MITIGATION MEASURE:
PUBLIC SERVICES AND UTILITIES 5.3-5b Prior to issuance of building permits, the Project Applicant shall provide evidence to the County of San Bernardino that the BBARWA has sufficient transmission and treatment plant capacity to accept sewage flows from the Project site.
IMPLEMENTATION AND VERIFICATION:
1) Applicant shall submit evidence that BBARWA has sufficient capacity to accept flows from the Project site. 2) The Department of Special Districts and/or BBARWA shall verify compliance with the approved plans during site inspections.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to the issuance of grading permits. 2) Prior to the issuance of building permits.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
PUBLIC SERVICES AND UTILITIES 5.3-5c The Project Applicant shall relocate the BBARWA 10" force main by installing new pipe (and/or bonding for the relocation) so that it is aligned within the south shoulder of the relocated State Route 38. The 10" force main shall be accessible for BBARWA to maintain and repair the sewer force main. The force main shall not pass through residential lots within the proposed tract.
IMPLEMENTATION AND VERIFICATION:
1) Relocate sewer mains to be aligned with SR-38; and/or bond for the relocation. 2) The Department of Special Districts and/ or BBARWA shall verify compliance with the improved plans.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to the recordation of the final map. 2) Prior to the recordation of the final map.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
PUBLIC SERVICES AND UTILITIES 5.3-5d The Project Applicant shall install air release valves and vaults at high elevation points on the new force main to minimize odors. Air release valves shall be large enough to enclose 55-gallon drum carbon filters to control odors.
IMPLEMENTATION AND VERIFICATION:
1) Submit evidence to the Building and Safety Division that air-release valves have been installed. 2) The Building and Safety Division shall verify compliance with the approved plans.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to recordation of the final map. 2) Prior to recordation of the final map.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
PUBLIC SERVICES AND UTILITIES 5.3-6a Values of production rates and pumping levels for on-site water supply wells shall be obtained through step-drawdown and constant rate pumping tests. Water samples shall be taken during the inspection for testing and analysis in accordance with standard requirements.
IMPLEMENTATION AND VERIFICATION:
1) Submit production rates and pumping levels through pumping tests to the Division of Environmental Health Services and the County Geologist. 2) Division of Environmental Health Services and the County Geologist shall verify compliance with approved plans during site inspections.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to the approval of building permits. 2) Prior to the approval of building permits.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
PUBLIC SERVICES AND UTILITIES 5.3-6b If either or both of the two existing on-site wells are utilized as a water source for the project, the Project Applicant shall equip the wells to meet DWP and/or County Special Districts Department standards and dedicate these facilities and water rights to the appropriate water purveyor. Within the proposed tract, no individual private irrigation wells shall be permitted.
IMPLEMENTATION AND VERIFICATION:
1) Wells must be equipped to meet DWP and/or County Special Districts Department standards. 2) Water rights must be dedicated to the appropriate water purveyor. 3) The DWP and/or County Special Districts shall verify compliance with approved plans during site inspections.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to the approval of building permits. 2) Prior to recordation of the final tract map. 3) Prior to the approval of building permits.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
PUBLIC SERVICES AND UTILITIES 5.3-6c After a determination has been made regarding the water purveyor, the Project Applicant shall advance fair-share funds to the appropriate water agency (CSA and/or DWP) towards constructing a new reservoir and pipeline improvement at Cline-Miller Reservoir (with an estimated project cost at $481,100). These facilities would be dedicated to the appropriate water agency.
IMPLEMENTATION AND VERIFICATION:
1) Applicant shall advance fair-share funds towards constructing a new reservoir and pipeline improvement. 2) These facilities shall be dedicated to the appropriate water agency. 3) The applicant shall submit evidence/verification documenting that fair-share funds have been deposited (to CSA and/or DWP) and that the facilities have been dedicated to the appropriate water agency.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to the issuance of building permits. 2) Prior to the issuance of building permits. 3) Prior to the issuance of building permits.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
PUBLIC SERVICES AND UTILITIES 5.3-6d The following water conservation measures are the minimum measures that shall be complied with in conjunction with domestic water supply to the project. A Homeowners Association shall be responsible for enforcing the water conservation measures. Additional measures may be imposed as a result of a contract for water supply between CSA 53-C and the City of Big Bear Lake DWP: ▪ Landscape shall not be irrigated between the hours of 9:00 a.m. and 6:00 p.m. ▪ Residences, buildings and premises shall be limited to watering every other day. ▪ Landscape irrigation shall be limited to what is needed and shall not be excessive. Water from landscape irrigation shall not be allowed to run off into streets. ▪ Water shall not be allowed to leak from any waterline, faucet, or any other facility, either within or outside a private residence, business establishment or on private property. All such leaking waterlines, faucets, and other facilities shall be repaired immediately to prevent leakage. ▪ Sidewalks, paved driveways, and parkways shall not be washed off with hoses, except as required for sanitary purposes. ▪ Non-commercial washing of cars, and boats or any other vehicle shall only be done with an automatic shut-off nozzle on a hose, or with a bucket. ▪ New landscaping shall not exceed more than one-thousand square feet of turf on a parcel or lot or twenty-five percent of the available landscape area. ▪ A model landscaping and irrigation guide shall be prepared for the tract and required by homeowner association rules. The guide shall specify a plant palate that emphasizes native plants and cultivars that are suitable for the mountain climate. Plant materials shall be low water consuming and fire resistant. Irrigation shall emphasize drip and bubbler type emitters with limit aerial spray irrigation methods. The guide shall be reviewed and approved by the Land Use Services Department.
IMPLEMENTATION AND VERIFICATION:
1) Applicant shall submit evidence to the Planning Division that water conservation measures are included within the HOAs Conditions Covenants and Restrictions (CC&Rs). 2) The applicant shall submit evidence/documentation to the Planning Division verifying that the Homeowners Association CC&Rs includes provisions requiring compliance with the approved water conservation measures.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to recordation of the final map. 2) Prior to recordation of the final map.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)			**DATE:**

MITIGATION MEASURE:
AESTHETICS/LIGHT AND GLARE 5.4-1a Construction equipment staging areas shall be located away from existing residential uses. Appropriate screening (i.e., temporary fencing with opaque material) shall be used to buffer views of construction equipment and material, when feasible. Staging locations shall be indicated on project Grading Plans.
IMPLEMENTATION AND VERIFICATION:
1) Locate construction staging areas away from residential uses. 2) Utilize appropriate screening for construction staging areas. 3) Indicate staging locations on the grading plan, erosion control plan and/or SWWP. 4) The Building and Safety Division shall verify compliance with the approved plans during site inspections.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) During Construction. 2) During Construction. 3) During Construction. 4) During Construction.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
AESTHETICS/LIGHT AND GLARE 5.4-1b All construction-related lighting associated with the construction of new roadways, the realignment of State Route 38, and the installation of utilities shall be located and aimed away from adjacent residential areas. Lighting shall use the minimum wattage necessary to provide safety at the construction site. A construction safety lighting plan shall be submitted to the county for review concomitant with Grading Permit applications for the subdivision of the lots.
IMPLEMENTATION AND VERIFICATION:
1) Locate and aim constructed-related lighting away from residential areas. 2) Lighting shall use minimum wattage necessary. 3) Submit a construction safety lighting plan to the county for review. 4) The Building and Safety Division shall verify compliance with approved plans during site inspections.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) During Construction. 2) During Construction. 3) Prior to the issuance of Grading Permits. 4) During construction.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
AESTHETICS/LIGHT AND GLARE 5.4-2a Roof pitches shall not exceed 9/12 and no higher than two-story for any portion of the structure footprint for lots 62-92.
IMPLEMENTATION AND VERIFICATION:
1) Provide a note on the Composite Development Plan listing this requirement. 2) Submit a copy of the appropriate plans to the Building and Safety Division for approval. 3) The Building and Safety Division shall verify compliance with the approved plans during site inspections.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to recordation. 2) Prior to the issuance of building permits. 3) During Construction.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
AESTHETICS/LIGHT AND GLARE 5.4-2b All homes shall provide a two-car garage with automatic garage doors.
IMPLEMENTATION AND VERIFICATION:
1) Provide a note on the Composite Development Plan listing this requirement. 2) Submit a copy of the appropriate plans to the Building and Safety Division for approval. 3) The Building and Safety Division shall verify compliance during site inspection.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to recordation of the final map. 2) Prior to the issuance of building permits. 3) During construction.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
AESTHETICS/LIGHT AND GLARE 5.4-2c A view envelope for each property shall be established by creating a line starting at 6 feet at each side lot line and moving up at a 30 degree angle until both lines meet at the middle of the property. The area located under these lines is the view envelope. Structures shall not protrude outside the view envelope. The view envelope orients the building ridgeline parallel to the view corridors on narrower lots providing views for residents located behind the property.
IMPLEMENTATION AND VERIFICATION:
1) Establish a view envelope. 2) Structures must not protrude outside the envelope. 3) Delineate on the Composite Development Plan. 4) Submit plans to the Planning and Building and Safety Division for approval. 5) The Planning and Building and Safety Division shall verify compliance during site inspection.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to the recordation of the final map. 2) Prior to the recordation of the final map. 3) Prior to the recordation of the final map. 4) Prior to issuance of Building Permits. 5) During construction.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
AESTHETICS/LIGHT AND GLARE 5.4-2d New development shall be subordinate to the natural setting and minimize reflective surfaces. Building materials including siding and roof materials shall be selected to blend in hue and brightness with the surroundings. Colors shall be earth tones, shades of grays, tans, browns, greens, pale yellows, and shall be consistent with the mountain character of the area.
IMPLEMENTATION AND VERIFICATION:
1) Colors must be consistent with the mountain character of the area. 2) Establish (include this measure) in the Home Owners Association Conditions Covenants and Restrictions. 3) Provide a note on the Composite Development Plan listing this requirement. 4) Design guidelines and plans must be submitted to the Planning and Building and Safety Division for approval.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) On-going. 2) Prior to recordation of the final map. 3) Prior to recordation of the final map. 4) Prior to the issuance of building permits.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
AESTHETICS/LIGHT AND GLARE 5.4-2e Outside parking/storage areas associated with the boat dock activities shall be completely screened from view by the placement of landscaping and plantings which are compatible with the local environment and, where practicable, are capable of surviving with a minimum of maintenance and supplemental water.
IMPLEMENTATION AND VERIFICATION:
1) Parking and storage areas associated with boat dock activities must be screened from view. 2) Specify (include this measure) in the Homeowners Association Conditions Covenants and Restrictions. 3) Submit a copy of landscape plans to the Planning Division for approval. 4) The Building and Safety Division shall verify compliance with approved plans during site inspections.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) On-going. 2) Prior to the recordation of the final map. 3) Prior to issuance of Grading Permits. 4) Prior to occupancy of the first residential unit.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
AESTHETICS/LIGHT AND GLARE 5.4-2f Construction plans for each individual lot shall include the identification and placement of vegetation with the mature height of trees listed. Landscaping and plantings should not obstruct significant views, within or outside of the project, either when installed or when they reach mature growth. The removal of existing vegetation shall not be required to create views.
IMPLEMENTATION AND VERIFICATION:
1) Provide a note on the Composite Development Plan listing this requirement. 2) Landscape plans must be submitted to the Planning Division for review. 3) The Building and Safety Division shall verify compliance with approved plans during the site inspections.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to recordation of the final map. 2) Prior to the issuance of building permits. 3) Prior to the issuance of Occupancy Permits.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
AESTHETICS/LIGHT AND GLARE 5.4-2g A Note shall be placed on the Composite Development Plan stating that during construction plans review and prior to issuance of building permits for each lot, the building inspector shall refer to the Mitigation Monitoring and Compliance Program regarding these aesthetic impact mitigation measures. The building inspector shall coordinate with the Advance Planning Division the review and approval of building plans in relation to these aesthetic impact mitigation measures, prior to approval and issuance of building permits.
IMPLEMENTATION AND VERIFICATION:
1) The Building and Safety Division must review building plans in relation to aesthetic impact mitigation measures. 2) The Building and Safety Division shall verify compliance with the approved plans during site inspections.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to approval and issuance of building permits. 2) Prior to occupancy.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:			
AESTHETICS/LIGHT AND GLARE 5.4-3a Any entry sign for the development shall be a monument style sign compatible with the mountain character, preferably, rock or rock-appearance.			
IMPLEMENTATION AND VERIFICATION:			
1) The applicant shall include all proposed signage (compatible with the mountain character), on the landscaping plan. 2) The Building and Safety Division shall verify compliance during site inspections.			
COMPLIANCE RECORD:			
WHEN REQUIRED:	1) Prior to approval of the Landscape Plan. 2) Prior to occupancy of the first residential unit.		
SUBMITTED:		**DATE SUBMITTED:**	
1.		1.	
2.		2.	
APPROVED BY:		**DATE APPROVED:**	

