SMUD
SACRAMENTO MUNICIPAL UTILITY DISTRICT
The Power To Do More.®

P.O. Box 15830, Sacramento, CA 95852-1830; 1-888-742-SMUD (7683)

August 22, 2008

DPG 08-082

AVAILABILITY OF FINAL CEQA SUPPLEMENT TO FERC/USFS FINAL EIS; UPPER AMERICAN RIVER PROJECT (FERC PROJECT NO. 2101-084)

Dear Sir/Madam:

On March 14, 2008, the Federal Energy Regulatory Commission (FERC) and U.S. Forest Service issued a Final Environmental Impact Statement for Hydropower License (Final EIS) evaluating the environmental impacts of SMUD's proposal to obtain a new license for the Upper American River Project (UARP), FERC Project No. 2101. The proposed project consists of the continued operation of seven existing hydroelectric developments – Loon Lake, Robbs Peak, Jones Fork, Union Valley, Jaybird, Camino, and Slab Creek/White Rock – and the construction and operation of a new development – the Iowa Hill Pumped-storage Development, located in El Dorado County near the community of Camino, CA. The Final EIS was prepared in compliance with the National Environmental Policy Act (NEPA) of 1969, as amended.

Pursuant to the California Environmental Quality Act (CEQA) and the CEQA Guidelines, SMUD, as Lead Agency, intends to rely on the Final EIS as the Environmental Impact Report, and has prepared a Final CEQA Supplement to the Final EIS (Supplemental Analysis) to ensure consistency with CEQA. The Final Supplemental Analysis also evaluates the suggested mitigation measures of the Iowa Hill Joint Advisory Committee for the Iowa Hill Development, including potential transportation routes for construction traffic.

The Final Supplemental Analysis identifies potentially significant unavoidable environmental impacts to noise during construction of the Iowa Hill Development. After accounting for mitigation, all other potential impacts have been determined to be less than significant.

SMUD issued a Draft Supplemental Analysis on May 2, 2008 for a 45-day period of public comment. A public meeting was held on June 2, 2008 to provide members of the public an opportunity to submit oral and written comments on the Draft Supplemental Analysis, and the comment period was extended to June 30, 2008. The Final Supplemental Analysis includes responses to comments on environmental issues received from persons who reviewed the Draft Supplemental Analysis.

Copies of the Draft Supplemental Analysis, the Final Supplemental Analysis, and the Final EIS are available for review at SMUD's Relicensing Web site at: http://hydrorelicensing.smud.org and hardcopies at:

- El Dorado County Library, 345 Fair Lane, Placerville
- Sacramento Central Library, 828 I Street, Sacramento
- SMUD Headquarters Office, 6201 S Street, Sacramento

The SMUD Board of Directors will consider certification of the Final Supplemental Analysis for the UARP relicensing at two meetings at which the public may make oral comments. The Board will take no action at the Integrated Resources & Customer Services (IRCS) Committee meeting.

Both public meetings will be held at: SMUD Headquarters Building, 6201 S Street, Sacramento, CA 95817:

SMUD IRCS Committee Meeting	SMUD Board of Directors Meeting
September 3, 2008, 4:30 p.m.	September 4, 2008, 6:00 p.m.
Room: HCC	Room: Auditorium

The next step in the relicensing process is the issuance of a 401 Water Quality Certificate, pursuant to the Clean Water Act. This step is the responsibility of the California State Water Resources Control Board, which will rely of the FERC Final EIS and the Final Supplemental Analysis in its decision-making.

Upon issuance of the Water Quality Certificate, FERC will issue its licensing decision. Once the new license is issued, the SMUD Board of Directors will consider acceptance of the new license (i.e., approve the project).

If you have any questions, please contact me at (916) 732-6703 or dhanson@smud.org.

Sincerely,

David Hanson
Project Manager, Hydro Relicensing

SACRAMENTO MUNICIPAL UTILITY DISTRICT'S UPPER AMERICAN RIVER PROJECT (FERC NO. 2101)

FINAL CEQA SUPPLEMENTAL ANALYSIS TO THE FERC / USFS FINAL ENVIRONMENTAL IMPACT STATEMENT FOR HYDROPOWER LICENSE AND ANALYSIS OF IOWA HILL JOINT ADVISORY COMMITTEE COMMENTS

Prepared by:
CH2M HILL
Sacramento, California

Prepared for:
Sacramento Municipal Utility District
Sacramento, California

August 2008

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

ACRONYMS AND ABBREVIATIONS

ALP	Alternative Licensing Procedures
BLM	Bureau of Land Management
BMP	Best Management Practices
3-D	Three-dimensional
Cal Fire	California Department of Forestry and Fire Protection
CARB	California Air Resources Board
CCR	California Code of Regulations
CDFG	California Department of Fish & Game
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CGS	California Geological Survey
CPRC	California Public Resources Code
dBA	Decibel on the A-weighted Scale
DOC	California Department of Conservation
DPA	State's Direct Protection Area
EDCDOT	El Dorado County Department of Transportation
EDCWA	El Dorado County Water Agency
EID	El Dorado Irrigation District
EIM	Environmental Improvement Measure
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
FERC	Federal Energy Regulation Commission
FWS	U. S. Fish and Wildlife Service
Advisory Committee	Iowa Hill Joint Advisory Committee
LORS	Laws, Ordinances, Regulations and Standards
LOS	Level of Service
MMOU	Master Memorandum of Understanding
MW	Megawatt
MWh	Megawatt-hour
MWH	Montgomery Watson Harza
NEPA	National Environmental Policy Act
NOP	Notice of Preparation
OPR	California Office of Planning and Research
PAL	Project Activity Level
PDEA	Preliminary Draft Environmental Assessment
ROD	Record of Decision
RWQCB	Regional Water Quality Control Board
SD1	Scoping Document 1 and Notice of Preparation
SFAR	South Fork American River
SMUD	Sacramento Municipal Utility District
SRA	State's Responsibility Area

