

**Department of Water and Power Letter
Requesting Exemption dated
September 23, 2015 with
Application and Excerpts from
Revised and Recirculated EIR No. 2 for
TT 16136 and Appendix B Water
Feasibility Study**

Attachment 1

DEPARTMENT OF WATER



Service, Quality, Community

LAFCO SC # 401

RECEIVED
OCT 06 2015

LAFCO
San Bernardino County

September 23, 2015

Kathleen Rollings-McDonald
Executive Officer
Local Agency Formation Commission – San Bernardino
215 North D Street, Suite 204
San Bernardino, CA 92415-0490

Re: Agreement between the City of Big Bear Lake, Department of Water and Power and the County Service Area 53C

Dear Ms. Rollings-McDonald:

The San Bernardino County Service Area 53C (CSA 53C) has the authority to provide water services to the proposed Mooncamp development, located east of Fawnskin. CSA53C does not currently have potable water facilities in the Bear Valley and are not able to economically provide potable water services to the proposed development. City of Big Bear Lake, Department of Water and Power (DWP) currently provides potable water service to about 700 customers in the Fawnskin area and could economically provide potable water service to the proposed development. On September 22, 2015, DWP's Board of Commissioners approved an agreement (attached), pending County Board of Supervisors approval (scheduled for the October 20, 2015 meeting), which would allow DWP to provide potable water services to the proposed Mooncamp development. Since DWP will be providing service outside of their jurisdictional boundaries, DWP is respectfully requesting that the Local Agency Formation Commission consider an exemption from the provisions of Government Code Section 56133 as authorized by subsection (e) because the attached agreement for potable water services between CSA 53C and DWP is solely between two public agencies.

If you have any questions, please contact me at 909-866-5050, Ext. 201.

Sincerely,

A handwritten signature in blue ink, appearing to read "Reginald A. Lamson".

Reginald A. Lamson PE LS
General Manager

Cc: Jeff Mathieu, City of Big Bear Lake
Jeff Rigney, San Bernardino County Special Districts

**SAN BERNARDINO LAFCO
APPLICATION FOR
EXTENSION OF SERVICE BY CONTRACT**

(A certified copy of the City Council/District Board of Directors resolution or a letter from the City Manager/General Manager requesting approval for an out-of-agency service agreement must be submitted together with this application form.)

AGENCY TO EXTEND SERVICE:

AGENCY NAME: City of Big Bear Lake, Department of Water & Power
CONTACT PERSON: Reggie Lamson
ADDRESS: P O Box 1929
Big Bear Lake, CA 92315
PHONE: 909-866-5050
EMAIL: rlamson@bbldwp.com

CONTRACTING PARTY:

NAME OF PROPERTY OWNER: County Special District - County Service Area 53C
CONTACT PERSON: Jeff Rigney
MAILING ADDRESS: 157 W. 5th Street
San Bernardino, CA 92415
PHONE: 909-387-5940
EMAIL: jrigney@sdd.sbcounty.gov
ADDRESS OF PROPERTY PROPOSED FOR CONTRACT: Attached as Exhibit "A"

CONTRACT NUMBER/IDENTIFICATION: Moon Camp Development
PARCEL NUMBER(S): Attached as Exhibit "A"
ACREAGE: 62.0

The following questions are designed to obtain information related to the proposed agreement/contract to allow the Commission and staff to adequately assess the proposed service extension. You may include any additional information which you believe is pertinent. Please use additional sheets where necessary.

1. (a) List the type or types of service(s) to be provided by this agreement/contract.

Potable Water Services

- (b) Are any of the services identified above "new" services to be offered by the agency? YES NO. If yes, please provide explanation on how the agency is able to provide the service.
-
-
-

2. Is the property to be served within the agency's sphere of influence? YES NO

3. Please provide a description of the service agreement/contract.

The City of Big Bear Lake, Department of Water and Power will provide Potable Water Services to the proposed Moon Camp Development, in lieu of CSA 53C providing these services.

4. (a) Is annexation of the territory by your agency anticipated at some point in the future? YES NO. If yes, please provide a projected timeframe when it anticipates filing an application for annexation of territory that would include the area to be served. If no, please provide an explanation as to why a jurisdictional change is not possible at this time.

It is cost prohibitive for CSA 53C to construct and maintain potable water facilities for the proposed development.

- (b) Is the property to be served contiguous to the agency's boundary?
 YES NO. If yes, please provide explanation on why annexation to the agency is not being contemplated.

CSA 53C does not have potable water facilities near the proposed development.

It would be cost prohibitive for CSA 53C to provide potable water services to the proposed development.

5. Is the service agreement/contract outside the Agency's sphere of influence in response to a threat to the public health and safety of the existing residents as defined by Government Code Section 56133(c)?
 YES NO. If yes, please provide documentation regarding the circumstance (i.e. letter from Environmental Health Services or the Regional Water Quality Control Board).

6. (a) What is the existing use of the property?

Vacant land.

- (b) Is a change in use proposed for the property? YES NO. If yes, please provide a description of the land use change.

Fifty residential home sites.

7. If the service agreement/contract is for development purposes, please provide a complete description of the project to be served and its approval status.

The proposed development will develop 62 acres of native land into fifty residential home sites, including grading, road construction and all utilities. Once this Extension of Service Agreement is approved, the developer will submit the subdivision to the County Planning Commission for final approval.

8. Are there any land use entitlements/permits involved in the agreement/contract?
 YES NO. If yes, please provide documentation for this entitlement including the conditions of approval and environmental assessment that are being processed together with the project. Please check and attach copies of those documents that apply:

Tentative Tract Map / Parcel Map	<input type="checkbox"/>
Permit (Conditional Use Permit, General Plan Amendment, etc.)	<input type="checkbox"/>
Conditions of Approval	<input type="checkbox"/>
Negative Declaration (Initial Study)	<input type="checkbox"/>
Notice of Determination (NOD)/Notice of Exemption (NOE)	<input type="checkbox"/>
Department of Fish and Game (DFG) Receipt	<input type="checkbox"/>
Others (please identify below)	<input type="checkbox"/>

9. Has the agency proposing to extend service conducted any CEQA review for this contract? YES NO. If yes, please provide a copy of the agency's environmental assessment including a copy of the filed NOD/NOE and a copy of the DFG Receipt.

10. Plan for Service:

- (a) Please provide a detailed description of how services are to be extended to the property. The response should include, but not be limited to, a description of: 1) capacity of existing infrastructure, 2) type of infrastructure to be extended or added to serve the area, 3) location of existing infrastructure in relation to the area to be served, 4) distance of infrastructure to be extended to serve the area, and 5) other permits required to move forward with the service extension.

The DWP has recently constructed several water system improvements in the area of the proposed development and now has sufficient capacity to serve the existing Fawnskin area, including build out, and the proposed development. The developer will need to construct 3,700 linear feet of 12-inch pipeline from the existing Upper Fawnskin Pressure Zone System, to the proposed development's border. The Upper Fawnskin Pressure Zone System is located Northeast of the proposed development. The developer will also construct all on-site water system improvements, including 8-inch pipelines, hydrants and valves. The developer

will acquire all permits required to construct the water facilities.

- (b) Please provide a detailed description of the overall cost to serve the property. The response should include the costs to provide the service (i.e. fees, connection charges, etc.) and also the costs of all improvements necessary to serve the area (i.e. material/equipment costs, construction/installation costs, etc.).

<i>Description of Fees/Charges</i>	<i>Cost</i>	<i>Total</i>
6,000 LF 8-inch piping & facilities (on-site), Developer Paid	\$160.00/LF	\$ 960,000
3,700 LF 12-inch piping & facilities (off-site), Developer Paid	\$180.00/LF	\$ 666,000
Estimated annual operating costs (Homeowner paid through Bi-monthly water bill)		\$ 23,000
Estimated annual depreciation expense (Homeowner paid through Bi-monthly water bill)		\$ 32,000
Capacity Charges vary based on the number of fixture units constructed in each home using the same fee schedule that applies to all DWP residential customers. Currently the DWP charges \$8,928 per EDU. Homeowner Paid		
Meter / Service Fees vary based on the size of meter according to the same rate table that applies to all DWP residential customers. Currently the average installation fee is \$2,225 Homeowner Paid		
Bi-monthly water bill will vary based on usage according to the same rate table that applies to all DWP residential customers. Homeowner Paid		
Construction Costs Total		\$ 1,626,000
Annual Cost Total		\$ 55,000
Total Costs		\$ 1,681,000

- (c) Please identify any unique costs related to the service agreement such as premium outside City/District rates or additional 3rd-party user fees and charges (i.e. fees/charges attributable to other agencies).

N/A

- (d) If financing is to occur, please provide any special financial arrangement between the agency and the property owner, including a discussion of any later repayment or reimbursement (If available, a copy of the agreement for repayment/reimbursement is to be provided).

N/A

- 11 Does the City/District have any policies related to extending service(s) outside its boundary? YES NO. If yes, has a copy been provided to LAFCO? If not, please include a copy of the policy or policies (i.e. resolution, municipal code section, etc.) as part of the application.

A copy of the agreement with CSA 53C is attached.

CERTIFICATION

As a part of this application, the City of Big Bear Lake, Department of Water and Power agree to defend, indemnify, hold harmless, promptly reimburse San Bernardino LAFCO for all reasonable expenses and attorney fees, and release San Bernardino LAFCO, its agents, officers, attorneys, and employees from any claim, action, proceeding brought against any of them, the purpose of which is to attack, set aside, void, or annul the approval of this application or adoption of the environmental document which accompanies it.

This indemnification obligation shall include, but not be limited to, damages, penalties, fines and other costs imposed upon or incurred by San Bernardino LAFCO should San Bernardino LAFCO be named as a party in any litigation or administrative proceeding in connection with this application.

Extension of Service by Contract
Application Form

(FOR LAFCO USE ONLY)

The agency signing this application will be considered the proponent for the proposed action(s) and will receive all related notices and other communications. I understand that if this application is approved, the Commission will impose a condition requiring the applicant to indemnify, hold harmless and reimburse the Commission for all legal actions that might be initiated as a result of that approval.

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this evaluation of service extension to the best of my ability, and that the facts, statement and information presented herein are true and correct to the best of my knowledge and belief.

SIGNED

Reginald A. Lamson

NAME:

REGINALD A. LAMSON

POSITION TITLE:

GM

DATE:

9-23-15

REQUIRED EXHIBITS TO THIS APPLICATION:

1. Copy of the agreement/contract.
2. Map(s) showing the property to be served, existing agency boundary, the location of the existing infrastructure, and the proposed location of the infrastructure to be extended.
3. Certified Plan for Service (if submitted as a separate document) including financing arrangements for service.

Please forward the completed form and related information to:

Local Agency Formation Commission for San Bernardino County
215 North D Street, Suite 204
San Bernardino, CA 92415-0490
PHONE: (909) 388-0480 • FAX: (909) 885-8170

Rev: krm - 8/19/2015

THIS MAP IS FOR THE PURPOSE
OF AD VALOREM TAXATION ONLY.



Ptn. N.W.1/4, Sec.13, T.2N.,R.1W., S.B.B.&M.

