8–7

The extraordinary amount of volunteer time, effort, dedication, research and consultation with experts on the part of local citizens that has been marshaled to confront the inappropriate proposals of the Moon Camp Project is indicative of the unacceptable level of adverse impacts that the project threatens to force upon the community and the public. The County needs to recognize the tremendous amount of time, expertise and expense that has been invested by the public in defending itself against the Moon Camp proposal. Certainly the sum is at least equivalent to any investment made so far by the applicant of the project. We hope that such a prodigious effort and demonstration of citizen concern will make it sufficiently apparent to the County Planning Department that the most appropriate decision must be an explicit denial of the proposal. In respect to the biological resources, maintaining the status quo in the current land use designation is clearly in the best interest of the public as well as for the Bald Eagle, the entire range of wildlife habitat, the overall forest, the rare plants and for the important economic benefits that derive from each of these valuable natural resources. 8–8

For all of the above reasons, the San Bernardino Valley Audubon Society strongly encourages the County Planning Department to recommend denial of the proposed Moon Camp Project. We thank you for your consideration of these comments. 8–9

Sincerely

David Goodward

David Goodward
Conservation Chair

Response to Commentor No. 8
David Goodward, San Bernardino Audubon Society
April 15, 2005

8-1 Comment is noted and refers to the San Bernardino County Policy provisions which have been addressed in Section 5.1, *Land Use and Relevant Planning*, of the Draft and Final EIR.

8-2 Please refer to Response to Comment No. 8-1.

8-3 Please refer to Response to Comment Nos. 5-3 and 7-1. For the bald eagle, avoidance through retention of eagle perch trees is likely to be more successful than any attempt to recreate/replace some form of eagle habitat elsewhere. Due to unknowns as to how successful the avoidance approach would be, the conclusion of significance for impacts is accurate as presented in the EIR.

8-4 The full text of the paragraph on page 5.8-46 is provided as follows:

> "An evaluation of whether an impact on biological resources would be substantial must consider both the resource itself and how that resource fits into a regional or local context. Substantial impacts would be those that would substantially diminish, or result in the loss of, an important biological resource or those that would obviously conflict with local, State or Federal resource conservation plans, goals, or regulations. Impacts are sometimes locally adverse but not significant because, although they would result in an adverse alteration of existing conditions, they would not substantially diminish or result in the permanent loss of an important resource on a population- or region-wide basis."

This discussion describes the application of the Section 15065(a), *Mandatory Findings of Significance*, of the CEQA Guidelines. According to this threshold, although a project may result in direct impacts to a population of a particular species, the significance of the impact depends on the extent to which the project reduces the numbers or range of a local population or the reduction of numbers or range of the resource on a region-wide basis. This threshold applies on a resource by resource basis and does not apply to state- or federally-listed Threatened or Endangered wildlife species, impacts to which are considered significant regardless of number of individuals impacted.

The CEQA threshold of significance for wildlife movement is whether or not the Project "interferes substantially with the movement of any native or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impedes the use of native wildlife nursery sites." The project site provides a travel route to the shoreline of Big Bear Lake and does not qualify as a native resident or migratory wildlife corridor.

8-5 The conclusion cited from page 5.8-55 of the recirculated Biological Resources Section, applies to the loss of wildlife habitat available to common native wildlife

species on the project site. Project-related impacts to bald eagle are considered significant and unavoidable.

8-6 The thresholds of significance used in the impact analysis are taken directly from the Appendix G, Section 15065(a), and Section 15380 of CEQA.

8-7 Comment is noted. Please refer to Response to Comment No. 7-7.

8-8 Comment is noted.

8-9 Comment is noted.

- To Whom this should go To;

3/6/05

North Shore Drive is also Hwy 38
It is a beautiful drive along the Lake &
this should not be changed for someones
private use to build homes & a not
needed boat dock - Right next door to this
Proposed property change is already a
Boat Marina & boat dock with 175
Proposed slips - Marina Cove development.
The houses they want to build is ok if
they have the "water, sewer" problems" solved,
this property being a lot of hillside so water
table should be considered look what is happening
in all the areas in L.A - Orange Cty - Pasadena -
Pomona etc -
But most important the North Shore Drive
Hwy 38 - should not be changed for
Private enterprise. I have lived in
Fawnskin on + now just off North Shore Drive
+ Canyon for 33 years. My opinion should
be considered I love this valley and
Fawnskin - "Thank You,

9-1

Betty Conroy
P.O. Box 165
Fawnskin Ca 92333
tel 909-866-3245

Mooncamp Development
Project TCK properties

this letter was from
RBF - Planning - Design - Construction
consulting

Private 222
enterprise - -

Response to Commentor No. 9
Betty Conroy
March 2, 2005

9-1 Comment is noted. Environmental considerations noted by the Commentor have been addressed in the Draft and Final EIR.

COMMENT NO. 10

March 16, 2005

Dear Mr. Slowick,

I am responding to the Review Draft EIR for the Mooncamp Development Project. As a 30 year owner of nearby property on Canyon Rd, I have many objections to the project but I will limit my concerns to the Biological Resources section.

10-1

Specifically, even after implementation of proposed mitigation measures, the project will seriously impact the wintering bald eagle population. This is an important site for these endangered birds, and should be protected by all levels of government.

Sincerely,

Carol Enos
2615 Chestnut
Orange, Ca 92867

Response to Commentor No. 10
Carol Enos
March 16, 2005

10-1 Comment is noted. Environmental considerations noted by the Commentor have been addressed in the Draft and Final EIR.

COMMENT NO. 11

39567 Oak Glen Road
Fawnskin, CA
March 15, 2005

County of San Bernardino
Land Use Services Department, Planning Division
385 N. Arrowhead Avenue, First Floor
San Bernardino, CA 92415-0182

Attn: Matthew W. Slowik Re: Mooncamp Development Project/RCK Properties, Inc.

Dear Mr. Slowik,

I'm the lady that called to tell you that I couldn't read the Biological Resources section of the EIR on your website. Thank you for helping me.

Having read Section 5.8, it seems apparent to me that allowing the Mooncamp project to be built would be a serious assault on the biological resources. Not only are there a very high number of special status plants and wildlife that would be affected to varying degree but Section 5.8-6 -- Cumulative Impacts, clearly states that the bald eagle would be affected not only by loss of habitat and food source but also by the presence of man. The effect of night lighting alone would "significantly affect" the eagles. This area is one of the most important habitats in the state of California. 11-1

Obviously, the bald eagle issue is the most significant impact mentioned in the report but as I read the entire report, I found that there are so many other forms of plantlife and wildlife that would be significantly affected – the Big Bear Valley Sandwort, the Ash-gray Indian Paintbrush, bird and bat foraging to name a few.

I am aware that you asked for comment only on the Biological Resources section but I would just like to say that as a homeowner in Fawnskin, I believe that this development would irrevocably change the entire area. I am concerned about the infrastructure supporting a huge, ungainly development of this sort. I am concerned about the water usage by this large number of units. I am concerned about property values plummeting. And I am truly alarmed that the County of San Bernardino might possibly decide that this development is in character with the surrounding area. You only need to stand on the land that will be covered by this development and look around at the surrounding area to see that this would be an insult to the land, its wildlife and plantlife and it's present inhabitants. 11-2

I most strongly urge you , as an Associate Planner for the County, as well as other members of the Planning Division and ultimately the Board of Supervisors, to decide against this extremely intrusive and damaging development.

Sincerely,
Diane Shattuck

Response to Commentor No. 11
Diane Shattuck
March 17, 2005

11-1 Comment is noted. Impacts to the bald eagle were determined to be significant and unavoidable by the Draft EIR analysis.

11-2 Comment is noted.

COMMENT NO. 12

April 14, 2005
County of San Bernardino
Land Use Services Department, Planning Division
385 N. Arrowhead Ave, First Floor
San Bernardino, CA 92415-0182
Attention: Matthew W. Slowik

Regarding: Mooncamp Development Project/Rck Properties, Inc.
Draft EIR Biological Section Recirculation

This letter addresses the Moon Camp newly recirculated biological section of the DEIR.

The impact on the bald eagle population which visits Big Bear every winter would be significant. The mitigation measures recommended would not reduce direct or cumulative impacts to bald eagle habitat to a level considered less than significant. The DEIR states: "The proposed project contains some of the most utilized bald eagle roosting and perching habitat in the Big Bear Valley. Construction of the proposed project would diminish the habitat value of the project site for the Bear Valley." The cumulative effect of the loss of bald eagle perch and roosting trees if this project is to go forward, along with other past, present, and possible future developments planned for the Fawnskin / Big Bear area would significantly impact bald eagle habitat on the north shore of Big Bear Lake. The bald eagles are a big tourist attraction as well. 12-1

This project would take a general plan amendment for a change in the existing zoning. There can be no overriding considerations that justify this negative impact on the wintering bald eagle population in Big Bear.

Most sincerely,

Sandra Ellis

Sandra Ellis
PO Box 8542
Green Valley Lake, CA 92341

Response to Commentor No. 12
Sandra Ellis
April 14, 2005

12-1 Comment is noted. Environmental considerations noted by the Commentor have been addressed in the Draft and Final EIR.

COMMENT NO. 13

Rush E Wallace
PO Box 3064 Big Bear Lake, Ca
92315

County of San Bernardino

Land Use Services Department, Planning Division

385 N. Arrowhead Ave, First Floor

San Bernardino, CA 92415-0182

Attn: Matthew W. Slowik

Subject MOONCAMP DEVELOPMENT PROJECT/RCK PROPERTIES, INC. DRAFT EIR BIOLOGICAL SECTION RECIRCULATION.