SWRCB	State Water Resources Control Board
TEL	Threshold Effect Level
UARP	Upper American River Project
USBM	U. S. Bureau of Mines
USC	U. S. Code
USEPA	U. S. Environmental Protection Agency
USFS	U. S. Forest Service

1.0 INTRODUCTION

On March 14, 2008, the Federal Energy Regulatory Commission (FERC) and U. S. Forest Service (USFS) issued the Final Environmental Impact Statement for Hydropower License, Upper American River Project, FERC Project No. 2101-084, California, and Chili Bar Hydroelectric Project, FERC Project No. 2155-024, California (Final EIS). The Final EIS (FERC 2008) was prepared in compliance with the National Environmental Policy Act (NEPA) of 1969, as amended.

For the issuance of a new hydropower license for the Upper American River Project (UARP), the Sacramento Municipal Utility District (SMUD), as the project proponent, is the lead agency pursuant to the California Environmental Quality Act (CEQA) of 1970 (as amended), Cal. Pub. Res. Code §§ 21000–21178. When a project requires compliance with both CEQA and NEPA, state and local agencies "shall, whenever possible, use" the EIS rather than preparing an Environmental Impact Report (EIR) if the EIS was prepared before an EIR would otherwise be required, and the EIS complies with the CEQA Guidelines, Cal. Code Regs, tit. 14 §§ 15000–15387. (Cal. Pub. Res. Code §§ 21083.5, 21083.7; CEQA Guidelines § 15221(a).) Because NEPA does not require a separate discussion of mitigation measures or growth-inducing impacts, those points of analysis, if missing from the EIS, must be added or supplemented before the EIS can be used as an EIR. (CEQA Guidelines § 15221(b).) Where the federal agency circulated the EIS in a way that satisfies California requirements for notice and public comment, the CEQA lead agency may use the EIS without recirculation. (Id. § 15225.)

SMUD intends to rely on the Final EIS as the EIR for the relicensing of the UARP. SMUD has prepared this CEQA Supplement to the Final EIS for the FERC relicensing of the UARP (Supplemental Analysis) to accomplish three goals under CEQA: 1) to complete the discussion of mitigation measures relative to the Iowa Hill Pumped-storage Development (Iowa Hill Development) with a focus on the Settlement Agreement for the Upper American River Project; 2) to address the growth-inducing impacts of the project; and 3) to provide the public and interested public agencies with additional information about the potential environmental effects of the proposed action/project due to the completion of additional water quality investigations at Slab Creek Reservoir that were performed at the request of the State Water Resources Control Board (SWRCB). Because FERC and the USFS met the applicable notice and public comment requirements under California law, SMUD is circulating the Supplemental Analysis without re-circulating the EIS.

Separate from its obligations pursuant to CEQA, SMUD has also included a discussion of the Iowa Hill Joint Advisory Committee's (Advisory Committee) comments on the environmental effects of, and suggested mitigation measures for, the Iowa Hill Pumped-storage Development portion of the proposed UARP relicensing. The Advisory Committee's comments were submitted to SMUD on August 29, 2007; they are included as Appendix A.

1.1 Purpose and Need for Action

The purpose and need for action is described in the FERC Final EIS Section 1.0 Purpose and Need for Action.

1.2 Purpose of Action

The purpose of action is described in the FERC Final EIS Section 1.1 Purpose of Action. As lead agency under CEQA, SMUD has developed this Supplemental Analysis to support the decisions of SMUD and the state agencies with discretionary approval over some portion of the project, including the SWRCB (issuance of a Section 401 Water Quality Certification for the project pursuant to the Clean Water Act) and the California Department of Fish and Game (CDFG Streambed Alteration Agreement).

1.3 Need for Power

The need for power is described in the FERC Final EIS Section 1.2 Need for Power.

1.4 Scoping Process

The scoping process is described in the FERC Final EIS Section 1.3.1 (Upper American River Project). Additional details on the scoping process are provided below.

1.4.1 Initial Scoping

In accordance with the licensing process authorized by FERC (the Alternative Licensing Process [ALP]), SMUD initiated the scoping process early in the licensing timeline. A principal goal of the ALP was to develop a single efficient environmental review process that meets the requirements of separate state and federal statutory provisions. As part of the ALP for the UARP, SMUD conducted the NEPA review process in coordination with the CEQA process.

In accordance with the procedures established pursuant to NEPA, CEQA, and the ALP for the UARP, SMUD issued *Scoping Document 1 and Notice of Preparation for the Relicensing of the UARP* (SD1) on August 14, 2003. FERC noticed the availability of SD1 in the Federal Register on August 18, 2003. SD1 provided a brief overview of the relicensing process to date; explained the existing project facilities and operations; described the proposed Iowa Hill Development; identified major issues raised to date; and provided preliminary alternatives.

The purpose of the scoping process was to invite the public and agencies to help SMUD and the collaborative team: 1) identify social and environmental issues associated with the proposed action; 2) identify reasonable alternatives; 3) determine the depth of analysis needed; and 4) identify if and how the project would or would not contribute to cumulative effects. In addition to issuing SD1, SMUD hosted three public meetings: two in Sacramento, CA on September 9 and 10, 2003, and one in Placerville, CA on September 11, 2003. All three meetings were advertised in the Sacramento Bee and the Mountain Democrat newspapers two

weeks in advance of the scoping meetings. A court reporter recorded each of the meetings. Comments on SD1 were accepted until October 13, 2003. Table 1.4.1-1 lists the entities that provided comments on SD1.