Bear Valley
Unified School District
Tax Rate Area
57018, 57019

0304-08

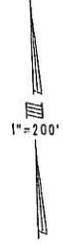
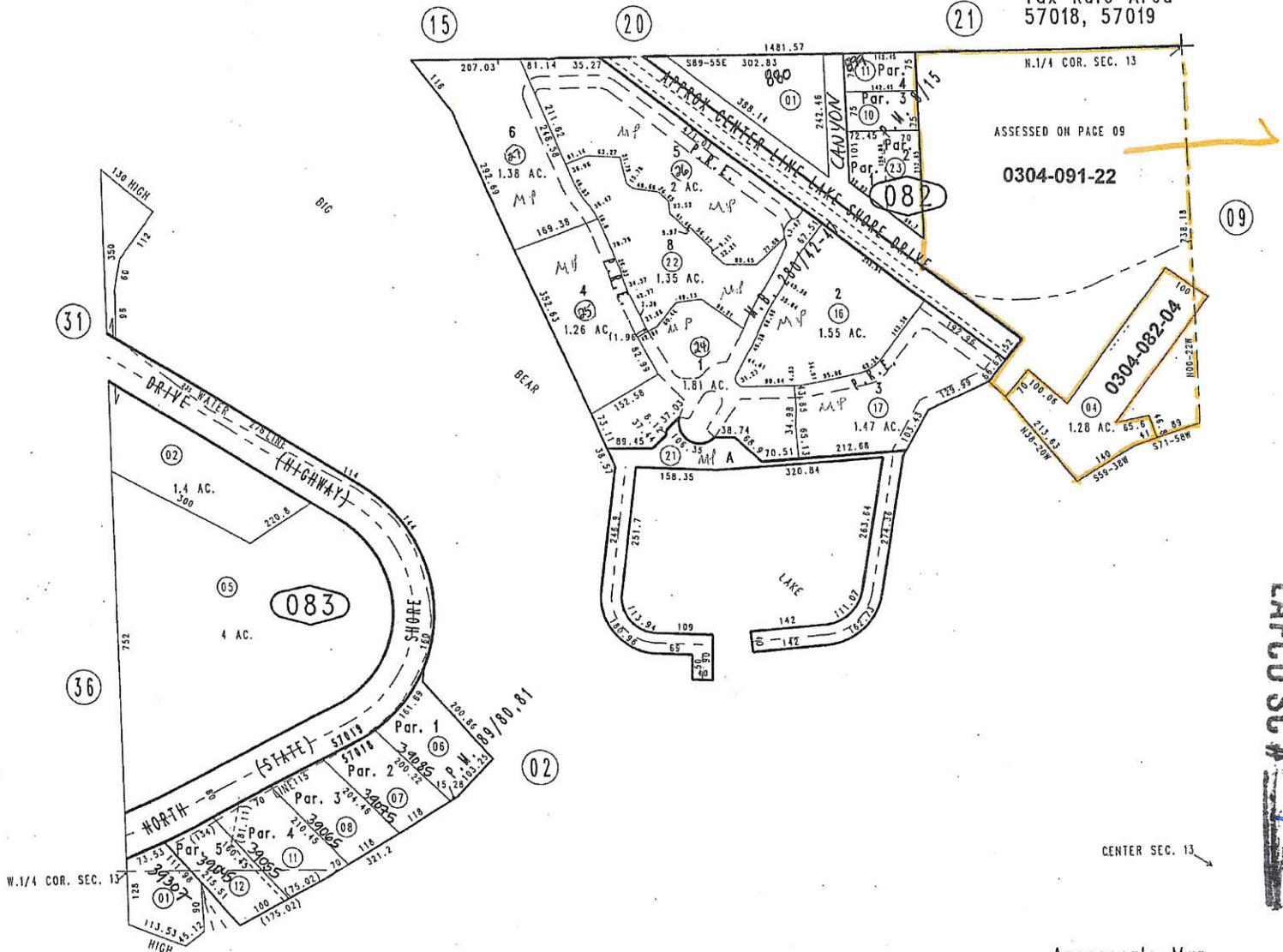


EXHIBIT A

LAFCD SC # 491

Tract No. 12217, M.B. 280/42-47
Parcel Map No. 7492, P.M. 89/80-81
Parcel Map No. 855, P.M. 8/15

Assessor's Map
Book 0304 Page 08
San Bernardino County

REVISED
11/09/04 BK
7.13.15

December 2003

THIS MAP IS FOR THE PURPOSE OF AD VALOREM TAXATION ONLY.

Ptn. N.E.1/4, Sec.13, T.2N.,R.1W., S.B.B.&M.

Bear Valley Unified School District 0304-09
Tax Rate Area 57018

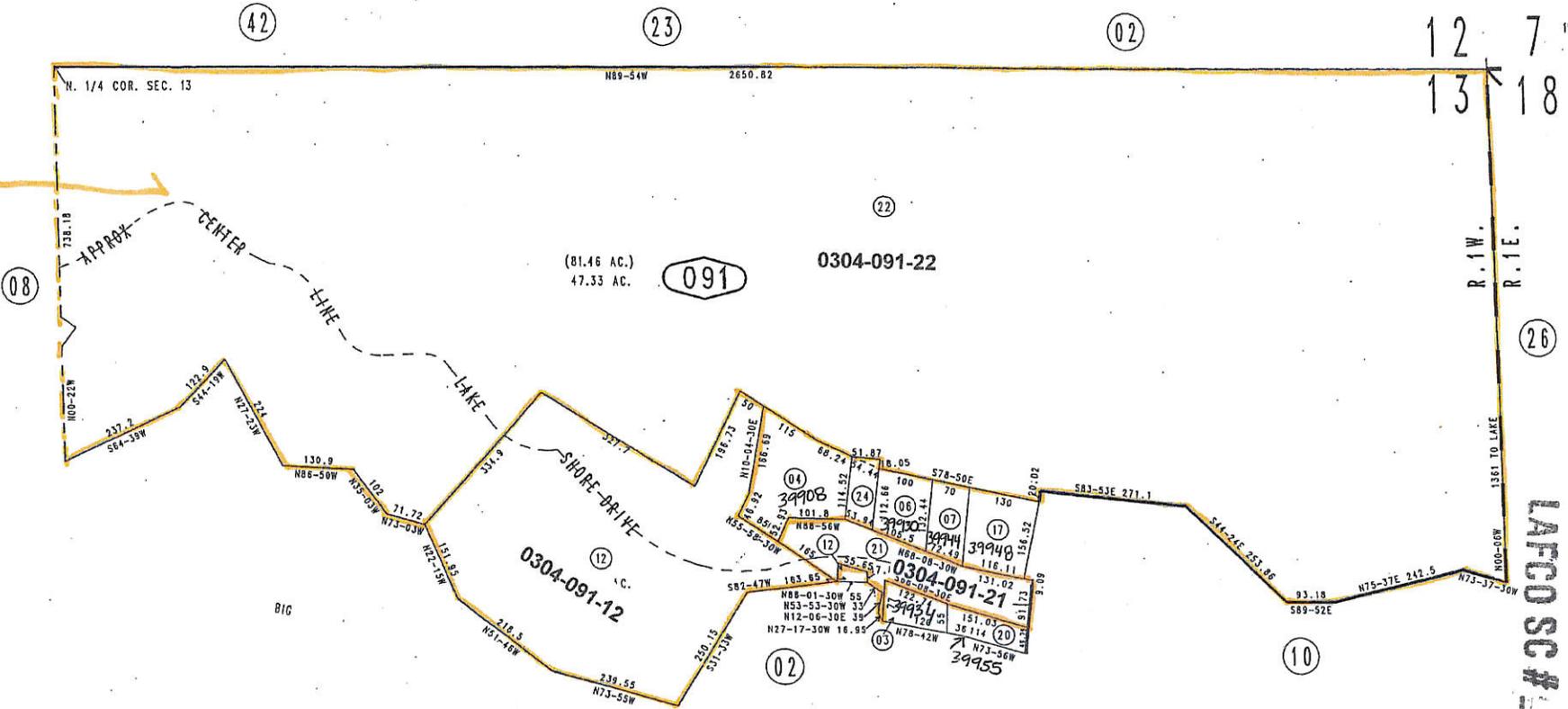
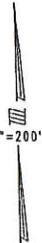


EXHIBIT A

LAFCD SC # 401

December 2003

Assessor's Map
Book 0304 Page 09
San Bernardino County

REVISED
06/09/04 KMP
06/10/04 KMP

**Revised and Recirculated
Draft Environmental Impact Report No. 2
Moon Camp 50-lot Residential Subdivision, TT No. 16136
(Based on the Revised Site Plan)
Big Bear Lake, San Bernardino County, California
SCH No. 2002021105**

Prepared for:

County of San Bernardino
Advance Planning Division
Land Use Services Department
385 North Arrowhead Avenue
San Bernardino, CA 92415-0182

Contact: Mr. Matthew Slowik, MURP, MPA, Senior Planner

Prepared by:

Michael Brandman Associates
621 E. Carnegie Drive, Suite 100
San Bernardino, CA 92408
909-884-2255

Contact: Bob Prasse, Branch Manager



Revised: November, 2011

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 A.4 - Southwestern Willow Flycatcher Focused Survey Report (Michael Brandman Associates, August 2007)

 A.5 - Peer Review of Existing Biological Documents (Michael Brandman Associates, January 2007)

 A.6 - Peer Review of Existing Biological Documents (Michael Brandman Associates, February 2007)

 A.7 - Draft Vegetation and Special Status Plants Survey (Scott White Biological Consulting, August 2007)

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EXECUTIVE SUMMARY

Purpose and Use of this Revised and Recirculated Draft EIR No. 2

Background and History

Three separate public circulations of the Draft Environmental Impact Report (EIR) for this project have occurred since 2004 (including this 2011 Recirculation). In order to provide context for this current recirculation of limited portions of the EIR, a description of project evolution and environmental review process is provided below.

Original Project - 2004

In 2004, the County circulated a Draft EIR evaluating the Original Project - a 92-lot residential subdivision on 62.43 acres with a minimum lot size of 7,200 square feet. Significant adverse and unavoidable impacts resulting from development of the Original Project included Aesthetics (loss of views of the lake and surrounding mountains due to the development of the 31 lakefront lots), Air Quality (short-term during construction and long-term), Biological Resources (noise and perch tree impacts on the bald eagle), and Water Supply (inconclusive groundwater supply). Partially in response to public comments received on the Original Project-2004 and accompanying EIR, the Applicant revised the tentative tract map (see discussion of Alternative Project 2010, below) to avoid or substantially reduce the identified significant impacts. Although numerous comments were received on the 2004 Draft EIR, the County did not prepare a Response to Comments/Final EIR document and the Project was not considered for approval at a public hearing.

Alternative Project - 2010

Partially in response to comments received on the 2004 Draft EIR, the Applicant proposed an alternative to the Original Project - 2004 that substantially reduced and in some cases completely avoided the significant environmental impacts that were identified in the 2004 EIR. The revised project design/description (2010 Alternative Project) reduced the number of residential lots from 92 to 50 and also seven lettered lots. The residential lots would have a minimum lot size of 20,000 square feet and be sold individually and developed into individual custom homes. In addition, the 2010 Alternative project eliminated realignment of SR-38 and eliminated all lakefront residential lots. All 50 residential lots would be located to the north of SR-38. Of the seven lettered lots, one would be designated Open Space/Conservation (4.91 acres), one would be designated as Open Space/Neighborhood Lake Access (0.82 acre with 891 lineal feet of lakefront access), one would be developed as the marina parking lot for a 55-slip private boat marina (2.90 acres), three include the existing well sites, and the final lettered lot is a potential reservoir site. The marina parking lot is designed for the preservation of existing trees and eagle perch trees; however, because of the development of the parking lot, the lot would not be considered Open Space. A 10-acre off-site pebble plain habitat will also be purchased and preserved in perpetuity through a Conservation Easement.