As Chairman of the Executive Committee of the Big Bear Group of the Sierra Club I have grave concerns regarding the draft EIR for the above mentioned project. Specifically my concerns and comments are as follows:

-- What scientific basis is there for using 40% of normal rainfall as the time when they do another plant survey? Why shouldn't it be done with normal rainfall? 13-1

-- It is very unlikely that there is a place available that they can purchase for offsite mitigation for pebble plains habitat, so this is not a satisfactory mitigation. 13-2

-- The impact on bald eagles has been determined to be significant and the DEIR states that

"The proposed project contains some of the most utilized bald eagle roosting and perching habitat in the Big Bear Valley. Construction of the proposed project would diminish the habitat value of the project site for the species. When viewed in conjunction with other past, present, and reasonably foreseeable developments planned for the Fawnskin/Big Bear Lake area, the loss of bald eagle perch and roosting trees on the project site would significantly impact bald eagle habitat on the north shore of Big Bear Lake. Thus, cumulative impacts to the bald eagle are considered significant. Mitigation measures reflective of recommendations developed by scientific studies in the the Big Bear Valley, including Kimball Garrett's study on the effects of human activity on wintering bald eagles (1981), are provided as part of the proposed project. However, implementation of these mitigation measures would not reduce direct or cumulative impacts to bald eagle habitat to a level considered less than significant." 13-3

To approve this project the Supervisors would have to cite overriding considerations.

-Since this project would take a general plan amendment for a change in the existing zoning, there can be no overriding considerations that justify this negative impact on the wintering bald eagle population in Big Bear.

--In fact, since the economy of the valley very much thrives on nature, recreation and the existence of the bald eagle here, there would most likely be economic harm to the entire valley if this project is approved.

The County must start taking the protection of these valuable resources seriously. They can not be replaced by mitigation!

Rush E Wallace

Response to Commentor No. 13
Rush Wallace
April 14, 2005

13-1 Please refer to Response to Comment No. 7-7.

13-2 Please refer to Response to Comment No. 7-9.

13-3 Comment is noted. Environmental considerations noted by the Commentor have been addressed in the Draft and Final EIR.

COMMENT NO. 14

To: County of San Bernardino
Land Use Services Dept., Planning Division
385 N. Arrowhead Ave. First Floor
San Bernardino, Ca.92415-0182
Attn: Matthew W. Slowik

Refer to: Mooncamp Development/RCK Properties, Inc. Draft EIR Biological Section recirculation.

Sirs,
The people of Big Bear Valley have made it clear that an amendment to the General Plan for the Proposed MoonCamp Development would not be in the best interests of the future of this area.
We would lose valuable Eagle habitat, recreation and nature sites and the very reason this valley is unique. 14-1
There is no plus side to the overdevelopment of this unique Valley for the people who live here or the people who visit here to see exactly what you could help destroy if this proposal is approved.
I oppose this project and having taken part in the survey of Fawnskin regarding changes to the General Plan I can assure you that there is overwhelming opposition to these changes....
Don't kill our Valley.
Loretta L. Gardiner
P O Box 258
Fawnskin , Ca 92333

Response to Commentor No. 14
Loretta Gardiner
April 14, 2005

14-1 Comment is noted.

COMMENT NO. 15

To: Matthew W. Slowik
Rea: Mooncamp development

For your considcration.

Attention Matthew W. Slowik
Rea: Moon camp developmnent project/RCK Properties, Inc. Draft EIR Biological section recirculation.

-- What scientific basis is there for using 40% of normal rainfall as the time when they do another plant survey? Why shouldn't it be done with normal rainfall? 15-1

-- It is very unlikely that there is a place available that they can purchase for offsite mitigation for pebble plains habitat, so this is not a satisfactory mitigation. 15-2

– The impact on bald eagles has been determined to be significant and the DEIR states that "The proposed project contains some of the most utilized bald eagle roosting and perching habitat in the Big Bear Valley. Construction of the proposed project would diminish the habitat value of the project site for the species. When viewed in conjunction with other past, present, and reasonably foreseeable developments planned for the Fawnskin/Big Bear Lake area, the loss of bald eagle perch and roosting trees on the project site would significantly impact bald eagle habitat on the north shore of Big Bear Lake. Thus, cumulative impacts to the bald eagle are considered significant. Mitigation measures reflective of recommendations developed by scientific studies in the the Big Bear Valley, including Kimball Garrett's study on the effects of human activity on wintering bald eagles (1981), are provided as part of the proposed project. However, implementation of these mitigation measures would not reduce direct or cumulative impacts to bald eagle habitat to a level considered less than significant." (there are other quotes in the document, if you have a chance to look them up) 15-3

To approve this project the Supervisors would have to cite overriding considerations.
-Since this project would take a general plan amendment for a change in the existing zoning, there can be no overriding considerations that justify this negative impact on the wintering bald eagle population in Big Bear.
–In fact, since the economy of the valley very much thrives on nature, recreation and the existence of the bald eagle here, there would most likely be economic harm to the entire valley if this project is approved.

Response to Commentor No. 15
Unknown
April 14, 2005

15-1 Please refer to Response to Comment No. 7-7.

15-2 Please refer to Response to Comment No. 7-9.

15-3 Comment is noted. Environmental considerations noted by the Commentor have been addressed in the Draft and Final EIR.

COMMENT NO. 16

Georg R. Kast, P.E.
39152 Chactaw Dr.
Fawnskin, CA 92333

April 14, 2005

County of San Bernardino
Land Use Services Department, Planning Division
385 N. Arrowhead Ave, First Floor
San Bernardino, CA 92415-0182

Attn: Matthew W. Slowik

Reference: Mooncamp Development Project/Rick Properties, Inc. Draft Elr Biological Section Recirculation

Subj: Comments on revised Moon Camp DIER

Dear Sir or Madam:

I have significant concerns regarding the referenced filing. My fundamental concerns that the project violates common sense with regard to the continued development and expansion of the population base in an area where the available water cannot sustain it are still valid and in the forefront of my opposition of the project. Additional latent concerns include the elimination of native shoreline, urbanization of a rural setting and diminished public access to access and view of the lake. 16-1

With regards to the changes in the DEIR, I am concerned that the project will destroy a significant portion of the Bald Eagle Habitat at Big Bear Lake. Specifically,

> "The proposed project contains some of the most utilized bald eagle roosting and perching habitat in the Big Bear Valley. Construction of the proposed project would diminish the habitat value of the project site for the species. When viewed in conjunction with other past, present, and reasonably foreseeable developments planned for the Fawnskin/Big Bear Lake area, the loss of bald eagle perch and roosting trees on the project site would significantly impact bald eagle habitat on the north shore of Big Bear Lake. Thus, cumulative impacts to the bald eagle are considered significant. Mitigation measures reflective of recommendations developed by scientific studies in the the [sic] Big Bear Valley, including Kimball Garrett's study on the effects of human activity on wintering bald eagles (1981), are provided as part of the proposed project. However, implementation of these mitigation measures would not reduce direct or cumulative impacts to bald eagle habitat to a level considered less than significant."

16-2

The bald eagle is an integral component of the wildlife diversity that draws visitors to the valley. In fact, since the economy of the valley very much thrives on nature, recreation and the existence of the bald eagle here, there would most likely be economic harm to the entire valley if this project is approved.

Thank you for your attention and consideration of my input

Sincerely,

Response to Commentor No. 16
George Kast
April 14, 2005

16-1 Comment is noted. Environmental considerations noted by the Commentor have been addressed in the Draft and Final EIR.

16-2 Comment is noted. The Draft EIR section and biological technical report identify project-related impacts to bald eagles and their perch trees as significant and unavoidable impacts and significant and unavoidable cumulative impacts.

COMMENT NO. 17

County of San Bernardino, Attn. Matt W. Slowik
Land Use Services Dept, Planning Division
385 N. Arrowhead Ave, First Floor
San Bernardino, CA 92415-0182

RE: Moon Camp Development Project/RCK Properties, Inc. Draft EIR
Biological Section Recirculation
FAXED: ~~April 15, 2005~~ to ~~(909)~~ 387-3223

ATTN: Matthew W. Slowik

I have been a property owner and full-time resident on Flicker Road since 1974. Since I made comment on the initial EIR circulation, I was notified about the Recirculated DEIR, and the opportunity for additional comments concerning the Moon Camp Project.

It seems there are flaws in the DEIR study that seems to suggest that off-site mitigation is possible for pebble plain habitat and other biological species. First, where is the mitigation site? Who will monitor it? Is it equal or better than the existing site? **17–1**

Secondly, a few years back in Orange County, a citizen's group looked into off-site mitigation for some projects. They found that there was no monitoring, and no follow-up by the County to ensure that the mitigation actually took place. In Big Bear, Eagle Point and Castle Glen-the same developer as Moon Camp- were supposed to contribute to an eagle mitigation fund in Stanfield Marsh. When I went to the Big Bear Municipal Water District to find out who and who much had been contributed to that fund, I was told that there were no such records-so much for off site mitigation by any developer. **17–2**

Third, and finally, under real estate law, no two pieces of real estate are considered the same. Each piece is deemed unique. The Moon Camp habitat is unique and can not effectively be duplicated anywhere else in the world. **17–3**

I urge you to preserve that uniqueness.