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
AESTHETICS/LIGHT AND GLARE 5.4-3b Prior to recordation of the tract map (and/or any ground disturbance, whichever occurs first), landscaping plans for lettered lots B and C shall be submitted to and approved by the San Bernardino County Planning Department.
IMPLEMENTATION AND VERIFICATION:
1) Landscaping plans shall be submitted to the San Bernardino County Planning Division for review and approval. 2) The San Bernardino County Building and Safety Division shall verify compliance with the approved plans during site inspection.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to the recordation of the tract map. 2) Prior to occupancy of the first residential unit.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
AESTHETICS/LIGHT AND GLARE 5.4-4a All exterior lighting shall be designed and located as to avoid intrusive effects on adjacent residential properties and undeveloped areas adjacent to the project site. Low-intensity street lighting and low-intensity exterior lighting shall be used throughout the development to the extent feasible. Lighting fixtures shall use shielding, if necessary to prevent spill lighting on adjacent off-site uses.
IMPLEMENTATION AND VERIFICATION:
1) The intrusive effects of exterior lighting shall be minimized. 2) The Building and Safety Division shall verify compliance during site inspections.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) On-going. 2) Prior to the issuance of building permits.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
AESTHETICS/LIGHT AND GLARE 5.4-4b Lighting used for various components of the development plan shall be reviewed for light intensity levels, fixture height, fixture location and design by an independent engineer, and reviewed and approved by the County Building and Safety Division.
IMPLEMENTATION AND VERIFICATION:
1) The various lighting components of the development plan shall be submitted to the County Building and Safety Division for review and approval. 2) The Building and Safety Division shall verify compliance with the approved plans during site inspections.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to the issuance of Building Permits. 2) During Construction.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
AESTHETICS/LIGHT AND GLARE 5.4-4c The project shall use minimally reflective glass. All other materials used on exterior buildings and structures shall be selected with attention to minimizing reflective glare.
IMPLEMENTATION AND VERIFICATION:
1) Submit a copy of CC&Rs and/or design guidelines to the Planning Division for review and approval. 2) Provide a note on the Composite Development Plan listing this requirement. 3) The Building and Safety Division shall verify compliance during site inspections.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to the recordation of the final map. 2) Prior to recordation of the final map. 3) During Construction.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
AESTHETICS/LIGHT AND GLARE 5.4-4d Vegetated buffers shall be used along State Route 38 to reduce light intrusion on residential development and on forested areas located adjacent to the project site.
IMPLEMENTATION AND VERIFICATION:
1) Vegetation buffers on the open space lots shall be included on the Landscaping Plans which shall be submitted to the San Bernardino County Planning Division for review and approval. 2) Vegetation Buffers on individual lots adjacent to State Route 38 shall be included in the CC&Rs. 3) These vegetation buffers will be verified by the Building and Safety Division.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to approval of the Landscaping Plan. 2) Prior to recordation of the final map. 3) Prior to issuance of occupancy permits (for residential lots adjacent to State Highway 38).

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:			
AESTHETICS/LIGHT AND GLARE 5.4-4e Mitigation Measures 5.4-4a through 5.4-4d shall be included within the Conditions, Covenants and Restrictions (CC&Rs) of the Home Owner's Association (HOA).			
IMPLEMENTATION AND VERIFICATION:			
1) Submit a copy of the CC&Rs to the Planning Division for review and approval. 2) Building and Safety Division shall verify compliance with approved CC&Rs during site inspection.			
COMPLIANCE RECORD:			
WHEN REQUIRED:	1) Prior to recordation of final map. 2) During construction.		
SUBMITTED:		**DATE SUBMITTED:**	
1.		1.	
2.		2.	
APPROVED BY:		**DATE APPROVED:**	

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**
CORRECTION REQUIRED: (attach copies of correspondence)			**DATE:**

MITIGATION MEASURE:
AESTHETICS/LIGHT AND GLARE 5.4-4f All outdoor light fixtures shall be cutoff luminaries and shall only use high- or low-pressure sodium lamps.
IMPLEMENTATION AND VERIFICATION:
1) Submit a copy of the CC&Rs and/or design guidelines to the Planning Division for review and approval. 2) The Building and Safety Division shall verify compliance with approved plans during site inspections.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to recordation of final map. 2) During Construction.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
AESTHETICS/LIGHT AND GLARE 5.4-4g The Project Applicant/Developer shall install light colored, reflective roof products. Such roofs shall utilize light colored, reflective materials that meet the performance standards developed by the Energy Star Labeled Roof Program, as well as the American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) Standards 90.1 and 90.2 on energy efficient buildings. This condition shall be verified by the County of San Bernardino Building and Safety Division prior to issuance of building permits.
IMPLEMENTATION AND VERIFICATION:
1) Submit a copy of the CC&Rs and/or design guidelines to the Planning Division for review and approval. 2) Provide a note on the Composite Development Plan listing this requirement. 3) The Building and Safety Division shall verify compliance with approved plans during site inspections.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to recordation of the final map. 2) Prior to recordation of the final map. 3) During construction.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
TRAFFIC AND CIRCULATION 5.5-1 For existing traffic conditions, the intersection of Stanfield Cutoff and Big Bear Boulevard currently requires the eastbound right turn lane to be converted to an eastbound through lane, through the intersection. The eastbound right turn lane is restricted to an eastbound through lane, and involves roadway widening. The project's pro rata share of these off-site road improvements is estimated to be $17,748.
IMPLEMENTATION AND VERIFICATION:
1) The applicant shall submit evidence to the Planning Division that the project's pro rata share of off-site road improvements has been satisfied.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to the issuance of building permits.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
TRAFFIC AND CIRCULATION 5.5-3 For future traffic conditions, the intersection of Stanfield Cutoff and North Shore Drive shall require a traffic signal. The project's pro rata share of the signal is $56,523.
IMPLEMENTATION AND VERIFICATION:
1) The applicant shall submit evidence to the Planning Division that the project's pro rata share of off-site road improvements has been satisfied.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to the issuance of building permits.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
TRAFFIC AND CIRCULATION 5.5-4a Parking shall be restricted on State Route 38.
IMPLEMENTATION AND VERIFICATION:
1) The applicant shall submit evidence to the Planning Division that parking is restricted on State Route 38.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to the issuance of building permits.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
TRAFFIC AND CIRCULATION 5.5-4b A 150-foot eastbound left turn pocket shall be striped for traffic on North Shore Drive turning left into the project entry locations.
IMPLEMENTATION AND VERIFICATION:
1) Submit evidence of left turn pocket to the Department of Public Works, and the Department of Public Works shall verify compliance.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to the occupancy of the first residential unit.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
TRAFFIC AND CIRCULATION 5.5-4c For future traffic conditions, intersection geometrics as recommended in Table 1b of the Kunzman Associates June 2003 *Traffic Analysis report*, shall be implemented.
IMPLEMENTATION AND VERIFICATION:
1) Submit intersection geometries to the Department of Public Works for review and approval and, the Department of Public Works shall verify intersection geometries.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to the recordation of the final map.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:			
TRAFFIC AND CIRCULATION 5.5-4d All streets internal to the project shall be constructed to full ultimate cross-sections.			
IMPLEMENTATION AND VERIFICATION:			
1) Submit evidence of compliance to the Department of Public Works and, the Department of Public Works shall verify compliance.			
COMPLIANCE RECORD:			
WHEN REQUIRED:	1) Prior to the issuance of the first building permit.		
SUBMITTED:		**DATE SUBMITTED:**	
1.		1.	
2.		2.	
APPROVED BY:		**DATE APPROVED:**	
INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**
CORRECTION REQUIRED: (attach copies of correspondence)			**DATE:**

MITIGATION MEASURE:			
TRAFFIC AND CIRCULATION 5.5-4e A STOP sign shall be installed to control outbound traffic on all site access roadways onto North Shore Drive.			
IMPLEMENTATION AND VERIFICATION:			
1) Submit evidence of stop sign installation on access roadways, to the Department of Public Works and, the Department of Public Works shall verify compliance.			
COMPLIANCE RECORD:			
WHEN REQUIRED:	1) Prior to the occupancy of the first residential unit.		
SUBMITTED:		**DATE SUBMITTED:**	
1.		1.	
2.		2.	
APPROVED BY:		**DATE APPROVED:**	
INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**
CORRECTION REQUIRED: (attach copies of correspondence)			**DATE:**

MITIGATION MEASURE:			
TRAFFIC AND CIRCULATION 5.5-4f The County of San Bernardino shall periodically review traffic operations in the vicinity of the site once the project is constructed in order to assure that the traffic operations are satisfactory.			
IMPLEMENTATION AND VERIFICATION:			
1) The County of San Bernardino Public Works Department shall verify compliance with the mitigation measure.			
COMPLIANCE RECORD:			
WHEN REQUIRED:	1) During Project implementation.		
SUBMITTED:		**DATE SUBMITTED:**	
1.		1.	
2.		2.	
APPROVED BY:		**DATE APPROVED:**	

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
TRAFFIC AND CIRCULATION 5.5-4g Landscape plantings and signs shall be limited to 36 inches in height within 25 feet of project driveways to assure good visibility.
IMPLEMENTATION AND VERIFICATION:
1) Applicant shall submit a copy of CC&Rs to the Planning Division for review and approval. 2) Limitations on landscape plantings and signs on individual lots shall be included in the CC&Rs. Compliance with these limitations will be verified by the Building and Safety Division.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to the recordation of the final tract map. 2) Prior to the issuance of building permits.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
AIR QUALITY 5.6-1 In accordance with the County Development Code and SCAQMD Rules, the Project Applicant shall incorporate the following measures during the construction phase of the Project to the satisfaction of the SCAQMD and County of San Bernardino. Compliance with this measure is subject to periodic field inspections by the SCAQMD and County of San Bernardino. <u>Grading:</u> ▪ Apply non-toxic soil stabilizers according to manufacturer's specifications to all inactive construction areas (previously graded for ten days or more); ▪ Replace ground cover in disturbed areas as quickly as possible; ▪ Enclose, cover, water two times daily or apply non-toxic soil binders in accordance to manufacturer's specifications to exposed piles (i.e., gravel, sand, dirt) with 5% or greater silt content; ▪ Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 mph; and ▪ All trucks hauling dirt, sand, soil, or other loose materials shall be covered and shall maintain at least two feet of freeboard (i.e., minimum vertical distance between top of the load and the top of the trailer). <u>Paved Roads:</u> ▪ Sweep streets at the end of the day if visible soil material is carried onto adjacent public paved roads.
IMPLEMENTATION AND VERIFICATION:
1) Submit evidence to the Building and Safety Division that mitigation measures are being implemented. 2) The Building and Safety Division shall verify compliance with the mitigation measure.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) During the construction phase.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
AIR QUALITY 5.6-2 To the extent feasible, the project shall incorporate the installation of EPA-certified wood burning stoves or fireplaces. If this is not feasible, then the installation of a ceramic coating on the honeycomb inside a catalytic combustor shall be investigated as a feasible alternative. Alternatively, the use of natural gas fireplaces may be used as a feasible alternative.
IMPLEMENTATION AND VERIFICATION:
1) Provide a note on the Composite Development Plan and include in the Conditions Covenants and Restrictions. 2) Submit evidence of the installation of appropriate heating devices. 3) The Building and Safety Division shall verify installation during site inspection.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to Recordation. 2) During the construction phase. 3) During the construction phase.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
NOISE 5.7-1a Construction activities shall be limited to the hours of 7:00 a.m. to 7:00 p.m. Monday to Saturday and prohibited on Sundays and Federal Holidays.
IMPLEMENTATION AND VERIFICATION:
1) Applicant shall submit evidence of construction hours to the Building and Safety Division, and include the limitation of construction hours on all grading plans. 2) The Building and Safety Division shall verify construction does not take place during prohibited times.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to issuance of grading permits. 2) During the construction phase.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:			
NOISE 5.7-1b All construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers, to the satisfaction of the County Engineer.			
IMPLEMENTATION AND VERIFICATION:			
1) Submit evidence of properly operating and maintained mufflers on all construction equipment to the County Building and Safety Division. 2) The County Building and Safety Division shall verify compliance with the mitigation measure.			
COMPLIANCE RECORD:			
WHEN REQUIRED:	1) During the construction phase. 2) During the construction phase.		
SUBMITTED:		**DATE SUBMITTED:**	
1.		1.	
2.		2.	
APPROVED BY:		**DATE APPROVED:**	
INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**
CORRECTION REQUIRED: (attach copies of correspondence)			**DATE:**

MITIGATION MEASURE:
NOISE 5.7-1c Stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receptors, to the satisfaction of the County Engineer.
IMPLEMENTATION AND VERIFICATION:
1) The County Building and Safety Division shall verify emitted noise is directed away from sensitive receptors during site inspection.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) During the construction phase.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
NOISE 5.7-1d Stockpiling and staging areas shall be located as far as practical from noise sensitive receptors during construction activities, to the satisfaction of the County Engineer.
IMPLEMENTATION AND VERIFICATION:
1) The applicant shall submit evidence to the County Building and Safety Division that construction staging areas are located away from sensitive receptors. The applicant shall indicate the location of the construction staging areas on the grading plans, erosion control plans, and/or SWWP. 2) The County Building and Safety Division shall verify that staging areas are not located near sensitive receptors during site inspection.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to issuance of grading permits. 2) During the construction phase.