In response to the development of the 2010 Alternative Project, the County prepared revisions to the 2004 EIR. (Revised and Recirculated Draft EIR No. 1) The following sections were revised:

1. **Aesthetics** - views of the site from adjacent residential uses and the state highway, and from the lake.
2. **Air Quality** - update air quality analysis to include consistency with 2007 Air Quality Management Plan (AQMP) and to address global climate change.
3. **Biological Resources** - conduct new surveys for sensitive species and to assess the pebble plain habitat on-site.
4. **Hydrology and Water Quality** - address potential water quality impacts to Big Bear Lake from runoff from the site.
5. **Land Use and Planning** - evaluate the 2010 Alternative Project using the 2007 General Plan and Development Code.
6. **Noise** - address construction noise and long-term residential noise from the 2010 Alternative Project site.
7. **Public Services and Utilities** - address emergency evacuation of the site, provide an analysis of water supply and wastewater treatment.
8. **Traffic and Circulation** - update the traffic study to address revisions to the 2010 Alternative Project's circulation plan and to capture the most recent cumulative projects in the vicinity.
9. **Cumulative Impacts** - evaluate potential environmental effects of the 2010 Alternative Project, in conjunction with other proposed or recently approved projects in the vicinity that together could result in significant and unavoidable cumulative impacts.
10. **Alternatives** - evaluate the 2010 Alternative Project, comparing the potential environmental effects to the Original Project-2004 and other alternatives identified in the 2005 Final EIR.

The Revised and Recirculated Draft EIR No. 1 also included certain updated technical reports analyzing the impacts of the 2010 Alternative Project. These reports included an updated Traffic analysis, Biological Resources analysis, Hydrology and Water Supply analysis and Noise analysis. The Revised and Recirculated Draft EIR No. 1 was circulated for public review from April 5, 2010 to June 3, 2010. The County received 109 comments on the Revised and Recirculated Draft EIR No. 1.

Significant Impacts that Cannot Be Mitigated

The Revised and Recirculated Draft EIR No. 1 concluded that the 2010 Alternative Project would have significant and unavoidable impacts related to Biological Resources. The unavoidable impacts were to the bald eagle. No additional significant impacts related to the 2010 Alternative Project were identified following implementation of mitigation measures and/or compliance with applicable standards, requirements and/or policies by the County of San Bernardino. See Table ES-4 within the Revised and Recirculated Draft EIR No. 1 for the 2010 Alternative Project mitigation measures and impacts.

2011 Alternative Project

Based on concerns raised in comments received on the Revised and Recirculated Draft EIR No. 1, a Supplemental Focused Special Status Plant Species Survey, dated August 2010, was conducted to confirm the conclusion in the Revised and Recirculated Draft EIR No. 1 that impacts to the Ashy-Gray Indian Paintbrush (a Federally-Listed Threatened Species) are less than significant. The survey analyzed the density of Ashy-Gray Indian Paintbrush within the Project site and whether project implementation would result in potential off-site impacts on the U.S. Forest Service pebble plain habitat near the northeast portion of the Project site. The Supplemental Focused Special Status Plant Species Survey (August 29, 2010) showed the presence of high densities of Ashy-Gray Indian Paintbrush plants on the western most Lots (Lots 1, 2 and 3) in the area west of “Street A”—the public roadway through the Project site.

In addition, the Supplemental Focused Special Status Plant Species Survey (August 29, 2010) determined that the area thought to be pebble plain habitat located within Lot A (as identified within the Supplemental Special Status Plant Species Survey, 2008), is not a true pebble plain habitat due to the lack of two key indicator species (*Arenaria ursina* and *Eriogonum kennedyi austromontanum*). The Supplemental Focused Special Status Plant Species Survey (August 29, 2010) findings augment the Supplemental Focused Special Status Plant Species Survey conducted by Dr. Krantz, dated June 29, 2008, providing an above-average precipitation year for observation.

Based on the new finding regarding the presence of high densities of Ashy-Gray Indian Paintbrush in areas occupied by significant Ashy-Gray Indian Paintbrush occurrences, the applicant redesigned the subdivision layout to minimize impacts to this species. The redesigned subdivision, which is depicted in Exhibit 1-4 (see Section 1, Project Description, for Exhibit 1-4) creates a new Lot “H” Open Space Conservation Easement over the area with the highest concentration of plants (Lots 1-3), with three replacement residential lots proposed to be created along the south side of Street “A”, an area with significantly lower concentrations of Ashy-Gray Indian Paintbrush.

The redesign of the subdivision and the conclusions of the Supplemental Focused Special Status Plant Species Survey (August 29, 2010) revealing the presence of high densities of Ashy-Gray Indian Paintbrush on Lots 1-3 of the Project site constitutes “significant new information” as defined by Section 15088.5 of the CEQA Guidelines, and therefore requires a partial recirculation of the Revised and Recirculated Draft EIR No. 1 to fully disclose and analyze the potential impacts of the redesigned subdivision. See Table ES-1 for a comparison of the changes in project design between the three (3) iterations of the Draft EIR.

Table ES-1: Comparison Between the Original Project, 2010 Alternative Project and the 2011 Alternative Project

Project Design	Original Project - 2004	2010 Alternative Project	2011 Alternative Project
Circulated for Public Review	Draft EIR - March 30, 2004 to May 13, 2004	Revised and Recirculated Draft EIR No. 1 - April 5, 2010 to June 3, 2010	Revised and Recirculated Draft EIR No. 2
Site Size	62.43 acres	62.43 acres	62.43 acres
Proposed General Plan Designation*	BV/RS-1 (residential-minimum 7,200 sf lots)	BV/RS-20M (residential-minimum 20,000 sf lots)	BV/RS-20M (residential-minimum 20,000 sf lots)
Number of Lots	95	57	58
Residential Lots	92	50	50
	3	7	8
Lettered Lots	Lot A – proposed private street designed to provide access to the southernmost lots (lakefront sites)	Lot A – a 4.91-acre Open Space/Conservation (OS/C) easement to preserve pebble plain habitat and eagle perch trees	Lot A – a 3.4-acre Open Space/Conservation (OS/C) easement to preserve Ashy Gray Indian Paintbrush, pebble plain soil conditions and eagle perch trees
	Lot B – a 1.4-acre strip of land between State Route 38 and the private street south of the highway	Lot B – a 0.82 acre/891 lineal feet strip of land to remain OS/C between State Route 38 and the lakefront for open space and Neighborhood Lake Access	Lot B – a 0.82 acre/891 lineal feet strip of land to remain OS/C between State Route 38 and the lakefront for open space and Neighborhood Lake Access
	Lot C – a gated entrance, south of State Route 38, a parking lot and access to the marina	Lot C – a 2.90-acre strip of land to be used as a parking lot and boat launch and open space	Lot C – a 2.90-acre strip of land to be used as a parking lot and boat launch and open space
	—	Lots D, E and F – well sites	Lots D, E and F – well sites
	—	Lot G – reservoir site	Lot G – reservoir site
	—	—	Lot H – a 1.9-acre Open Space Conservation Easement over the area with the highest concentration of Ashy-Gray Indian Paintbrush.
Common Areas	Common areas within lettered lots would be maintained by a homeowner's association	Conservation Easements would be maintained by a Conservation Group and Common areas within lettered lots would be maintained by a homeowner's association	Conservation Easements would be maintained by a Conservation Group and Common areas within lettered lots would be maintained by a homeowner's association

Table ES-1 (cont.): Comparison Between the Original Project, 2010 Alternative Project and the 2011 Alternative Project

Project Design	Original Project - 2004	2010 Alternative Project	2011 Alternative Project
Marina/Boat Dock	103 boat slips on west side of the site	55 boat slips on the east side of the site	55 boat slips on the east side of the site
Lakefront Lots	31 lakefront lots	No lakefront lots	No lakefront lots
State Route 38	Realignment of State Route 38 to provide a straighter alignment and to provided lakefront residential lots	No change in the alignment of State Route 38	No change in the alignment of State Route 38
Development Scenario	Lots would be sold individually and custom homes would be constructed by the individual property owners	Lots would be sold individually and custom homes would be constructed by the individual property owners	Lots would be sold individually and custom homes would be constructed by the individual property owners
* Current General Plan Designation is BV/RL-40 – Bear Valley Community Plan, Rural Living, minimum 40-acre residential lot size.			

Partial recirculation of this EIR for the 2011 Alternative Project will further the basic purpose of CEQA to inform decision makers and the public about the potential significant environmental effects of proposed activities.

CEQA requires the preparation of an objective, full disclosure document to inform agency decision makers and the general public of the direct and indirect environmental effects of the proposed action; provide mitigation measures to greatly reduce or eliminate significant adverse effects; and identify and evaluate reasonable project alternatives that could avoid or substantially lessen one or more of such effects to the 2011 Alternative Project. The subject of this Revised and Recirculated Draft EIR No. 2 is such a project alternative.

This Revised and Recirculated Draft EIR No. 2 evaluates the potential environmental effects of the 2011 Alternative Project to the degree of specificity appropriate to the current proposed actions, as required by Section 15146 of the State CEQA Guidelines. The sections included in the Revised and Recirculated Draft EIR No. 2 comprise the following:

Executive Summary. This section includes a summary of the revisions to the 2011 Alternative Project and alternatives addressed in the Draft EIR No. 2. Also included are descriptions of the issues to be resolved, areas of controversy and a table that summarizes the impacts, mitigation measures, and level of significance after mitigation.

Section 1: Project Description. This section includes a detailed description of the 2011 Alternative Project, including its location, site, and project characteristics. A discussion of the 2011 Alternative

Project objectives, intended uses of the Revised and Recirculated Draft EIR No. 2, responsible agencies, and approvals that are needed for the 2011 Alternative Project are also provided.

Section 2: Biological Resources. This section analyzes the potential for the 2011 Alternative Project to result in significant impacts to biological resources and discusses the conclusions and analysis included in the Supplemental Focused Special Status Plant Species Survey (August 29, 2010) prepared by Dr. Timothy Krantz..

The analysis considers the actions associated with the 2011 Alternative Project to determine the short-term and long-term effects of their implementation. This Revised and Recirculated EIR No. 2 discusses both the direct and indirect impacts of the revisions to the 2011 Alternative Project.

This Revised and Recirculated Draft EIR No. 2 will be circulated for public review for a period of 45 days. Upon completion of the public review period, comments received on this Revised and Recirculated Draft EIR No. 2 will be considered and responses will be prepared. In releasing this Revised and Recirculated Draft EIR No. 2, the County, pursuant to CEQA Guidelines § 15088.5, request that reviewers limit their comments to the revised portions of this Recirculated EIR.

The County of San Bernardino (County) has prepared this Revised and Recirculated Draft EIR No.2 to provide responsible and trustee agencies, interested parties, and the public with information about the potential environmental effects associated with the Revised Moon Camp 50-lot Residential Subdivision Project (Alternative Project - 2011) on 62.43 acres located in the Community of Fawnskin in San Bernardino County, California.

Project (2011 Alternative Project) Characteristics

The 2011 Alternative Project that is the subject of this Revised and Recirculated Draft EIR No. 2, represents very minor changes from the 2010 Alternative Project, consisting entirely of reconfiguration of residential lots and Open Space Conservation Areas. The changes are summarized below:

- Redesigned Residential Lot Layout. The 2011 Alternative Project still reflects development of 50 residential lots on approximately 62.43 acres. The 2011 Alternate Project does not increase development intensity but merely proposes a revised lot configuration. However, Lots 1-3, which were located north of Street A on the western-most portion of the Project site have been shifted east and will be located in an area previously occupied by a portion of Lot A which was designated as Open Space Conservation Easement. (Please see Exhibit 1-4).
- Creation of Open Space Lot H. To compensate for the loss of a portion of Lot A, previously designated as Open Space Conservation Easement, and in response to the Supplemental Focused Special Status Plant Species Survey (August 29, 2010) which identified significant occurrences of Ashy-Gray Indian Paintbrush in the area previously designated for

development, a 1.98 acre portion of the Project site previously occupied by Lots 1-3 will now become lettered Lot H which, like Lot A, is designated Open Space/Conservation Easement.

The revisions to the 2011 Alternative Project do not increase or alter development type or intensity but merely redistribute the developable lots in order to minimize impacts to the Federally Threatened Ashy-Gray Indian Paintbrush plant species and the discovery that the prior portion of Lot A characterized as pebble plain habitat was mischaracterized. Aside from the redesign of three developable lots and creation of an additional Open Space lettered lot, nothing about the 2011 Alternative Project changed.