Table 1.4.1-1. Comments Received on Scoping Document 1 and Notice of Preparation.

Entity	Date of Communication
Oral Comments	
Tom Heflin, Camino Community Advisory Committee	September 11, 2003
Doug Leisz, El Dorado County Citizens for Water	September 11, 2003
Ray Larsen	September 11, 2003
Written Comments (letters)	
El Dorado County Citizens for Water	September 11, 2003
Camino Community Advisory Committee	September 11, 2003
State Water Resources Control Board	October 2, 2003
USDI National Park Service	October 9, 2003
California Department of Fish and Game	October 10, 2003
USDA Forest Service, Eldorado National Forest	October 10, 2003
Placer County Water Agency	October 10, 2003
El Dorado County Water Agency	October 10, 2003
Taxpayers Association of El Dorado County	October 10, 2003
USDI Bureau of Land Management	October 10, 2003
Pacific Gas and Electric Company	October 10, 2003
Friends of El Dorado County	October 13, 2003
American Whitewater	October 13, 2003
City of Sacramento	October 13, 2003
Written Comments (e-mail)	
Paul Raffaeli	September 10, 2003
Kelsey Schwind	October 6, 2003
Michael Picker	October 7, 2003
Chuck Seidler	October 9, 2003
Dan Crandall	October 9, 2003
Mike and Jude Lee	October 10, 2003
Phillip Samuels	October 10, 2003
Chris Shackleton	October 10, 2003
Justin States	October 13, 2003
Phillip Boudreau	October 14, 2003
Michael Snead	October 14, 2003

SMUD revised SD1 to reflect the written and oral comments and issued *Scoping Document 2 for the relicensing of the UARP* (SD2) on May 24, 2004. The SD2 included a list of the entities that provided comments, and a summary table of issues raised and SMUD's responses. The comments received in response to the SD1 were considered during preparation of the FERC Final EIS and the Supplemental Analysis.

1.4.2 Agency Consultations and Settlement Agreement

The agency consultations and February 2007 Settlement Agreement are described in the FERC Final EIS Section 1.4 Agency Consultation. Subsequent to the agency consultation described in the Final EIS, SMUD conducted further consultation with the SWRCB on water quality issues associated with the Iowa Hill Development. At an April 19, 2007 meeting between SMUD and the SWRCB, SMUD agreed to perform additional investigations requested by the SWRCB in preparation for the 401 Water Quality process for the UARP relicensing. Four investigations were performed during 2007 and 2008, including: 1) a bathymetric survey of Slab Creek Reservoir; 2) an update of the turbidity analysis for the Iowa Hill Development and revision to the 2004 technical report; 3) a mercury bioaccumulation study of fish residing in Slab Creek Reservoir; and 4) a survey of mercury concentrations in sediment deposits within Slab Creek Reservoir. In each case, study plans and reports were developed in consultation with SWRCB and U.S. Geological Survey staff to ensure the investigations generated information needed for the 401 Water Quality Certification process. The results of these additional investigations are assessed in Section 3.3.3.1 of this document.

1.4.3 Iowa Hill Joint Advisory Committee

In late 2005, SMUD and governmental entities within El Dorado County (El Dorado Parties[1]) reached settlement on all issues related to the UARP relicensing, including the Iowa Hill Development. The *El Dorado – SMUD Cooperation Agreement* included a provision for the establishment of an Iowa Hill Joint Advisory Committee (Advisory Committee). As outlined in Section 3.4.2 of the Cooperation Agreement, the basic charge of the Advisory Committee is to receive public input and to develop reasonable and feasible measures to substantially mitigate the impacts of activities related to the construction of the Iowa Hill Pumped-storage Development on the surrounding communities and existing infrastructure (SMUD 2005b). The Advisory Committee is to meet as frequently as necessary throughout the duration of construction of the Iowa Hill Pumped-storage Development. The Advisory Committee considers issues regarding the Iowa Hill Pumped-storage Development and recommends solutions and alternatives for consideration by the SMUD Board of Directors.

SMUD and the El Dorado Parties agreed that it would be beneficial to initiate the Advisory Committee early in the licensing process, before construction plans are finalized, to engage the local community and address its concerns regarding the Iowa Hill Pumped-storage Development. To that end, the Advisory Committee was convened in the spring of 2006.

The Advisory Committee is led by two co-chairs, one from El Dorado County and one from SMUD, and is comprised of seven members: two from El Dorado County, two from SMUD, and one each from the following organizations: Apple Hill Growers' Association, Camino Advisory Committee, and the Iowa Hill Action Committee.

[1] The El Dorado Parties consist of: the County of El Dorado; El Dorado County Water Agency; Georgetown Divide Public Utility District; El Dorado Irrigation District; and El Dorado Water and Power Authority.

The Advisory Committee agreed to develop a set of issues and recommended mitigation measures for SMUD to study as part of the CEQA process. Based upon input from the local community, the Advisory Committee identified five major areas of concern: Visual, Noise, Transportation, Fire Protection, and Socioeconomics. The Advisory Committee then formed subcommittees to address the local citizens' concerns related to each of those issues. From June 2006 through August 2007, a total of 13 Advisory Committee meetings and 15 ad-hoc committee meetings were held. All Advisory Committee meetings have been noticed and are open to the public. A record of all Advisory Committee meetings, correspondence, and documents is available on SMUD's Iowa Hill Web site at: http://hydrorelicensing.smud.org/iowahill.

