

## **A.1 - 2005 Final Environmental Impact Report (EIR) and Appendices**

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**FINAL**

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December 2005



# **Moon Camp Residential Subdivision TT No. 16136 EIR**



**Lead Agency:  
County of San Bernardino**

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**Prepared by:  
RBF Consulting**



Administrative Draft EIR Completed: August 23, 2002  
Public Review Draft EIR Completed: March 23, 2004  
Final EIR Completed: December, 2005

**FINAL**  
**ENVIRONMENTAL IMPACT REPORT**

**MOON CAMP**  
**RESIDENTIAL SUBDIVISION**  
**TENTATIVE TRACT NO. 16136**

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**SCH NO. 2002021105**

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## **1.0 Introduction and Purpose**

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## **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: ash-grey paintbrush, flycatchers, California spotted owl, herons, hawks, Southern



mountain buckwheat (*Eriogonum kennedyi* var. *austromontanum*) 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*).

#### March 2, 2002 Public Scoping Meeting

- 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

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## 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**

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## **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.

<u>EIR SECTION</u>	<u>IMPACTS</u>	<u>MITIGATION MEASURES</u>	<u>SIGNIFICANCE AFTER MITIGATION</u>
5.1	<b>LAND USE AND RELEVANT PLANNING</b>		
	<b>San Bernardino County General Plan</b>		
5.1-1	<i>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).</i>	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.
	<b>San Bernardino County Development Code</b>		
5.1-2	<i>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.</i>	5.1-2 No mitigation measures are recommended.	
	<b>Cumulative</b>		
5.1-3	<i>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.</i>	5.1-3 No mitigation measures are recommended.	
5.2	<b>RECREATION</b>		
	<b>Expansion and/or Construction of Recreational Facilities</b>		
5.2-1	<i>Implementation of the Moon Camp project involves the construction or expansion of recreational facilities which may have an adverse physical</i>	5.2-1 No mitigation measures are recommended.	No significant impacts related to Recreational facilities have been identified in this Section.

<u>EIR SECTION</u>	<u>IMPACTS</u>	<u>MITIGATION MEASURES</u>	<u>SIGNIFICANCE AFTER MITIGATION</u>
	<p>effect on the environment. Compliance with the Big Bear MWD standards and permit requirements would reduce impacts to a less than significant level.</p> <p><b>Public Access</b></p> <p>5.2-2 <i>Implementation of the Moon Camp project would not affect public access along the north shore of Big Bear Lake. <u>Mitigation requiring dedication of an easement along the south side of North Shore Drive has been incorporated.</u> The Project site is Private Property. Affects on public access are concluded as less than significant.</i></p> <p><b>Cumulative</b></p> <p>5.2-3 <i>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.</i></p>	<p>5.2-2 <del>No mitigation measures are recommended.</del> <u>The proposed project shall be conditioned to incorporate a pedal path easement along the south side of North Shore Drive, prior to map recordation.</u></p> <p>5.2-3 No mitigation measures are recommended.</p>	
<b>5.3</b>	<b>PUBLIC SERVICES AND UTILITIES</b>		
	<p><b>Fire Protection</b></p> <p>5.3-1 <i>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.</i></p>	<p>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.</p> <p>5.3-1b <del>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.</del> <u>have a larger sprinkler requirement (FPA13R).</u></p> <p>5.3-1c A <del>Fuels</del> <u>Management Plan</u> modification program, with specifications, shall be prepared and</p>	

<u>EIR SECTION</u>	<u>IMPACTS</u>	<u>MITIGATION MEASURES</u>	<u>SIGNIFICANCE AFTER MITIGATION</u>
		<p>subject to approval by the County of San Bernardino <u>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.</u></p>	
		<p>5.3-1d Cul-de-sac lengths shall be no longer than 350 feet.</p>	
		<p>5.3-1e A Homeowner's Association or a Special District shall be established to assure <u>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 Forester 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.</u></p>	
		<p>5.3-1f <del>Fire resistance/drought tolerant landscaping shall be required and referenced in the Homeowner's Association or Special District Standards.</del></p>	

<u>EIR SECTION</u>	<u>IMPACTS</u>	<u>MITIGATION MEASURES</u>	<u>SIGNIFICANCE AFTER MITIGATION</u>
<b>Police Protection</b>			
5.3-2	<i>Project implementation could result in significant physical impacts with respect to police protection. Analysis has concluded that a less than significant impact would occur.</i>	5.3-2 No mitigation measures are recommended.	
<b>Schools</b>			
5.3-3	<i>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.</i>	5.3-3 No mitigation measures are recommended.	
<b>Libraries</b>			
5.3-4	<i>Project implementation would increase the demand on library services. Analysis has concluded that that a less than significant impact would occur.</i>	5.3-4 No mitigation measures are recommended.	
<b>Wastewater</b>			
5.3-5	<i>Project implementation would generate additional wastewater beyond current conditions. Analysis has concluded that impacts would be less than significant with the recommended mitigation measures.</i>	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 <u>(and/or bonding for the relocation)</u> 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.	

<u>EIR SECTION</u>	<u>IMPACTS</u>	<u>MITIGATION MEASURES</u>	<u>SIGNIFICANCE AFTER MITIGATION</u>
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**Water**

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| 5.3-6  | <p><i>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.</i></p> | <p>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.</p>   |  |
| 5.3-6a |  | <p><del>Prior to approval of building permits, a video inspection of water supply easings 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.</del> Water samples shall be taken during the inspection for testing and analysis in accordance with standard requirements.</p>  | <p>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, <i>Hydrology and Drainage</i>, due to inconclusive testing of potential overdraft conditions for the groundwater basin associated with the North Shore Hydrologic Subunit.</p> |
| 5.3-6b |  | <p><del>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 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.</del> Within the proposed tract, no individual private irrigation wells shall be permitted.</p>  | <p>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.</p>  |
| 5.3-6c |  | <p><del>If served by CSA 53-C through a contract with the City of Big Bear Lake Department of Water and Power, 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.</del></p> | <p>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.</p>   |
| 5.3-6d |  | <p>The following water conservation measures are the minimum measures that shall be complied with in conjunction with domestic water supply to the project. <u>A Homeowners Association shall be</u></p>  |  |

**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

<u>EIR SECTION</u>	<u>IMPACTS</u>	<u>MITIGATION MEASURES</u>	<u>SIGNIFICANCE AFTER MITIGATION</u>
		irrigation methods. The guide shall be reviewed and approved by the Land Use Services Department.	
<b>Solid Waste</b>			
5.3-7	<i>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.</i>	5.3-7 No mitigation measures are recommended.	
<b>Natural Gas</b>			
5.3-8	<i>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.</i>	5.3-8 No mitigation measures are recommended.	
<b>Electricity</b>			
5.3-9	<i>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.</i>	5.3-9 No mitigation measures are recommended.	
<b>Cumulative Impacts</b>			
5.3-10	<i>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.</i>	5.3-10 No mitigation measures are recommended.	