Summary of this Revised and Recirculated Draft EIR No. 2

Issues Addressed in this Revised and Recirculated Draft EIR No. 2

The following issues are addressed in this Revised and Recirculated Draft EIR No. 2:

Section ES: Executive Summary. This section includes a summary of the 2011 Alternative Project and alternatives addressed in the Revised and Recirculated Draft EIR No. 2. Also included are descriptions of the issues to be resolved, areas of controversy and a table that summarizes the impacts, mitigation measures, and level of significance after mitigation.

Section 1: Project Description. This section includes a detailed description of the 2011 Alternative Project, including its location, site, and project characteristics. A discussion of the Project objectives, intended uses of the Revised and Recirculated Draft EIR No. 2, responsible agencies, and approvals that are needed for the 2011 Alternative Project is also provided.

Section 2: Biological Resources. This section analyzes new surveys for sensitive species and assesses the sensitive species habitat on-site.

Please note that sections have been modified only related to the revised biological resources and to reflect the minor changes to the site plan that have been made to accommodate the mitigation provided for the Ashy-Gray Indian Paintbrush.

Due to the limited scope of revisions to the 2010 Alternative Project, the analysis included in the original EIR, as modified by Revised and Recirculated Draft EIR No. 1, for all other impact areas is still applicable to the 2011 Alternative project and, therefore, those sections will not be recirculated.

Table ES-2, Executive Summary Matrix, provides a summary of the Alternative Project's - 2011 environmental impacts, mitigation measures and the level of significance after implementation of mitigation. This Executive Summary Matrix only addresses the Biological Resources section.

Table ES-2: Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Section 2 - Biological Resources		
Special Status Biological Resources	<p><i>Special Status Plants and Plant Communities</i></p> <p>MM BR-1a. Prior to the initiation of clearing or grading activities on the Project site, a conservation easement shall be placed upon the 10-acre Dixie Lee Lane property. The conservation easement shall be in favor of a qualified conservation entity and shall be recorded in the San Bernardino County Recorder’s Office. The easement shall provide for the continued protection and preservation of the property. The easement shall, at a minimum, restrict all use of the property that has the potential to impact the quality of pebble plain soils and other valuable biological habitat, including the occurrences of the Federally Threatened Ashy-Gray Indian Paintbrush. Project proponent shall also create a perpetual, non-wasting endowment for the management and preservation of the mitigation property. The management entity will be approved by the California Department of Fish and Game (CDFG).</p> <p>MM BR-1b. Prior to the initiation of clearing or grading activities on the Project site, the 5.38-acre on-site conservation easements (including Lot-A and Lot-H) shall be established. The conservation easement shall be in favor of a qualified conservation entity and shall be recorded in the San Bernardino County Recorder’s Office. The easement shall provide for the continued protection and preservation of the property. The easement shall, at a minimum, restrict all use of the property that has the potential to impact the occurrences of the Federally Threatened Ashy-Gray Indian Paintbrush. Project proponent shall also create a perpetual, non-wasting endowment for the management and preservation of the mitigation property. The management entity will be approved by the California Department of Fish and Game (CDFG).</p> <p>MM BR-1c. Project Applicant shall take the following actions to further ensure the permanent preservation of the Conservation Areas (Lots A and H):</p>	Significant and unavoidable impacts related to Biological Resources have been identified for impacts to Bald Eagle.

Table ES-1 (cont.): Comparison Between the Original Project, 2010 Alternative Project and the 2011 Alternative Project

Impacts	Mitigation Measures	Level of Significance After Mitigation
	<ul style="list-style-type: none"> • Restrict access by pedestrians and motor vehicles to the Conservation Areas. The Conservation Areas shall be secured through installation of fencing or other barriers to prevent access to Conservation Areas. Barriers shall be installed prior to commencement of any construction activities on site. Applicant shall also include provisions in the CC&Rs for the Project instituting penalties to residents who violate the restrictions and cause any damage to the protected plant habitat. • Include enforcement provisions in the CC&Rs allowing the Homeowners Association, individual residents within the Project and/or County of San Bernardino to enforce any violation of provisions intended for the protection of sensitive plant species located within Lot A and Lot H. • Install appropriate signage identifying Conservation Areas and the sensitive nature of such areas on the project site and that access is prohibited. • Prohibit use of invasive plant species in landscaping. Each lot owner shall be given a list of prohibited invasive plant species upon purchase of lot with the parcel. Landscape plans for individual parcels shall be approved by the County prior to development to ensure no inappropriate plant material is incorporated into the design of any individual lot or common area which may compromise the quality of the Conservation Areas. • Development may not change the natural hydrologic conditions of the Conservation Areas. All grading plans shall be reviewed by the County to ensure hydrologic conditions of the conservation lands are not adversely changed by development • Applicant or appointed conservation entity shall monitor Conservation Areas on a periodic basis to ensure invasive, non-native species are not present. All non-nature invasive plant species shall be removed from Conservation Areas. 	

Table ES-1 (cont.): Comparison Between the Original Project, 2010 Alternative Project and the 2011 Alternative Project

Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>MM BR-1d. Construction to the rear portions of Lots 47, 48, 49, and 50 shall be restricted by means of building envelopes or building setback lines to prevent construction in the occupied Ashy-Gray Paintbrush habitat, wherever feasible.</p> <p><i>Special Status Wildlife</i></p> <p>MM BR-2. Trees and downed logs shall remain in place, to the extent that clearing is not required by the development process, and a 50-foot setback (measured on each side of the centerline) must be maintained along the deepest ravine at the eastern edge of the property. This measure will serve to preserve habitat for potential special status wildlife species.</p> <p>MM BR-3. The project proponent shall have a biologist qualified with San Bernardino flying squirrel (SBFS) as a monitor during tree removal. Minimize the number of trees, snags, and downed wood removed for project implementation. Compensating the removal of snags containing cavities; this would be achieved by constructing and erecting two nest boxes and one aggregate box per snag removed. Appendix A of this Revised and Recirculated Draft EIR No. 2 provides the specifications of the nest and aggregate boxes (Flying Squirrels 2007). These boxes should be located on the adjacent U.S. Forest Service (USFS) land (with their permission) and the locations marked with a global positioning system. The locations of the boxes shall be provided to the USFS so that their biologists could monitor the boxes for occupation by SBFS. Provide new homeowners with a flyer that would provide information on the biology of SBFS and how they are susceptible to depredation by cats. The flyer would also outline steps that homeowners could take to reduce their urban edge effects.</p> <p>MM BR-4. Eagle perch trees identified in the 2002 Bonterra Consulting Bald Eagle Survey for Tentative Tract 16136, Moon Camp, Fawnskin, San Bernardino County, California, (see Appendix A of this Revised and Recirculated Draft EIR No. 2) shall be preserved in place upon project</p>	

Table ES-1 (cont.): Comparison Between the Original Project, 2010 Alternative Project and the 2011 Alternative Project

Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>completion. If any of the designated perch trees should become hazardous and need to be taken down, replacement will be at a 5:1 ratio with the creation of artificial perch trees along shoreline designated open space. Any development that may occur within the Project site and in the individual lots must avoid impacts to trees larger than 24 inches diameter breast height (dbh) and their root structures to the maximum extent feasible. If any additional non-perch trees on-site larger than 24 inches dbh are removed, then a replacement ratio of 2:1 shall be required and replacement trees shall be 24-inch box trees or larger. 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 lots 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.</p> <p>MM BR-5. 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 4.5 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 shall avoid impacts to tagged trees and their root structures. If such trees cannot be avoided, their removal shall be coordinated with the County of San Bernardino to minimize impacts to the extent feasible. 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 individual lots 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.</p>	

Table ES-1 (cont.): Comparison Between the Original Project, 2010 Alternative Project and the 2011 Alternative Project

Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>MM BR-6. Seven days prior to the onset of construction activities, a qualified biologist shall survey within the limits of project disturbance for the presence of any active raptor nests. Any nest found during survey efforts shall be mapped on the construction plans. If no active nests are found, no further mitigation would be required. Results of the surveys shall be provided to the CDFG.</p> <p>If nesting activity is present at any raptor nest site, the active site shall be protected until nesting activity has ended to ensure compliance with Section 3503.5 of the California Fish and Game Code. Nesting activity for raptors in the region of the Project site normally occurs from February 1 to June 30. To protect any nest site, the following restrictions on construction are required between February 1 and June 30 (or until nests are no longer active as determined by a qualified biologist): (1) clearing limits shall be established a minimum of 300 feet in any direction from any occupied nest and (2) access and surveying shall not be allowed within 200 feet of any occupied nest. Any encroachment into the 300/200-foot buffer area around the known nest shall only be allowed if it is determined by a qualified biologist that the proposed activity shall not disturb the nest occupants. Construction during the nesting season can occur only at the sites if a qualified biologist has determined that fledglings have left the nest.</p> <p>MM BR-7. Vegetation removal, clearing, and grading on the Project site should be performed outside of the breeding and nesting season (between February 1 and June 30), when feasible, to minimize the effects of these activities on breeding activities of migratory birds and other species. If clearing occurs during breeding season, a 30-day clearance survey for nesting birds shall be conducted. 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 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.</p>	

Table ES-1 (cont.): Comparison Between the Original Project, 2010 Alternative Project and the 2011 Alternative Project

Impacts	Mitigation Measures	Level of Significance After Mitigation
Sensitive Natural Communities/Habitats	<p>MM BR-8. 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 Conditions, Covenants & Restrictions (CC&Rs).</p> <p><i>Wildlife Impacts/Indirect Impacts</i></p> <p>MM BR-9. 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).</p> <p>MM BR-10. 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 lots 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.</p> <p>MM BR-11. To limit the amount of human disturbance on adjacent natural open space areas, signs shall be posted, to the satisfaction of the Planning Director or appointee, along the northern and eastern perimeter of the Project site where the property boundary abuts USFS open space with the following statement: “Sensitive plant and wildlife habitat. Please use designated trails and keep pets on a leash at all times.”</p> <p>In addition, a requirement stating that residents shall keep out of adjacent</p>	Less than significant impact

Table ES-1 (cont.): Comparison Between the Original Project, 2010 Alternative Project and the 2011 Alternative Project

Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>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.</p> <p>MM BR-12. Prior to recordation of the final map, a landscaping plan for the entire tract shall be prepared (inclusive of a plant palette) with an emphasis on native trees and plant species, and such plan shall be submitted to the County of San Bernardino for review and approval by a qualified biologist. The review shall determine that invasive, non-native plant species are not to be used in the proposed landscaping. The biologist will suggest appropriate native plant substitutes or non-invasive, non-native plants. A note shall be placed on the Composite Development Plan indicating that all proposed landscaping (including landscaping on individual lots) shall conform to the overall approved tract map landscaping plan. A requirement shall be included stating that residents shall be restricted to the use of tree and plant species approved per the overall tract map landscaping plan. The Homeowner Association CC&Rs shall also require individual lot owners to use only tree and plant species approved per the overall tract map landscaping plan/plant palette.</p>	
Jurisdictional Delineation	<p>MM BR-13. Prior to issuance of grading permits, the Project applicant shall obtain all required authorization from agencies with jurisdiction over all unavoidable impacts to State and Federal jurisdictional lakes, streams, and associated habitat within the Project site. Impacted features shall be offset through onsite restoration, offsite restoration, or purchase of credits at an agency-approved mitigation bank in the region at no less than a 3:1 for direct impacts and 1:1 for indirect impacts if impacts cannot be avoided.</p>	Less than significant impact

SECTION 1: PROJECT DESCRIPTION

1.1 - Project Location and Setting

The proposed 62.43-acre Moon Camp project site is located on the north shore of Big Bear Lake, in the unincorporated community of Fawnskin, County of San Bernardino (refer to Exhibit 1-1, Regional Location, and Exhibit 1-2, Local Vicinity). The Big Bear Lake area is primarily a resort community where a major portion (approximately two-thirds) of the residences are second homes. The south shore contains commercial and recreational facilities, including ski areas, hotels, and restaurants, within the incorporated City of Big Bear Lake. By comparison, the north shore area in the vicinity of the Project is less populated and primarily residential, with a small commercial component westerly of the Project site.