The results of the Advisory Committee's efforts are presented in matrices[2] which are contained in Appendix A. In the matrices, each comment or suggestion is numbered and described, along with a suggested measure for SMUD to follow to mitigate the potential impact, in most cases. In other cases, the comment or suggestion has been completed by the Advisory Committee or the Advisory Committee determined the measure did not warrant analysis; these comments or suggestions are not analyzed in this document.

SMUD considered the Advisory Committee's recommendations in preparing this Supplemental Analysis. Table 1.4.3-1 summarizes the recommendations and informs the reader where to find the analysis of the recommendation in this document. As shown in Table 1.4.3-1, some mitigation measures developed by the Advisory Committee are not applicable pursuant to CEQA, and are, therefore, not addressed in this document. Nevertheless, these measures are addressed by SMUD in the Analysis of Non-Environmental Measures Recommended by the Iowa Hill Joint Advisory Committee document, which was distributed to the Advisory Committee and interested citizens on May 23, 2008, was reviewed and discussed by the Advisory Committee during its June 2, 2008 meeting, and is available on SMUD's Relicensing Web site at: http://hydrorelicensing.smud.org.

[2] An August 29, 2007 letter to Director Susan Patterson, President, SMUD Board of Directors included the Advisory Committee matrix recommendations to SMUD for analysis in the CEQA process as possible mitigation measures for the Iowa Hill Pumped-storage Development.

Table 1.4.3-1 Summary of Iowa Hill Joint Advisory Committee Measures Recommended for Analysis.		
ADVISORY COMMITTEE ITEM NO.	**MEASURE SUMMARY**	**LOCATION OF ANALYSIS**
Fire Protection		
1, 4, 17a	Interface with fire protection and emergency services to define what they will require of a road for it to be passable for emergency fire evacuation.	This measure is analyzed in the Supplemental Analysis in Sections 3.3.3.3 Transportation and Traffic and 3.3.3.5 Public Health and Safety.
2, 6, 21	Develop an evacuation plan with evacuation routes.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.5 Public Health and Safety.
3	Partner with Fire Safe Council to develop and implement a Camino Community Wildfire Protection Plan.	This measure is not analyzed in the Supplemental Analysis. It is addressed in a SMUD document titled, Analysis of Non-Environmental Measures Recommended by the Iowa Hill Joint Advisory Committee.
3a, 3b	Work with adjacent property owners around the Iowa Hill project to assist in the costs of removing underbrush (ladder effect) to help reduce the risk of fire to the broader area.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.5 Public Health and Safety.
5, 5a	Designate the entire construction project area including ingress and egress roads as a "Non-Smoking Construction Zone" and post applicable signs to this effect.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.5 Public Health and Safety.
7	Do not burn vegetation cleared from the upper or lower construction sites.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.5 Public Health and Safety.
8	Provide a fire observation tower and staff this tower or provide an observation camera throughout the construction period.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.5 Public Health and Safety.
9	Build a water storage facility at the project site that would serve fire response personnel in combating a construction-related fire.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.5 Public Health and Safety.
10	Provide the necessary financial resources to fire responders to ensure rapid air support to the Iowa Hill Project area including consideration for a fire fighting helicopter stationed in close proximity to the project area.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.5 Public Health and Safety.
11, 12	Ensure a minimum of $l billion (2 times the estimated project cost) is immediately available for mitigation of the effects of one or more fires resulting from construction of the Iowa Hill Project.	This measure is not analyzed in the Supplemental Analysis. It is addressed in a SMUD document titled, Analysis of Non-Environmental Measures Recommended by the Iowa Hill Joint Advisory Committee.
13	Suspend all Iowa Hill Project construction-related activities during seasonal peak fire danger periods (based on specific criteria) and totally during any drought years.	This comment is analyzed in the Supplemental Analysis in Section 3.3.3.5 Public Health and Safety.

Table 1.4.3-1 Summary of Iowa Hill Joint Advisory Committee Measures Recommended for Analysis.		
ADVISORY COMMITTEE ITEM NO.	**MEASURE SUMMARY**	**LOCATION OF ANALYSIS**
14	SMUD carry insurance coverage for diminution of aesthetic value (e.g., timber stand [not stumpage value], landscape, view-shed).	This measure is not analyzed in the Supplemental Analysis. It is addressed in a SMUD document titled, Analysis of Non-Environmental Measures Recommended by the Iowa Hill Joint Advisory Committee.
14a, 14b	Provide compensation for visual impacts from project-induced fire other than the socioeconomic fund.	This measure is not analyzed in the Supplemental Analysis. It is addressed in a SMUD document titled, Analysis of Non-Environmental Measures Recommended by the Iowa Hill Joint Advisory Committee.
15	Initiate immediate fuels management mitigation in the project area.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.5 Public Health and Safety.
16	Fund a SMUD-independent fire prevention officer (with required vehicle and equipment), with law enforcement authority on both public and private lands to enforce a Fire Protection Plan.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.5 Public Health and Safety.
17, 22	Develop a Fire Protection Plan prior to construction initiation that is reviewed and approved by California Department of Forestry & Fire Protection, USFS, and local county fire officials.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.5 Public Health and Safety.
18, 19	Identify a central point of contact for submitting all claims/concerns related to construction.	This measure is not analyzed in the Supplemental Analysis. It is addressed in a SMUD document titled, Analysis of Non-Environmental Measures Recommended by the Iowa Hill Joint Advisory Committee.
20	Provide fire safety awareness/orientation for all workers at the Project site.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.5 Public Health and Safety.
23	Provide compensation to residents when an "act of God" starts a fire, such as a project-related helicopter crash due to a random thermal wind gust.	This measure is not analyzed in the Supplemental Analysis. It is addressed in a SMUD document titled, Analysis of Non-Environmental Measures Recommended by the Iowa Hill Joint Advisory Committee.
24	Extend fire water service lines with hydrants on a portion of Cable Road that will be used for construction access to provide protection for all homes on the route.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.5 Public Health and Safety.
Noise		
1, 2, 7	Establish a noise hotline and assign a person to investigate and resolve noise complaints as well as inform public of noisy activities.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.4 Noise.
3, 8, 9, 21, 32, 33	Schedule noisy construction, such as blasting, during the hours of 7:00AM to 7:00PM, Monday thru Friday. Treat holidays, special events and weekends separately from the work week.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.4 Noise.