<u>EIR SECTION</u>	<u>IMPACTS</u>	<u>MITIGATION MEASURES</u>	<u>SIGNIFICANCE AFTER MITIGATION</u>
5.4	<b>AESTHETICS/LIGHT AND GLARE</b>		
	<b>Short-Term Aesthetic/Light and Glare Impacts</b>		
5.4-1	<i>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.</i>	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.
	<b>Long-Term Aesthetic Impacts</b>		
5.4-2	<i>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.</i>	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.

<u>EIR SECTION</u>	<u>IMPACTS</u>	<u>MITIGATION MEASURES</u>	<u>SIGNIFICANCE AFTER MITIGATION</u>
		<p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p>	

**Long-Term Scenic Highway Impacts**

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| <p>5.4-3 <i>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</i></p> | <p>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.</p> |
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<u>EIR SECTION</u>	<u>IMPACTS</u>	<u>MITIGATION MEASURES</u>	<u>SIGNIFICANCE AFTER MITIGATION</u>
	<p><i>(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.</i></p>	<p>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.</p>	
	<p><b>Long-Term Light and Glare Impacts</b></p>		
5.4-4	<p><i>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.</i></p>	<p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>5.4-4e Mitigation Measures 5.4-4a through 5.4-4d shall be included within the Conditions, Covenants and Restrictions (CC&amp;Rs) of the Home Owner's Association (HOA).</p> <p><u>5.4-4f All outdoor light fixtures shall be cutoff luminaries and shall only use high- or low-pressure sodium lamps.</u></p> <p><u>5.4-4g The Project Applicant/Developer shall install light colored, reflective roof products. Such roofs shall utilize light colored, reflective</u></p>	

<u>EIR SECTION</u>	<u>IMPACTS</u>	<u>MITIGATION MEASURES</u>	<u>SIGNIFICANCE AFTER MITIGATION</u>
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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	<i>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.</i>	5.4-5	No mitigation measures are recommended.
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**5.5 TRAFFIC AND CIRCULATION**

**Existing Conditions with Project Traffic Analysis**

5.5-1	<i>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.</i>	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.
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**Year 2006 Traffic Analysis**

5.5-2	<i>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.</i>	5.5-2	Refer to Mitigation Measure 5.5-1. No additional mitigation measures are recommended.
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<u>EIR SECTION</u>	<u>IMPACTS</u>	<u>MITIGATION MEASURES</u>	<u>SIGNIFICANCE AFTER MITIGATION</u>
<b>Year 2025 Traffic Analysis</b>			
5.5-3	<i>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.</i>	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.	
<b>Safety Hazards and Emergency Access</b>			
5.5-4	<i>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.</i>	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 <i>Traffic Analysis</i> report, shall be implemented.  5.5-4d All streets internal to the project shall be constructed to full ultimate cross-sections. <del>as adjacent development occurs.</del>  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.	
<b>5.6 AIR QUALITY</b>			
<b>Short-Term Air Quality Impacts</b>			
5.6-1	<i>Significant short-term air quality impacts would occur during site</i>	5.6-1 In accordance with the County Development Code and SCAQMD	The following air quality impacts would remain

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	<p><i>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.)</i></p>	<p>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.</p> <p><u>Grading:</u></p> <p>Apply non-toxic soil stabilizers according to manufacturer's specifications to all inactive construction areas (previously graded for ten days or more);</p> <ul style="list-style-type: none"> <li>▪ Replace ground cover in disturbed areas as quickly as possible;</li> <li>▪ 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;</li> <li>▪ Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 mph; and</li> <li>▪ 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).</li> </ul> <p><u>Paved Roads:</u></p> <ul style="list-style-type: none"> <li>▪ Sweep streets at the end of the day if visible soil material is carried onto adjacent public paved roads.</li> </ul>	<p>significant and unavoidable following mitigation:</p> <ul style="list-style-type: none"> <li>▪ ROG and NOx from construction activities;</li> <li>▪ Project Operations: Exceedance of State and/or Federal emission levels (ROG, CO and PM10) from project operations; and</li> <li>▪ Project implementation would result in a significant un-avoidable impact with respect to consistency with the AQMP.</li> </ul> <p>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.</p>

**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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	<p><i>PM<sub>10</sub>. These exceedances are considered significant and cannot be mitigated to a less than significant level.</i></p> <p><b>Consistency with Air Quality Management Plan</b></p>	<p>use of natural gas fireplaces may be used as a feasible alternative.</p>	
	<p>5.6-3 <i>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.</i></p>	<p>5.6-3 No mitigation measures are recommended.</p>	
	<p><b>Cumulative Impacts</b></p>		
	<p>5.6-4 <i>Cumulative impacts to regional air quality resulting from development of the proposed Project would be less than significant.</i></p>	<p>5.6-4 No mitigation measures are recommended.</p>	
<b>5.7</b>	<b>NOISE</b>		
	<p><b>Short-Term Construction Noise and Vibration Impacts</b></p>		
	<p>5.7-1 <i>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.</i></p>	<p>5.7-1a Construction activities shall be limited to the hours of 7:00 a.m. <del>and</del> to 7:00 p.m. Monday to Saturday and prohibited on Sundays and Federal Holidays.</p> <p>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.</p> <p>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.</p> <p>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.</p>	<p>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.</p>
	<p><b>Long-Term Noise Impacts</b></p>		
	<p>5.7-2 <i>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</i></p>	<p>5.7-2 No mitigation measures are recommended.</p>	

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Year 2006 and Year 2025 traffic scenarios. No mitigation measures are recommended.

**Stationary Noise**

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| 5.7-3 | <i>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.</i> | 5.7-3 No mitigation measures are recommended. |  |
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**Watercraft Noise**

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| 5.7-4 | <i>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.</i> | 5.7-4 No mitigation measures are recommended. |  |
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**Cumulative**

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| 5.7-5 | <i>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.</i> | 5.7-5 No mitigation measures are recommended. |  |
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**5.8 BIOLOGICAL RESOURCES**

**Special Status Biological Resources**

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| 5.8-1 | <i>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.</i> | 5.8-1a <del>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.</del> | 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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**EIR SECTION**

**IMPACTS**

**MITIGATION MEASURES**

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~~The location and extent of special status species populations shall be mapped and the size of the populations accurately documented.~~

accordance with section 15093 of CEQA.