Sincerely,

ROBERT S. DRAKE, 39722 Flicker Road, Fawnskin, CA 92333

FAXED

Response to Commentor No. 17
Robert Drake
April 15, 2005

17-1 Implementation of Mitigation Measure 5.8-1a requires that a pebble plains mitigation site is identified prior to any vegetation clearing, grading, or other site disturbance on the project site. Although a specific site has not been identified by the project applicant, the project would not be allowed to move forward until a mitigation site is identified and purchased. The County of San Bernardino and the California Department of Fish and Game shall be responsible for the enforcement of the mitigation requirements. The mitigation measures stated that off-site habitat shall contain the same species as those identified within resources impacted by the proposed project and shall be purchased at a ratio of 3:1 (i.e., three acres of habitat purchased for preservation for each acre impacted by development).

17-2 The County of San Bernardino is not proposing off-site mitigation for bald eagles.

17-3 Comment is noted.

COMMENT NO. 18

County of San Bernardino, Attn. Matt W. Slowik
Land Use Services Dept, Planning Division
385 N. Arrowhead Ave, First Floor
San Bernardino, CA 92415-0182

RE: Mooncamp Development Project/RCK Properties, Inc. Drafe EIR
Biological Section Recirculation
FAXED: April 15, 2005 to ((909) 387-3223 (73151)

ATTN: Matthew W. Slowik

I have been a property owner and full-time resident on Flicker Road since 1974. Since I made comment on the initial EIR circulation I was under the impression that I would be notified on any additional comments needed concerning the Moon Camp Project . To date I have not received any information from the county on the biological section as it was recirculated. It was through a neighbor that I was told of this deadline and I send my comments faxed and in a timely manner. **18–1**

It seems there are flaws in the DEIR study that seems to suggest that off-site mitigation is possible for the bald eagle habitat and the pebble plains habitat. This was a problem in Castle Glen, Eagle Point, and Cluster Pines Projects After several phone calls to agencies I cannot find where the off-site mitigations are located nor can I find out where any monetary compensations have been sent and administered. These past project mitigations should be listed in your DEIR so that the same off-sites are not suggested over and over again to approve a project **18–2**

The human activity and density of the project would have a significant impact on bald eagle habitat especially if the project allows for the realignment of our county scenic highway and homes are stacked on the shoreline. This is unacceptable since builders should be expected to build as per the zoning they purchased. I see no overriding considerations that justify changing the existing zoning to allow this negative impact on the wintering Bald Eagle and the biological species listed as well. **18–3**

Respectively submitted,

Mary Lu Drake

Mary Lu Drake
39722 Flicker Road, Fawnskin, Ca.

Response to Commentor No. 18
Mary Lu Drake
April 15, 2005

18-1 Please refer to Comment Letter No. 17. The County of San Bernardino notified 39722 Flicker Road regarding the recirculation and review for the biological resources section of the EIR.

18-2 Please refer to Response to Comment Nos. 17-1 and 17-2.

18-3 Comment is noted. Environmental considerations noted by the Commentor have been addressed in the Draft and Final EIR.

COMMENT NO. 19

Sandy Steers
P.O. Box 423
Fawnskin, CA 92333
(909) 878-3091

15 April 2005

Sent by FACSIMILE (909-387-3223), hard copy to follow via U.S. Mail

County of San Bernardino
Land Use Services Department, Planning Division
385 North Arrowhead Avenue 1st Floor
San Bernardino, California 92415-0182

Attn: Matthew Slowik, Sr. Assoc. Planner

RE: "REVISED BIOLOGICAL RESOURCES SECTION OF THE DEIR FOR THE PROPOSED MOON CAMP DEVELOPMENT PROJECT/RCK PROPERTIES INC."

Thank you for the opportunity to comment on this revised Biological Resources section of the DEIR for the proposed Moon Camp Development Project.

Although changes have been made to this Biological Resources section, the overall section and the DEIR as a whole remain inadequate and incomplete. I concur with the details of those inadequacies as stated in the Friends of Fawnskin/Center for Biological Diversity letter. **19–1**

In addition, I would like to point out another level of inadequacies in the bald eagle mitigations offered. In this revised section, the purchase of off-site habitat to mitigate for a small portion of the plants has been suggested. However, no purchase of off-site habitat has been suggested for the bald eagle. The most likely reason for this omission of an often included mitigation measure is that there is no equivalent off-site habitat available. This fact alone points to the glaring understatement of the adverse impacts to the bald eagle should this proposed project be approved. **19–2**

Considering that this mitigation measure, which should be and is often included to mitigate for loss of habitat, cannot even be suggested, shows clearly a primary reason that this proposed project should be entirely rejected. It is imperative to the biological resources and especially to the bald eagle that the 'no project' option be selected. **19–3**

Sincerely,

Sandy Steers

Response to Commentor No. 19
Sandy Steers
April 15, 2005

19-1 Comment is noted.

19-2 Please refer to Response to Comment No. 16-2.

19-3 Comment is noted.

COMMENT NO. 20

ATTEN: MATT

MOONCAMP DEVELOPMENT PROJECT/RCK PROPERTIES, INC. DRAFT EIR

BIOLOGICAL SECTION RECIRCULATION.

MY FAMILY AND I ARE VERY CONCERNED AVOUT THE BALD EAGLE ROOSTING AND PERCHING HABITAT IN THE BIG BEAR VALLEY. CONSTRUCTION OF THE PROPOSED PROJECT WOULD DIMINISH THE HABITAT VALUE OF THE PROJECT SITE FOR THE SPECIES. WHEN VIEWED IN CONJUNCTION WITH OTHER PAST, PRESENT, AND REASONABLEY FORESEEABLE DEVELOPMENTS PLANNED FOR THE FAWNSKIN/BIG BEAR LAKE AREA THE LOSS OF BALD EAGLE PERCH AND ROOSTING TREES ON THE PROJECT SITE WOULD SIGNIFICANTLY IMPACT BALD EAGLE HAVITAT ON THE NORTH SHORE OF BIG BEAR LAKE. THUS, CUMULATIVE IMPACTS TO THE BALD EAGLE ARE CONSIDERED SIGNIFICANT. PLEASE KNOW WHERE WE ARE COMING FROM ON THIS WE WANT TO PROTECT BIG BEAR. SO KNOW THAT MY FAMILY AND I ARE AGAINST THIS PROJECT.

20-1

THANK YOU,

DONALD WHEELER
&
WHEELER FAMILY

Response to Commentor No. 20
Donald Wheeler and Wheeler Family
April 15, 2005

20-1 Comment is noted. Environmental considerations noted by the Commentor have been addressed in the Draft and Final EIR.

COMMENT NO. 21

VIA FACSIMILE

April 15, 2005

County of San Bernardino
Land Use Services Department, Planning Division
385 N. Arrowhead Ave, First Floor
San Bernardino, CA 92415-0182
Attn: Matthew W. Slowik

RE: Proposed Moon Camp Development

Dear Mr. Slowik,

As a full-time resident of Big Bear Lake, I am writing to voice my concerns concerning the proposed Moon Camp development.

My primary concern is on the negative impact on the bald eagle habitat in that area. In fact, the DEIR states that "The proposed project contains some of the most utilized bald eagle roosting and perching habitat in the Big Bear Valley. Construction of the proposed project would diminish the habitat value of the project site for the species. When viewed in conjunction with other past, present, and reasonably foreseeable developments planned for the Fawnskin/Big Bear Lake area, the loss of bald eagle perch and roosting trees on the project site would significantly impact bald eagle habitat on the north shore of Big Bear Lake. Thus, cumulative impacts to the bald eagle are considered significant. Mitigation measures reflective of recommendations developed by scientific studies in the the Big Bear Valley, including Kimball Garrett's study on the effects of human activity on wintering bald eagles (1981), are provided as part of the proposed project. However, implementation of these mitigation measures would not reduce direct or cumulative impacts to bald eagle habitat to a level considered less than significant." This sounds like a very serious consideration to me which should be weighted heavily by the Supervisors. 21-1

It is also my understanding that to approve this project the Supervisors would have to cite overriding considerations. Since this project would take a general plan amendment for a change in the existing zoning, there can be no overriding considerations that justify this negative impact on the wintering bald eagle population in Big Bear. In fact, since the economy of the valley very much thrives on nature, recreation and the existence of the bald eagle here, there would most likely be economic harm to the entire valley if this project is approved. 21-2

Thank you,

Lisa Patterson
PO Box 412
Big Bear Lake, CA 92315

Response to Commentor No. 21
Lisa Patterson
April 15, 2005

21-1 Comment is noted. Environmental considerations noted by the Commentor have been addressed in the Draft and Final EIR.

21-2 Comment is noted.

COMMENT NO. 22

April 15, 2005

County of San Bernardino
Land Use Services Department, Planning Division
385 N. Arrowhead Avenue, 1st Floor
San Bernardino, Ca. 92415
Attn: Matthew Slowik

Re - Moon Camp Development, RCK Properties, Inc, Draft EIR Biological Section

Dear Mr. Slowik,

I write to comment on the draft EIR, Biologic Section, for the Moon Camp proposed development. I have a number of concerns that I believe are not sufficiently addressed or dealt with in the draft EIR. These include the following:

- the impact on the bald eagles is not capable of remediation or planning. | 22-1
- the project site is one of the largest and most often used sites for the eagles during their wintering habitat in the Big Bear Valley | 22-2
- since the draft EIR has already concluded that construction would diminish the habitat value, there is simply no proper action which can or should be taken that could accommodate the presence of eagles and the construction of approximately 90 homes | 22-3
- some may argue for the purchase of 'replacement habitat' somewhere else to compensate for the loss of habitat due to the construction project. The problem with this approach is that there is no comparable habitat available around the lake that would serve this purpose. Thus, any consideration of the project must exclude the notion that other land may be set aside as habitat. It simply doesn't exist. | 22-4
- the same concern exists for the pebble plains habitat. There is no comparable site available to compensate for the destruction of endangered species which the proposed project will cause. | 22-5

Thank you for your consideration of these concerns.