Table 1.4.3-1 Summary of Iowa Hill Joint Advisory Committee Measures Recommended for Analysis.		
ADVISORY COMMITTEE ITEM NO.	**MEASURE SUMMARY**	**LOCATION OF ANALYSIS**
4, 34, 37, 42	Monitor blasting, using noise and seismic reading equipment at a few locations during construction and pre-construction activities and consider muffling blasting noise with blast curtains, backfill, or other techniques.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.4 Noise.
5	Conduct pre-construction environmental surveys and establish buffers as necessary.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.4 Noise.
6, 6a, 41	Ensure project operation noise levels do not exceed 35 dBA at the nearest residence.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.4 Noise.
7, 20	Limit noise associated with transportation on North Canyon Road and in Camino by limiting vehicle speed on Cable Road, using shuttle buses or vans, properly maintaining equipment, limiting idling, and limiting heavy trucks to 7:00AM to 7:00PM.	This measure is addressed in the Supplemental Analysis in Section 3.3.3.4 Noise.
7, 11, 25, 26, 45	Develop a public communication policy that: 1) provides notice for noisy activities within 0.5 mile of the project boundary; 2) communicate potential noise impact to community; and 3) reporting all regulatory agencies as required, with periodic status report to EDC Board of Supervisors and posting on web site.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.4 Noise.
13	End work day before 7:00 PM because traffic will continue well beyond that time due to workers going home.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.4 Noise.
22, 23, 27, 35, 36	Monitor noise compliance during all construction operations at designated monitoring points and consider: 1) financial penalties as required by agencies with jurisdiction; 2) halting construction operations not in compliance for 1 to 2 weeks until compliant; and 3) preparing construction contracts that include accountability for noise compliance.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.4 Noise.
29, 31, 38	Address noise levels associated with other projects: 1) obtain noise level reference for Camino Mill as comparison data for Iowa Hill operating noise levels; 2) provide a field trip to Loon Lake Powerhouse to learn about its noise levels. Provide a video for public viewing of blasting techniques that will be similar to that used for Iowa Hill.	These measures are not analyzed in the Supplemental Analysis. They are addressed in a SMUD document titled, Analysis of Non-Environmental Measures Recommended by the Iowa Hill Joint Advisory Committee.
43	Provide written confirmation of commitment to abide by the El Dorado County General Plan Noise Element.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.4 Noise.

Table 1.4.3-1 Summary of Iowa Hill Joint Advisory Committee Measures Recommended for Analysis.		
ADVISORY COMMITTEE ITEM NO.	**MEASURE SUMMARY**	**LOCATION OF ANALYSIS**
46	Hire geotechnical consultant to meet with residents to discuss impacts to underground water and wells.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.1 Water Quality.
47	Address noise impacts if chipping is used to clear brush/timber.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.4 Noise.
Socioeconomics		
1, 3, 12	Perform pre-construction ground water surveys and monitor seismic activity during construction. Rectify any residential loss of well water associated with the Iowa Hill Development construction.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.1 Water Quality.
2, 4, 13, 24, 39, 42, 44, 45	Concerns regarding the methodology for the socioeconomic assessment contained in the EDC-SMUD Cooperation Agreement, including: 1) determination of the potential realized financial loss from an aesthetic impact; 2) the mitigation fund payment cap and payment recipient; 3) using up-to-date data; 4) considering both non-agriculture and agriculture economic considerations; and 5) revising the methodology to improve compensation arrangements for property owners and businesses.	These measures are not analyzed in the Supplemental Analysis. They are addressed in a SMUD document titled, Analysis of Non-Environmental Measures Recommended by the Iowa Hill Joint Advisory Committee.
5, 6, 8	Provide annual compensation to potentially affected property owners during construction.	This measure is not analyzed in the Supplemental Analysis. It is addressed in a SMUD document titled, Analysis of Non-Environmental Measures Recommended by the Iowa Hill Joint Advisory Committee.
7, 29	Provide one-time payment to property owners who have visual impacts from the Iowa Hill Development.	This measure is not analyzed in the Supplemental Analysis. It is addressed in a SMUD document titled, Analysis of Non-Environmental Measures Recommended by the Iowa Hill Joint Advisory Committee.
9	Provide monthly payment for road repair related to construction.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.3 Transportation and Traffic.
10	SMUD to require all contractors and subcontractors for the Iowa Hill Project carry $500 million in liability insurance.	This measure is not analyzed in the Supplemental Analysis. It is addressed in a SMUD document titled, Analysis of Non-Environmental Measures Recommended by the Iowa Hill Joint Advisory Committee.
11, 31	Reserve $1B for immediate response after a major event associated with the Iowa Hill Development. Carry $100M bond to cover damages during construction.	This measure is not analyzed in the Supplemental Analysis. It is addressed in a SMUD document titled, Analysis of Non-Environmental Measures Recommended by the Iowa Hill Joint Advisory Committee.
16	Fund brush clearing at individuals' residences and businesses in coordination with the El Dorado County Fire-Safe Council.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.5 Public Health and Safety.