~~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).~~

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.

~~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

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EIR SECTION	IMPACTS	MITIGATION MEASURES	SIGNIFICANCE AFTER MITIGATION
		<p><u>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).</u></p> <p><u>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.</u></p> <p><u>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</u></p>	

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		<u>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.</u>	
		5.8-1b Trees identified on Exhibits 3 and 4 of the Bald Eagle Survey Report (Appendix E, <u>see attached</u> ) 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. <u>All construction or landscaping improvements, including irrigation, will be prohibited on or around the exposed root structures or within the dripline of these trees.</u> 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. <u>All construction or landscaping improvements, including irrigation, will be prohibited on or around the exposed root structures or within the dripline of these trees.</u> These restrictions on development of the individual tentative tracts must be clearly presented and explained to any potential prospective developers	

<u>EIR SECTION</u>	<u>IMPACTS</u>	<u>MITIGATION MEASURES</u>	<u>SIGNIFICANCE AFTER MITIGATION</u>
		<p>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.</p>	
		<p>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.</p>	
		<p>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.</p>	
		<p>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.</p>	

<u>EIR SECTION</u>	<u>IMPACTS</u>	<u>MITIGATION MEASURES</u>	<u>SIGNIFICANCE AFTER MITIGATION</u>
		<p>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&amp;Rs.</p>	
		<p><del>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.</del></p>	

<u>EIR SECTION</u>	<u>IMPACTS</u>	<u>MITIGATION MEASURES</u>	<u>SIGNIFICANCE AFTER MITIGATION</u>
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**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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		<p>5.8-2d <del>Prior to the issuance of individual building permits, landscaping designs</del> <u>recording 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,</u> 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. <u>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&amp;Rs shall also restrict (individual lot owners) to use only native tree and plant species approved per the overall tract map landscaping plan.</u></p> <p>5.8-2e <del>Garages with automatic door openers shall be required. No exterior construction shall occur between December 1 and April 1, when bald eagles are present.</del> <u>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).</u></p> <p>Also refer to mitigation measures 5.8-1a to 5.8-1f.</p>	
	<p><b>Jurisdictional Waters</b></p> <p>5.8-3 <del>Development of the proposed Project does not have</del><u>has</u> the potential to impact jurisdictional waters. Analysis has concluded that <u>potentially significant impacts would be reduced to a less than significant level</u><del>impact</del></p>	<p>5.8-3 <del>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</del></p>	

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	<p><del>would occur in this regard after regulatory compliance with implementation of the recommended mitigation measures</del></p>	<p><u>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.</u></p>	
	<b>Wildlife Movement</b>		
5.8-4	<p><i>Project implementation may interfere with the movement of a native resident or migratory wildlife species. Analysis has concluded that impacts are less than significant.</i></p>	5.8-4 No mitigation measures are recommended.	
	<b>Regional and Local Policies/Plans</b>		
5.8-5	<p><i>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.</i></p>	5.8-5 No mitigation measures are recommended.	
	<b>Cumulative</b>		
5.8-6	<p><del>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.</del></p>	5.8-6 No mitigation measures are recommended.	
<b>5.9</b>	<b>CULTURAL RESOURCES</b>		
	<b>Archaeological/Historical Resources</b>		
5.9-1	<p><i>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.</i></p>	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**

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| <p>5.9-3 <i>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.</i></p> | <p>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."</p> |
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**Cumulative**

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| <p>5.9-4 <i>Cumulative development may adversely affect cultural resources in the north shore area. Resources are evaluated and mitigated on a project-by-project basis.</i></p> | <p>5.9-4 No mitigation measures are recommended.</p> |
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**5.10 GEOLOGY AND SOILS**

**Slope Stability**

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| <p>5.10-1 <i>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.</i></p> | <p>5.10-1 <u>The stability of Ssouth facing cut slopes shall be analyzed as part of the design-level geotechnical investigation.</u> <del>Utilizing</del> 2:1 buttressed slopes using on site native soil materials, or <del>by</del> constructing geotextile-reinforced soil buttresses <del>wherefor planned unstable cut slopes are planned are typical engineering designs for stabilizing slopes.</del> Either of these methods, or <u>other methods must</u> be approved by the San Bernardino County <u>Department of Building and Safety</u> Geologist for slope reinforcement may be utilized.</p> | <p>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.</p> |
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**Soil Erosion**

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| <p>5.10-2 <i>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.</i></p> | <p>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.</p> |
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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.
	<b>Ground Shaking</b>		
5.10-3	<i>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.</i>	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.
	<b>Seiche</b>		
5.10-4	<i>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.</i>	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.
	<b>Expansive Soils</b>		
5.10-5	<i>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.</i>	5.10-5	Prior to grading permit issuance, <del>geologic analysis/studies shall be required including 1) a quantitative geotechnical analysis and 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.</del>
	<b>Cumulative Impacts</b>		
5.10-6	<i>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.</i>	5.10-6	No mitigation measures are recommended.

<u>EIR SECTION</u>	<u>IMPACTS</u>	<u>MITIGATION MEASURES</u>	<u>SIGNIFICANCE AFTER MITIGATION</u>
5.11	<b>HYDROLOGY AND DRAINAGE</b>  <b>Drainage and Runoff</b>  5.11-1 <i>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).</i>  <b>Groundwater</b>  5.11-2 <i>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.</i>	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.  <del>5.11-2 Based upon the technical analysis presented, a potential groundwater overdraft condition would occur and no additional mitigation measures have been identified.</del>  <u>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.</u>  <u>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.</u>  <u>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.</u>	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.