SUBMITTED:	DATE SUBMITTED:
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	DATE:	INSPECTED BY:	DATE:

CORRECTION REQUIRED: (attach copies of correspondence)	DATE:

MITIGATION MEASURE:
BIOLOGICAL RESOURCES 5.8-1a Prior to vegetation clearing, grading, or other disturbance, the project site shall be surveyed during a year with precipitation at least 40 percent of average for the area to determine presence or absence of special status plant species and vegetation types. Surveys shall focus on special status vegetation types, and Threatened or Endangered, and CNPS List 1B and 2 species whose presence could not be determined during surveys due to lack of rainfall. The location and extent of special status species populations shall be mapped and the size of the populations accurately documented. Pebble plain habitat acreages will be recalculated following the survey using criteria established by the Habitat Management Guide for Pebble Plain Habitat on the National Forest System (2002). Should avoidance/retention on-site of the 4.91 acres of Pebble Plain habitat in permanent open space under a Conservation Easement Agreement not occur, the Project Applicant shall pay compensation for the loss of special status botanical resources identified on the project site during the survey by funding the purchase, establishment of a conservation easement, and management of off-site habitat within the conservation easement by an entity approved by the CDFG. Off-site habitat containing the same species as those identified within resources impacted by the proposed project shall be purchased at a ratio of 3:1 (i.e., three acres of habitat purchased for preservation for each acre impacted by development). Prior to the initiation of clearing or grading activities on the project site, the conservation easement will be established, the management entity will be approved by the CDFG, and a non-wasting endowment will be established for the monitoring and management of the preservation site by the management entity in perpetuity. If additional surveys during a year with precipitation at least 40 percent of average do not encounter additional special status plant resources, the Project Applicant is responsible for mitigating impacts to a minimum of 11.8-acres of pebble plain and open Jeffrey pine forest in the western half of the project site that is known to be occupied by the Federally-listed Threatened ash-gray Indian paintbrush. As such, the applicant would be required to fund the purchase and maintenance of 35.4-acres of offsite pebble plain and open Jeffrey pine forest habitat that contains special status plant species, including Ash-gray Indian paintbrush and others known to occur on the site.
IMPLEMENTATION AND VERIFICATION:
1) The applicant shall submit evidence of biological surveys to the Planning Division. 2) The conservation easement(s) shall be established and recorded on the tract map. 3) The applicant shall submit evidence to the County Planning Division that the conservation easement(s) is/are established, the management entity is approved, and a non-wasting endowment is established for the monitoring and management of the preservation site by the management entity in perpetuity.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to vegetation clearing, grading, or other disturbance. 2) Prior to recordation of the tract map 3) Prior to vegetation clearing, grading, or any other land disturbance.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.

APPROVED BY:		DATE APPROVED:	
INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**
CORRECTION REQUIRED: (attach copies of correspondence)			**DATE:**

MITIGATION MEASURE:
BIOLOGICAL RESOURCES 5.8-1b Trees identified on Exhibits 3 and 4 of the Bald Eagle Survey Report (Appendix E, see attached) as eagle perch locations shall be preserved in place upon project completion and shall not be removed under any circumstances. Any development that may occur within the project site and in the individual lots must avoid impacts to these trees and their root structures. All construction or landscaping improvements, including irrigation, will be prohibited on or around the exposed root structures or within the dripline of these trees. These restrictions on development of the individual tentative tracts must be clearly presented and explained to any potential prospective developers and/or homeowners prior to assumption of title and close of escrow. This measure shall be identified as a Note on the Composite Development Plan.
IMPLEMENTATION AND VERIFICATION:
1) The applicant shall include this measure as a note on the Composite Development Plan. 2) The Building and Safety Division shall verify the implementation of appropriate tree preservation during construction.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to recordation. 2) During the construction phase.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
BIOLOGICAL RESOURCES 5.8-1c Prior to vegetation clearing, grading, or other disturbance, the project site shall be surveyed to identify all large trees (i.e., greater than 20-inches in diameter at 4.5 feet from the ground) within 600 feet from the high water line. Trees identified on the project site as having a diameter in excess of 20-inches at four feet from the ground within 600 feet of the shoreline shall be documented and tagged. Any development that may occur within the project site and in the individual lots must avoid impacts to tagged trees and their root structures. All construction or landscaping improvements, including irrigation, will be prohibited on or around the exposed root structures or within the dripline of these trees. These restrictions on development of the individual tentative tracts must be clearly presented and explained to any potential prospective developers and/or homeowners prior to assumption of title and close of escrow. This measure shall be identified as a Note on the Composite Development Plan.
IMPLEMENTATION AND VERIFICATION:
1) The applicant shall include this measure as a note on the Composite Development Plan. 2) Forester to perform and certify compliance. 3) The applicant shall submit evidence to the Planning Division that tagged trees are protected. 4) The Building and Safety Division shall verify tree protection during site inspection.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to recordation of the tract map. 2) Prior to vegetation clearing, grading, or any other land disturbance. 3) Prior to vegetation clearing, grading, or any other land disturbance. 4) During the construction phase.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
BIOLOGICAL RESOURCES 5.8-1d Seven days prior to the onset of construction activities, a qualified biologist shall survey within the limits of project disturbance for the presence of any active raptor nests. Any nest found during survey efforts shall be mapped on the construction plans. If no active nests are found, no further mitigation would be required. Results of the surveys shall be provided to the CDFG. If nesting activity is present at any raptor nest site, the active site shall be protected until nesting activity has ended to ensure compliance with Section 3503.5 of the California Fish and Game Code. Nesting activity for raptors in the region of the project site normally occurs from February 1 to June 30. To protect any nest site, the following restrictions on construction are required between February 1 and June 30 (or until nests are no longer active as determined by a qualified biologist): (1) clearing limits shall be established a minimum of 300 feet in any direction from any occupied nest and (2) access and surveying shall not be allowed within 200 feet of any occupied nest. Any encroachment into the 300/200 foot buffer area around the known nest shall only be allowed if it is determined by a qualified biologist that the proposed activity shall not disturb the nest occupants. Construction during the nesting season can occur only at the sites if a qualified biologist has determined that fledglings have left the nest.
IMPLEMENTATION AND VERIFICATION:
1) Submit evidence of biologist consultant services contract/agreement. 2) The applicant shall submit evidence of biological surveys to the Planning Division. 3) The Planning Division shall verify that no active raptor nests were found.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to issuance of building permits. 2) Prior to initiating the construction phase. 3) Prior to initiating the construction phase.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
BIOLOGICAL RESOURCES 5.8-1e Vegetation removal, clearing, and grading on the project site shall be performed outside of the breeding and nesting season (between March and September) to minimize the effects of these activities on breeding activities of migratory birds and other species.
IMPLEMENTATION AND VERIFICATION:
1) The applicant shall include a note on the grading plans that vegetation removal and grading will be performed outside the breeding season (i.e., March to September). 2) Applicant shall submit evidence to the Planning Division that vegetation removal and grading will be performed outside the breeding season. 3) The Building and Safety Division shall verify compliance during construction/grading.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to issuance of grading permits. 2) Prior to issuance of grading permits. 3) During the construction phase.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
BIOLOGICAL RESOURCES 5.8-1f The use of the boat dock for motorized boating shall be prohibited between the dates of December 1 and April 1. No motorized boats shall be allowed to launch or moor in the vicinity of the boat dock at any time during this period. This restriction shall be clearly displayed on signage at the entrance to the parking lot and on the boat dock visible from both land and water. This requirement shall also be published in the Homeowner's Association CC&Rs.
IMPLEMENTATION AND VERIFICATION:
1) The applicant shall submit to the Planning Division a copy of the HOAs CC&Rs inclusive of the restriction of this measure. 2) The applicant shall install the required signage.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to recordation of the tract map. 2) During project construction, and prior to use of the boat dock.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
BIOLOGICAL RESOURCES 5.8-2a Street lamps on the project site shall not exceed 20 feet in height, shall be fully shielded to focus light onto the street surface and shall avoid any lighting spillover onto adjacent open space or properties. Furthermore, street lights shall utilize low color temperature lighting (e.g., red or orange).
IMPLEMENTATION AND VERIFICATION:
1) The applicant shall submit evidence to the Planning Division that street lamps conform to the guidelines. 2) The Public Works Division shall verify that street lamps conform to these guidelines.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to final approval of road improvement plans. 2) During the construction phase.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
BIOLOGICAL RESOURCES 5.8-2b Outdoor lighting for proposed homes on the individual tentative tracts shall not exceed 1,000 lumens. Furthermore, residential outdoor lighting shall not exceed 20 feet in height and must be shielded and focused downward to avoid lighting spillover onto adjacent open space or properties. These restrictions on outdoor lighting of the individual tentative tracts must be clearly presented and explained to any potential prospective developers and/or homeowners prior to assumption of title and close of escrow. This requirement shall also be published in the Homeowner's Association CC&Rs.
IMPLEMENTATION AND VERIFICATION:
1) The applicant shall submit to the Planning Division a copy of the HOA's CC&Rs inclusive of the restriction of this measure. 2) The individual lot owners shall submit evidence to the Building and Safety Division that the outdoor lighting conforms to these guidelines.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to recordation of the tract map. 2) During the construction phase.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
BIOLOGICAL RESOURCES 5.8-2c To limit the amount of human disturbance on adjacent natural open space areas, signs shall be posted along the northeastern and eastern perimeter of the project site where the property boundary abuts open space with the following statement: "Sensitive plant and wildlife habitat. Please use designated trails and keep pets on a leash at all times." In addition, a requirement stating that residents shall keep out of adjacent open space areas to the north with the exception of designated trails will be published in the Homeowner Association CC&Rs and a map of designated hiking trails will be provided to all residents.
IMPLEMENTATION AND VERIFICATION:
1) Sign design and text message shall be included in the Landscape Plan submitted to the Planning Division for review and approval. 2) The applicant shall submit to the Planning Division a copy of the HOA's CC&Rs, inclusive of the restrictions of this measure. 3) The applicant shall install the signs.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to recordation of the tract map. 2) Prior to recordation of the tract map. 3) Prior to issuance of the first occupancy permit.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
BIOLOGICAL RESOURCES 5.8-2d Prior to recordation of the final map, a landscaping plan for the entire tract shall be prepared (inclusive of a plant palette) with native trees and plant species, and, shall be submitted to the County of San Bernardino for review and approval by a qualified biologist. The review shall determine that no non-native or invasive plant species are to be used in the proposed landscaping. The biologist should suggest appropriate native plant substitutes. A note shall be placed on the Composite Development Plan indicating that all proposed landscaping (including landscaping on individual lots) shall conform with the overall approved tract map landscaping plan. A requirement shall be included stating that residents shall include a restriction of the use of tree and plant species to only native trees/plants approved per the overall tract map landscaping plan, the Homeowner Association CC&Rs shall also restrict (individual lot owners) to use only native tree and plant species approved per the overall tract map landscaping plan.
IMPLEMENTATION AND VERIFICATION:
1) The applicant shall submit a landscaping plan for the entire tract for review and approval by a qualified biologist, prior to recordation of the final map. 2) The applicant shall include a note on the Composite Development Plan indicating the approved native plant materials. 3) The applicant shall submit a copy of the HOA's CC&Rs, inclusive of the restrictions of this measure to the Planning Division and Building and Safety Division. 4) The individual lot owners shall submit landscaping plans (which conform with the overall approved tract map landscaping plan) to the Planning Division and Building and Safety Division for review and approval.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to recordation of the final tract map. 2) Prior to recordation of the final tract map. 3) Prior to recordation of the final tract map. 4) Prior to the issuance of individual building permits.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
BIOLOGICAL RESOURCES 5.8-2e Garages with automatic door openers shall be required. No exterior construction, grading or vegetation clearing shall be permitted between December 1 and April 1, which is the wintering period for bald eagles (i.e., the season when bald eagles are present in the Big Bear area).
IMPLEMENTATION AND VERIFICATION:
1) The applicant and/or subsequent individual lot owners shall submit evidence that automatic garage door openers are installed. 2) The applicant and/or subsequent individual lot owners shall not perform any exterior construction, grading, or vegetation clearing between December 1 and April 1, which will be verified by the Building and Safety Division. 3) Both requirements shall be noted on the Composite Development Plan and included in the Homeowners Association Conditions Covenants and Restrictions.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to issuance of occupancy permits. 2) During the construction phase. 3) Prior to Recordation.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
BIOLOGICAL RESOURCES 5.8-3 Per the direction of the California Department of Fish and Game, all unavoidable impacts to State and Federal jurisdictional lakes, streams, and associated habitat shall be compensated for with the creation and/or restoration of in-kind habitat on-site and/or off-site at a minimum 3:1 replacement-to-impact ratio. Additional requirements may be required through the permitting process depending on the quality of habitat impacted, project design and other factors.
IMPLEMENTATION AND VERIFICATION:
1) The applicant shall submit evidence (copies) of the required Federal and State Resources Agency's Permits (inclusive of details of compensation habitat), to the San Bernardino County Planning Division.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to issuance of grading permits, vegetation removal, and/or any other land-disturbing activity.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
CULTURAL RESOURCES 5.9-1 Project-related grading, grubbing, trenching, excavations, and/or other earth-moving activities in the project area shall be monitored by a qualified archaeologist. In the event that a material of potential cultural significance is uncovered during such activities on the project site, all earth-moving activities in the project area shall cease and the archeologist shall evaluate the quality and significance of the material. Earth-moving activities shall not continue in the area where a material of potential cultural significance is uncovered until resources have been completely removed by the archaeologist and recorded as appropriate.
IMPLEMENTATION AND VERIFICATION:
1) The applicant shall submit to the Planning Division a copy of a contract with a qualified archaeologist. 2) A qualified archaeologist shall perform the field monitoring. 3) The applicant shall submit the qualified archaeologists report of findings to the County Planning Division.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to grading, vegetation removal, and/or any other land-disturbing activity. 2) During the construction phase. 3) During the construction phrase.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
CULTURAL RESOURCES 5.9-2a Grading shall be monitored during excavation in areas identified as likely to contain paleontologic resources by a qualified paleontological monitor. Monitoring shall be accomplished for any undisturbed subsurface older alluvium, which might be present in the subsurface. The monitor shall be equipped to salvage fossils as they are unearthed to avoid construction delays and to remove samples of sediments which are likely to contain the remains of small fossil invertebrates and vertebrates. The monitor must be empowered to temporarily halt or divert grading equipment to allow for removal of abundant or large specimens.
IMPLEMENTATION AND VERIFICATION:
1) The applicant shall submit to the Planning Division a copy of a contract with a qualified paleontologist. 2) A qualified paleontologist shall perform the field monitoring. 3) The applicant shall submit the qualified paleontologist's report of findings to the County Planning Division.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to grading, vegetation removal, and/or any other land-disturbing activity. 2) During the grading phase. 3) During the grading phase.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:			
CULTURAL RESOURCES 5.9-2b Recovered specimens shall be prepared to a point of identification and permanent preservation, including washing of sediments to recover small invertebrates and vertebrates.			
IMPLEMENTATION AND VERIFICATION:			
1) Submit evidence to the Planning Division that recovered specimens will be preserved.			
COMPLIANCE RECORD:			
WHEN REQUIRED:	1) During the construction phase.		
SUBMITTED:		**DATE SUBMITTED:**	
1.		1.	
2.		2.	
APPROVED BY:		**DATE APPROVED:**	