Table 1.4.3-1 Summary of Iowa Hill Joint Advisory Committee Measures Recommended for Analysis.		
ADVISORY COMMITTEE ITEM NO.	**MEASURE SUMMARY**	**LOCATION OF ANALYSIS**
17	Explore the possibility of using the green wastes from the Project in an alternative energy facility to benefit the area.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.2 Aesthetic Resources.
18, 27, 33, 35, 40, 41	Provide assistance to the community of Camino, including establishing: 1) hiking/biking trails and crosswalks; 2) parks; 3) community center; 4) Boys & Girls Club; and 5) if transportation route 11 (through the golf course) is used, donate the land to local community after construction.	These measures are not analyzed in the Supplemental Analysis. They are addressed in a SMUD document titled, Analysis of Non-Environmental Measures Recommended by the Iowa Hill Joint Advisory Committee.
19	Work with El Dorado High School to develop natural resources curriculum.	This measure is not analyzed in the Supplemental Analysis. It is addressed in a SMUD document titled, Analysis of Non-Environmental Measures Recommended by the Iowa Hill Joint Advisory Committee.
20, 21, 22	Work with Apple Hill businesses to proactively develop communication strategies, media coordination, and marketing assistance during project construction.	This measure is not analyzed in the Supplemental Analysis. It is addressed in a SMUD document titled, Analysis of Non-Environmental Measures Recommended by the Iowa Hill Joint Advisory Committee.
23	Expand shuttle operations during Apple Hill's apple-selling season.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.3 Transportation and Traffic.
25	Hire local workers and buy local wares/services during construction phase of the Project.	This measure is not analyzed in the Supplemental Analysis. It is addressed in a SMUD document titled, Analysis of Non-Environmental Measures Recommended by the Iowa Hill Joint Advisory Committee.
26	Partnering with local Apple Hill community to develop an Information Center that would benefit both the Iowa Hill Project and the local community.	This measure is not analyzed in the Supplemental Analysis. It is addressed in a SMUD document titled, Analysis of Non-Environmental Measures Recommended by the Iowa Hill Joint Advisory Committee.
28	Study the use of alternative energy vehicles to be driven during the construction phase of the Project, including construction of alternative fueling station.	This measure is not analyzed in the Supplemental Analysis. It is addressed in a SMUD document titled, Analysis of Non-Environmental Measures Recommended by the Iowa Hill Joint Advisory Committee.
30	All legal costs of a successful lawsuit by an individual or group against SMUD, or any of its contractors to recover damages will be borne by SMUD.	This measure is not analyzed in the Supplemental Analysis. It is addressed in a SMUD document titled, Analysis of Non-Environmental Measures Recommended by the Iowa Hill Joint Advisory Committee.
32	Establish permanent fire hydrant protection around the perimeter of all housing that is directly adjacent (first line of defense) to the Iowa Hill Development or on the access/egress route.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.5 Public Health and Safety.
34, 37	Improve and use Copperton Road to reduce traffic on Cable Road.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.3 Transportation and Traffic.

Table 1.4.3-1 Summary of Iowa Hill Joint Advisory Committee Measures Recommended for Analysis.		
ADVISORY COMMITTEE ITEM NO.	**MEASURE SUMMARY**	**LOCATION OF ANALYSIS**
36	Hold annual or semi-annual meetings with the citizens of Mosquito and Camino for the life of the Iowa Hill Project - especially during and after construction for the purposes of communication and mitigation.	This measure is not analyzed in the Supplemental Analysis. It is addressed in a SMUD document titled, Analysis of Non-Environmental Measures Recommended by the Iowa Hill Joint Advisory Committee.
38	Curtail construction during the "Apple Hill" season, mainly October, to avoid impacts on tourism. It would also help reduce the risk of fires in the driest part of the year.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.5 Public Health and Safety.
43	Assess the number of water trucks moving from the lower to upper project sites, potentially having to pass through much of the Camino community en route.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.3 Transportation and Traffic.
Transportation		
2, 2a, 13, 13a, 29, 35, 36, 65, 66, 67, 81, 81a, 86, 109, 110	Minimize or avoid conflicts between construction traffic and: 1) peak morning and afternoon traffic; 2) school bus traffic; 3) Apple Hill traffic (weekends); 4) bus charters; 5) educational tours; 6) walking and bicycling activities; and 7) El Dorado transit. Need to consider daylight savings time and national and religious holidays. Prohibit weekend work. Build bicycling/walking lanes. Consider the Advisory Committee Transit Matrix as a mitigation measure.	These measures are analyzed in the Supplemental Analysis in Section 3.3.3.3 Transportation and Traffic.
3, 6, 18, 27, 57, 58, 59, 95	Establish offsite queuing areas for construction personnel and materials and equipment parking and deliveries. Consider potential park-and-ride/staging areas identified in Advisory Committee Transit Matrix.	These measures are analyzed in the Supplemental Analysis in Section 3.3.3.3 Transportation and Traffic.
4, 4a	Establish van pools and car pools to minimize trips from offsite queuing area to construction site during times specified in the Advisory Committee Transit Matrix.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.3 Transportation and Traffic.
5	All temporary construction signage to comply with applicable standards.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.3 Transportation and Traffic.
9, 9a, 9b, 17	Repair roads to pre-construction condition throughout the construction period. Video routes to determine pre-construction	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.3 Transportation and Traffic.