<u>EIR SECTION</u>	<u>IMPACTS</u>	<u>MITIGATION MEASURES</u>	<u>SIGNIFICANCE AFTER MITIGATION</u>
	<b>Water Quality – Construction</b>		
5.11-3	<p><i>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.</i></p>	<p>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 <i>California Storm Water Best Management Practice Handbook - Construction Activity</i>:</p> <ul style="list-style-type: none"> <li>▪ <i>CA 1 Dewatering Operations</i> – This operation requires the use of sediment controls to prevent or reduce the discharge of pollutants to storm water from dewatering operations.</li> <li>▪ <i>CA 2 Paving Operations</i> – Prevent or reduce the runoff of pollutants from paving operations by proper storage of materials, protecting storm drain facilities during construction, and training employees.</li> <li>▪ <i>CA 3 Structural Construction and Painting</i> – 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.</li> <li>▪ <i>CA 10 Material Delivery and Storage</i> – Minimize the storage of hazardous materials on-site. If stored on-site, keep in designated areas, install secondary</li> </ul>	

<u>EIR SECTION</u>	<u>IMPACTS</u>	<u>MITIGATION MEASURES</u>	<u>SIGNIFICANCE AFTER MITIGATION</u>
		<p>containment, conduct regular inspections and train employees.</p> <ul style="list-style-type: none"> <li>▪ <i>CA 11 Material Use</i> – Prevent and reduce the discharge of pesticides, herbicides, fertilizers, detergents, plaster, petroleum products and other hazardous materials from entering the storm water.</li> <li>▪ <i>CA 20 Solid Waste Management</i> - 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.</li> <li>▪ <i>CA 21 Hazardous Waste Management</i> - This BMP describes the requirements to properly design and maintain waste areas.</li> <li>▪ <i>CA 23 Concrete Waste Management</i> – 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.</li> <li>▪ <i>CA 24 Sanitary Septic Water Management</i> – Provide convenient, well-maintained facilities, and arrange regular service and disposal of sanitary waste.</li> <li>▪ <i>CA 30 Vehicle and Equipment Cleaning</i> – Use off-site facilities or wash in designated areas to reduce pollutant discharge into the storm drain facilities.</li> <li>▪ <i>CA 31 Vehicle and Equipment Fueling</i> – Use off-site facilities or designated areas with enclosures or coverings to reduce pollutant discharge into the storm drain facilities.</li> <li>▪ <i>CA 32 Vehicle and Equipment Maintenance</i> – Use off-site facilities or designated areas with enclosing or coverings to reduce pollutant discharge into the storm</li> </ul>	

<u>EIR SECTION</u>	<u>IMPACTS</u>	<u>MITIGATION MEASURES</u>	<u>SIGNIFICANCE AFTER MITIGATION</u>
		<p>drain facilities. In addition, run a "dry site" to prevent pollution discharge into storm drains.</p> <ul style="list-style-type: none"> <li>▪ <i>CA 40 Employee and Subcontractor Training</i> – Have a training session for employees and subcontractors to understand the need for implementation and usage of BMPs.</li> <li>▪ <i>ESC 2 Preservation of Existing Vegetation</i> – Minimize the removal of existing trees and shrubs since they serve as erosion control.</li> <li>▪ <i>ESC 10 Seeding and Planting</i> – Provide soil stability by planting and seeding grasses, trees, shrubs, vines, and ground cover.</li> <li>▪ <i>ESC 11 Mulching</i> – Stabilize cleared or freshly seeded areas with mulch.</li> <li>▪ <i>ESC 20 Geotextiles and Mats</i> – Natural or synthetics material can be used for soil stability.</li> <li>▪ <i>ESC Dust Control</i> – Reduce wind erosion and dust generated by construction activities by using dust control measures.</li> <li>▪ <i>ESC 23 Construction Road Stabilization</i> – All on-site vehicle transport routes shall be stabilized immediately after grading and frequently maintained to prevent erosion and control dust.</li> <li>▪ <i>ESC 24 – Stabilized Construction Entrance</i> – Stabilize the entrance pad to the construction area to reduce amount of sediment tracked off-site.</li> <li>▪ <i>ESC 30 Earth Dikes</i> – Construct earth dikes of compacted soil to divert runoff or channel water to a desired location.</li> <li>▪ <i>ESC 31 Temporary Drains and Swales</i> – 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.</li> </ul>	

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<u>EIR SECTION</u>	<u>IMPACTS</u>	<u>MITIGATION MEASURES</u>	<u>SIGNIFICANCE AFTER MITIGATION</u>
		<ul style="list-style-type: none"><li>▪ <i>ESC 40 Outlet Protection</i> – Use rock or grouted rock at outlet pipes to prevent scouring of soil caused by high velocities.</li><li>▪ <i>ESC 41 Check Dams</i> – 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.</li><li>▪ <i>ESC 50 Silt Fence</i> – 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.</li><li>▪ <i>ESC 51 Straw Bale Barrier</i> – 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.</li><li>▪ <i>ESC 52 Sand Bag Barriers</i> – By stacking sand bags on a level contour, a barrier is created to detain sediment-laden water. The barrier promotes sedimentation.</li><li>▪ <i>ESC 53 Brush or Rock Filter</i> – 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.</li><li>▪ <i>ESC 54 Storm Drain Inlet Protection</i> – Devices that remove sediment from sediment laden storm water before entering the storm drain inlet or catch basin.</li><li>▪ <i>ESC 55 Sediment Trap</i> – A sediment trap is a small, excavated, or bermed area where runoff for small drainage areas can pass through allowing sediment to settle out.</li></ul>	



<u>EIR SECTION</u>	<u>IMPACTS</u>	<u>MITIGATION MEASURES</u>	<u>SIGNIFICANCE AFTER MITIGATION</u>
	<b>Water Quality – Long-Term</b>		
5.11-4	<i>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.</i>	<p>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 <i>Water Quality Management Plan (WQMP) for Urban Runoff</i>.</p> <ul style="list-style-type: none"> <li>▪ <i>Education for Property Owners, Tenants and Occupations</i> – 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.</li> <li>▪ <i>Activity Restrictions</i> – The developer shall prepare conditions, covenants and restriction of the protection of surface water quality.</li> <li>▪ <i>Common Area Landscape Management</i> – 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.</li> <li>▪ <i>Common Area Catch Basin Inspection</i> – 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.</li> </ul>	

<u>EIR SECTION</u>	<u>IMPACTS</u>	<u>MITIGATION MEASURES</u>	<u>SIGNIFICANCE AFTER MITIGATION</u>
		<ul style="list-style-type: none"> <li>▪ <i>Common Area Litter Control</i> – POAs shall be required to implement trash management and litter control procedures to minimize pollution to drainage waters.</li> <li>▪ <i>Street Sweeping Private Streets and Parking Lots</i> – 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.</li> </ul> <p>The following controls from the <i>California Storm Water Best Management Practice Handbook - Municipal</i> shall be employed:</p> <ul style="list-style-type: none"> <li>▪ <i>SC10 Housekeeping Practices</i> - This entails practices such as cleaning up spills, proper disposal of certain substances and wise application of chemicals.</li> <li>▪ <i>SC32 Used Oil Recycling</i> - May apply to maintenance and security vehicles.</li> <li>▪ <i>SC72 Vegetation Controls</i> – 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.</li> <li>▪ <i>SC73 Storm Drain Flushing</i> - 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.</li> </ul> <p>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,</p>	