State Route 38 (SR-38), also known as North Shore Drive, provides access to the Project site; the road actually transects the property. The Project site is roughly bounded to the north by Flicker Road, to the south by Big Bear Lake, to the east by Polique Canyon Road, and to the west by Canyon Road. In the Township and Range nomenclature system, the Project site is described as being located in the northern half of Section 13, Township 2 North, Range 1 West, San Bernardino Baseline and Meridian (SBBM). San Bernardino County parcel numbers for the site include Assessor's Parcel Numbers (APN) 0304-082-04, 0304-091-12, 0304-091-22, and 0304-091-21. According to the legal description, the site includes Tracts 108, 109, 117, and 118, Township 14 South, Range 14 East, and SBBM. The study area is specifically located at coordinates 34.264 degrees latitude and 116.933 degrees longitude.

An Environmental Impact Report (EIR) for the proposed Moon Camp Project has been circulated for public review and comment on three separate occasions (numbered in this document as): 1) Original Draft EIR - 2004, 2) Revised and Recirculated Draft EIR No. 1, and 3) Revised and Recirculated Draft EIR No. 2, respectively. In addition, the Project's site plan has been revised on three separate occasions and is outlined within this document as: 1) 2004 Original Project, 2) 2010 Alternative Project, and 3) 2011 Alternative Project, respectively.

1.1.1 - Project Site Characteristics

In addition to State Route 38 (SR-38), several dirt trails (generally associated with unauthorized off-road vehicle use) traverse the Project site, which is located approximately 1 mile south of the Pacific Crest Trail; a trail that stretches between the US/Mexican border and the US/Canadian border. Site elevations range from approximately 6,744 feet above mean sea level (msl) at the lakeshore to 6,960 feet above msl at the northeast corner of the site. Individual slopes on-site range from 5 percent to 40 percent. Slope orientation is generally from north to south toward the lake, except for three natural ravines on the Project site that contain eastern and western slopes. Vegetation and habitat

types in the Project area include open Jeffery Pine forest (with an average density of 44.4 trees per acre) and pebble plain soil like conditions in the western portion.

1.1.2 - Existing Land Use

The Project site is currently undeveloped and is designated in the County of San Bernardino, Bear Valley Community Plan (BV) as Rural Living with minimum 40-acre lots (BV/RL-40) (refer to Exhibit 1-3, Land Use Designations). The RL-40 land use designation is identified as a “Holding Zone” within the Bear Valley Community Plan, which states: future development proposals (such as Moon Camp) within the RL-40 designation will be considered based on a demonstrated ability to provide adequate infrastructure and maintain consistency with the goals and policies of the 2007 Community Plan. Table 2-1, Existing Land Use and Land Use Designations, identifies the land use category of the site and surrounding properties, as well as the current land use designations.

Table 1-1: Existing Land Use and Official Land Use Zoning District

Existing Land Use		Official Land Use Zoning District (Bear Valley Community Plan)
Project Site	Vacant	Rural Living (BV/RL-40). This district provides sites for open space and recreational activities, single-family homes on very large parcels and similar and compatible uses. Minimum parcel size is 40 acres; 1 dwelling unit per parcel. This is considered a holding zone designation in the Bear Valley Community Plan, which indicates that future General Plan amendments will be considered where specific development proposals within the RL-40 designation demonstrate an ability to provide adequate infrastructure to serve the development and maintain consistency with the goals and policies of the Bear Valley Community Plan.
North	Residential (N and NW), Forest (N and NE)	Residential (BV/RS). One dwelling unit per 0.25 acre and a minimum lot size of 7,200 square feet. US Forest Service administered land.
South	Big Bear Lake, Residential (SE)	Floodway (FW). Uses permitted at owners risk; minimum parcel size is 10 acres. Single Residential (BV/RS). Four dwelling units per acre, minimum lot size is 7,200 square feet.
East	Vacant, Residential (SE) Forest (N and NE)	Single Residential (BV/RS). One dwelling unit per 0.25 acre and a minimum lot size of 7,200 square feet. Resource Conservation (BV/RC). Minimum parcel size is 40 acres; 1 dwelling unit per parcel. US Forest Service administered land.
West	Vacant, Residential	Special Development (BV/SD-RES). Minimum parcel size 40 acres. This District provides sites for a combination of residential uses. Single Residential (BV/RS). Four dwelling units per acre, minimum lot size is 7,200 square feet.
Sources: Bear Valley Community Plan, 2007; County of San Bernardino Development Code, 2007.		



Source: Census 2000 Data, The CaSIL, MBA GIS 2009.



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Exhibit 1-1 Regional Location Map

SAN BERNARDINO COUNTY
MOON CAMP RESIDENTIAL SUBDIVISION PROJECT



Source: National Agriculture Imagery Program, San Bernardino County (2009).



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Exhibit 1-2 Project Vicinity Map Aerial Base

SAN BERNARDINO COUNTY
MOON CAMP RESIDENTIAL SUBDIVISION PROJECT

1.1.3 - Community History

A marshy portion of the nearly flat floor of Bear Valley was dammed in 1884 to provide a reservoir (Big Bear Lake) to retain irrigation water for release to the Redlands area of the eastern San Bernardino Valley. In 1912, a larger 72-foot multiple arch dam was constructed about 300 feet downstream of the old dam, increasing the lake capacity to 73,000 acre feet. Tourism in the area began with the onset of the automobile age and the eventual establishment of highways accessing the relatively remote area.

Maximum elevation at the lake surface is 6,744 feet above msl, but the actual level fluctuates according to annual snowmelt and runoff. The dam is owned by the Big Bear Municipal Water District. The lake has an east-west length of approximately 7 miles and is approximately 2.5 miles at its widest, though most of the lake's width averages a little more than 1 mile. Big Bear Lake measures 72 feet deep at the dam. It is completely rain- and snow-fed, having no other source of tributary or mechanical replenishment other than natural precipitation.

The Community of Fawnskin was founded in 1916, and by 1928, there were at least nine resort camps in the area, including Moon Camp, which was built in 1919. The project site has remained primarily vacant since destruction of the original camp in 1951. The current property owner purchased the marina permit along with the property in 1969. Site improvements currently include three water wells and SR-38, which transects the property from east to west.

2011 Alternative Project Characteristics

The 2011 Alternative Project incorporates very minor revisions to the 2010 Alternative Project as analyzed in the Revised and Recirculated Draft EIR No. 1. The 2011 Alternative Project consists of the subdivision of the site into 58 lots—50 numbered lots (single family residential lots) to be sold individually and developed into custom homes; and eight lettered lots described as follows:

- Three designated as Open Space/Conservation easements and Neighborhood Lake Access;
- Three designated as well sites;
- One designated as a potential reservoir site; and
- One would be developed as the marina parking lot.

The 2011 Alternative Project proposes 6.2 acres of open space/conservation/Neighborhood Lake Access within the Project site. The 2011 Alternative Project also includes a 55-slip marina. The marina parking lot also includes some open space for the preservation of existing trees; however, because of the development of the parking lot, the lot would not be considered Open Space. The main differences between the 2010 Alternative Project and the 2011 Alternative Project that is the subject of this Revised and Recirculated Draft EIR No. 2 and are summarized below:

- Redesigned Residential Lot Layout. The 2011 Alternative Project still reflects development of 50 residential lots on approximately 62.43 acres. The 2011 Alternate Project does not increase development intensity but merely proposes a revised lot configuration. Lots 1-3, which were

located north of Street A on the western-most portion of the Project site have been shifted east and will be located in an area previously occupied by a portion of Lot A which was designated as Open Space Conservation Easement. (Please see Exhibit 1-4)

- **Creation of Open Space Lot H.** To compensate for the loss of a portion of Lot A, previously designated as Open Space Conservation Easement, and in response to the Supplemental Focused Special Status Plant Species Survey (August 29, 2010) which identified significant occurrences of Ashy-Gray Indian Paintbrush in the area previously designated for development, a 1.98 acre portion of the Project site previously occupied by Lots 1-3 will now become lettered Lot H which, like Lot A, is designated Open Space/Conservation Easement.

The revisions to the 2011 Alternative Project do not increase or alter development type or intensity but merely redistribute the developable lots in order to minimize impacts to the Federally Threatened Ashy-Gray Indian Paintbrush plant species and the discovery that the prior portion of Lot A characterized as pebble plain habitat was mischaracterized. Aside from the redesign of three developable lots and creation of an additional Open Space lettered lot, nothing about the Project changed. Accordingly, as indicated in detail below, the remainder of the Project components remain unchanged.

Infrastructure

A water service feasibility study entitled “Final Feasibility Study to Serve the Proposed Moon Camp Residential Development (Tentative Tract Map No. 16163),” was prepared by Alda Engineering, Inc., in March 2007 (and updated in 2011), to address issues raised in comments received on the Original Draft EIR - 2004. In addition, the sewer feasibility study prepared by So & Associates was updated to reflect the revisions to the Moon Camp site plan. This study entitled, “County Service Area 53, Improvement Zone B (CSA 53-B) Updated Sewer Feasibility Study for APNs 0304-091-12, -21, -22, and 0304-082-04, TTM 16136 RCK Properties, Inc./Moon Camp,” prepared April 11, 2007. Both studies are included in Appendix G of the Revised and Recirculated Draft EIR No. 1. Based on the analysis and recommendations included in these studies, the following water and sewer infrastructure components are proposed as part of development of the 2011 Alternative Project.



Source: Hicks & Hartwick, Inc.



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Exhibit 1-4 Moon Camp TTM No 16136 Proposed 2011 Alternative Project

SAN BERNARDINO COUNTY
MOON CAMP RESIDENTIAL SUBDIVISION PROJECT



Source:



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Exhibit 1-5 Moon Camp TTM No. 16136 Revised Alternative Project-2011

SAN DERNARDINO COUNTY
MOON CAMP RESIDENTIAL SUBDIVISION PROJECT

Water Service Options and Infrastructure

There are currently three (3) separate water service options for the 2011 Alternative Project. Under Alternative #1, significant improvements to the Big Bear Department of Water and Power (DWP) upper Fawnskin pressure zone are necessary to provide water service to the site. The three ground water production wells located within the Project site would be deeded to the DWP at the time the tract map is recorded. Annexation to the DWP's authorized service area is required for DWP to be the water service provider. DWP has conducted a Water Feasibility Study (Alda 2007), and provided a conditional will serve letter to the Applicant. However, the majority of the Project site is outside of the DWP authorized service area as well as the City's Sphere of Influence. DWP cannot provide water service without first complying with the provisions of Government Code Section 56133, which pertains to the Local Area Formation Commission (LAFCO) annexation process. In order for the DWP to provide water service to the Project site and to own and operate the 2011 Alternative Project's water system, LAFCO would have to approve an expansion of the City of Big Bear Lake's Sphere of Influence to include the entire existing DWP Water Service Area in Fawnskin as well as the entire Project site. The developer would be required to construct the on-site and off-site facilities as described in the DWP's Water Feasibility Study (Alda 2007), as amended by the 2011 update, as discussed below.