Table 1.4.3-1 Summary of Iowa Hill Joint Advisory Committee Measures Recommended for Analysis.		
ADVISORY COMMITTEE ITEM NO.	**MEASURE SUMMARY**	**LOCATION OF ANALYSIS**
	condition and post construction condition; provide funding, develop a plan and maintenance schedule for repairs to routes. Apply for all required El Dorado County and CalTrans permits and implement required mitigation.	
10, 22, 28, 33, 38, 39, 42, 47-53, 60, 69, 71, 83-85, 100-108	Use one or more alternative traffic routes to the upper and lower construction sites identified in the Advisory Committee Transit Matrix. Study construction of a new road to access the upper construction site from the lower construction site. Prohibit routes that involve left turns across U.S. Highway 50 oncoming traffic. Consider existing traffic conditions in downtown Camino in selection of transportation routes.	These measures are analyzed in the Supplemental Analysis in Section 3.3.3.3 Transportation and Traffic.
12	Develop a better estimate for the number of trucks and trips on Hwy 50 through Placerville.	This measure is not analyzed in the Supplemental Analysis. It is addressed in a SMUD document titled, Analysis of Non-Environmental Measures Recommended by the Iowa Hill Joint Advisory Committee.
15, 25, 49, 99	Evaluate the use of existing grade-separate on- and off-ramps along US Highway 50, or build a new underpass or interchange for project-related traffic as defined in the Advisory Committee Transit Matrix.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.3 Transportation and Traffic.
16, 91	Transport explosives safely and notify residents when explosives are transported to site.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.3 Transportation and Traffic.
19, 20, 20a, 41	Require construction traffic to follow designated construction vehicle routes and adhere to traffic regulations including speeding.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.3 Transportation and Traffic.
23, 23a, 23b, 23c	Recognize federal, state and local transportation-related requirements for land use, fire protection, and traffic, including obtaining all necessary permits for use of El Dorado County roads such as Cable Road, if required.	This measure is analyzed in the Supplemental Analysis in Sections 3.3.3.3 Transportation and Traffic and 3.3.3.5 Public Health and Safety.
24a, 24b, 24c, 24d	Minimize cutting of trees or tree limbs along roadways, including exiting roads to be widened or new roads to be built.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.3 Transportation and Traffic.
32	Plow roads used to access construction sites.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.3 Transportation and Traffic.
34, 45, 94	Notify local jurisdictions of CEQA process and potential transportation routes being considered, including: 1) Mayor and Placerville City Council; and 2) El Dorado County Planning	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.3 Transportation and Traffic.

Table 1.4.3-1 Summary of Iowa Hill Joint Advisory Committee Measures Recommended for Analysis.		
ADVISORY COMMITTEE ITEM NO.	**MEASURE SUMMARY**	**LOCATION OF ANALYSIS**
	Department and Transportation Department; 3) all applicable school districts; and 4) California Department of Forestry and Fire Protection, and local fire districts.	
43, 45, 70, 73, 74, 79	Ensure all roadway beds are designed to carry the weight and size of construction traffic. Widen and improve roads, if necessary.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.3 Transportation and Traffic.
55	Improve access road from Slab Creek Dam to the Powerhouse Tunnel Portal.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.3 Transportation and Traffic.
56	Construct buildings at staging area with potential of designating building(s) to community for use after construction.	This measure is not analyzed in the Supplemental Analysis. It is addressed in a SMUD document titled, Analysis of Non-Environmental Measures Recommended by the Iowa Hill Joint Advisory Committee.
63	Require workers to live onsite or in nearby existing housing to minimize commuter traffic.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.3 Transportation and Traffic.
68, 68a	Conduct jurisdictional review of Slab Creek Road to establish road security.	This measure is not analyzed in the Supplemental Analysis. It is addressed in a SMUD document titled, Analysis of Non-Environmental Measures Recommended by the Iowa Hill Joint Advisory Committee.
75, 97, 113	Ensure that all vehicles needed for construction should comply with California air quality standards. Control dust along Slab Creek Road.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.3 Transportation and Traffic.
77, 77a	Place litter bags in all vans and vehicles traveling to the construction sites.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.3 Transportation and Traffic.
78, 78a	Ban smoking in vehicles en route to the construction area, and no smoking in the construction area.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.3 Transportation and Traffic and 3.3.3.5 Public Health and Safety.
80, 80a	Provide "Sharing the Road" training for both community members and for SMUD employees.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.5 Public Health and Safety.
88	Ban use of JAKE brakes as part of contract with construction contractor.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.4 Noise.
92	Analyze Cable Road with respect to width (narrowness).	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.3 Transportation and Traffic.
111	Integrate any El Dorado County capital improvement projects for county roads into selection of routes to the construction sites.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.3 Transportation and Traffic.
112	Integrate accident information into the selection of routes to the	This measure is analyzed in the Supplemental Analysis in Section