<u>EIR SECTION</u>	<u>IMPACTS</u>	<u>MITIGATION MEASURES</u>	<u>SIGNIFICANCE AFTER MITIGATION</u>
		<p>sedimentation and siltation. The structural BMPs shall conform to the San Bernardino County NPDES permit and the San Bernardino WQMP standards.</p> <p>Consistent with the WQMP guidelines contained in the <i>Draft National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements</i> 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.</p> <p>Volume Based BMPs shall be designed to infiltrate or treat either:</p> <ul style="list-style-type: none"> <li>▪ The volume of runoff produced from the 85<sup>th</sup> percentile 24-hour storm event, as determined from the local historical rainfall record; or</li> <li>▪ The volume of the annual runoff produced by the 85<sup>th</sup> percentile 24-hours rainfall event, determined as the maximized capture storm water volume for the area, from the formula recommended in <u>Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87 (1998)</u>; or</li> <li>▪ The volume of annual runoff based on unit basin storage volume, to achieve 80% or more volume treatment by the method recommended in <u>California Stormwater Best Management Practice Handbook – Industrial/Commercial (1993)</u>; or</li> <li>▪ 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 85<sup>th</sup> percentile 24-hour runoff event.</li> </ul>	

<u>EIR SECTION</u>	<u>IMPACTS</u>	<u>MITIGATION MEASURES</u>	<u>SIGNIFICANCE AFTER MITIGATION</u>
		<p>OR</p> <p>Flow-based BMPs shall be designed to infiltrate or treat either:</p> <ul style="list-style-type: none"> <li>▪ The maximum flow rate of runoff produced from a rainfall intensity of 0.2 inch of rainfall per hour; or</li> <li>▪ The maximum flow rate of runoff produced by the 85<sup>th</sup> percentile hourly rainfall intensity, as determined from the local historical rainfall record, multiplied by a factor of two; or</li> <li>▪ The maximum flow rate of runoff, as determined from the local historical rainfall record that achieved by mitigation of the 85<sup>th</sup> percentile hourly rainfall intensity multiplied by a factor of two.</li> </ul> <p>The following are the minimum required controls to be implemented as a part of the <i>Water Quality Management Plan (WQMP) for Urban Runoff</i>.</p> <ul style="list-style-type: none"> <li>▪ <i>Control of Impervious Runoff</i> – Surface runoff shall be directed to landscaped areas or pervious areas.</li> <li>▪ <i>Common Area Efficient Irrigation</i> – 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.</li> <li>▪ <i>Common Area Runoff-Minimizing Landscape Design</i> – Group plants with similar water requirements in order to reduce excess irrigation runoff and promote surface filtration.</li> <li>▪ <i>Catch Basin Stenciling</i> – “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.</li> </ul>	

<u>EIR SECTION</u>	<u>IMPACTS</u>	<u>MITIGATION MEASURES</u>	<u>SIGNIFICANCE AFTER MITIGATION</u>
		<ul style="list-style-type: none"> <li>▪ <i>Debris Posts</i> – These shall be installed to prevent large floatable debris from entering the storm drains. They shall be placed upstream of the cross culverts.</li> <li>▪ <i>Inlet Trash Racks</i> – 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.</li> </ul>	
		<p>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.</p>	
		<p><u>Infiltration Trenches and Basins</u></p> <p>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.</p>	

**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<sup>®</sup> unit). Once the runoff has entered the storm drain, an in-line diversion would direct the treatment flow to a CDS<sup>®</sup> unit. The CDS<sup>®</sup> unit is a non-blocking, non-mechanical screening system, which would provide a second line of defense for solids removal. Adsorption materials can

<u>EIR SECTION</u>	<u>IMPACTS</u>	<u>MITIGATION MEASURES</u>	<u>SIGNIFICANCE AFTER MITIGATION</u>
		<p>be added within the CDS<sup>®</sup> unit to aid in the removal of oil and grease. The treated flow will exit the CDS<sup>®</sup> unit and continue downstream.</p> <p>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.</p> <p>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.</p>	

**Cumulative Impacts**

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| <p>5.11-5 <i>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.</i></p> | <p>5.11-5 No mitigation measures are recommended.</p> |
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## **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**

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## **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.

<u>EIR SECTION</u>	<u>IMPACTS</u>	<u>MITIGATION MEASURES</u>	<u>SIGNIFICANCE AFTER MITIGATION</u>
5.1	<b>LAND USE AND RELEVANT PLANNING</b>		
	<b>San Bernardino County General Plan</b>		
	5.1-1 <i>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).</i>	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.
	<b>San Bernardino County Development Code</b>		
	5.1-2 <i>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.</i>	5.1-2 No mitigation measures are recommended.	
	<b>Cumulative</b>		
	5.1-3 <i>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.</i>	5.1-3 No mitigation measures are recommended.	
5.2	<b>RECREATION</b>		
	<b>Expansion and/or Construction of Recreational Facilities</b>		
	5.2-1 <i>Implementation of the Moon Camp project involves the construction or expansion of recreational facilities which may have an adverse physical</i>	5.2-1 No mitigation measures are recommended.	No significant impacts related to Recreational facilities have been identified in this Section.

<u>EIR SECTION</u>	<u>IMPACTS</u>	<u>MITIGATION MEASURES</u>	<u>SIGNIFICANCE AFTER MITIGATION</u>
	<p>effect on the environment. Compliance with the Big Bear MWD standards and permit requirements would reduce impacts to a less than significant level.</p> <p><b>Public Access</b></p> <p>5.2-2 <i>Implementation of the Moon Camp project would not affect public access along the north shore of Big Bear Lake. <u>Mitigation requiring dedication of an easement along the south side of North Shore Drive has been incorporated.</u> The Project site is Private Property. Affects on public access are concluded as less than significant.</i></p> <p><b>Cumulative</b></p> <p>5.2-3 <i>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.</i></p>	<p>5.2-2 <del>No mitigation measures are recommended.</del> <u>The proposed project shall be conditioned to incorporate a pedal path easement along the south side of North Shore Drive, prior to map recordation.</u></p> <p>5.2-3 No mitigation measures are recommended.</p>	
<b>5.3</b>	<b>PUBLIC SERVICES AND UTILITIES</b>		
	<p><b>Fire Protection</b></p> <p>5.3-1 <i>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.</i></p>	<p>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.</p> <p>5.3-1b <del>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.</del> <u>have a larger sprinkler requirement (FPA13R).</u></p> <p>5.3-1c A <del>Fuels</del> <u>Management Plan</u> modification program, with specifications, shall be prepared and</p>	