The Water Feasibility Study provides two options (A and B) for expanding the existing Fawnskin Water System infrastructure. Option B has been chosen by DWP and the Applicant as the preferred Water Feasibility Study alternative for Water Service Alternative #1. In either case, the Applicant would install all common infrastructures, including fire hydrants, and would also install the water main lines within the project site. The water improvements will primarily be constructed within the rights-of-way of existing or proposed paved roads. The water service infrastructure required is as follows:

- 900 ft of 12-inch pipeline along Ridge Road from the intersection of Raccoon Drive south to tie to an existing 8-inch PVC pipeline on a private easement.
- 200 ft of 12-inch pipeline along private easement to connect Fawnskin Drive and Canyon Road.
- 650 ft of 12-inch pipeline along Canyon Road to Chinook Road.
- 600 ft of 12-inch pipeline along Chinook Road to Flicker Road.
- 500 ft of 12-inch pipeline along Flicker Road to Mesquite Drive.
- 400 ft of 12-inch pipeline along Mesquite Road to North Shore Drive.
- 250 ft of 12-inch pipeline along North Shore Drive to development westerly boundary.
- Refurbishing existing Cline Miller pump station to augment pumping capacity to approximately 300 gmp.
- 50 KW on-site emergency generators at the Cline Miller Reservoir.

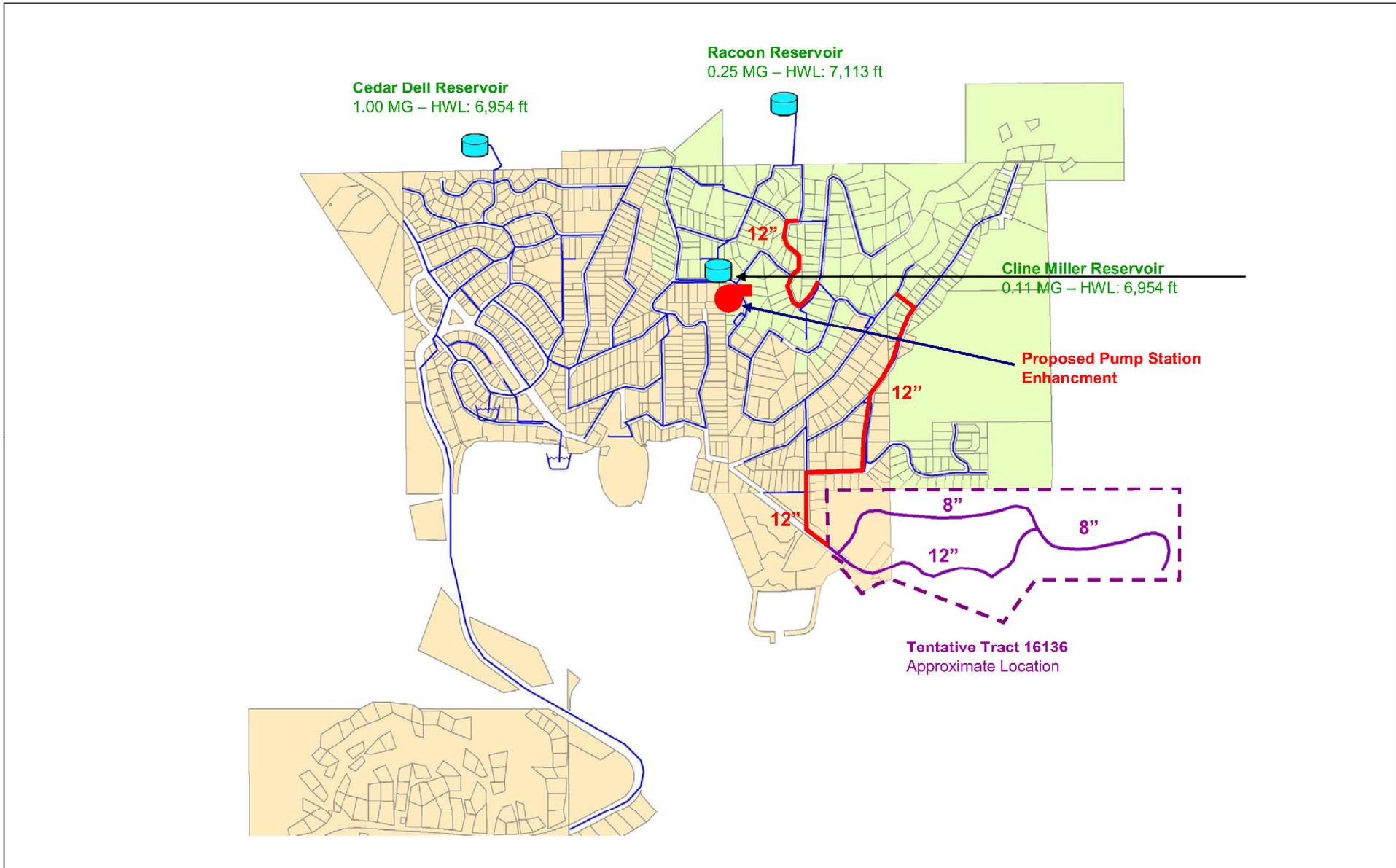
See Exhibit 1-6 for the proposed water facilities and improvements.

Water Service Alternative #2 (see Section 4.9 of the Revised and Recirculated Draft EIR No. 1 for details) would not require LAFCO's approval and would not create the need for expansion of the City's Sphere of Influence around Fawnskin and the project site. Instead, County Service Area 53C (CSA 53C) would own and operate the water facilities within the project site and contract with the DWP for a water interconnection to the existing Fawnskin water system. The developer would be required to construct the same on-site and off-site facilities as described above.

Under Water Service Alternative #3 (see Section 4.9 of the Revised and Recirculated Draft EIR No. 1 for details), instead of constructing the off-site water facilities (within the Fawnskin Water System) identified in the DWP's Water Feasibility Study Option B (Alda, 2007, which is the basis for Water Service Alternatives #1 and #2, above), water service would be provided entirely from an onsite water supply, storage and distribution system. Water would be extracted from the onsite water wells; the 2011 Alternative Project would require construction of an on-site aboveground water tank (238,600 gallons) and an on-site booster station capable of providing the daily water supply flow and the required 1,750 gallons per minute fire flow. The water tank and booster station would be sized based upon the same demand calculations contained in the Water Feasibility Study and Water Service Alternatives #1 and #2. Water Service Alternative #3 would not require LAFCO's approval and would not require the expansion of the City's Sphere of Influence around Fawnskin and the project site. The developer would also construct the same on-site (within the Project site) water facilities (water main lines, fire hydrants, etc) identified in the Alda Water Feasibility Study necessary to transmit water to the developed lots within the 2011 Alternative Project. Existing water wells FP2 and FP4 would be connected to the on-site water system and pump their water into the 238,600 gallon on-site reservoir. The on-site booster station would produce the Average and Maximum Daily Demand flows (8.68 gpm and 15.27 gpm) and the Fire Flow of 1,750 gpm for the 2-hour duration. The booster station would include an emergency electrical generator to allow the station to operate during a power outage. The water improvements for Water Service Alternative #3 will primarily occur within the 2011 Alternative Project's paved roads and at the 2011 Alternative Project's water tank site. The construction of the water tank would include grading of an approximately 75-foot-diameter pad for the reservoir. CSA 53C would own and operate this independent water system.

Projected water demand for the proposed Moon Camp 50-lot subdivision (2011 Alternative Project) is based on the Water Feasibility Study's consumption rate of 250 gallons per day (gpd) per connection. Exhibit 1-6, Proposed Water Facilities, shows the Water Feasibility Study's proposed Moon Camp water system. Maximum day demand is estimated based on information provided in the DWP Water Master Plan and it is equivalent to 1.76 times the average day demand. Therefore, the average and maximum day demands for the 2011 Alternative Project are estimated as follows:

- Average Day Demand (ADD) = 12,500 gpd or 8.68 gpm; and
- Maximum Day Demand (MDD) = 15.27 gpm.



Source: ALDA Engineering Inc.



Not to Scale

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Exhibit 1-6 Proposed Water Facilities

SAN BERNARDINO COUNTY
MOON CAMP RESIDENTIAL SUBDIVISION PROJECT

Based on an estimated average day demand of 12,500 gallons, the annual water demand for the 2011 Alternative Project is estimated at 4.56 million gallons or 14.0 acre-feet per year.

Wastewater Service

The Project site is located within County Service Area 53, Improvement Zone B (CSA 53B) administered by the County of San Bernardino Special Districts Department. The Sewer Feasibility Study indicated that the existing sewer system located adjacent to the project site to the southeast and southwest is capable of handling the wastewater flows from the 2011 Alternative Project.

The Applicant would be responsible for all plumbing and sewer facilities located within the site, including manholes and connection to the CSA 53B system at locations that have been approved by CSA 53B. Exhibit 1-7, Proposed On-site Sewer Facilities, shows the preliminary system. The Applicant would also be responsible for an off-site sewer extension of approximately 1,200 linear feet along North Shore Drive to connect to an existing CSA 53B collector sewer to the southwest of the property. This extension would accommodate the westerly lots; the easterly lots would be served by a gravity sewer extended to the existing CSA 53B Pump Station B to the southeast of the property. Depending upon where some of the houses are built, some lots may require a residential sewage pump station to transport the lot's sewage up to the sewer line in the street adjoining the property. The wastewater conveyance system on-site would be designed to accommodate these conditions and would be subject to review and approval by the County Special District's Engineer. In addition, regional connection fees would be imposed by the Big Bear Area Regional Wastewater Authority (BBARWA).

Roadway Facilities

The 2011 Alternative Project will include a development of roadway facilities to service the project and provide direct access for the residents to SR-38. The 2011 Alternative Project proposes two points of ingress and egress from SR-38 with Street "A" terminating on the east-end of the Project in the cul-de-sac. The 2011 Alternative Project roadway system will consist of standard two-lane roadways with two stop sign-controlled intersections on SR-38 and one intersection interior to the Project. Development of the roadway infrastructure will occur at one time at the initial phase of 2011 Alternative Project development.

**Revised and Recirculated
Draft Environmental Impact Report No. 2
Moon Camp 50-lot Residential Subdivision, TT No. 16136
(Based on the Revised Site Plan)
Big Bear Lake, San Bernardino County, California
SCH No. 2002021105**

APPENDICES

Prepared for:

County of San Bernardino
Advance Planning Division
Land Use Services Department
385 North Arrowhead Avenue
San Bernardino, CA 92415-0182

Contact: Mr. Matthew Slowik, MURP, MPA, Senior Planner

Prepared by:

Prepared by:

Michael Brandman Associates
621 E. Carnegie Drive, Suite 100
San Bernardino, CA 92408
909-884-2255

Contact: Bob Prasse, Branch Manager



Revised: November 9, 2011

APPENDICES

Appendix A: Biological Resources Assessment

- A.1 - Results of Bald Eagle Survey on Tentative Tract 16136 (Bontera Consulting, 2002)
- A.2 - Bald Eagle Count in Area (U.S. Fish and Wildlife Service, 2009)
- A.3 - Focused Flying Squirrel Trapping Report (Michael Brandman Associates, 2007)
- A.4 - Southwestern Willow Flycatcher Focused Survey Report (Michael Brandman Associates, August 2007)
- A.5 - Peer Review of Existing Biological Documents (Michael Brandman Associates, January 2007)
- A.6 - Peer Review of Existing Biological Documents (Michael Brandman Associates, February 2007)
- A.7 - Draft Vegetation and Special Status Plants Survey (Scott White Biological Consulting, August 2007)
- A.8 - Revised Vegetation and Special Status Plants Survey (Scott White Biological Consulting, February 2009)
- A.9 - Supplemental Focused Rare Plant Survey (Tim Krantz, June 2008)
- A.10 - Southern Rubber Boa Letter Report (Glen Stewart, February 2007)
- A.11 - Revised Supplemental Focused Special Status Plant Species Survey (Timothy Krantz, August 2010)

Appendix B: Water Feasibility Studies

- B.1 - Recommended Alternative for DWP (Alda Engineering Inc., February 2011)
- B.2 - Water Feasibility Study (Alda Engineering Inc., March 2007)

Appendix B: Water Feasibility Studies

**B.1 - Recommended Alternative for DWP
(Alda Engineering Inc., February 2011)**

ALDA Engineering Inc.