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:			
CULTURAL RESOURCES 5.9-2c Identification and curation of specimens into a museum repository with permanent retrievable storage shall occur for paleontological resources.			
IMPLEMENTATION AND VERIFICATION:			
1) Submit evidence that specimens will be stored for paleontological resources to the Planning Division.			
COMPLIANCE RECORD:			
WHEN REQUIRED:	1) During the construction phase.		
SUBMITTED:		**DATE SUBMITTED:**	
1.		1.	
2.		2.	
APPROVED BY:		**DATE APPROVED:**	

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:			
CULTURAL RESOURCES 5.9-2d A report of findings shall be prepared with an appended itemized inventory of specimens. The report shall include pertinent discussion of the significance of all recovered resources where appropriate. The report and inventory when submitted to the appropriate Lead Agency shall signify completion of the program to mitigate impacts to paleontologic resources.			
IMPLEMENTATION AND VERIFICATION:			
1) Submit the report of finding to the Planning Division for review.			
COMPLIANCE RECORD:			
WHEN REQUIRED:	1) During the construction phase.		
SUBMITTED:		**DATE SUBMITTED:**	
1.		1.	
2.		2.	
APPROVED BY:		**DATE APPROVED:**	

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
GEOLOGY AND SOILS 5.10-1 The stability of south facing cut slopes shall be analyzed as part of the design-level geotechnical investigation. Utilizing 2:1 buttressed slopes using on site native soil materials, or constructing geotextile-reinforced soil buttresses for planned unstable cut slopes are typical engineering designs for stabilizing slopes. Either of these methods, or other methods must be approved by the San Bernardino County Department of Building and Safety.
IMPLEMENTATION AND VERIFICATION:
1) The design-level geotechnical investigation shall be submitted to the County Geologist for review/approval. 2) The Building Safety Division (i.e., County Geologist) shall verify compliance with the design-level geotechnical investigation.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to recordation of the tract map. 2) During the grading/construction phase.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
GEOLOGY AND SOILS 5.10-2a Due to the potential for erosion associated with younger alluvial deposits within the two major on-site stream channels, increased surface drainage quantities associated with development on-site shall be directed away from the stream channels.
IMPLEMENTATION AND VERIFICATION:
1) Demonstrate in the SWWP that surface drainage shall be directed away from stream channels. 2) The Department of Public Works shall verify compliance during site inspections.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to issuance of grading permits. 2) During the construction phase. 3) During the construction phase.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
GEOLOGY AND SOILS 5.10-2b Prior to the issuance of Grading Permits, the Project Applicant shall prepare a Soil Erosion and Sedimentation Plan for submittal and approval by the County Building and Safety Department.
IMPLEMENTATION AND VERIFICATION:
1) The applicant shall submit a copy of the Soil Erosion and Sedimentation Plan to the Building and Safety Division. 2) The Building and Safety Division shall review/approve the Soil Erosion and Sedimentation Plan prior to issuance of grading permits.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to the issuance of Grading Permits. 2) During the grading/construction phase.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
GEOLOGY AND SOILS 5.10-3 Engineering design for all structures and roadways shall be based on the current California Uniform Building Code at the time of project development. Construction plans shall be in accordance with seismic design standards set forth by the County's Development Code and Uniform Building Code.
IMPLEMENTATION AND VERIFICATION:
1) Applicant shall submit a copy of the construction plans to the Building and Safety Department for review and approval. 2) The Building and Safety Department shall verify compliance with the construction plans during site inspections.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to the issuance of Grading Permits. 2) During the grading/construction phase.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:			
GEOLOGY AND SOILS 5.10-4 Residential structures shall be located in areas which provide a minimum of five feet of freeboard above the high water line for any structures.			
IMPLEMENTATION AND VERIFICATION:			
1) Applicant shall submit a copy of the construction plans to the Building and Safety Department for review and approval. 2) The Building and Safety Department shall verify compliance with the construction plans during site inspections.			
COMPLIANCE RECORD:			
WHEN REQUIRED:	1) Prior to the issuance of grading permits. 2) Prior to grading/construction phase.		
SUBMITTED:		**DATE SUBMITTED:**	
1.		1.	
2.		2.	
APPROVED BY:		**DATE APPROVED:**	

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
GEOLOGY AND SOILS 5.10-5 Prior to grading permit issuance, a quantitative geotechnical analysis and design-level geotechnical engineering report shall be required and submitted to the County of San Bernardino Department of Building and Safety for their approval.
IMPLEMENTATION AND VERIFICATION:
1) The applicant shall submit a quantitative geotechnical analysis and design-level geotechnical investigation to the County Geologist for review and approval. 2) The Building and Safety Division (County Geologist) shall verify compliance with the approved geotechnical analysis and design-level geotechnical investigation.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to recordation of the tract map. 2) During grading/construction phase.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
GEOLOGY AND SOILS 5.11-1 The proposed cross culverts shall be sized for 100-year burn and bulking flow rates. The burn and bulking method would increase the runoff from the natural areas. The method provided in the Los Angeles County Hydrology Manual is recommended. In addition, the cross culverts shall all be designed with headwalls to prevent CMP crushing, and shall be maintained adequately.
IMPLEMENTATION AND VERIFICATION:
1) Applicant shall submit evidence to the Department of Public Works and the Building and Safety Division that proposed cross culverts shall be sized for 100-year flow rates. 2) The Department of Public Works and the Building and Safety Division shall verify compliance during site inspections.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to issuance of grading permits. 2) During the grading/construction phase.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
GEOLOGY AND SOILS 5.11-2a Within three months of project approval, the Project Applicant shall submit a plan for a detailed geohydrologic investigation. The plan must present the possible sources of groundwater selected for the project and the methodology proposed to investigate those sources. If the on-site wells are to be utilized to serve this project, it must be determined if either could draw water from Big Bear Lake. The plan must be prepared by a California Registered Geologist.
IMPLEMENTATION AND VERIFICATION:
1) The applicant shall submit a plan for a detailed geohydrologic investigation to the County Geologist, and to the Division of Environmental Health Services. 2) The Building and Safety Division (County Geologist) and the Division of Environmental Health Services shall verify compliance with recommendations of the investigation.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Within three months of project approval. 2) Prior to issuance of building permits.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
GEOLOGY AND SOILS 5.11-2b Within six months of plan approval, the Project Applicant shall submit the results of the geohydrologic investigation. The report must be prepared by a California Registered Geologist.
IMPLEMENTATION AND VERIFICATION:
1) The applicant shall, within six months of project approval, submit results of the geohydrologic investigation prepared by a California Registered Geologist to the Building and Safety Division (County Geologist) for review/approval. 2) The Building and Safety Division (County Geologist) shall verify compliance with recommendations.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Within six months of plan approval. 2) During the grading/construction phase.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:
GEOLOGY AND SOILS 5.11-2c Concurrently or within three months of approval by the geohydrologic report, the Project Applicant shall submit a groundwater monitoring plan in accordance with San Bernardino County's "Guidelines for Preparation of a Groundwater Monitoring Plan." The plan must be prepared by a California Registered Geologist.
IMPLEMENTATION AND VERIFICATION:
1) The applicant shall, concurrently or within three months of approval of the hydrogeologic report, submit a groundwater monitoring plan prepared by a California Registered Geologist, to the County Geologist and the Division of Environmental Health Services for review/approval. 2) The County Building and Safety Division (County Geologist) and the Division of Environmental Health Services shall verify compliance with the approved Groundwater Monitoring Plan.
COMPLIANCE RECORD:

WHEN REQUIRED:	1) Concurrently or within three months of approval by the geohydrologic report. 2) Prior to issuance of the first residential building permit.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

MITIGATION MEASURE:

GEOLOGY AND SOILS

5.11-3 Prior to Grading Permit issuance and as part of the Project's compliance with the NPDES requirements, a Notice of Intent (NOI) shall be prepared and submitted to the Santa Ana Regional Water Quality Control Board providing notification and intent to comply with the State of California general permit. Also, a Storm Water Pollution Prevention Plan (SWPPP) shall be completed for the construction activities on-site. A copy of the SWPPP shall be available and implemented at the construction-site at all times. The SWPPP shall outline the source control and/or treatment control BMPs to avoid or mitigate runoff pollutants at the construction-site to the "maximum extent practicable." At a minimum, the following shall be implemented from the *California Storm Water Best Management Practice Handbook - Construction Activity*:

- CA 1 Dewatering Operations – This operation requires the use of sediment controls to prevent or reduce the discharge of pollutants to storm water from dewatering operations.
- CA 2 Paving Operations – Prevent or reduce the runoff of pollutants from paving operations by proper storage of materials, protecting storm drain facilities during construction, and training employees.
- CA 3 Structural Construction and Painting – Keep site and area clean and orderly, use erosion control, use proper storage facilities, use safe products and train employees to prevent and reduce pollutant discharge to storm water facilities from construction and painting.
- CA 10 Material Delivery and Storage – Minimize the storage of hazardous materials on-site. If stored on-site, keep in designated areas, install secondary containment, conduct regular inspections and train employees.
- CA 11 Material Use – Prevent and reduce the discharge of pesticides, herbicides, fertilizers, detergents, plaster, petroleum products and other hazardous materials from entering the storm water.
- CA 20 Solid Waste Management - This BMP describes the requirements to properly design and maintain trash storage areas. The primary design feature requires the storage of trash in covered areas.
- CA 21 Hazardous Waste Management - This BMP describes the requirements to properly design and maintain waste areas.
- CA 23 Concrete Waste Management – Prevent and reduce pollutant discharge to storm water from concrete waste by performing on and off-site washouts in designated areas and training employees and consultants.
- CA 24 Sanitary Septic Water Management – Provide convenient, well-maintained facilities, and arrange regular service and disposal of sanitary waste.
- CA 30 Vehicle and Equipment Cleaning – Use off-site facilities or wash in designated areas to reduce pollutant discharge into the storm drain facilities.
- CA 31 Vehicle and Equipment Fueling – Use off-site facilities or designated areas with enclosures or coverings to reduce pollutant discharge into the storm drain facilities.
- CA 32 Vehicle and Equipment Maintenance – Use off-site facilities or designated areas with enclosing or coverings to reduce pollutant discharge into the storm drain facilities. In addition, run a "dry site" to prevent pollution discharge into storm drains.
- CA 40 Employee and Subcontractor Training – Have a training session for employees and subcontractors to understand the need for implementation and usage of BMPs.
- ESC 2 Preservation of Existing Vegetation – Minimize the removal of existing trees and shrubs since they serve as erosion control.
- ESC 10 Seeding and Planting – Provide soil stability by planting and seeding grasses, trees, shrubs, vines, and ground cover.
- ESC 11 Mulching – Stabilize cleared or freshly seeded areas with mulch.
- ESC 20 Geotextiles and Mats – Natural or synthetics material can be used for soil stability.
- ESC Dust Control – Reduce wind erosion and dust generated by construction activities by using dust control measures.
- ESC 23 Construction Road Stabilization – All on-site vehicle transport routes shall be stabilized immediately after grading and frequently maintained to prevent erosion and control dust.
- ESC 24 – Stabilized Construction Entrance – Stabilize the entrance pad to the construction area to reduce amount of sediment tracked off-site.

- ESC 30 Earth Dikes – Construct earth dikes of compacted soil to divert runoff or channel water to a desired location.
- ESC 31 Temporary Drains and Swales – Use temporary drains and swales to divert off-site runoff around the construction-site and stabilized areas and to direct it into sediment basins or traps.
- ESC 40 Outlet Protection – Use rock or grouted rock at outlet pipes to prevent scouring of soil caused by high velocities.
- ESC 41 Check Dams – Use check dams to reduce velocities of concentrated flows, thereby reducing erosion and promoting sedimentation behind the dams. Check dams are small and placed across swales and drainage ditches.
- ESC 50 Silt Fence – Composed of filter fabric, these are entrenched, attached to support poles, and sometimes backed by wire fence support. Silt fences promote sedimentation behind the fence of sediment-laden water.
- ESC 51 Straw Bale Barrier – Place straw bales end to end in a level contour in a shallow trench and stake them in place. The bales detain runoff and promote sedimentation.
- ESC 52 Sand Bag Barriers – By stacking sand bags on a level contour, a barrier is created to detain sediment-laden water. The barrier promotes sedimentation.
- ESC 53 Brush or Rock Filter – Made of 0.75 to 3-inch diameter rocks placed on a level contour or composed of brush wrapped in filter cloth and staked to the toe of the slope provides a sediment trap.
- ESC 54 Storm Drain Inlet Protection – Devices that remove sediment from sediment laden storm water before entering the storm drain inlet or catch basin.
- ESC 55 Sediment Trap – A sediment trap is a small, excavated, or bermed area where runoff for small drainage areas can pass through allowing sediment to settle out.

IMPLEMENTATION AND VERIFICATION:

1) The applicant shall submit a copy of the Notice of Intent and SWPPP to the Santa Ana Regional Water Quality Control Board for review and approval and a copy of the approved Notice of Intent and SWPPP to the County Building and Safety Division.
2) The Santa Ana Regional Water Quality Control Board and the County Building and Safety Division shall verify compliance with the Notice of Intent and SWPPP.

COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to grading permit issuance. 2) Prior to grading permit issuance.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	DATE:

MITIGATION MEASURE:

GEOLOGY AND SOILS

5.11-4a Prior to Grading Permit issuance, a Water Quality Management Plan shall be developed and shall include both Non-Structural and Source Control BMPs. The WQMP shall conform to the San Bernardino County Draft NPDES permit and WQMP standards. The following are the minimum required controls to be implemented as a part of the *Water Quality Management Plan (WQMP) for Urban Runoff*.

- Education for Property Owners, Tenants and Occupations – The Property Owners Association is required to provide awareness educational material, including information provided by San Bernardino County. The materials shall include a description of chemicals that should be limited to the property and proper disposal, including prohibition of hosing waste directly to gutters, catch basins, storm drains or the lake.
- Activity Restrictions – The developer shall prepare conditions, covenants and restriction of the protection of surface water quality.
- Common Area Landscape Management – For the common landscape areas on-going maintenance shall occur consistent with County Administrative Design Guidelines or city equivalent, plus fertilizer and pesticide usage consistent with the instructions contained on product labels and with regulation administered by the State Department of Pesticide Regulation or county equivalent.
- Common Area Catch Basin Inspection – Property Owners Associations shall have privately owned catch basins cleaned and maintained, as needed. These are intended to prevent sediment, garden waste, trash and other pollutants from entering the public streets and storm drain systems.
- Common Area Litter Control – POAs shall be required to implement trash management and litter control procedures to minimize pollution to drainage waters.
- Street Sweeping Private Streets and Parking Lots – Streets and Parking lots shall be swept as needed, to prevent sediment, garden waste, trash and other pollutants from entering public streets and storm drain systems.

The following controls from the *California Storm Water Best Management Practice Handbook - Municipal* shall be employed:

- SC10 Housekeeping Practices – This entails practices such as cleaning up spills, proper disposal of certain substances and wise application of chemicals.
- SC32 Used Oil Recycling – May apply to maintenance and security vehicles.
- SC72 Vegetation Controls – Vegetation control typically includes chemical (herbicide) application and mechanical methods. Chemical methods are discussed in SC10. Mechanical methods include leaving existing vegetation, cutting less frequently, hand cutting, planting low maintenance vegetation, collecting and properly disposing of clippings and cuttings, and educating employees and the public.
- SC73 Storm Drain Flushing – Although general storm drain gradients are sufficiently steep for self-cleansing, visual inspection may reveal a buildup of sediment and other pollutants at the inlets or outlets, in which case flushing may be advisable.

IMPLEMENTATION AND VERIFICATION:

1) The applicant shall submit a Water Quality Management Plan to the County Building and Safety Division to review compliance with the County NPDES.
2) The County Building and Safety Division shall verify compliance with the Water Quality Management Plan.

COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to the issuance of a grading permit. 2) Prior to the issuance of a grading permit.

SUBMITTED:	DATE SUBMITTED:
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	DATE:	INSPECTED BY:	DATE:

CORRECTION REQUIRED: (attach copies of correspondence)	DATE:

MITIGATION MEASURE:

GEOLOGY AND SOILS

5.11-4b The Water Quality Management Plan (WQMP) shall include Structural or Treatment BMPs. The structural BMPs utilized shall focus on meeting potential TMDL requirements for noxious aquatic plants, nutrients, sedimentation and siltation. The structural BMPs shall conform to the San Bernardino County NPDES permit and the San Bernardino WQMP standards.

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

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

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

OR

Flow – based BMPs shall be designed to infiltrate or treat either:

- The maximum flow rate of runoff produced from a rainfall intensity of 0.2 inch of rainfall per hour; or
- The maximum flow rate of runoff produced by the 85th percentile hourly rainfall intensity, as determined from the local historical rainfall record, multiplied by a factor of two; or
- The maximum flow rate of runoff, as determined from the local historical rainfall record that achieved by mitigation of the 85th percentile hourly rainfall intensity multiplied by a factor of two.

The following are the minimum required controls to be implemented as a part of the *Water Quality Management Plan (WQMP) for Urban Runoff*.

- Control of Impervious Runoff – Surface runoff shall be directed to landscaped areas or pervious areas.
- Common Area Efficient Irrigation – Physical implementation of the landscape plan consistent with County Administrative Design Guidelines or city equivalent, which may include provision of water sensors, programmable irrigation timers, etc.
- Common Area Runoff-Minimizing Landscape Design – Group plants with similar water requirements in order to reduce excess irrigation runoff and promote surface filtration.
- Catch Basin Stenciling – "No Dumping – Flows to Lake" or equivalent effective phrase shall be stenciled on catch basins to alert the public as to the destination of pollutant discharging into storm drain.
- Debris Posts – These shall be installed to prevent large floatable debris from entering the storm drains. They shall be placed upstream of the cross culverts.
- Inlet Trash Racks – These shall be installed where appropriate to reduce intake and transport through the storm drain system of large floatable debris. Trash racks shall be provided where drainage from open areas enters storm drain or cross culverts.

IMPLEMENTATION AND VERIFICATION:			
1) The applicant shall submit a Water Quality Management Plan to the County Building and Safety Division to review compliance with the County NPDES, TMDLs and other WQMP standards. 2) The County Building and Safety Division shall verify compliance with the Water Quality Management Plan.			
COMPLIANCE RECORD:			
WHEN REQUIRED:	1) Prior to the issuance of a grading permit. 2) Prior to the issuance of a grading permit.		
SUBMITTED:		**DATE SUBMITTED:**	
1.		1.	
2.		2.	
APPROVED BY:		**DATE APPROVED:**	
INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**
CORRECTION REQUIRED: (attach copies of correspondence)			**DATE:**

MITIGATION MEASURE:

GEOLOGY AND SOILS

5.11-4c Storm water treatment under the NPDES Permit and the future TMDL requirements shall include the construction of treatment BMPs. Treatment BMPs appropriate for on-site use shall include infiltration trenches and basins, swales, inlet filtration, and/or water quality basins. All storm water runoff shall be treated before leaving the site to reduce pollutants in Big Bear Lake.

Infiltration Trenches and Basins

Infiltration Trenches and/or Basins shall be used on site to meet potential future TMDLs for noxious aquatic plants and nutrients. Infiltration trenches and basins treat storm water runoff through filtration. A typical infiltration trench is essentially an excavated trench that is lined with filter fabric and backfilled with stones. Depth of the infiltration trench shall range from three to eight feet and shall be located in areas with permeable soils, and water table and bedrock depth situated well below the bottom of the trench. Trenches shall not be used to trap coarse sediments since large sediment would likely clog the trench. Grass buffers may be installed to capture sediment before it enters the trench to minimize clogging. Infiltration basins shall be used for drainage areas between five and 50 acres. Infiltration basins shall be either in-line or off-line, and may treat different volumes such as the water quality volume or the 2-year or 10-year storm.

Swales

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

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

Filtration

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

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

To assure the efficiency of these filtration devices, monitoring shall be conducted. The use of street sweeps on the parking lots and streets shall aid in reducing the amounts of sediment and debris that flow through the devices. This will extend the effectiveness of the devices during a storm and will lower the frequency of required maintenance. The devices shall be checked and cleaned, if necessary, once a month during the rainy season, following any precipitation and at the end of the dry season prior to the first precipitation event of the rainy season.

	Consideration shall be given to using these filtration units in other areas besides the parking lot inlets. Another potential location is at the downstream end of the tributary pipes that feed the discharge point. Siting these units at a downstream point would allow for the treatment of a greater amount of runoff.

IMPLEMENTATION AND VERIFICATION:

1) The applicant shall submit a copy of the Stormwater treatment BMPs to the County Building and Safety Division for review.
2) The County Building and Safety Division shall review BMPs to verify compliance with NPDES and TMDL requirements.

COMPLIANCE RECORD:

WHEN REQUIRED:	1) Prior to the issuance of grading permits. 2) Prior to the issuance of grading permits.

SUBMITTED:	**DATE SUBMITTED:**
1.	1.
2.	2.
APPROVED BY:	**DATE APPROVED:**

INSPECTED BY:	**DATE:**	**INSPECTED BY:**	**DATE:**

CORRECTION REQUIRED: (attach copies of correspondence)	**DATE:**

14.0 Comments and Responses

14.0 COMMENTS AND RESPONSES

14.1 CEQA REQUIREMENTS

In accordance with Section 15088, 15089 and 15132 of the California Environmental Quality Act (CEQA) Guidelines, the County of San Bernardino has prepared the Environmental Impact Report (EIR) for the Moon Camp Tentative Tract #16136 Residential Subdivision Project (SCH #2002021105).