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		<p>subject to approval by the County of San Bernardino <u>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 <u>minimum 100 foot fuel modification zone requirements</u> may be greater in steeper areas (up to 300 ft.), as determined by the Fire Agency Department.</u></p>	
		<p>5.3-1d Cul-de-sac lengths shall be no longer than 350 feet.</p>	
		<p>5.3-1e A Homeowner's Association or a Special District shall be established to assure <u>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.</u></p>	
		<p>5.3-1f <del>Fire resistance/drought tolerant landscaping shall be required and referenced in the Homeowner's Association or Special District Standards.</del></p>	

<u>EIR SECTION</u>	<u>IMPACTS</u>	<u>MITIGATION MEASURES</u>	<u>SIGNIFICANCE AFTER MITIGATION</u>
<b>Police Protection</b>			
5.3-2	<i>Project implementation could result in significant physical impacts with respect to police protection. Analysis has concluded that a less than significant impact would occur.</i>	5.3-2 No mitigation measures are recommended.	
<b>Schools</b>			
5.3-3	<i>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.</i>	5.3-3 No mitigation measures are recommended.	
<b>Libraries</b>			
5.3-4	<i>Project implementation would increase the demand on library services. Analysis has concluded that that a less than significant impact would occur.</i>	5.3-4 No mitigation measures are recommended.	
<b>Wastewater</b>			
5.3-5	<i>Project implementation would generate additional wastewater beyond current conditions. Analysis has concluded that impacts would be less than significant with the recommended mitigation measures.</i>	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 <u>(and/or bonding for the relocation)</u> 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.	

<u>EIR SECTION</u>	<u>IMPACTS</u>	<u>MITIGATION MEASURES</u>	<u>SIGNIFICANCE AFTER MITIGATION</u>
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**Water**

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| 5.3-6  | <p><i>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.</i></p> | <p>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.</p>   |  |
| 5.3-6a |  | <p><del>Prior to approval of building permits, a video inspection of water supply easings 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.</del> Water samples shall be taken during the inspection for testing and analysis in accordance with standard requirements.</p>  | <p>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, <i>Hydrology and Drainage</i>, due to inconclusive testing of potential overdraft conditions for the groundwater basin associated with the North Shore Hydrologic Subunit.</p> |
| 5.3-6b |  | <p><del>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 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.</del> Within the proposed tract, no individual private irrigation wells shall be permitted.</p>  | <p>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.</p>  |
| 5.3-6c |  | <p><del>If served by CSA 53-C through a contract with the City of Big Bear Lake Department of Water and Power, 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.</del></p> | <p>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.</p>   |
| 5.3-6d |  | <p>The following water conservation measures are the minimum measures that shall be complied with in conjunction with domestic water supply to the project. <u>A Homeowners Association shall be</u></p>  |  |

**EIR  
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**IMPACTS**

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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.	
<b>Solid Waste</b>			
5.3-7	<i>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.</i>	5.3-7 No mitigation measures are recommended.	
<b>Natural Gas</b>			
5.3-8	<i>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.</i>	5.3-8 No mitigation measures are recommended.	
<b>Electricity</b>			
5.3-9	<i>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.</i>	5.3-9 No mitigation measures are recommended.	
<b>Cumulative Impacts</b>			
5.3-10	<i>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.</i>	5.3-10 No mitigation measures are recommended.	

<u>EIR SECTION</u>	<u>IMPACTS</u>	<u>MITIGATION MEASURES</u>	<u>SIGNIFICANCE AFTER MITIGATION</u>
5.4	<b>AESTHETICS/LIGHT AND GLARE</b>		
	<b>Short-Term Aesthetic/Light and Glare Impacts</b>		
5.4-1	<i>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.</i>	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.
	<b>Long-Term Aesthetic Impacts</b>		
5.4-2	<i>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.</i>	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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		<p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p>	

**Long-Term Scenic Highway Impacts**

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| <p>5.4-3 <i>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</i></p> | <p>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.</p> |
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	<p><i>(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.</i></p>	<p>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.</p>	
	<p><b>Long-Term Light and Glare Impacts</b></p>		
5.4-4	<p><i>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.</i></p>	<p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>5.4-4e Mitigation Measures 5.4-4a through 5.4-4d shall be included within the Conditions, Covenants and Restrictions (CC&amp;Rs) of the Home Owner's Association (HOA).</p> <p><u>5.4-4f All outdoor light fixtures shall be cutoff luminaries and shall only use high- or low-pressure sodium lamps.</u></p> <p><u>5.4-4g The Project Applicant/Developer shall install light colored, reflective roof products. Such roofs shall utilize light colored, reflective</u></p>	

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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	<i>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.</i>	5.4-5	No mitigation measures are recommended.
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**5.5 TRAFFIC AND CIRCULATION**

**Existing Conditions with Project Traffic Analysis**

5.5-1	<i>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.</i>	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.
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**Year 2006 Traffic Analysis**

5.5-2	<i>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.</i>	5.5-2	Refer to Mitigation Measure 5.5-1. No additional mitigation measures are recommended.
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<b>Year 2025 Traffic Analysis</b>			
5.5-3	<i>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.</i>	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.	
<b>Safety Hazards and Emergency Access</b>			
5.5-4	<i>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.</i>	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 <i>Traffic Analysis</i> report, shall be implemented.  5.5-4d All streets internal to the project shall be constructed to full ultimate cross-sections. <del>as adjacent development occurs.</del>  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.	
<b>5.6</b>	<b>AIR QUALITY</b>		
	<b>Short-Term Air Quality Impacts</b>		
5.6-1	<i>Significant short-term air quality impacts would occur during site</i>	5.6-1 In accordance with the County Development Code and SCAQMD	The following air quality impacts would remain