Very truly yours,

Roman Silberfeld

Response to Commentor No. 22
Roman Silberfeld
April 15, 2005

22-1 Comment is noted.

22-2 The Draft EIR section and biological technical report identify project-related impacts to bald eagles and their perch trees as significant and unavoidable impacts and significant and unavoidable cumulative impacts.

22-3 Comment is noted.

22-4 Refer also to Response to Comment No. 7-7. Implementation of Mitigation Measure 5.8-1a requires that a pebble plains mitigation site is identified prior to any vegetation clearing, grading, or other site disturbance on the project site. Although a specific site has not been identified by the project applicant, the project would not be allowed to move forward until a mitigation site is identified and purchased.

22-5 Please refer to Response to Comment No. 7-9.

COMMENT NO. 23

Nancy & Bill Hazewinkel
880 Canyon Rd. PO Box 378
Fawnskin, CA 92333

County of San Bernardino
Land Use Services Department, Planning Division
385 N. Arrowhead Ave, First Floor
San Bernardino, CA 92415-0182
Attn: Matthew W. Slowik

RE: MOONCAMP DEVELOPMENT PROJECT/RCK PROPERTIES, INC. DRAFT EIR
BIOLOGICAL SECTION RECIRCULATION

April 15, 2005

Dear Mr. Slowik,

We are responding to the Draft EIR for the proposed Mooncamp project in Fawnskin. We have several concerns which are described below:

- What scientific basis is there for using 40% of normal rainfall as the time when they do another plant survey? Why shouldn't it be done with normal rainfall? **23-1**
- It is very unlikely that there is a place available that they can purchase for offsite mitigation for pebble plains habitat, so this is not a satisfactory mitigation. **23-2**
- The impact on bald eagles has been determined to be significant and the DEIR states that "The proposed project contains some of the most utilized bald eagle roosting and perching habitat in the Big Bear Valley. Construction of the proposed project would diminish the habitat value of the project site for the species. When viewed in conjunction with other past, present, and reasonably foreseeable developments planned for the Fawnskin/Big Bear Lake area, the loss of bald eagle perch and roosting trees on the project site would significantly impact bald eagle habitat on the north shore of Big Bear Lake. Thus, cumulative impacts to the bald eagle are considered significant. Mitigation measures reflective of recommendations developed by scientific studies in the Big Bear Valley, Including Kimball Garrett's study on the effects of human activity on wintering bald eagles (1981), are provided as part of the proposed project. However, implementation of these mitigation measures would not reduce direct or cumulative impacts to bald eagle habitat to a level considered less than significant." **23-3**
- Since this project would take a general plan amendment for a change in the existing zoning, there can be no overriding considerations that justify this negative impact on the wintering bald eagle population in Big Bear.
- In fact, since the economy of the valley very much thrives on nature, recreation and the existence of the bald eagle here, there would most likely be economic harm to the entire valley if this project is approved.

We have many concerns for our community, and do not want to see our beautiful forests reduced any further. Fawnskin should not become another Big Bear Lake.
Residents and visitors come here *because* it has been somewhat protected so far, please do not allow developers to overdevelop this side of the lake. For instance, moving North Shore Drive to provide lakefront property for the sole purpose of making more money is unconscionable. One of our concerns is that the County Supervisors are more interested in the income that such a project would generate, than in preserving the natural beauty, and future environment of our area, and our planet. **23-4**

Very truly yours,

Nancy Hazewinkel & Wil C. Hazewinkel

Response to Commentor No. 23
Nancy and Bill Hazewinkel
April 15, 2005

23-1 Please refer to Response to Comment No. 7-7.

23-2 Please refer to Response to Comment No. 7-9.

23-3 Please refer to Response to Comment No. 13-3.

23-4 Comment is noted.

COMMENT NO. 24

Daniel A. Levenick
334 Pine Kone Ln.
Fawnskin, CA
and 866 South Grand Avenue
Pasadena, CA

April 15, 2005

County of San Bernardino
Land Use Services Department, Planning Division
385 N. Arrowhead Ave, First Floor
San Bernardino, CA 92415-0182
Attn: Matthew W. Slowik

Reference to: MOONCAMP DEVELOPMENT PROJECT/RCK PROPERTIES, INC. DRAFT EIR BIOLOGICAL SECTION RECIRCULATION.

Mr. Slowik,

I am a part time resident of Fawnskin, CA. the town of this project site. I have read the revised draft EIR and have the following comments, in rough order of the progress of the report.

I have a BS degree in biological sciences from UCSB; I have done graduate work at the University of Idaho in the College of Forestry and wildlife. I specifically studied Fisheries and fishery management. To my reading of this DEIR, there are substantial detrimental effects that this project brings to the site. This site was originally set aside at low density in mitigation for overdevelopment elsewhere. The proposed mitigation here is to simply move the problems with destroyed habitat further down the road. It is not possible to mitigate roosting and perching habitat for the Bald Eagle. **24–1**

I urge you to require further study of vegetation habitats in normal rain years. That should be simple this year. The plant diversity and presence will greatly improve over the year 2002, and will be a truer picture of the diversity available. **24–2**

The description of habitats include Jeffery pine forest only, declines to admit that wetlands exist between forest and lake shore. Most unusual as there are ducks breeding, brood ponds, seasonal ponds and roosting areas in the area concerned, but no wetlands. How does that happen? Ducks need wetlands to breed. Their description ignores the overall weather pattern of abundance and drought that is common in this locale. Where is the 0.15 ac CDFG jurisdictional streambed? **24–3**

Wildlife movement:

Presently SR 38 is a 2 lane slow traffic hwy, which allows for many small mammals and reptiles to migrate easily. The whole road might be considered a wildlife corridor or **24–4**

crossing, as it is narrow and is infrequently traveled. The strict definition listed in the DEIR essentially delineates the entire lake from the entire forest with very few travel routes, wildlife corridors or wildlife crossings as there are no culverts, green belts, forests that stretch directly from the mountain tops to the lake front uninterrupted at any point of the lake. Therefore to suggest that there are no corridors or crossings is to simply admit that there is a road around the entire lake. A living organism cannot traverse the slope from the mountain peak to the lake level without crossing at least one road anywhere. Highway 18 provides the least obstacle to wildlife. Currently the path of least resistance to wildlife is the shortest path between the forest and the water, that path is not to the East or the West, it is directly with the fall line from hilltop to lake level, right through the project in question. Contrary to the reports' statement, a larger hwy with more lanes, more traffic and a higher speed limit will reduce efficiency of travel of migrant native species to and from water or habitat due to a larger distance to travel over a paved surface without cover.

24–4

Endangered species:

Of rare, threatened, or endangered plant species listed by California native plant society the site has 21 species present or likely to be present. Of plants on US Fish and Wildlife Service and California Dept of Fish and Game listing of endangered, threatened or likely to be listed as threatened or endangered this site has 14 species preset.

Protected, rare, endangered, or threatened animal species that include invertebrates, amphibians, reptiles, birds and mammals as defined by the USFWS and California Dept Fish and Game are also present on the site. Protected, rare, threatened or endangered present species number 6, Species of Concern or special concern number 35.

24–5

These counts represent significant numbers of species affected on this site.

In the report, most of these special class, rare or endangered species are simply dismissed as not significant. That is outrageous! They are rare or endangered for a reason.

Special Status vegetation types:

Pebble plain as described on the site has already been altered due to unauthorized use. This abuse of the plain has degraded habitat for rare, threatened or endangered species as noted in report. Unauthorized use represents neglect on the part of the landholder, and should be curtailed immediately before sever damage occurs.

24–6

Montane meadow is currently unmapped in this report. It is however known to support endemic species and is recognized as a rare ecological community of concern to the San Bernardino National Forest. The montane meadow acreage needs to be measured, the flora and fauna identified.

24–7

Special status plants occurring on the site were evaluated during a low rain year. Admitted expectations were that more rain will bring forth more diverse growth. Surveys during a normal rain year are required to determine presence and extent of many of the special status plants.

24-8

Special status wildlife: Contained in table 5.8-3 is listing of special status animals. Many of which spend a part of their life cycle on the project site. Each part of the life cycle is necessary to the completion of the whole life cycle. Therefore, to remove the habitat and environment necessary for part of the life cycle endangers the likelihood of completing that life cycle successfully.

24-9

To find that there is little or no impact on the local species, because there is other habitat available is to shirk responsibility. There is limited habitat for the Bald Eagle in southern California. Big Bear Lake area has the largest wintering population of Bald Eagles in Southern California, some of that population utilizes the project site, when the site is removed from use, the Eagles' range is reduced. That reduction cannot be tolerated.

24-10

The continual finding that there is significant local impact, but overall impact is slight due to the availability of other sites is simply a carefully worded way to say 'it's OK for me but not for you.' The fact is that site was set aside as low density building site RL-40 as mitigation for high density building on the South Shore. It was set at low density exactly to mitigate habitat destruction elsewhere. When that site is destroyed, where is the mitigation for it?

By survey and admissions in the survey, there are shortcomings in this summation. Namely, due to weather conditions surveys of montane meadows were not done, the true extent of plant life was not fully explored. Now, in this current high rain year, there is opportunity to fully address the diversity of plant life and meadow extent. That assessment is necessary for a true evaluation of the site.

24-11

This report is nothing more than a gloss over of admitted severe habitat destruction by using the phrase 'not significant overall' on each species individually. Enough individually insignificant items become significant when taken as a whole.