5928 Vineyard Avenue
Alta Loma, CA 91701
Tel: (909) 587-9916
Fax: (909) 498-0423

February 7, 2011

Bill La Haye, Water Resources Manager
Big Bear Lake Department of Water & Power
41972 Garstin Drive
Big Bear Lake, CA 92315

Subject: **Moon Camp Development Project – Tentative Tract 16136
Recommended Alternative to Provide Water Service**

Dear Mr. La Haye:

The purpose of this letter is to document the recommended alternative to serve the proposed Moon Camp Development Project in the Fawnskin area. Initially, two alternatives to serve this development were documented in our March 2007 Feasibility Study. Both alternatives considered serving the development off the Upper Fawnskin pressure zone and differ from each other on the alignment of recommended transmission facilities and the size of pumping units.

The recommended alternative (Alternative “B”) consists of serving the proposed development by gravity off the existing Racoon Reservoir. Initially, this alternative included the replacement of two undersized pipeline segments that were built along property lines; thus requiring a construction and operations easement. Since the recommended alternative was initially configured, it has been determined that construction along one of these segments will be extremely difficult due to the steepness of the terrain; hence new alignment had to be selected along Ridge Road. Figure 1 illustrates the revised alignment for the recommended alternative; facility requirements to implement this alternative are listed below.

- 900 ft of 12-inch pipeline along Ridge Road from the intersection of Racoon Drive south to tie to an existing 8-inch PVC pipeline on a private easement.
- 200 ft of 12-inch pipeline along private easement to connect Fawnskin Drive and Canyon Road
- 650 ft of 12-inch pipeline along Canyon Road to Chinook Road
- 600 ft of 12-inch pipeline along Chinook Road to Flicker Road
- 500 ft of 12-inch pipeline along Flicker Road to Mesquite Drive
- 400 ft of 12-inch pipeline along Mesquite Road to North Shore Drive
- 250 ft of 12-inch pipeline along North Shore Drive to development westerly boundary

ALDA Engineering Inc.

Mr. Bill La Haye, Water Resources Manager
February 7, 2011
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- Refurbishing existing Cline Miller pump station to augment pumping capacity to approximately 300 gpm
- 50 KW on-site emergency generator at the Cline Miller Reservoir

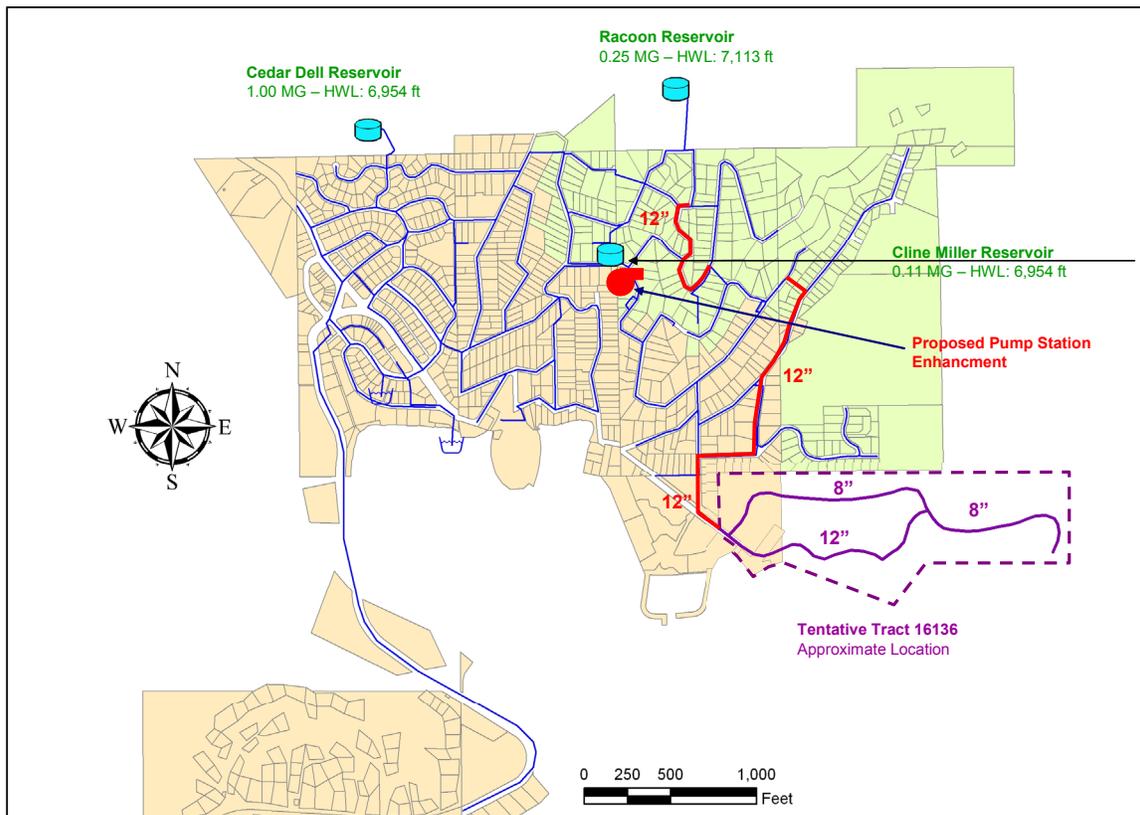


Figure 1
Recommended Facilities to Serve Tentative Tract 16136

Should you have any questions on this matter, please contact us at 909-587-9916 during normal business hours.

Very truly yours

ALDA Engineering Inc.

F. Anibal Blandon, P.E.
Principal

B.2 - Water Feasibility Study
(Alda Engineering Inc., March 2007)

ALDA Engineering Inc.

9996 Orange Street
Alta Loma, CA 91737
Tel: 909-297-3741
Fax: 909-498-0423

March 6, 2007

Mr. Scott Heule, C.E.G./C.H.G., Assistant General Manager
City of Big Bear Lake
Department of Water & Power
41972 Garstin Drive
Big Bear Lake, CA 92315

Subject: **Final Feasibility Study to Serve the Proposed Moon Camp Residential Development** (Tentative Tract No. 16136)

Dear Mr. Heule:

Pursuant to your request, ALDA Engineering Inc. (ALDA) has conducted a feasibility study to determine the necessary system facilities to serve the above referenced development. This report summarizes the results of our investigation and recommendations. This report presents the project background, an assessment of demand and supply issues, the results of the system analysis, and the recommended improvements.

Project Background

The proposed Moon Camp development consists of 50 residential lots to be developed over approximately 62 acres of land. The proposed development is located along North Shore Drive, in the community of Fawnskin on the north side of Big Bear Lake, and ranges in elevation from approximately 6,750 ft. near the lake to approximately 6,950 ft. in the northeasterly quadrant. Individual lots range in size from approximately half an acre to well over two acres depending on location and are anticipated to be developed as single family residential units; average lot size is approximately one and a quarter acres. Because of its location and lot size, some of the residential units are anticipated to be fairly large and potentially exceed 4,000 square feet in size.

Water service to the proposed development will be provided off the Upper Fawnskin pressure zone as the Lower Fawnskin zone would not provide enough static head to provide the development adequate fire flow. DWP's closest pipeline off the Upper Fawnskin system is a single 6-inch diameter pipeline located near the intersection of Flicker Road and Chinook Road, approximately 2,000 ft away from the westerly boundary of the proposed development. Significant transmission improvements in the Fawnskin system are needed to provide fire flow to the proposed tract.

Mr. Scott Heule, C.E.G./C.H.G., Assistant General Manager
March 6, 2007
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Currently, there are two groundwater production wells within the proposed residential tract. These wells are located in subarea A of the North Shore hydrologic subunit. It is our understanding that these wells will be deeded to the DWP at the time the tract map is recorded. The developer plans to equip the FP-2 well initially to meet the development projected water demands. The DWP will use excess capacity from this well to help reduce reliance on the leased North Shore Well No. 1. Groundwater production capacity from this well is estimated at approximately 100 gallons per minute. The second well (FP-3), located to the east of the FP-2 well, will not be initially equipped by DWP.

Pressure Zone Service Area

Based on the elevation range of the proposed development, 6,750 ft. to 6,950 ft., the development can be served off the Upper Fawnskin pressure zone. This pressure zone has an operating hydraulic grade of 7,113 ft. set by the high water level of the existing 0.25-million gallon Racoon Reservoir. Based on this hydraulic elevation, static pressures would range from a low of 71 psi at the highest point in Lot 18 to 157 psi near the lake. Individual pressure regulators would be required for all lots with static pressures exceeding 80 psi.

Water supply in the Fawnskin area is provided by two groundwater wells in the Lower Fawnskin pressure zone and by slant wells in the vicinity of the Racoon Reservoir. Excess groundwater production from the Lower Fawnskin pressure zone is conveyed to the Upper Fawnskin pressure zone through a booster station located at the Cline Miller Reservoir.

Water Demand

Projected water demand for the proposed development is based on the average consumption rate of 250 gallons per day per connection. Maximum day demand is estimated based on information provided in the recently completed water master plan and it is equivalent to 1.76 times the average day demand. Therefore, the average and maximum day demands for the proposed 50-lot subdivision are estimated as follows:

- Average Day Demand (ADD) = 12,500 gpd or 8.68 gpm
- Maximum Day Demand (MDD) = 15.27 gpm

Based on an estimated average day demand of 12,500 gallons, the annual water demand for the development is estimated at 4.56 million gallons or 14.00 ac-ft per year.

Mr. Scott Heule, C.E.G./C.H.G., Assistant General Manager
March 6, 2007
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Water Supply

Water supply sources for this development must meet projected maximum day demands during the summer as well as annual demands. The existing on-site FP-2 well, when equipped by the developer, would be capable of meeting the projected maximum day demand for the proposed Tract 16136.

To meet the projected annual demand, the developer would have to participate in the Water Demand Offset Plan currently being implemented by DWP. This plan requires that any development that creates new lots must pay for the necessary facilities to reduce water demand somewhere else in the service area. The demand to be reduced is equivalent to one half of the average water demand for residential parcels in the service area, estimated at 250 gallons per day, for each new lot developed. Therefore, in the case of the proposed tract, a demand equivalent to 6,250 gallons per day (50 EDUs times 250 gallons per day per EDU times 50 percent) would need to be offset.

Fire Flow Requirements

Fire flow protection in the Fawnskin area is provided by the County of San Bernardino Fire Department. Information obtained from the Office of the Fire Marshall for the county indicates the following fire flow requirements for residential structures in the Fawnskin area:

- Structures less than 3,600 ft² - 1,000 gpm @ 20 psi with a two-hour duration
- Structures between 3,601 to 4,800 ft² - 1,750 gpm @ 20 psi with a two-hour duration
- Structures between 4,801 to 6,200 ft² - 2,000 gpm @ 20 psi with a two-hour duration

Additional information provided by the Office of the Fire Marshall indicates that fire flow requirements could be lowered if fire sprinklers are installed; however, actual requirements are determined individually based on the construction plans for individual residences.

For the purpose of this analysis and based on discussions held with DWP staff, a fire flow of 1,750 gpm @ 20 psi with a two-hour duration was used to size transmission, pumping, and storage facilities that would be needed to serve the proposed development.

Storage Requirements

Storage capacity for this development was sized to meet the operational, emergency and fire flow storage requirements. Operational storage is used to meet the hourly fluctuations in demand during maximum day conditions and has been established as 30 percent of maximum day. Emergency storage is used to meet demands during a power outage or other emergency situation when supply sources and boosting pumps may not be available; DWP requirements for emergency storage are equivalent to one day of maximum day demand.