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	<p><i>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.)</i></p>	<p>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.</p> <p><u>Grading:</u></p> <p>Apply non-toxic soil stabilizers according to manufacturer's specifications to all inactive construction areas (previously graded for ten days or more);</p> <ul style="list-style-type: none"> <li>▪ Replace ground cover in disturbed areas as quickly as possible;</li> <li>▪ 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;</li> <li>▪ Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 mph; and</li> <li>▪ 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).</li> </ul> <p><u>Paved Roads:</u></p> <ul style="list-style-type: none"> <li>▪ Sweep streets at the end of the day if visible soil material is carried onto adjacent public paved roads.</li> </ul>	<p>significant and unavoidable following mitigation:</p> <ul style="list-style-type: none"> <li>▪ ROG and NOx from construction activities;</li> <li>▪ Project Operations: Exceedance of State and/or Federal emission levels (ROG, CO and PM10) from project operations; and</li> <li>▪ Project implementation would result in a significant un-avoidable impact with respect to consistency with the AQMP.</li> </ul> <p>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.</p>

**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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	<p><i>PM<sub>10</sub>. These exceedances are considered significant and cannot be mitigated to a less than significant level.</i></p> <p><b>Consistency with Air Quality Management Plan</b></p>	<p>use of natural gas fireplaces may be used as a feasible alternative.</p>	
	<p>5.6-3 <i>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.</i></p>	<p>5.6-3 No mitigation measures are recommended.</p>	
	<p><b>Cumulative Impacts</b></p>		
	<p>5.6-4 <i>Cumulative impacts to regional air quality resulting from development of the proposed Project would be less than significant.</i></p>	<p>5.6-4 No mitigation measures are recommended.</p>	
<b>5.7</b>	<b>NOISE</b>		
	<p><b>Short-Term Construction Noise and Vibration Impacts</b></p>		
	<p>5.7-1 <i>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.</i></p>	<p>5.7-1a Construction activities shall be limited to the hours of 7:00 a.m. <del>and</del> to 7:00 p.m. Monday to Saturday and prohibited on Sundays and Federal Holidays.</p> <p>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.</p> <p>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.</p> <p>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.</p>	<p>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.</p>
	<p><b>Long-Term Noise Impacts</b></p>		
	<p>5.7-2 <i>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</i></p>	<p>5.7-2 No mitigation measures are recommended.</p>	



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Year 2006 and Year 2025 traffic scenarios. No mitigation measures are recommended.

**Stationary Noise**

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| 5.7-3 | <i>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.</i> | 5.7-3 No mitigation measures are recommended. |  |
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**Watercraft Noise**

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| 5.7-4 | <i>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.</i> | 5.7-4 No mitigation measures are recommended. |  |
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**Cumulative**

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| 5.7-5 | <i>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.</i> | 5.7-5 No mitigation measures are recommended. |  |
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**5.8 BIOLOGICAL RESOURCES**

**Special Status Biological Resources**

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| 5.8-1 | <i>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.</i> | 5.8-1a <del>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.</del> | 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.~~

accordance with section 15093 of CEQA.

~~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).~~

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.

~~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

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		<p><u>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).</u></p> <p><u>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.</u></p> <p><u>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</u></p>	

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		<u>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.</u>	
		5.8-1b Trees identified on Exhibits 3 and 4 of the Bald Eagle Survey Report (Appendix E, <u>see attached</u> ) 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. <u>All construction or landscaping improvements, including irrigation, will be prohibited on or around the exposed root structures or within the dripline of these trees.</u> 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. <u>All construction or landscaping improvements, including irrigation, will be prohibited on or around the exposed root structures or within the dripline of these trees.</u> These restrictions on development of the individual tentative tracts must be clearly presented and explained to any potential prospective developers	

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		<p>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.</p>	
		<p>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.</p>	
		<p>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.</p>	
		<p>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.</p>	

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		<p>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&amp;Rs.</p>	
		<p><del>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.</del></p>	

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**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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		<p>5.8-2d <del>Prior to the issuance of individual building permits, landscaping designs</del> <u>recording 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,</u> 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. <u>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&amp;Rs shall also restrict (individual lot owners) to use only native tree and plant species approved per the overall tract map landscaping plan.</u></p> <p>5.8-2e <del>Garages with automatic door openers shall be required. No exterior construction shall occur between December 1 and April 1, when bald eagles are present.</del> <u>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).</u></p> <p>Also refer to mitigation measures 5.8-1a to 5.8-1f.</p>	
	<p><b>Jurisdictional Waters</b></p> <p>5.8-3 <del>Development of the proposed Project does not have</del><u>has</u> the potential to impact jurisdictional waters. Analysis has concluded that <u>potentially significant impacts would be reduced to a less than significant level</u><del>impact</del></p>	<p>5.8-3 <del>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</del></p>	



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	<p><del>would occur in this regard after regulatory compliance with implementation of the recommended mitigation measures</del></p>	<p><u>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.</u></p>	
	<b>Wildlife Movement</b>		
5.8-4	<p><i>Project implementation may interfere with the movement of a native resident or migratory wildlife species. Analysis has concluded that impacts are less than significant.</i></p>	5.8-4 No mitigation measures are recommended.	
	<b>Regional and Local Policies/Plans</b>		
5.8-5	<p><i>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.</i></p>	5.8-5 No mitigation measures are recommended.	
	<b>Cumulative</b>		
5.8-6	<p><del>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.</del></p>	5.8-6 No mitigation measures are recommended.	
<b>5.9</b>	<b>CULTURAL RESOURCES</b>		
	<b>Archaeological/Historical Resources</b>		
5.9-1	<p><i>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.</i></p>	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**

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| <p>5.9-3 <i>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.</i></p> | <p>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."</p> |
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**Cumulative**

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| <p>5.9-4 <i>Cumulative development may adversely affect cultural resources in the north shore area. Resources are evaluated and mitigated on a project-by-project basis.</i></p> | <p>5.9-4 No mitigation measures are recommended.</p> |
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**5.10 GEOLOGY AND SOILS**

**Slope Stability**

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| <p>5.10-1 <i>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.</i></p> | <p>5.10-1 <u>The stability of Ssouth facing cut slopes shall be analyzed as part of the design-level geotechnical investigation.</u> <del>Utilizing</del> 2:1 buttressed slopes using on site native soil materials, or <del>by</del> constructing geotextile-reinforced soil buttresses <del>wherefor planned unstable cut slopes are planned are typical engineering designs for stabilizing slopes.</del> Either of these methods, or <u>other methods must</u> be approved by the San Bernardino County <u>Department of Building and Safety</u> Geologist for slope reinforcement may be utilized.</p> | <p>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.</p> |
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**Soil Erosion**

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| <p>5.10-2 <i>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.</i></p> | <p>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.</p> |
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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.
	<b>Ground Shaking</b>		
	5.10-3 <i>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.</i>	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.
	<b>Seiche</b>		
	5.10-4 <i>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.</i>	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.
	<b>Expansive Soils</b>		
	5.10-5 <i>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.</i>	5.10-5	Prior to grading permit issuance, <del>geologic analysis/studies shall be required including 1) a quantitative geotechnical analysis and 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.</del>
	<b>Cumulative Impacts</b>		
	5.10-6 <i>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.</i>	5.10-6	No mitigation measures are recommended.