24-12

Thank you for your time,

Daniel A. Levenick

Response to Commentor No. 24
Daniel Levenick
April 15, 2005

24-1 Comment is noted.

24-2 Please refer to Response to Comment No. 5-2.

24-3 Implementation of Mitigation Measure 5.3-8a would reduce impacts to jurisdictional areas on the project site. The jurisdictional streambed locations have been identified in the Draft EIR and recirculated Biological Resources Section. Please refer to Page 5.8-7 of the recirculated Biological Resources section for additional information.

24-4 Please refer to Response to Comment No. 7-19.

24-5 Impacts to special status plants would be mitigated to a level considered less than significant by implementation of Mitigation Measure 5.8-1a.

Impacts to potential habitat for special status species not listed as Threatened or Endangered are considered less than significant due to the limited amount of habitat loss associated with the proposed project relative to the availability of habitat for these species in the region.

Cooper's hawk, long-eared owl, white-tailed kite, California spotted owl, hepatic tanager, and purple martin have potential to nest on the project site. If an active bird nest (common or special status species) were found on the project site, the loss of the nest would be considered a violation of the California Fish and Game Code Sections 3503, 3503.5, and 3513. Implementation of Mitigation Measure 5.8-1e would reduce impacts to a less than significant level.

24-6 Comment is noted. Environmental considerations noted by the Commentor have been addressed in the Draft and Final EIR.

24-7 Please refer to Response to Comment No. 7-10.

24-8 Please refer to Response to Comment No. 5-1.

24-9 Comment is noted. Environmental considerations noted by the Commentor have been addressed in the Draft and Final EIR.

24-10 Comment is noted. Environmental considerations noted by the Commentor have been addressed in the Draft and Final EIR.

24-11 Please refer to Responses to Comment Nos. 5-2 and 7-10.

24-12 Comment is noted.

COMMENT NO. 25

April 15,2005

County of San Bernardino
Land Use Services Department, Planning Division
385 North Arrowhead Ave. 1st Floor
San Bernardino, CA 92415-0182

Attn. Matthew W. Slowik

RE: MOONCAMP DEVELOPMENT PROJECT/RCK PROPERTIES, INC. DRAFT EIR BIOLOGICAL SECTION RECIRCULATION

Dear Sir,

Thank you for allowing us to review the new biological section. Neither my wife nor I are biologists but we know what we like. We love seeing the bald eagles in the winter. We can see them from our deck flying over the lake, perched in the trees on the Mooncamp property or standing on the ice looking for food.

In the report it's stated that even with saving the perch trees there will be a significant effect on the bald eagles. We feel the bald eagles are very important to our community and every effort possible should be made to protect their environment. We don't think building 92 homes on property zoned RL-40 should be pursued with the fragile state of the bald eagle. The number of bald eagles coming into our valley has been decreasing in the recent years and we don't need to do anything to add to that number. 25-1

In the report it's stated they will do another plant study when they have a year with at least 40% of normal rainfall. The average rainfall in the city of Big Bear Lake is about 22.75 inches per year. We assume Fawnskin will have the same amount of rainfall. By this criteria the new study will be made on 9.10 inches of rain. We don't think this is acceptable. The study should be made with at least 2/3rds of normal rainfall. 25-2

We hope you take our concerns into consideration and deny this zone change.

Sincerely,

James C. McGrew

James C. McGrew

Lola E. McGrew

Lola E. McGrew

P. O. Box 493
Fawnskin CA, 92333-0493

Response to Commentor No. 25
James and Lola McGrew
April 15, 2005

25-1 Comment is noted. Environmental considerations noted by the Commentor have been addressed in the Draft and Final EIR.

25-2 Please refer to Response to Comment No. 7-7.

April 15, 2005

VIA FACSIMILE - (909) 387-3223

County of San Bernardino
Land Use Services Department, Planning Division
385 N. Arrowhead Avenue, First Floor
San Bernardino, CA 92415-0182
Attn: Matthew W. Slowik

Re: Moon Camp Development Project/RCK Properties, Inc. --
Draft EIR Biological Section as Re-circulated

Dear Mr. Slowik:

After review of the draft EIR biological section which was re-circulated, we have the following comments and concerns.

1. Use of dated information

I note that the "focused surveys" stated as having been made were all conducted during 2002. Since that time, several additional years of extreme drought conditions and a major fire in an adjacent area may have affected the subject site. In particular, the tree surveys are described as having been prepared in 2001. Given the impact of drought and the bark beetle since that time, the County should require that this report be based on a more recent tree survey. It may be that removal of and damage to trees which was appropriate or acceptable based on the 2001 survey is no longer appropriate or acceptable based on current conditions. The County should take note that there have been dramatic impacts on the San Bernardino National Forest areas since 2001 and require more recent

26-1

information. Furthermore, bark beetle devastation to the forest areas on the Western side of Grout Bay may have made the project site a more important source of shelter, foraging area and other uses by wildlife. For that reason, the wildlife surveys should also be revised and up-dated. The draft says, based in part on a 2001 aerial survey, that "although a large number of dead trees were observed...only one tree was observed to have been recently killed by bark beetles." This statement is most likely inaccurate in 2005, and a supposedly re-done biological section should address and correct the inacurracy. 26–1

2. Pebble Plain

On page 5.8-4, the draft biological resources section suggests that activities are being taken pursuant to a "pebble plain habitat management guide and action plan." The report does not indicate whether the forest service is taking these actions on the subject property, whether the developer and project proponent has agreed to take such actions or whether, in fact, any actions are occurring on the subject property. This confusing and misleading portion of the report should be clarified. The County is unable to properly evaluate the potential loss of pebble plain habitat and the endangered species described in this section without knowing whether the mitigation and correction efforts alluded to are happening or not. 26–2

3. Meadow

On page 5.8-7, the draft report states the "extent of the meadows could not be determined or mapped in 2002 due to dry conditions." Before approving the report, the 26–3

County should require that this area be re-surveyed given the recent, although perhaps temporary, abatement of drought conditions. 26-3

4. Wetlands

The draft report states on page 5.8-8 that no wetlands were identified. We understand the United States Army Corps. of Engineers and the Environmental Protection Agency do not necessarily accept this position. This portion of the report should be re-evaluated given existing lake levels because the conclusions made were based on 2002 data. 26-4

5. Special Status Plants

The discussion beginning on page 5.8-25 and continuing for several pages, contains numerous statements about whether certain things are potentially likely to occur and whether certain special concerned species were observed in 2002. As this occurred during a significant drought which has now at least temporarily been abated, this section should be updated to reflect current conditions. The County should request that this information be taken immediately since much of this discussion indicates that the species in question bloom beginning in April and continue through early Summer. The opportunity to rectify this deficiency in the report will be lost if quick action is not ordered. 26-5

6. Animal Species

The information about bird habitat seems to be somewhat boilerplate and in several respects inaccurate. For example, the report concludes on the basis of an analysis of the 26-6

site, that it has a low potential for foraging on behalf of peregrine falcons. This is inconsistent with known bird-watching groups and personal observation, which indicate that the peregrine falcon regularly uses this site in the summer. This inconsistency should be reconsidered. 26–6

Although the general language in the introduction to the report describes the wild turkey, the report itself does not mention any specific observations about wild turkeys. It is known that this site is used by wild turkeys, and that from their roosting and nesting areas on higher elevations, they use this site for access to the lake. The impact of development of this site on the wild turkey, and on the forest service and wildlife service efforts to re-introduce the wild turkey to the area should be addressed and the failure to do so is a deficiency in the report. 26–7

7. Mammals

The discussion of mammals beginning on page 5.8-39 is incomplete. The general language in the introduction to this section of the report mentions mule deer and other species which are not discussed in this section. Additionally, nowhere in the report are coyotes and mountain lions mentioned although both are known to inhabit the area. Failure to discuss the impact on these animals, both of which have been observed on or near the project site, is a deficiency which ought to be corrected. 26–8

8. Vegetation and Wildlife Impact Tables

The discussion beginning page 5.8-46 on vegetation types impacted should be revised and the table updated following completion of the additional survey measures described above. Since this table was prepared from 2002 data during a drought it is more than likely our of date. Also, the absence of a similar table for wildlife and animal resources is noted. Such a table should be included so that the County may adequately consider the impact on animal species.