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Fire flow storage is equal to the fire flow capacity (1,750 gpm) times its duration (two-hours). Storage requirements for the proposed development are as follows:

- Operational Storage = 30% of MDD (15.27 gpm): 6,600 gallons
 - Emergency Storage = 100% of MDD (15.27 gpm): 22,000 gallons
 - Fire Flow Storage for 1,750 gpm (based on 120 min): 210,000 gallons
- Total storage requirement for indoor use: 238,600 gallons

According to the recently completed water master plan, DWP has sized its storage facilities to provide a maximum fire flow of 1,500 gpm with a two-hour duration for residential development. Additional storage to provide incremental fire flow requirements would be the responsibility of individual developers in each of the pressure zones impacted. In the case of Tract 16136, the incremental fire flow of 250 gpm (1,750 gpm – 1,500 gpm) results in an additional storage requirement of 30,000 gallons. Storage requirements for operational and emergency storage are provided by the DWP as part of the meter connection charges.

Existing storage facilities in the Upper Fawnskin pressure zone consist of a single 0.25 million gallon reservoir that is fed by a combination of slant wells, located in the vicinity of the reservoir site, and the Cline Miller booster station that supplies water from the Lower Fawnskin pressure zone. The existing reservoir capacity is adequately sized to meet current storage requirements of existing users while providing fire flow protection for a flow rate of 1,500 gpm over a two-hour duration. Current storage requirements in this zone are estimated at approximately 225,000 gallons; this value is approximately 10 percent below existing storage capacity.

An additional storage of 30,000 gallons would be required in the Upper Fawnskin pressure zone to supply the recommended 1,750 gpm fire flow over a two-hour duration. This additional storage could be provided by either constructing a second reservoir adjacent to the existing Racoon Reservoir or conveying surplus storage capacity in the Lower Fawnskin pressure zone through the existing Cline Miller booster station. This booster station consists of two booster units with a combined capacity of approximately 190 gpm. To make surplus storage from the Lower Fawnskin pressure zone available during power outages, a backup generator at the Cline Miller booster station would be needed. In addition, the capacity of the existing booster station would need to be increased to pump 303 gpm. This flow rate represents a combination of a) estimated maximum day demand at full development in the Upper Fawnskin pressure zone of 38 gpm, b) estimated maximum day demand of 15 gpm from tract 16136, and c) 250 gpm of incremental fire flow into the Upper pressure zone.

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Alternatives to Serve Proposed Tract 16136

Under average and peak summer demands, the proposed development could be served by simply extending existing facilities in the Upper Fawnskin pressure zone. The closest facility in this pressure zone that the development can be connected to consist of a 6-inch pipeline in the vicinity of Flicker Road and Chinook Road. However, existing distribution facilities would not be able to provide the required fire flow capacity needed to protect future residential development in the area. Existing system facilities consist of pipelines ranging in size from 2 to 8 inches in diameter with limited fire flow carrying capacity.

To provide the fire flow requirements indicated by the Office of the Fire Marshall, transmission improvements will be required in the Upper Fawnskin pressure zone. Two alternatives were evaluated to serve the proposed development; a brief description of these alternatives and the required facilities is presented below. Figure 1 illustrates the alignment of proposed transmission facilities for each alternative and the recommended pipelines within the proposed residential tract.

Facilities Common to Both Alternatives. Transmission facilities south of the intersection of Flicker Road and Mesquite Drive to the westerly boundary of the proposed tract are common to both alternatives and consist of approximately 700 ft of 12-inch diameter pipeline. The alignment of this pipeline is shown in Figure 1.

Alternative A. This alternative consists of serving the proposed tract by constructing a dedicated 12-inch transmission pipeline from the vicinity of the Cline Miller Reservoir to the proposed development site. This alternative would also require the construction of a fire booster station at the Cline Miller Reservoir site to augment the capacity of the existing booster units as they are not adequate to provide the recommended fire flow capacity into the Upper Fawnskin pressure zone. To assure that the fire booster unit is operational during power outages, the installation of a 200 kilowatt on-site electric generator is recommended.

The alignment of the recommended transmission pipeline between the Cline Miller Reservoir and the intersection of Flicker Road and Mesquite Drive is depicted in Figure 1. The estimated length of this pipeline is approximately 2,450 ft.

Alternative B. This alternative consists of serving the proposed development by gravity off the existing Racoon Reservoir. Transmission improvements in the Upper Fawnskin pressure zone would be required as existing distribution facilities have limited fire flow carrying capacity; they consist primarily of small pipelines ranging in size from 2 to 8 inches in diameter. Recommended improvements consist of a series of 12-inch segments between the reservoir site and the intersection of Flicker Road and Mesquite Drive as illustrated in Figure 1. The estimated combined length of proposed facilities is approximately 2,800 ft.

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 March 6, 2007
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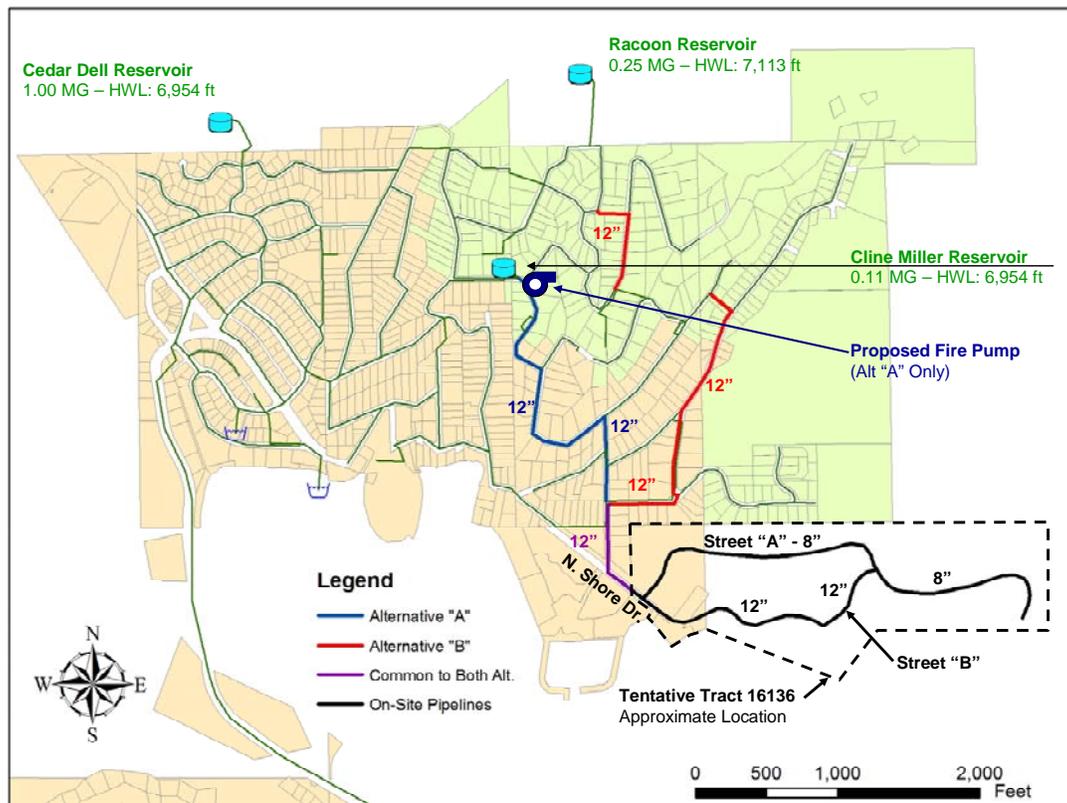


Figure 1
 Tentative Tract 16136 - Recommended Facilities Both Alternatives

Alternative "B" would not require the construction of a fire pump at the Cline Miller Reservoir to pump from the Lower to the Upper Fawnskin pressure zone as the majority of the fire flow would be provided by gravity off the existing Raccoon Reservoir. However, the existing Cline Miller booster station would have to be refurbished to increase its capacity to convey surplus storage from the Lower Fawnskin pressure zone during a fire flow event. The capacity of this booster station would be increased from its current capacity of 190 gpm to 303 gpm. In addition, an on-site generator would be required to operate the station during power outages. The enhancement of this booster station would eliminate the need to construct additional storage facilities in USFS lands, which are difficult to obtain approval for.

On-Site Facilities. The sizing of pipelines within the proposed tract is the same for both alternatives. Recommended pipeline diameters for the various street segments shown in Figure 1 are described as follows:

Mr. Scott Heule, C.E.G./C.H.G., Assistant General Manager
 March 6, 2007
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- North Shore Dr. from tract boundary to Street "A": 150 ft of 12-inch pipeline
- North Shore Dr. from Street "A" to Street "B": 1,600 ft of 12-inch pipeline
- Street "B" from North Shore Dr. to Street "A": 700 ft of 12-inch pipeline
- Street "A" from North Shore Dr. to Street "B": 2,000 ft of 8-inch pipeline
- Street "A" from Street "B" to end of Cul-de-sac: 1,500 ft of 8-inch pipeline

Estimated Cost of Improvements

The capital cost of proposed improvements was based on construction information provided by DWP and from other construction cost information available. The estimated cost of construction for pipelines is estimated at \$15 per diameter inch; the cost for pump stations is estimated at \$2,500 per horsepower. Construction contingencies are estimated at 20 percent while engineering cost is estimated at 15 percent.

It should be noted that estimated capital cost of proposed improvements shown here is for planning purposes only; actual cost of improvements may vary significantly depending on materials and labor cost at the time of construction.

Alternative "A" – Dedicated line from the Cline Miller Reservoir

■ 2,450 ft of 12-inch diameter off-site pipeline	\$ 440,000
■ 700 ft of 12-inch diameter off-site – Common to both Alt.	\$ 130,000
■ 175 Hp Cline Miller booster fire pump	\$ 440,000
■ 200 KW on-site emergency generator ⁽¹⁾	<u>\$ 65,000</u>
Sub-total:	\$ 1,075,000
Contingency during construction – 20 percent	\$ 215,000
Engineering, administration, inspection – 15 percent	<u>\$ 165,000</u>
Overall construction cost for off-site improvements	\$ 1,455,000

(1) Capital cost estimate includes cost of generator and transfer switch.

ALDA Engineering Inc.

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Alternative “B” – Gravity flow from the Racoon Reservoir

■ 2,800 ft of 12-inch diameter off-site pipeline	\$ 505,000
■ 700 ft of 12-inch diameter off-site – Common to both Alt.	\$ 130,000
■ Refurbishing of existing Cline Miller booster station	\$ 100,000
■ 50 KW on-site emergency generator ⁽¹⁾	<u>\$ 35,000</u>
Sub-total:	\$ 770,000
Contingency during construction – 20 percent	\$ 155,000
Engineering, administration, inspection – 15 percent	<u>\$ 115,000</u>
Overall construction cost for off-site improvements	\$ 1,030,000

(2) Capital cost estimate includes cost of generator and transfer switch.

Recommendations

The implementation of either alternative should provide the proposed development with the necessary facilities to meet the recommended fire flow protection of 1,750 gpm during maximum day demand conditions. However, Alternative “B” is preferred because it also enhances the distribution and fire flow capacity of the existing system in the Upper Fawskin pressure zone. In addition, the implementation of this alternative is approximately 29 percent less expensive than Alternative “A”.

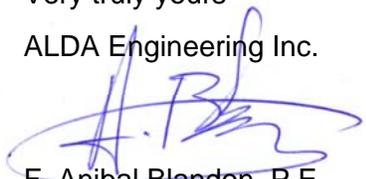
Disclaimer

This feasibility study is based on current system conditions and it is valid for a period of 12 months from the date of this letter. The feasibility of developing the Tract 16136 subdivision may need to be revised and/or reassessed if the project is delayed for a significant period of time. Revisions may result from changes in future water demands, system conditions, and construction cost of recommended facilities.

Should you have any questions, please contact us at 909-587-9916 during normal business hours.

Very truly yours

ALDA Engineering Inc.



F. Anibal Blandon, P.E.
Principal