This Comments and Responses section combined with the Draft EIR, which was circulated from March 30, 2004 to May 13, 2004, make up the Final EIR. CEQA requires a 45-day public review period for a project of this nature. Although the public review period ended on May 13, 2004, the County did accept comment letters after this date, as late as July 2, 2004, to which responses will be provided. Any additional County recommendations or requirements during the certification process will make up the final components of this EIR.

The following is an excerpt from the CEQA Guidelines, Section 15132:

"The Final EIR shall consist of:

(a) The Draft EIR or a version of the draft.

(b) Comments and recommendations received on the Draft EIR either verbatim or in summary.

(c) A list of persons, organizations and public agencies commenting on the Draft EIR.

(d) The responses of the Lead Agency to significant environmental points raised in the review and consultation process.

(e) Any other information added by the Lead Agency."

This Comments and Responses section includes all of the above-required components and shall be attached to the revised Draft EIR to make up the Final EIR. Each comment letter is followed by the corresponding responses. A response is provided for each comment raising significant environmental issues, as received by the County during the Draft EIR review period. Added or modified text is double underlined (example) while deleted text is struck out (~~example~~).

14.2 LIST OF COMMENTORS: 45-DAY DRAFT EIR REVIEW

FEDERAL, STATE AND LOCAL GOVERNMENT AGENCIES

1. Wes Reeder, County of San Bernardino
2. Greg Holmes, Department of Toxic Substances Control
3. Leslie MacNair, California Department of Fish and Game
4. Dennis Castrillo, California Governor's Office of Emergency Services
5. Jeffrey M. Smith, Southern California Association of Governments
6. Allison L. Stewart, United States Department of Agriculture
7. Terry Roberts, California Governor's Office of Planning and Research: State Clearinghouse and Planning Unit

PRIVATE/SPECIAL INTEREST GROUPS

8. Rogelio A. Rawlins, The Gas Company
9. Janet Davidson, Friends of Fawnskin
10. Sandy Steers, Friends of Fawnskin
11. Kassie Siegel, Center for Biological Diversity
12. Thomas Brandau, Friends of Fawnskin
13. Sandy Steers, Friends of Fawnskin
14. Ervin Nichols, The Sierra Club
15. Phillip R. Goode, William H. Marquette, and John R. Varsik, Big Bear Solar Observatory
16. Dorothy Myers, San Bernardino Audubon Society

INDIVIDUALS

17. Betty Conroy
18. Peg Allen
19. Barbara J. Finlayson-Pitts, Ph.D. and James N. Pitts, Jr., Ph. D.,
20. Herbert V. Clotts
21. Robert R. Henrich
22. Donald L. Eads, M.D.
23. Mary Lu Drake
24. Christine Florio
25. Everett H. Greenberg
26. Robert S. Drake
27. Joseph and Barbara Francuz
28. Jane E. MacNett
29. James C. McGrew and Lola E. McGrew
30. Roman M. Silberfeld
31. William C. Hazewinkel
32. Robert R. Henrich
33. Lindi Holland
34. Anne Browning McIntosh, AICP
35. James C. McGrew
36. Ervin Nichols

37. Peter J. Tennyson
38. Nancy Walker
39. Joseph and Barbara Francuz
40. Martha Brown
41. Robin and Scott Eliason
42. Marla J. Henrich
43. Dr. Gerald and Natalie Marks
44. William Hazewinkel and Nancy Walker
45. Beverly Ornelas
46. Sandy Steers
47. R. Lee and Marilyn Whitney
48. Thomas and Kimberly Brickley
49. Roman Silberfeld
50. Peter J. and Mary Tennyson
51. Gary and Judith Schkade
52. Stephen Youngerman
53. Marc and Mildred Mandel

COMMENT NO. 1

INTEROFFICE MEMO

DATE April 15, 2004

PHONE (909) 387-4240
MAIL CODE 0181

FROM WES REEDER, County Geologist
Building and Safety Division

TO MATT SLOWIK, Senior Associate Planner
Advance Planning Division

SUBJECT COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT REPORT, MOONCAMP DEVELOPMENT PROJECT, FAWNSKIN

Comments were previously provided for the Administrative Draft Environmental Impact Report (Interoffice memorandum dated September 12, 2002) and the Screencheck Draft Environmental Impact Report (August 5, 2003). Many of those previous comments are still applicable to the Draft Environmental Impact Report (DEIR).

Generally, there are two areas of concern, which include groundwater and the need for geotechnical and geologic design-level investigations.

Groundwater

The DEIR concludes that impacts related to water are considered as significant and unavoidable. The mitigation listed in table 2.2 of the DEIR includes a requirement for a video inspection of the existing on-site water wells prior to issuance of building permits. However, it is unclear just what "impact" this is intended to mitigate. The way this issue is presented in the DEIR is inconsistent with my understanding of the nature of the anticipated impacts and inconsistent with our previous discussions. 1-1

The water issue includes several subissues that appear to have been lumped into one overall impact. These subissues are: 1-2

- Current lack of a designated water purveyor
- Overdraft of the underlying aquifer
- Possible connection of the on-site wells with the waters of Big Bear Lake
- Need for additional off-site wells and/or construction of a new water reservoir

As you are aware, release of the DEIR was delayed several months pending publication of the Focused Geohydrologic Evaluation by Geoscience Support Services, Inc. for the City of Big Bear Lake Department of Water and Power (DWP). The report, dated December 3, 2003 was intended to supercede a previous Geohydrologic Investigation conducted by Geoscience in July 2000. However, the DEIR spends much time discussing the older report. In addition, page 5.11-6 states that the western one-third of the site lies within the Grout Creek Hydrologic Subunit and references the 2000 Geoscience report. This is incorrect. The DEIR then continues to discuss groundwater conditions within the Grout Creek Hydrologic Unit, although no project-related wells are currently proposed there. 1-3

The conclusion of the recently released 2003 study is simple and clear. The entire Moon Camp site is located within Subunit A of the North Shore Hydrologic Subunit. Subunit A is estimated to have an average groundwater recharge of 29-acre feet per year. According to page 5.3-16 of the DEIR, the DWP has estimated an Average Daily Demand for project water at 41,400 gallons. This equates to approximately 46 acre-feet per year. Therefore, there is a net deficit of 12-acre feet (46-29=12). The DEIR misses this point altogether. 1-4

The DEIR is inconsistent with respect to the overdraft discussion. Page 5.11-20 states "*the proposed project may result in groundwater overdraft*". Page 5.11-23 states that the groundwater basin "*is in a state of overdraft*". Page 8-15 states that "*a potential groundwater overdraft condition would occur*" due to the project. To indicate that groundwater overdraft may occur, would occur and is occurring is inconsistent. 1-5

The possible connection between the on-site wells and the waters of Big Bear Lake was mentioned in both of the Geoscience reports and in the DEIR. However, it is not treated as a separate issue. It should be considered independent from the impact of groundwater overdraft in that it may be possible to mitigate this impact by relocating wells up slope and away from the lake. 1-6

Page 5.3-16 of the DEIR states that the project applicant "*would be required to deposit funds with the DWP for new well construction unless a proven source of supply is provided by the developer at locations satisfactory to DWP and not exceeding sub-basin safe yields*". However, it is unknown whether DWP will be the water purveyor. In addition, if new wells are considered as part of the project description (on or off site) their potential impacts should be included in the environmental analysis. 1-7

Page 5.3-17 of the DEIR indicates that the existing Cline Miller Reservoir is not capable of serving the project. Apparently, a new reservoir 300% to 400% larger would be required. In addition, a 12-inch transmission pipeline would be required to connect the project to the new reservoir. It is unclear why these are not considered part of the project description. 1-8

Geotechnical/Geologic Design Criteria

To date, only a geologic feasibility study has been submitted and approved through the Building and Safety Division. Design-level geologic and geotechnical investigations are required prior to recordation and prior to issuance of grading or building permits. The need for additional studies was indicated in the DEIR but placed as mitigation for expansive soils (see Section 5.10-5 on page 5.10-15 and elsewhere in the DEIR). The requirement for an engineering geology investigation and a liquefaction analysis has nothing to do with the potential for expansive soils. 1-9

The DEIR implies that specific design has been recommended and approved for this project. Section 5.10-1 on page 5.10-15 (and elsewhere) states "*south facing cut slopes **shall** utilize 2:1 buttressed slopes using on site native materials, or by constructing geotextile-reinforced soil buttresses where cut slopes are planned*". (Emphasis added.) The design and methods utilized for cut slope stability must be approved by Building and Safety. As stated, no design-specific reports have been submitted for technical review. The DEIR should simply state that there is a potential for instability of south facing cut slopes and that this instability can be mitigated through standard engineering design as recommended in the required geologic and geotechnical reports. 1-10

WR:ljg

cc: Randy Scott, Division Chief, Advance Planning Division

Response to Commentor No. 1
Wes Reeder, County of San Bernardino
April 15, 2004

1-1 The purpose of the video logs is to determine if any modifications to the existing non-operative wells are necessary prior to use. Analysis and Mitigation Measure 5.3-6a of the Draft EIR have been updated to reflect the nature of the video inspection logs and requirement for step-drawdown and constant rate pumping tests.

Page 5.3-16, Paragraph 5 of the Draft EIR has been revised in the Final EIR as follows:

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

Page 5.3-17, Paragraph 1 of the Draft EIR has been revised in the Final EIR as follows:

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

Page 5.3-23, Mitigation Measure 5.3-6a of the Draft EIR has been revised in the Final EIR as follows:

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

1-2 The sub-issues identified by the Commentor are addressed in Section 5.3, *Public Services and Utilities*, and Section 5.11, *Hydrology and Drainage*. Also, refer to Response to Comment Nos. 1-3 to 1-6.

1-3 Section 5.11, *Hydrology and Drainage*, of the Draft EIR has been revised to state the applicable use of data included within the 2000 and 2003 reports prepared by Geosciences (GSS). The GSS 2003 report includes current data on groundwater supplies in the North Shore and Grout Creek Hydrologic Subunits. The findings in the GSS 2003 report regarding groundwater supplies are assumed to supercede the GSS 2000 report findings. However, the data regarding groundwater quality and well operations in the GSS 2000 report are still applicable and cited in the Final EIR, where appropriate. The Final EIR text has been updated to cite that the project is located entirely within tributary subarea A of the North Shore Hydrologic Subunit. Although the project is located within subarea A of the North Shore Hydrologic Subunit, groundwater conditions are also analyzed for the Grout Creek Hydrologic Subunit because water resources from this area could potentially be utilized as a water resource for the project. The EIR concludes that future studies and analysis will be required to provide proof of a proven water supply source for the project, regardless of whether the water resources come from the North Shore and/or Grout Creek Hydrologic Subunits or any other source.

Page 5.11-6, beginning with Paragraph 5 of the Draft EIR has been revised in the Final EIR as follows:

As stated above, ~~T~~the groundwater conditions cited in this EIR are based on two separate reports prepared by Geoscience Support Services, Inc. (GSS). The GSS 2000 report includes data on the groundwater quality, on-site well operations (Wells-FP-2 and FP-3) and groundwater supply potential. ~~in 2000 and a~~ The GSS 2003 report ~~Focused Geohydrologic Evaluation of the Maximum Perennial Yield for the North Shore and Grout Creek Hydrologic Subareas, prepared in 2003~~ includes current data on groundwater supplies in the North Shore and Grout Creek Hydrologic Subunits. The findings in the GSS 2003 report regarding groundwater supplies are assumed to supercede the 2000 findings. The GSS 2003 report presents a focused geohydrologic evaluation of the maximum perennial yield of the North Shore and Grout Creek Subunits that includes dividing each subunit into smaller tributary subareas. However, the data regarding groundwater quality and well operations in the GSS 2000 report are still applicable and cited in this section.

It is also noted that the wells analyzed in the GSS 2000 report are not included in the GSS 2003 report, as they are non-operational. Well FP-2 is located on the Moon Camp project site.

Although the project area is located entirely within tributary subarea A of the North Shore Hydrologic Subunit, potential groundwater resources are analyzed for both the North Shore and the Grout Creek Hydrologic Subunits as they are both considered potential sources to supply water to the project.