26–9

9. Impact on meadows

The Montane Meadows paragraph on page 5.8-47 should be revised after additional work is done now that the drought conditions which the report claims limited the ability to monitor have been at least temporarily mitigated. After this is done, the statement that impacts on these species "would be considered significant" should be considered for strengthening. Also, the proposed mitigation referred to, mitigation 5.1a, (discussed at page 5.8-62) must be improved. The statement states that the project applicant shall pay compensation for the loss of special status resources by arranging for the purchase and maintenance of off-site habitat. The report does not propose or make clear that this habitat would be located in or near the adjacent site or, indeed, that such habitat is available anywhere within the Bear Valley. Because of the high impact of wildlife status on local opportunities including fishing, hiking, bicycling and similar activities, it is important that impacted habitat be replaced at or near the site, or at least within the Bear Valley. Failure to do so could have an adverse economic impact on residents of the Valley by deterring or failing to attract visitors, including the many visitors who come to observe

26–10

nature. If the report is approved, it should be a report which includes arrangements to fund these activities, identify the replacement habitat prior to the commencement of any activities, and place the funds in an escrow or similar account designed to assure first, that the funding is actually paid and second that it is administered by appropriate conservation or wildlife officials. The numerous references to mitigation measure 5.8-1a require, at a minimum, that this mitigation measure be revised to include mitigation within the Bear Valley and appropriate funding in a separate account. 26-10

10. Wildlife

The discussion beginning on page 5.8-49 is inadequate because, due to some of the factors mentioned above, it fails to address or consider certain significant species. In addition, the report itself notes that this is based on surveys during an extreme drought. Even with these inadequacies, impact on several species including the Bald Eagle is stated to be significant and not capable of mitigation. This conclusion should be stated in greater detail and evaluated in light of the fact that much of the habitat formerly used by Bald Eagles in the Bear Valley has already been lost to development, including that at the Eagle Point Project, where mitigation measures proved unsuccessful. Additionally, a discussion of a number of species on page 5.8-50, including the peregrine falcon, should be revised to reflect the fact that these species are known to have used the area and to provide greater emphasis on the fact that approval of this project would contribute to the cumulative loss of foraging habitat. Although the report suggests that adjacent areas of foraging habitat for these species would be available in the San Bernardino National 26-11

Forest, the impact on recreational uses of the Bear Valley, especially the lakefront areas, due to loss of habitat accessible by visitors, should be explored in greater detail. In this regard, proposed mitigation measure 5.8-1d is inadequate because it would only apply prior to the onset of "construction activities" and the adverse impacts would already have occurred from grading and clearing activities. This so-called mitigation can also be eviscerated by constructing in the Fall or Winter time periods, because the mitigation depends on the discovery of "active nests" and it is extremely unlikely that "active nests" would be found after the spring nesting. Therefore, this mitigation proposal should be strengthened and identification of appropriate habitat near areas which are accessible to visitors, a major source of revenue to the Bear Valley, must be explored. 26-11

11. Mammals

The discussion on page 5.8-51 is inadequate because it does not cover many of the mammal species identified, including the mule deer, and the non-identified coyotes and mountain lions. 26-12

12. Discussion of Impacts

The discussion on page 5.8-52 is conclusory and not supported by other portions of the report. Mentioning that impact on the Jeffrey Pine Forest is insignificant because the pine is found elsewhere in the San Bernardino Mountains does not address the fact that loss of forest habitat directly impacts the Bear Valley. Loss of this habitat on the north shore of the lake reduces the appeal of the lake for recreational use by impacting use to boaters and 26-13

fishermen and tourists occupying the commercial areas of the south shore of the lake. In this regard, the discussion of lakeshore line should be revised to de-emphasize the fact that Big Bear Lake is man-made. Although it is correct that the Bear Valley Dam created this lake, that was almost a century ago with respect to the initial dam and over 80 years ago with respect to the revised dam. Therefore, the impact on lake shoreline should be evaluated without disparaging remarks about man-made reservoirs. The discussion of Pebble Plain habitat should be revised to point out whether or not it is feasible to acquire, develop, construct or preserve additional pebble plain habitat in an adjacent area. While there may be Pebble Plain habitat in other parts of southern California, the impacted species will not be able to migrate to these areas. The preservation of Pebble Plain habitat in the Bear Valley is important.

26–13

13. Suggested Mitigation Of Noise Impact And Impact On Eagles

The discussion on page 5.8-56 about the infeasibility of mitigating impact from noise on Bald Eagle populations because impact requirements on lesser-endangered species such as plants and animals, is disingenuous. If the project proponent wishes to take a parcel zoned for very limited development, and previously designated as a rural area in the County's general plan, and transform it into a densely populated urban-type environment, the project proponent should bear the burden of avoiding or mitigating all significant impacts. The project proponent's draft of the report suggests that this might require confining construction to a very few short months of the year, essentially late summer and early autumn. The project proponent s 14-358 required to factor this type of restriction

26–14

into its assessment of the desirability of the project. Since it would be necessary to conduct such limitations to avoid the impact on wintering Bald Eagle populations and on summer plant species, the project proponent is essentially demonstrating the infeasibility of the project itself without disastrous impact on plant and wildlife communities. 26-14

14. Impact of Night Lighting

The report states on page 5.8-56 and following that impact from night lighting at the project during construction and after occupancy would be a problem. The proposed mitigation measures are inadequate unless density of the proposed project is significantly reduced and more strict limits on night lighting are proposed. Moreover, in this regard, the night lighting restrictions should also be evaluated in terms of their impact on neighboring homes. Significant lighting in this project is likely to cause glare for residents above and adjacent to the project and to impair activities such as star gazing, night walking and wildlife observation. These impacts should mean that significantly stronger mitigation measures should be imposed before this report can be approved. 26-15

15. Non-native Species Introduction

The discussion on page 5.8-57 ignores the likely impact of residential development on the introduction of non-native species introduction. The proposed mitigation 5.8-2d must be improved to state that landscaping shall not be allowed to use any non-native plants. In addition, it should be revised to state that "lawns" and similar plantings will not be allowed, as both inconsistent with the l 14-359 l nature of the area and with the current 26-16

past and likely long-term water shortages in the area. In a dry woodland/pebble plain habitat, the watering and introduction of grasses associated with residential development must be strictly prohibited to avoid irretrievably damaging the nature of the area. In addition, this mitigation measure should including reducing the number of residences so that the density of construction will not significantly impact the nature habitat. Finally, mitigation measures should include requiring the project proponents to remove the proposed barrier walls. The project is slated to be a gated community, which frustrates the impact of all proposed mitigation efforts by proposing insurmountable barriers to migration of plant and animal species. 26-16

16. Wetlands

As noted above, in comment (4) the wetland determination statements in the report on page 5.8-58 and following are inconclusive, vague and non-supported. The work behind these statements should be re-evaluated in light of current conditions and in concurrence or non-concurrence should be obtained from the agencies mentioned because past development activities in the area have indicated that County officials permit dredging and similar activities without a section 404 permit. Comments from the Army Corps of Engineers, the California Department of Fish and Game, and the Regional Water Quality Control Board should be obtained and included this report before it is submitted for approval. 26-17

17. Wildlife Movement

Beginning on page 5.8-59, the draft states the wildlife movement would not impact wildlife corridors. The proposed project is a walled and gated community, therefore this statement is incorrect and should be revisited. 26-18

18. Regional and Local Policies and Plans

This statement simply summarizes certain existing policies. It proposes technical compliance with the requirement not to remove Bald Eagle perch trees without discussing the fact that such perch trees, when located in developed areas, no longer become perch trees. While the perch tree in question may not technically have been "removed" experience with the Eagle Point area suggests that the perch tree is nevertheless lost and therefore the policy behind the County requirements has been evaded. Further, the reliance on inadequate mitigation measures makes this report misleading and defective with respect to impacts Jeffery Pine Forest, Pebble Plain habitat and other native vegetation and wildlife. 26-19

19. Mitigation Measures

The measures proposed are inadequate and based on out-dated information. For example, the report states that a re-survey needs to be done after a 40% precipitation year. This means it can be done now and it should be. The suggested measure for eagle perch trees should be revised to require a "no-build" zone around at least all identified perch trees, which zone should, based on suggested zones in other measures, be at least 300 feet in diameter. The proponent should be prohibited from building paths for hiking in this zone, and required to fence it with appropriate materials that will allow wildlife to pass, but block hiking an recreational use. Likewise, restrictions on night lighting should be expanded to establish light-free zone for wildlife, which ideally should include the areas around perch trees.

26–20

For these and other reasons, the draft section of the report is an inadequate basis for an administrative decision and should be further revised.

26–21

Sincerely,

Peter J. Tennyson

Mary E. Tennyson

19 Monaco, Newport Beach, CA 92660

Response to Commentor No. 26
Peter and Mary Tennyson
April 15, 2005

26-1 Comment is noted.

26-2 The Pebble Plain Habitat Management Guide and Action Plan was developed in 1990 by the San Bernardino National Forest and the California Nature Conservancy to preserve pebble plain habitat on public lands. The plan was discussed in the Draft EIR section for informational purposes regarding current efforts to preserve this habitat and does not have any particular enforcement requirements for the project site.

26-3 Please refer to Responses to Comment Nos. 7-7 and 7-10.

26-4 Please refer to Response to Comment 3-1 (Leslie MacNair, California Department of Fish and Game) from the Draft EIR public review period, which occurred from March 30, 2004 to May 13, 2004.

26-5 Please refer to Responses to Comment Nos. 5-2 and 7-7.

26-6 Comment noted. The Draft EIR section assumed presence for all species with low, moderate, or high potential to occur on the site. The impact to foraging habitat for this species is considered less than significant due to the limited amount of habitat loss associated with the proposed project relative to the availability of habitat for this species in the region.

26-7 The wild turkey is not considered a special status species and, as such, would not receive additional attention in the Draft EIR section. A general impacts discussion is provided on page 5.8-54.

26-8 Mule deer, mountain lion, and coyote are not considered special status species and, as such, are not discussed under the special status species discussion of the Draft EIR section.

26-9 The Draft EIR section states that surveys for special status plants were inconclusive because they were conducted during an exceptionally dry year, necessitating an additional survey as required by Mitigation Measure 5.8-1a. Vegetation type acreages would be recalculated following focused plant surveys in accordance with Mitigation Measure 5.8-1a. Please see Table 5.8.3 for a table listing special status wildlife species potentially occurring within the project region.

26-10 Please refer to Responses to Comment Nos. 7-7, 7-10, and 7-23.

26-11 Please refer to Responses to Comment Nos. 6-2, 7-23, and 26-6. Mitigation Measure 5.8-1d is designed to avoid direct impacts to nesting activity on the site.

26-12 Please refer to Response to Comment No. 26-8.

26-13 Please refer to Response to Comment No. 7-9. Pebble plain habitat is restricted to the San Bernardino Mountains and does not occur in other parts of southern California.