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5.11	<b>HYDROLOGY AND DRAINAGE</b>  <b>Drainage and Runoff</b>  5.11-1 <i>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).</i>  <b>Groundwater</b>  5.11-2 <i>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.</i>	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.  <del>5.11-2 Based upon the technical analysis presented, a potential groundwater overdraft condition would occur and no additional mitigation measures have been identified.</del>  <u>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.</u>  <u>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.</u>  <u>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.</u>	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.

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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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		<p>containment, conduct regular inspections and train employees.</p> <ul style="list-style-type: none"> <li>▪ <i>CA 11 Material Use</i> – Prevent and reduce the discharge of pesticides, herbicides, fertilizers, detergents, plaster, petroleum products and other hazardous materials from entering the storm water.</li> <li>▪ <i>CA 20 Solid Waste Management</i> - 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.</li> <li>▪ <i>CA 21 Hazardous Waste Management</i> - This BMP describes the requirements to properly design and maintain waste areas.</li> <li>▪ <i>CA 23 Concrete Waste Management</i> – 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.</li> <li>▪ <i>CA 24 Sanitary Septic Water Management</i> – Provide convenient, well-maintained facilities, and arrange regular service and disposal of sanitary waste.</li> <li>▪ <i>CA 30 Vehicle and Equipment Cleaning</i> – Use off-site facilities or wash in designated areas to reduce pollutant discharge into the storm drain facilities.</li> <li>▪ <i>CA 31 Vehicle and Equipment Fueling</i> – Use off-site facilities or designated areas with enclosures or coverings to reduce pollutant discharge into the storm drain facilities.</li> <li>▪ <i>CA 32 Vehicle and Equipment Maintenance</i> – Use off-site facilities or designated areas with enclosing or coverings to reduce pollutant discharge into the storm</li> </ul>	

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		<p>drain facilities. In addition, run a "dry site" to prevent pollution discharge into storm drains.</p> <ul style="list-style-type: none"> <li>▪ <i>CA 40 Employee and Subcontractor Training</i> – Have a training session for employees and subcontractors to understand the need for implementation and usage of BMPs.</li> <li>▪ <i>ESC 2 Preservation of Existing Vegetation</i> – Minimize the removal of existing trees and shrubs since they serve as erosion control.</li> <li>▪ <i>ESC 10 Seeding and Planting</i> – Provide soil stability by planting and seeding grasses, trees, shrubs, vines, and ground cover.</li> <li>▪ <i>ESC 11 Mulching</i> – Stabilize cleared or freshly seeded areas with mulch.</li> <li>▪ <i>ESC 20 Geotextiles and Mats</i> – Natural or synthetics material can be used for soil stability.</li> <li>▪ <i>ESC Dust Control</i> – Reduce wind erosion and dust generated by construction activities by using dust control measures.</li> <li>▪ <i>ESC 23 Construction Road Stabilization</i> – All on-site vehicle transport routes shall be stabilized immediately after grading and frequently maintained to prevent erosion and control dust.</li> <li>▪ <i>ESC 24 – Stabilized Construction Entrance</i> – Stabilize the entrance pad to the construction area to reduce amount of sediment tracked off-site.</li> <li>▪ <i>ESC 30 Earth Dikes</i> – Construct earth dikes of compacted soil to divert runoff or channel water to a desired location.</li> <li>▪ <i>ESC 31 Temporary Drains and Swales</i> – 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.</li> </ul>	



**EIR**  
**SECTION**

**IMPACTS**

**MITIGATION MEASURES**

**SIGNIFICANCE**  
**AFTER MITIGATION**

- *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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	<b>Water Quality – Long-Term</b>		
5.11-4	<i>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.</i>	<p>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 <i>Water Quality Management Plan (WQMP) for Urban Runoff</i>.</p> <ul style="list-style-type: none"> <li>▪ <i>Education for Property Owners, Tenants and Occupations</i> – 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.</li> <li>▪ <i>Activity Restrictions</i> – The developer shall prepare conditions, covenants and restriction of the protection of surface water quality.</li> <li>▪ <i>Common Area Landscape Management</i> – 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.</li> <li>▪ <i>Common Area Catch Basin Inspection</i> – 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.</li> </ul>	

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		<ul style="list-style-type: none"> <li>▪ <i>Common Area Litter Control</i> – POAs shall be required to implement trash management and litter control procedures to minimize pollution to drainage waters.</li> <li>▪ <i>Street Sweeping Private Streets and Parking Lots</i> – 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.</li> </ul> <p>The following controls from the <i>California Storm Water Best Management Practice Handbook - Municipal</i> shall be employed:</p> <ul style="list-style-type: none"> <li>▪ <i>SC10 Housekeeping Practices</i> - This entails practices such as cleaning up spills, proper disposal of certain substances and wise application of chemicals.</li> <li>▪ <i>SC32 Used Oil Recycling</i> - May apply to maintenance and security vehicles.</li> <li>▪ <i>SC72 Vegetation Controls</i> – 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.</li> <li>▪ <i>SC73 Storm Drain Flushing</i> - 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.</li> </ul> <p>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,</p>	

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		<p>sedimentation and siltation. The structural BMPs shall conform to the San Bernardino County NPDES permit and the San Bernardino WQMP standards.</p> <p>Consistent with the WQMP guidelines contained in the <i>Draft National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements</i> 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.</p> <p>Volume Based BMPs shall be designed to infiltrate or treat either:</p> <ul style="list-style-type: none"> <li>▪ The volume of runoff produced from the 85<sup>th</sup> percentile 24-hour storm event, as determined from the local historical rainfall record; or</li> <li>▪ The volume of the annual runoff produced by the 85<sup>th</sup> percentile 24-hours rainfall event, determined as the maximized capture storm water volume for the area, from the formula recommended in <u>Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87 (1998)</u>; or</li> <li>▪ The volume of annual runoff based on unit basin storage volume, to achieve 80% or more volume treatment by the method recommended in <u>California Stormwater Best Management Practice Handbook – Industrial/Commercial (1993)</u>; or</li> <li>▪ 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 85<sup>th</sup> percentile 24-hour runoff event.</li> </ul>	