~~According to the 2000 report, the entire project site is within subunit A of the North Shore subarea of Big Bear Lake. The western one-third lies within the Grout Creek subarea. The North Shore subarea is similar in several respects to the Grout Creek subarea. For example, a considerable amount of the water bearing (older alluvial) material present is above the known groundwater surface. Only a band of these materials adjacent to Big Bear Lake are continuously saturated.~~

~~According to a recent geohydrologic investigation of the Moon Camp Area by Geoscience Support Services (GSS, 2000), the older alluvial deposits represent the main water-bearing formation beneath the site. Groundwater-level data from two U.S. Forest Service wells located within the project area suggest that Big Bear Lake provides recharge to the aquifer beneath the project area. Additional groundwater recharge emanates from gravity drainage from the higher elevations north of the Moon Camp area.~~

~~Based on studies by GSS (2000), the main water-bearing zones within the older alluvial deposits consist of intermixed and interlayered sand and gravels. However, lithologic data from the two U.S. Forest Service wells indicate that these sand and gravel aquifers are not continuous over wide areas and tend to follow subsurface channels (GSS, 2000). In mid 2000, groundwater beneath the southern margin of the site was approximately 5 to 10 feet below the level in the lake. More recent groundwater level observations from the three exploratory borings drilled for the liquefaction analysis appears to be similar with respect to the level of the lake.~~

~~The results from GSS 2000 geohydrologic investigation indicate the recoverable amount of groundwater in the Moon Camp area is estimated at 230 acre-feet per year. Based on the nature of the aquifer materials, thickness of the aquifer and the discharge rate of existing wells in the Moon Camp area is estimated at 230 acre-feet per year. Based on the nature of the aquifer materials, thickness of the aquifer and the discharge rate of existing wells in the Moon Camp area, the potential to develop a 100 gallon per minute (gpm) water well supply is considered by GSS (2000) to be good. Chemical analyses of the groundwater from the two on-site water wells indicate that the groundwater is of superior quality. However, the iron concentration (0.69 mg/l) in one well exceeds the state maximum concentration limit for iron (0.3 mg/l) (GSS, 2000).~~

The following insert, to be added following Paragraph 3 on Page 5.11-8 of the Draft EIR, is included in the Final EIR:

NORTH SHORE HYDROLOGIC SUBUNIT

Groundwater in the North Shore Hydrologic Subunit generally occurs in the unconsolidated alluvial deposits on the lower slopes of the surrounding mountains and in the fractures and weathered portions of the bedrock. Groundwater in the alluvium occurs at depths ranging from approximately 5 feet (ft) in the western portions of the Subunit and near the RV Park wells to approximately 50 ft near Division Well Nos. 6 and 7 (refer to Figure 2 in the GSS 2003 report for well location in the North Shore and Grout Creek Subunits).

Groundwater flows by gravity drainage from areas of high elevation (the mountain slopes) into areas of low elevation, ultimately collecting in the sediments beneath Big Bear Lake. Groundwater recharge likely occurs as deep percolation of runoff through the younger alluvium and fractures in the bedrock during periods of prolonged precipitation.

The primary sources of groundwater discharge from the North Shore Subunit are underflow and groundwater pumping from wells within the Subunit. The DWP currently operates four vertical production wells within the North Shore Subunit (RV Park Well Nos. 1 and 2 and Division Well Nos. 6 and 7). Combined average annual groundwater production from DWP wells between 1993 and 2002 is 282 acre-feet per year acre-ft/yr. Pumping data for the 20 private wells in the Subunit were not available. However, assuming that they are domestic sources and that an average single family home uses approximately 200 gallons per day per year (gpd/yr), it is estimated that production from these wells is approximately 4.5 acre-ft/yr.

Groundwater levels in the central portion of the North Shore Hydrologic Subunit, as measured in RV Park Well No. 1, have declined approximately 20 feet between 1996 and 2002. The groundwater level in this well is relatively stable, however, with most of the decline occurring after year 2000, a period of relatively dry climatic conditions. Groundwater levels in Division Well No. 6, located in the eastern portion of the Subunit, have declined approximately 80 ft between 1992 and 2003. Recent groundwater level declines in the eastern portion of the Subunit can also be correlated with dry climatic conditions, although the greater degree of decline is also a reflection of higher groundwater production in the area.

Estimates of Average Annual Groundwater Recharge (North Shore Subunit)

Estimates of average annual groundwater recharge were assigned to each tributary subarea using the watershed model. Required input parameters for the watershed model for which no measured data were available were obtained from the EPA database of hydrologic parameters. Based on the watershed modeling results, the estimates of average annual groundwater recharge for the North Shore Hydrologic Subunit range from approximately 150 to 430 acre-ft/yr with a midpoint of approximately 290 acre-ft/yr. This range of recharge is approximately 2 to 7 percent of average annual precipitation for the Subunit, which is within the range of accepted recharge estimates for other groundwater basins in southern California (3 to 7 percent) determined by the Metropolitan Water District of Southern

California (MWD). The midpoint of the range is approximately 4.5 percent of precipitation for the Subunit.

Estimates of average annual groundwater recharge for the six tributary subareas range from 27 acre-ft/yr (subarea E) to 73 acre-ft/yr (subarea B) (refer to Table 5.11-3, *Summary of Groundwater Recharge Results North Shore Tributary Subareas*). These groundwater recharge estimates represent the average of the watershed model output range, which is based on the average of typical and possible input values. The data suggests that the RV Park wells are producing groundwater at a rate (approximately 14 acre-ft/yr), which is well within their subarea's (subarea B) average annual groundwater recharge. Combined average annual groundwater production from Division Well Nos. 6 and 7 is exceeding that subarea's (subarea F) average annual groundwater recharge. However, it is important to note that these wells are in the alluvial portion of the subarea, which is in hydraulic continuity with the alluvial portions of the adjacent hydrologic subunit (i.e. the Division Subunit to the south). Accordingly, production from these wells should be evaluated in the context of the groundwater basin in this area and not the watershed tributary to the wells.

Maximum Perennial Yield (North Shore Subunit)

According to the GSS 2003 report, the midpoint of the estimated range of average annual groundwater recharge (approximately 290 acre-feet per year) is considered a good estimate of maximum perennial yield for the North Shore Hydrologic Subunit, given the available data.

The following insert, to be added below Table 5.11-3 on Page 5.11-8 of the Draft EIR, is included in the Final EIR:

GROUT CREEK HYDROLOGIC SUBUNIT

Groundwater within the Grout Creek Subunit occurs in both the bedrock and alluvium. The Cedar Dell slant wells (located in subarea C) are drilled into the Mesozoic granitic rock and typically produce approximately 20 gallons per minute, collectively. Groundwater in the alluvium occurs at depths ranging from approximately 20 to 90 ft and flows to the south toward Grout Bay (Big Bear Lake) at a gradient of 0.024 to 0.043 ft/ft. Pumping test and lithologic data from the Barbara Lee Lane Well and specific capacity data from Wells 12P01, 13C01, and Northshore Well Nos. 1, 2, and 3 were used to estimate aquifer transmissivity. Estimates range from 700 to 1,900 gpd/ft.

Groundwater recharge likely occurs within the Grout Creek streambed during periods of extended runoff, near the contact between the bedrock and alluvium and, to a lesser extent, as percolation of precipitation directly on the alluvium. Groundwater recharge also occurs through fractures in the bedrock formations.

The primary sources of groundwater discharge from the Grout Creek Subunit are underflow and groundwater pumping from wells within the Subunit. DWP currently

operates two vertical production wells, two slant wells in bedrock, and one spring within the Grout Creek Subunit. Average annual groundwater production from DWP wells within the Subunit from 1989 to 2002 has been approximately 134 acre-ft/yr. With the exception of pumping from Barbara Lee Lane Well No. 1, all of the municipal groundwater production in the Grout Creek Hydrologic Subunit is from tributary subarea C. Pumping data for the 29 private wells in the Subunit were not available. However, assuming that they are domestic sources and that an average single family home uses about 200 gpd/yr, it is estimated that production from these wells is approximately 6.5 acre-ft/yr.

Estimates of Average Annual Groundwater Recharge (Grout Creek Subunit)

Groundwater level elevations in North Shore Well Nos. 1 and 3, both located at the discharge end of tributary subarea C, have been relatively stable between 1995 and 2003, with seasonal fluctuations and a minor decline during the relatively dry climatic cycle from 1999 to December 2003. The average annual groundwater recharge of the Grout Creek Subunit was estimated using the underflow method and the watershed model.

The underflow method indicated an average annual groundwater recharge estimate of approximately 200 acre-ft/yr. It should be noted, however, that the underflow calculation only accounts for outflow in the alluvial aquifer and does not account for outflow through the bedrock in the Subunit. It is assumed that some outflow occurs within the bedrock aquifer, which is one reason why the underflow estimate for the Grout Creek Subunit is lower than the perennial yield estimate from the watershed model (described below).

Based on the watershed modeling results, the average annual groundwater recharge for the Grout Creek Hydrologic Subunit (subareas A through D) is estimated to range from approximately 260 to 840 acre-ft/yr with a midpoint of approximately 550 acre-ft/yr (refer to Table 5.11-4, *Summary of Groundwater Recharge Results Grout Creek Tributary Subareas*). This range of recharge is approximately 2 to 8 percent of average annual precipitation for the Subunit. The midpoint of the range is approximately 5 percent of precipitation for the Subunit. Assumed input parameters for the watershed model are based on the average of EPA' s suggested parameter ranges.

The relative disparity between the average annual recharge estimates obtained from the underflow analysis and watershed model is partly due to the estimated nature of the input parameters used in each analysis. In the case of the underflow analysis, the transmissivity parameter is estimated based on review of lithologic logs and pumping tests in wells within the Big Bear area that are perforated in similar aquifer materials. More representative values can be obtained via formal aquifer pumping tests using the wells in the Subunit. For the watershed model, 18 of the 20 required input parameters are estimated from the EPA' s database, which is not specific to the mountains of Southern California. Additionally, the underflow analysis does not account for all of the recharge within the bedrock. As data is collected in the future, the range of recharge will become less.

Estimates of average annual groundwater recharge for the four tributary subareas range from 66 acre-ft/yr (subarea D) to 217 acre-ft/yr (subarea C). These average annual recharge values represent the average of the watershed model output range, which is based on the average of typical and possible input values. These data suggest that average annual groundwater production from the Grout Creek Hydrologic Subunit (approximately 134 acre-ft/yr), which occurs almost entirely from tributary subarea C, is within the average annual recharge for both the tributary subarea and the hydrologic subunit.

Maximum Perennial Yield (Grout Creek Subunit)

The maximum perennial yield of the Grout Creek Hydrologic Subunit is within the range of average annual groundwater recharge specified by the watershed model, but is more likely to be in the lower end of the range than the upper end. As mentioned previously, by definition, maximum perennial yield is the amount of water that can be developed economically, legally and politically. In consideration of this, subareas A and B of the Grout Creek Subunit are remote and are located on land under the jurisdiction of the United States Forest Service (USFS). There is no established distribution system in subareas A and B of the Grout Creek Subunit. Furthermore, access to the area would likely require a lengthy negotiation process with the USFS. Given these factors, developing groundwater resources in these subareas is not currently practical.

At this time, it is recommended to use the sum of the midpoint recharge estimates for tributary subareas C and D (217 acre-ft plus 66 acre-ft; see Table 5.11-4) as the maximum perennial yield for the Grout Creek Subunit (total of 283 acre-ft/yr). It should be emphasized that as groundwater production is initiated in each subarea, it will be very important to monitor groundwater levels in dedicated non-pumping monitoring wells (i.e., "key wells") located in each tributary subarea from which groundwater is extracted. As was recommended for the North Shore Hydrologic Subunit, future management of the groundwater resources in each tributary subarea should rely more on established groundwater level thresholds than the perennial yield estimates.

The results of the groundwater recharge analysis for the Grout Creek Subunit are as follows:

Table 5.11-4
Summary of Ground Water Recharge Results
Grout Creek Tributary Subareas

Tributary Subarea	Area (acres)	Annual Precipitation	Average Annual Ground Water	Average Annual Ground Water	Average of Ground Water
A	1,074	33.44	74	249	161
B	850	29.01	50	160	105
C	1,668	29.93	104	331	217

D	592	26.74	32	99	66
Total (A to D)	4,184	119	260	839	549
Total (C and D only)	2,260	56.67	136	430	283

Tributary subareas A and B are excluded from the totals because they are not currently practicable to developed due to their remote locations and are located on land under the jurisdiction of the U.S. Forest Service.

1-4 Section 5.11, *Hydrology and Drainage*, of the Draft EIR has been revised to compare the water demand generated by the proposed project and the recharge rate of tributary subarea A of the North Shore Hydrologic Subunit in which the project area is located. According to the 2003 GSS report, the groundwater recharge rate of the subarea A is approximately 29-acre feet per year and the anticipated water demand for the proposed project is approximately 46 acre-feet per year. Thus, the Commentor is correct in their evaluation that there is a net deficit of 17-acre feet per year (46-29=17) in tributary subarea A in regards to the anticipated water demand of the project.