26-14 Comment is noted. Environmental considerations noted by the Commentor have been addressed in the Draft and Final EIR.

26-15 Comment is noted. Lighting and glare affects have been evaluated in Section 5.2 of the Draft and Final EIR.

26-16 Comment is noted. Mitigation Measure 5.8-2d of the Draft EIR has been updated for the Final EIR as follows:

5.8-2d	Prior to ~~the issuance of individual building permits, landscaping designs~~ recordation of the final map, a landscaping plan for the entire tract shall be prepared (inclusive of a plant palette) with native trees and plant species, and, shall be submitted to the County of San Bernardino for review and approval by a qualified biologist. The review shall determine that no non-native or invasive plant species are to be used in the proposed landscaping. The biologist should suggest appropriate native plant substitutes. A note shall be placed on the Composite Development Plan indicating that all proposed landscaping (including landscaping on individual lots) shall conform with the overall approved tract map landscaping plan. A requirement shall be included stating that residents shall include a restriction of the use of tree and plant species to only native trees/plants approved per the overall tract map landscaping plan, the Homeowner Association CC&Rs shall also restrict (individual lot owners) to use only native tree and plant species approved per the overall tract map landscaping plan.

26-17 Please refer to Response to Comment No. 26-4. The proposed project does not include perimeter walls or fences. Once the individual lots are created, the individual property owners could potentially install perimeter walls/fences.

26-18 The project site is considered to be a travel route between open space areas to the north of the project site and the Big Bear Lake. It is not considered a "Wildlife Corridor". Therefore, the proposed project would not impact wildlife corridors.

26-19 Please refer to Responses to Comment Nos. 6-2, 7-7, 7-9 and 7-10.

26-20 Comment is noted. Please refer to Responses to Comment Nos. 5-2 and 5-5.

26-21 Comment is noted.

COMMENT NO. 27

Bradley L. and Cathy Winch
PO Box 370
Fawnskin, CA 92333-0370

Faxed to (909-387-3223) this 15th day of April at ~~3:30~~ 4:45 PM.
Printed letter sent by US Mail.

April 15, 2005
County of San Bernardino
Land Use Services Department, Planning Division
385 North Arrowhead Avenue 1st Floor
San Bernardino, California 92415-0182

Attn: Matthew Slowik, Sr. Assoc. Planner

RE: "REVISED BIOLOGICAL RESOURCES SECTION OF THE DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE MOON CAMP DEVELOPMENT PROJECT/RCK PROPERTIES INC.: GENERAL PLAN AMENDMENT/OFFICIAL LAND USE DISTRICT CHANGE

FROM BV/RL-40 TO BV/RS-7200 AND AMENDMENT TO COUNTY CIRCULATION ELEMENT FOR REALIGNMENT OF NORTH SHORE DRIVE; TENTATIVE TRACT MAP #16136, AND CONDITIONAL USE PERMIT FOR A BOAT DOCK."

I. INTRODUCTION and SUMMARY

On behalf of myself and my wife, Cathy, we would like to thank the San Bernardino County Land Use Services Department Planning Division for the opportunity to comment on this Revised Biological Section of the Draft Environmental Impact Report for the proposed Moon Camp residential development project, General Plan amendment, land use district change, circulation amendment, tentative tract map and conditional use permit for a boat dock (collectively, DEIR).

My wife and I are residents of Fawnskin, California, and would be directly and adversely affected by the negative impacts to the biological resources of this area that would

27-1

result from the development of the proposed Moon Camp project. We chose to come to Fawnskin to live permanently just over one year ago -- after being part-timers for over 2 years -- because we wanted to continue to be surrounded by nature, as it currently exists here, and because of the current character of the town. We value those aspects of Fawnskin because one of us (Bradley) had those same surroundings where he grew up in a small town in Iowa. We feel that it is imperative to our rights and those of friends that we invite to visit us that the basic essence of this character be preserved. 27-1

My wife and I have studied the original EIR and the current DEIR and still are strongly opposed to this proposed Moon Camp development project because, even with the mitigations proposed in this revised biological resources section, this project would have extensive adverse effects on us, on the entire community of Fawnskin and on the Big Bear Valley environment as a whole.

This project goes against a large number of the goals set for the mountain areas in the County's own General Plan. T

Although an amendment to the General Plan to change the zoning is requested, there is no amendment currently proposed to change the general goals in the area of biological and natural resources. In order to maintain those goals and support the existing biological resources at this site and throughout the Big Bear Valley, we support the RL-40 designation of this property as it is currently zoned in the County's General Plan and strongly advocate that this designation be kept. From visitor information we have seen that was collected by the Discovery Center, we believe that much of the economic viability of this entire Valley depends on the maintenance of the native habitats and natural surroundings currently in existence. The adverse impacts to those habitats, and especially to the bald eagle, that would result from the development of this proposed project would, in our opinion, negatively affect the economic well-being of the entire Big Bear Valley.

27-1

In reviewing this revised Biological Section of the DEIR, my wife and I have found it to still be incomplete, inaccurate, and defective. The DEIR fails to adequately evaluate the severe adverse effects of the proposed project and grossly

downplays and understates the significant and unavoidable impacts that would be caused should it be approved. Our objections to this proposed project and the inadequacies of this revised Biological Resources section of the DEIR are set forth below. Please include this letter in its entirety as part of our formal CEQA comments to be included in the Environmental Impact Report.

In summary, we continue to object to this development project, as proposed, for the following reasons: 27-1

II. Biological Resources

The revised Biological Section of the DEIR still has provided an incomplete and inadequate evaluation of the impacts on Biological Resources that grossly underestimates the resulting impacts of this project.

- The Standard Conditions of Approval (SCA-1) does not specify that the replanting of trees must be native trees. Nor does it specify that the trees proposed to be planted be the same type of trees that are being removed. The 27-2

biological resources section does not evaluate the impact on the wildlife as a whole, or on the individual species of the area, for a change in the species of trees that exists on the site.

27–2

- Nothing has been mentioned or taken into account in this revised biological resources section that the bark beetle infestation has long passed its peak and that the removal of the dead trees and logs on the site to reduce the bark beetles could have adverse impacts on the other species in this area. The counterbalance of these has not been evaluated to make recommendations for finding a middle-ground for the long-term health of the area in all conditions.

27–3

- The percentage used to define the pebble plains habitat of this site as a portion of the total in existence has been grossly underestimated. According to the biological resources section itself, the special-status plants associated with the pebble plains habitat "were found to be widespread throughout an approximately 11.8 acre area of open Jeffrey pine forest with an herbaceous layer of Wright's matting buckwheat in the western half of the

27–4

Project site." There is no scientific evaluation or justification given for not including at a minimum the 11.8 acres or more accurately the "western half of the Project site" in the calculations for the size of the actual pebble plains habitat.

27-4

- Once again, since the entire "open Jeffery pine forest" as characterized in the document meets the habitat definition of pebble plains and supports special status species across 17.38 acres, the impact is not just 0.69 acres as considered in the analysis, but the entire 17.38 acres.

27-5

- Many of the pebble plains habitat areas in other parts of the Valley have been very recently and very extensively damaged and thus potentially reduced in size. No evaluation has been done on the actual size of the entire pebble plains habitat, and therefore on the actual percentage represented by this proposed development site, especially taking into account the large increase in off-road vehicle usage and resulting destruction of the existing habitat.

27-6

- No scientific justification is given to define neither 40% rainfall as being a sufficient basis for obtaining an accurate survey of the extent of the pebble plains habitat nor any justification given for surveys being valid with anything less than full and normal rainfall.

27–7

- No scientific justification is given to define neither 40% rainfall as being a sufficient basis for obtaining an accurate survey of the extent of the montane meadow habitat nor any justification given for surveys being valid with anything less than full and normal rainfall.

27–8

- Since it would be difficult if not impossible to find a willing seller of sufficient acreage of pebble plains and associated rare plant habitat to in any way mitigate the loss of the actual size of these habitats at the proposed project site, this mitigation measure (paragraph 2 of 5.8-1a) is impractical and inadequate.

27–9

- No mitigation measures have been defined to make up for the loss of montane meadow habitat with the development of this proposed project.

27–10

- No evaluations have been done to define how much of the total montane meadow habitat in the Valley would be lost with the development of this proposed project. **27–11**

- The special status plant species listed on page 5.8-48 of the revised biological resources section that are likely to exist at the site but that were not detectable during the surveys have not been adequately evaluated nor their potential loss accounted for in this DEIR. Since their numbers have not been determined, no determination as to the full impact to their total populations could have been determined, nor are there any requirements set for making up for their loss once their actual numbers and extent of range have been determined. **27–12**

- Given all of the above points, the mitigation measures defined in 5.8-1a are grossly inadequate and would not serve to reduce impacts to a less than significant level. **27–13**

- Since the extent of the pebble plains habitat has been inadequately evaluated and grossly underestimated, the **27–14**

evaluation of the potential impact to the special-status Andrews' marble butterfly is inadequate and could underestimate the significance of the impacts on this species.

27–14

- The analysis fails to evaluate the loss of a significant portion of the shoreline habitat for all the species that could be impacted, including not only shore-feeding species, but all species that use this portion of the shoreline for access to the lake.

27–15

- The mitigations proposed to protect the bald eagle habitat as proposed continue to be impractical and ineffective. Similar mitigations in other parts of the Valley have often not been enforced or regulated so that they, in the end, proved to be neither practical nor effective.