Page 5.11-23, Paragraph 2 of the Draft EIR has been revised in the Final EIR as follows:

As stated in Section 5.3, *Public Services and Utilities*, the project would require approximately 46 acre-feet per year of water to meet the average daily water demand for the proposed residential uses. If water was obtained from existing well(s) (FP-2 and/or FP-3), which are located in subarea A of the North Creek Hydrologic Subunit, subarea A alone would not have the requisite water resources to meet the ADD over the course of a one-year period, as it only averages approximately 29 ac-ft/yr of groundwater recharge. Thus, it can be concluded that additional water resources beyond what is available from on-site wells or wells located within subarea A of the North Shore Hydrologic Subunit would need to be obtained to meet the water demands of the project.

~~Regarding the two existing wells located within the Moon Camp Project site, no mention was given in the latest GSS report as to the potential hydrologic interconnection of the groundwater aquifer with Big Bear Lake. Given the proximity of these wells to the lake, it appears highly probably that the water extracted from one or both of these wells could include some component of lake water.~~

Based upon the conclusions rendered by GSS and subsequent peer review, additional review is necessary to conclude hydrologic subunit effects. Although mitigation measures requiring further testing are referenced, based upon the evidence presented to date, it is concluded that impacts to groundwater resources are~~overdraft is~~ a significant adverse effect and until additional technical review is conducted to verify conditions, the Project would result in an unavoidable impact.

1-5 Section 5.11, *Hydrology and Drainage*, of the Draft EIR has been revised to state that based upon the information/studies available as of the publication of the Draft EIR, there is the potential that the groundwater basin is in a state of overdraft. This conclusion is based upon the available data from the 2003 GSS report and the necessity to conduct additional studies to determine the state of groundwater conditions in the North Shore and Grout Creek Hydrologic Subunits.

Page 5.11-23, the first bullet point of the Draft EIR has been revised in the Final EIR as follows:

> It is stated that the reason for the recent groundwater level declines in the eastern portion of North Shore can be correlated with dry climatic conditions although the greater degree of decline is also a reflection of higher groundwater production in the area. Based on Mr. Magorien's review of the data, the production rate from Division Well No. 6 (see report Table 4) is the much more correlatable with the drop in water levels. Based upon information/studies available as of the publication of the Draft EIR, there is the potential that~~It appears~~ the North Shore Subunit is in an overdraft situation given ~~their~~the analyzed pumping rates.

Page 5.11-23, Paragraph 1 of the Draft EIR has been revised in the Final EIR as follows:

> Based on the information presented in the 2003 GSS report, as well as the 2000 report, it is concluded by Mr. Magorien in the peer review that the groundwater basin associated with the North Shore Hydrologic Subunit in which the Moon Camp Project area is situated~~, is in~~ has the potential to be in a state of overdraft. Any additional groundwater withdrawals from this Subunit will only exacerbate this potential overdraft condition. Considerably more investigative studies involving exploratory drilling and aquifer testing to assess the actual nature of the groundwater regime in the vicinity of the Moon Camp Project are is warranted. Furthermore, although there appears to be groundwater resources available within the neighboring Grout Creek hydrologic unit, a more thorough hydrogeologic investigation is also warranted for this hydrologic unit before additional groundwater resources can be exploited for a project the size of Moon Camp.

Page 5.11-27, Mitigation Measure 5.11-2 of the Draft EIR has been revised in the Final EIR as follows:

> **GROUNDWATER**
>
> Refer to Mitigation Measures 5.3-6a and 5.3-6b for mitigation regarding operations and groundwater quality from existing on-site wells.
>
> ~~5.11-2 Based upon the technical analysis presented, a potential groundwater overdraft condition would occur and no additional mitigation measures~~

~~have been identified.~~

5.11-2a Within three months of project approval, the Project Applicant shall submit a plan for a detailed geohydrologic investigation. The plan must present the possible sources of groundwater selected for the project and the methodology proposed to investigate those sources. If the on-site wells are to be utilized to serve this project, it must be determined if either could draw water from Big Bear Lake. The plan must be prepared by a California Registered Geologist.

5.11-2b Within six months of plan approval, the Project Applicant shall submit the results of the geohydrologic investigation. The report must be prepared by a California Registered Geologist.

5.11-2c Concurrently or within three months of approval by the geohydrologic report, the Project Applicant shall submit a groundwater monitoring plan in accordance with San Bernardino County's "Guidelines for Preparation of a Groundwater Monitoring Plan." The plan must be prepared by a California Registered Geologist.

1-6 According to the GSS 2000 and 2003 reports, there exists a potential connection between groundwater levels of the on-site wells and water of Big Bear Lake.

The following paragraph, to be added below Paragraph 3 on Page 5.11-23 of the Draft EIR, will be included in the Final EIR:

Interference with Big Bear Lake Water Levels

Regarding the two existing wells located within the Moon Camp Project site, no mention was given in the latest 2003 GSS report as to the potential hydrologic interconnection of the groundwater aquifer with Big Bear Lake. The GGSS 2000 report states that the water level in the lake is approximately 5 to 10 feet higher than the water level elevation of Well FP-2, indicating that there is the potential for recharge from the lake. Thus, given the proximity of the existing on-site wells to the lake, it appears highly probable that the water extracted from one or both of these wells could include some component of lake water. It may be possible to mitigate this impact by relocating wells up slope and away from the lake. However, further study is necessary to determine the interconnection of lake water to the subareas of the North Shore and Grout Creek Subunits.

1-7 The Commentor is correct is his comments. Section 5.3, *Public Services and Utilities*, of the Draft EIR has been revised to clarify that the Big Bear Department of Water and Power (DWP) and/or the County Special District could be the water purveyor for the project and that funds would be deposited to the appropriate agency, as necessary.

Page 5.3-16, Paragraph 2 and the proceeding text of the Draft EIR has been revised in the Final EIR as follows:

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

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

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

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

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

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

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

Operational Storage = (0.3 x MDD) = 17,250 gallons
Emergency Storage = (1.0 x MDD) = 57,500 gallons
Subtotal (without fire storage) = 74,750 gallons

Fire Storage (1,500 gpm x 2 hours) = 180,000 gallons
Total Storage Requirement = 255,000 gallons

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

1-8 The modifications necessary to the water distribution system, including the Cline Miller Reservoir and associated piping, were identified as recommendations in the Water Feasibility Study (March 2002) to accommodate the necessary water storage and distribution requirements for the project. Although the Project Applicant would fund the identified improvements, any modifications to the water distribution system would be subject to approval by the appropriate water agency. The water agency would conduct any additional environmental review, as required by CEQA, for the identified water system improvements. These improvements to the water distribution system were incorporated into the EIR as mitigation measures.

1-9 The Commentor is correct in his comments. Currently, there is insufficient information concerning the expansive nature of the alluvial soils beneath the project site. This impact would need to be evaluated in design-level geotechnical analysis/studies, which include a quantitative geotechnical analysis and a design-level geotechnical engineering report. Implementation of the recommended mitigation measures from the design-level geotechnical engineering report would reduce potential impacts regarding expansive soils to less than significant levels.

Page 5.10-14, Paragraph 2 of the Draft EIR have been revised in the Final EIR as follows:

Currently, there is insufficient information concerning the expansive nature of the alluvial soils beneath the project site. This impact will need to be evaluated in ~~additional~~ design level geotechnical analysis/studies~~.~~, which include ~~1)~~ a quantitative geotechnical analysis~~, 2), a design level geotechnical engineering report,~~ and ~~3)~~ a design-level engineering geology report. Implementation of the

recommended mitigation measures ~~of~~ from the design-level geotechnical engineering report ~~the recommended mitigation measure and conclusions rendered in the referenced reports~~ would reduce impacts to less than significant levels.

Page 5.10-15, Mitigation Measure 5.10-5 of the Draft EIR have been revised in the Final EIR as follows:

EXPANSIVE SOILS

5.10-5 Prior to grading permit issuance, ~~geologic analysis/studies shall be required including 1)~~ a quantitative geotechnical analysis and~~of liquefaction, 2) a~~ design-level geotechnical engineering report shall be required and submitted to the County of San Bernardino Department of Building and Safety for their approval. ~~and 3) a design level engineering geology report.~~

1-10 The Commentor is correct in his comments. Section 5.10, *Geology and Soils*, of the Draft EIR has been revised to state that the potential for instability of south facing cut slopes can be mitigated by standard engineering design as recommended in the geologic and geotechnical reports.

Page 5.10-15, Mitigation Measure 5.10-1 of the Draft EIR has been revised in the Final EIR as follows:

SLOPE STABILITY

5.10-1 The stability of ~~S~~south facing cut slopes shall be analyzed as part of the design-level geotechnical investigation. ~~u~~Utilize~~e~~ing 2:1 buttressed slopes using on site native soil materials, or ~~by~~ constructing geotextile-reinforced soil buttresses ~~where~~for planned unstable cut slopes ~~are planned~~ are typical engineering designs for stabilizing slopes. Either of these methods, or other methods must be approved by the San Bernardino County Department of Building and Safety~~Geologist for slope reinforcement may be utilized~~.

COMMENT NO. 2

Department of Toxic Substances Control

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Terry Tamminen
Agency Secretary
Cal/EPA

Arnold Schwarzenegger
Governor

Clear
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April 30, 2004

Mr. Matthew W. Slowik
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NOTICE OF COMPLETION OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE MOON CAMP RESIDENTIAL SUBDIVISION TT NO. 16136 PROJECT (SCH #2002021105)

Dear Mr. Slowik:

The Department of Toxic Substances Control (DTSC) has received your Notice of Completion (NOC) of a draft Environmental Impact Report (EIR) for the above-mentioned Project.

Based on the review of the document, DTSC's comments are as follows:

1) A copy of the NOC should be filed with the State Clearinghouse, 1400 Tenth Street, P.O. Box 3044, Sacramento, California 95812-3044, telephone number (916) 445-0613. 2-1

2) DTSC's comments dated March 11, 2002, regarding the Notice of Preparation of a draft EIR have not been properly addressed in the currently submitted draft EIR. If a DTSC comment in the aforementioned letter is not applicable to the project site, it should be stated in the draft EIR. 2-2

3) The Initial Study Environmental Checklist Form, Section VII, Hazards and Hazardous Materials, subsection (d) of the NOP states that the project site is not identified by the County of San Bernardino as a hazardous waste site (December 1, 1994). It also states that the County Fire Department HazMat Division responded to a Project Notice for Tentative Tract No: 16136 that "No hazardous materials conditions apply to this project" (July 24, 2001). The draft EIR needs to identify any known or potentially contaminated sites within the proposed Project area. For all identified sites, the draft EIR should evaluate 2-3

whether conditions at the site pose a threat to human health or the environment. A Phase I Assessment may be sufficient to identify these sites. Following are the databases of some of the regulatory agencies:

- National Priorities List (NPL): A list is maintained by the United States Environmental Protection Agency (U.S.EPA).
- CalSites: A Database primarily used by the California Department of Toxic Substances Control.
- Resource Conservation and Recovery Information System (RCRIS): A database of RCRA facilities that is maintained by U.S. EPA.
- Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS): A database of CERCLA sites that is maintained by U.S.EPA. 2-3
- Solid Waste Information System (SWIS): A database provided by the California Integrated Waste Management Board which consists of both open as well as closed and inactive solid waste disposal facilities and transfer stations.
- Leaking Underground Storage Tanks (LUST) / Spills, Leaks, Investigations and Cleanups (SLIC): A list that is maintained by Regional Water Quality Control Boards.
- Local County and City maintain lists for hazardous substances cleanup sites and leaking underground storage tanks.

4) The draft EIR should identify the mechanism to initiate any required investigation and/or remediation for any site that may be contaminated, and the government agency to provide appropriate regulatory oversight. If hazardous materials/wastes were stored at the site, an environmental assessment should be conducted to determine if a release has occurred. If so, further studies should be carried out to delineate the nature and extent of the contamination, and it will be necessary to estimate the potential threat to public health and/or the environment posed by the site. It may also be necessary to determine if an expedited response action is required to reduce existing or potential threats to public health or the environment. If no immediate threat exists, the final 2-4

remedy should be implemented in compliance with state regulations and policies. 2-4

5) All environmental investigation and/or remediation should be conducted under a workplan which is approved by a regulatory agency that has jurisdiction to oversee hazardous waste cleanup. 2-5

Prior to approving the draft EIR, please address all of DTSC's comments. As the lead agency, it is your responsibility to ensure that all of DTSC's concerns are properly addressed.

DTSC provides guidance for preparation of a PEA, and cleanup oversight, through its Voluntary Cleanup Program (VCP). For additional information on the VCP, please visit DTSC's web site at www.dtsc.ca.gov.

If you have any questions regarding this letter, please contact Mr. Johnson P. Abraham, Project Manager, at (714) 484-5476.

Sincerely,

Greg Holmes
Unit Chief
Southern California Cleanup Operations Branch
Cypress Office

cc: Governor's Office of Planning and Research
State Clearinghouse
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