27–16

- This revised section fails to evaluate the adequacy of the special-status wildlife mitigations on the basis that similar bald eagle mitigations have been done in prior developments in the Big Bear Valley and when the mitigations were implemented, the bald eagle numbers have been significantly reduced over the past two decades, thus rendering the mitigations totally inadequate. **27–17**

- Once again, the potential removal of additional trees to support Section 5.3-1c mitigation for a 100-foot fuel modification is not analyzed anywhere in the Biological Resources section. **27–18**

- The DEIR still fails to include in the biological resources analysis the impact to wildlife based on increases in road-kill from the increased traffic nor from the proposed highway realignment. **27–19**

- The evaluation of impacts to bald eagles fails to take into account that the eagles now can see the shoreline from the trees identified as bald eagle perches. There is neither **27–20**

mention nor evaluation of the increased impacts when the views from those perch trees are degraded extensively by the visually obstructive intrusion of homes built between the trees and the shoreline.

27–20

- Neither mention nor evaluation has been done on the larger-range impacts to the entire population of Southern California wintering bald eagles. The bald eagle numbers in Southern California have been declining in spite of what's happening in other areas of the country. One of the only potential ways for this population to begin recovering is to increase the chances of these populations actually nesting in Southern California. This habitat on the north Shore of Big Bear Lake is some of the last remaining likely areas for this nesting to occur and thus, this proposed project will very likely negatively impact the chances for overall recovery of the bald eagle populations in Southern California.

27–21

- No evaluation has been done on whether the drought in this area could have affected the existence of the wildlife on this site and whether more wildlife would be likely to be

27–22

found at the site during years of normal rainfall. Therefore, the evaluation of the impact on all wildlife, including but not limited, to the yellow-blotched salamander, the silvery legless lizard, the southern rubber boa, the San Bernardino Mountain Flying Squirrel, and all species of bats is inadequate and potentially understated.

27–22

- The adverse impacts on the biological resources that would result from the development of this project would spread out to affect other arenas, such as the economy of the valley and the economic viability of its current dependence on tourism. None of these impacts have been evaluated in this section or throughout the remainder of the DEIR.

27–23

This revised biological resources section analysis continues to be inaccurate and inadequate and grossly understates the level of significance of the impacts regarding wildlife and plants that would be caused by this proposed project. It especially continues to underestimate the significant impacts on bald eagles and both the pebble plains and the montane meadow habitats.

27–24

III. CONCLUSION

My wife and I believe that, since a section of this DEIR was revised, the entire document must be circulated once again so that the changes and how they apply from one section to another can be properly evaluated and the public and the decision-makers can be properly informed prior to making any decision on this project, as required by law. 27–25

We again formally request timely notification in advance of all meetings, documents, and decisions regarding this proposed project. 27–26

The Revised Biological Resources section of the Draft EIR, and thus the DEIR as a whole, for the proposed Moon Camp Project currently in circulation is incomplete, inaccurate and defective and must be rejected in its present form. It has failed to adequately assess the level of significance of the adverse impact on biological resources. Furthermore, multiple significant impacts continue to understate and sugar coat the project in a thinly-veiled attempt to convince the Board of Supervisors to approve this 27–27

project with overriding considerations. The project, on the basis of the present proposal, is so entirely contrary to the guidelines of the County's General Plan and the best interest of the tax-paying public that it warrants nothing less than a categorical denial. We urge the Board to carefully evaluate this project and select the No Project Alternative in the interest of the Public Trust.

27-27

Respectfully submitted,

Bradley L. Winch, Ph.D., J.D. and Cathy Winch

Residents of Fawnskin

Response to Commentor No. 27
Bradley and Cathy Winch
April 15, 2005

27-1 Please refer to Response to Comment No. 7-1.

27-2 Please refer to Response to Comment No. 7-2.

27-3 Please refer to Response to Comment No. 7-3.

27-4 Please refer to Response to Comment No. 7-4.

27-5 Please refer to Response to Comment No. 7-5.

27-6 Please refer to Response to Comment No. 7-6.

27-7 Please refer to Response to Comment No. 7-7.

27-8 Please refer to Response to Comment No. 7-8.

27-9 Please refer to Response to Comment No. 7-9.

27-10 Please refer to Response to Comment No. 7-10.

27-11 Please refer to Response to Comment No. 7-11.

27-12 Please refer to Response to Comment No. 7-12.

27-13 Please refer to Response to Comment No. 7-13.

27-14 Please refer to Response to Comment No. 7-14.

27-15 Please refer to Response to Comment No. 7-15.

27-16 Please refer to Response to Comment No. 7-16.

27-17 Please refer to Response to Comment No. 7-17.

27-18 Please refer to Response to Comment No. 7-18.

27-19 Please refer to Response to Comment No. 7-19.

27-20 Please refer to Response to Comment No. 7-20.

27-21 Please refer to Response to Comment No. 7-21.

27-22 Please refer to Response to Comment No. 7-22.

27-23 Please refer to Response to Comment No. 7-23.

27-24 Please refer to Response to Comment No. 7-24.

27-25 Please refer to Response to Comment No. 7-25.

27-26 Please refer to Response to Comment No. 7-26.

27-27 Please refer to Response to Comment No. 7-27.

27-28 Please refer to Response to Comment No. 7-28.

COMMENT NO. 28

P.O. Box 409
Fawnskin, CA 92333
April 15, 2005

County of San Bernardino
Land Use Services Department
Planning Division
385 N. Arrowhead Ave, First Floor
San Bernardino, CA 92415-0182

Attention: Mr. Matthew W. Slowik

Re: Mooncamp Development Project/RCK Properties Inc. Draft Biological section Recirculation

FAX: (909) 387-3223

Dear Mr. Slowik:

We received notification of the revised biological section of the draft EIR for the Mooncamp development project/RCK Properties Inc., and have very significant concerns about this revised version. For example:

1. How can it be guaranteed that there will be offsite mitigation regions available for pebble plains habitat? 28-1

2. Why would plant surveys be carried out at a time of 40% of normal rainfall, rather than for normal rainfall? 28-2

3. This revised draft again indicates that there will be significant impact on bald eagle habitat, which is particularly important when cumulative impacts are taken into account.

The overall draft EIR now indicates that there will be substantial negative impacts that cannot be mitigated in a number of areas, including air quality and biological impacts. Visitors come to our valley for the clean air, beautiful scenery and wildlife, and destruction of these important quality of life issues will have significant and irreversible negative economic impacts on this resort community. We hope that the Supervisors will not therefore judge that there are overriding economic considerations for approving the rezoning and this development, as it will have the opposite effect on all but the developers themselves. 28-3

Yours truly,

B. J. Finlayson-Pitts, Ph.D.

James N. Pitts, Jr., Ph.D.

Response to Commentor No. 28
B.J. Finlayson-Pitts and James Pitts
April 15, 2005

28-1 Please refer to Response to Comment No. 7-9.

28-2 Please refer to Response to Comment No. 7-7.

28-3 Comment is noted. Environmental considerations noted by the Commentor have been addressed in the Draft and Final EIR.

COMMENT NO. 29

Michael Karp
P.O. Box 1653
Big Bear Lake, CA 92315

County of San Bernardino
Land Use Services Department, Planning Division
385 N. Arrowhead Ave, First Floor
San Bernardino, CA 92415-0182
Attn: Matthew W. Slowik Fax: 909 387-3223

Concerning: MOONCAMP DEVELOPMENT PROJECT/RCK PROPERTIES, INC. DRAFT EIR BIOLOGICAL SECTION RECIRCULATION.

Dear Mr. Slowik:

I understand that the above project is about to come before the County Planning Commission and/or Board of Supervisors. I have some concerns that echo the findings of the DEIR:

- What scientific basis is there for using 40% of normal rainfall as the time when they do another plant survey? Why shouldn't it be done with normal rainfall? **29–1**
- It is very unlikely that there is a place available that they can purchase for offsite mitigation for pebble plains habitat, so this is not a satisfactory mitigation. **29–2**
- The impact on bald eagles has been determined to be significant. In fact, the DEIR states, "The proposed project contains some of the most utilized bald eagle roosting and perching habitat in the Big Bear Valley. Construction of the proposed project would diminish the habitat value of the project site for the species. When viewed in conjunction with other past, present, and reasonably foreseeable developments planned for the Fawnskin/Big Bear Lake area, the loss of bald eagle perch and roosting trees on the project site would significantly impact bald eagle habitat on the north shore of Big Bear Lake." **29–3**
- "As a result, cumulative impacts to the bald eagle are considered significant. Mitigation measures reflective of recommendations developed by scientific studies in the Big Bear Valley, including Kimball Garrett's study on the effects of human activity on wintering bald eagles (1981), are provided as part of the proposed project. However, implementation of these mitigation measures would not reduce direct or cumulative impacts to bald eagle habitat to a level considered less than significant." **29–4**
- To approve this project the Supervisors would have to cite overriding considerations. Since this project would take a general plan amendment for a change in the existing zoning, there can be no overriding considerations that justify this negative impact on the wintering bald eagle population in Big Bear. **29–5**

Since the economy of the Big Bear Valley depends upon nature, recreation and the existence of the bald eagle here, there would most likely be economic harm to the entire valley if this project were approved. I therefore request that this project *not* be approved as written. **29–6**

Sincerely,

Michael Karp

Response to Commentor No. 29
Michael Karp
April 16, 2005

29-1 Please refer to Response to Comment No. 7-7.

29-2 Please refer to Response to Comment No. 7-9.

29-3 Comment is noted. Environmental considerations noted by the Commentor have been addressed in the Draft and Final EIR.

29-4 Comment is noted. Environmental considerations noted by the Commentor have been addressed in the Draft and Final EIR.

29-5 Comment is noted.

29-6 Comment is noted.