Table 1.4.3-1 Summary of Iowa Hill Joint Advisory Committee Measures Recommended for Analysis.		
ADVISORY COMMITTEE ITEM NO.	**MEASURE SUMMARY**	**LOCATION OF ANALYSIS**
	construction sites.	3.3.3.3 Transportation and Traffic.
Visual Resources		
1, 2, 3	Reduce potential visual impacts from the project by placing primary features underground and/or utilizing existing facilities as much as possible.	These measures are analyzed in the Supplemental Analysis in Section 3.3.3.2 Aesthetic Resources.
4, 4a, 4b, 7, 7a, 11, 16, 18, 27	Reduce the visual appearance of the upper reservoir berm by planting vegetation, coloring, screening, placing boulders, and/or contouring it to fit in with the natural terrain. Planting should consider erosion control of soil placed on the berm for vegetation.	These measures are analyzed in the Supplemental Analysis in Section 3.3.3.2 Aesthetic Resources.
5	Reduce the visual appearance of the transmission line and switchyard by using COR_TEN steel for mono-pole towers.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.2 Aesthetic Resources.
8	Reduce visual appearance of the tunnel portal to the powerhouse.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.2 Aesthetic Resources.
10, 10a, 10b, 13	Develop a new 3-D visual simulation to help the community understand the visual effect of the project from their properties and validate the model, if necessary, with balloons. Using model, simulate the project areas ten years into the future as if the Iowa Hill Development was not constructed.	These measures are analyzed in the Supplemental Analysis in Section 3.3.3.2 Aesthetic Resources.
12, 18	Control erosion on disturbed land by implementing Best Management Practices.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.2 Aesthetic Resources.
14, 15, 23	Reduce visibility of the upper reservoir by either making it smaller, lowering its overall elevation by 18 feet, or building a secondary berm around it with planted trees (i.e., a screening berm).	These measures are analyzed in the Supplemental Analysis in Section 3.3.3.2 Aesthetic Resources.
9, 9a, 19	Retain as many high site timber resources as possible around the construction site to minimize aesthetic effects and to soften the visual effects of construction activities.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.2 Aesthetic Resources.
17, 22	Minimize tree removal during road widening.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.2 Aesthetic Resources.
20	Utilized an offsite biomass plant to dispose of cleared brush and provide a water source for dust control to reduce visual impacts associated with dust and smoke.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.2 Aesthetic Resources.
21, 21a	Compensate residents for visual resource impacts resulting from	This measure is not analyzed in the Supplemental Analysis. It is

Table 1.4.3-1 Summary of Iowa Hill Joint Advisory Committee Measures Recommended for Analysis.		
ADVISORY COMMITTEE ITEM NO.	**MEASURE SUMMARY**	**LOCATION OF ANALYSIS**
	project-related fires.	addressed in a SMUD document titled, Analysis of Non-Environmental Measures Recommended by the Iowa Hill Joint Advisory Committee
24	Conform with visual resource requirements and standards of the USFS.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.2 Aesthetic Resources.
25	Reduce the number of construction and operations night lights and lighted areas that can be seen from nearby residents.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.2 Aesthetic Resources.
26	Reduce the visibility of fencing at the upper reservoir and tunnel portal areas.	This measure is analyzed in the Supplemental Analysis in Section 3.3.3.2 Aesthetic Resources.

1.5 FERC Final EIS

FERC and the U.S. Forest Service have prepared the Final EIS (FERC 2008) in compliance with the NEPA of 1969, as amended. As documented in Section 1.4.4 of the Final EIS, FERC issued a draft EIS for the relicensing of the UARP on September 21, 2007, and held a public meeting on November 5, 2007 in Placerville, California, to receive public comments on the draft EIS. Written comments were also solicited and received. Appendix A of the Final EIS documents the comments FERC received and provides its responses to those comments and indicates, where appropriate, how it modified the text of the Final EIS. Section 8.0 of the Final EIS lists the entities that received the document.

A copy of the Final EIS is available to the public at the El Dorado County Library, 345 Fair Lane, Placerville, CA and the Sacramento Central Library, 828 I Street, Sacramento, CA, as well as from SMUD's Relicensing Web site at: http://hydrorelicensing.smud.org.

1.6 Notice of Availability of Draft Supplemental Analysis for Public Review

On May 2, 2008 SMUD issued the Draft Supplemental Analysis (SMUD 2008) to local, state, and federal agencies and to interested organizations and individuals for review and comment. The Draft Supplemental Analysis was also made available to the public on May 2, 2008 at the El Dorado County Library, 345 Fair Lane, Placerville, CA and the Sacramento Central Library, 828 I Street, Sacramento, CA, as well as from SMUD's Relicensing Web site at: http://hydrorelicensing.smud.org. SMUD filed the Draft Supplemental Analysis with the State Clearinghouse on May 2, 2008, marking the beginning of a 45-day public review period. SMUD also held a public meeting on June 2, 2008 at the Apple Mountain Golf Resort in Camino, California to receive written and verbal comments on the Draft Supplemental Analysis.

SMUD prepared the Draft Supplemental Analysis (SMUD 2008) in conformance with CEQA and the CEQA *Guidelines*. It referenced or contained a description of the proposed action/project, a description of the environmental setting, an identification of the environmental impacts associated with project implementation, and mitigation measures for impacts found to be significant. The mitigation measures were clearly identified to facilitate developing a mitigation monitoring and reporting program. A draft Mitigation Monitoring Program was included in Appendix B. Mitigation measures to be adopted by the SMUD Board of Directors as conditions for acceptance of the new license were included in the project Mitigation Monitoring Program to verify compliance.

A public notice of the availability of the Draft Supplemental Analysis was published on May 2, 2008 in both *The Sacramento Bee* and the *Mountain Democrat*. The public notice identified: 1) the project SMUD is proposing; 2) where to obtain a copy of the Draft Supplemental Analysis; 3) the date, time, and place of the public meeting; and 4) the deadline for submitting comments on the Draft Supplemental Analysis. Public notices were also posted by the El Dorado County Clerk and the Sacramento County Clerk on May 2, 2008, and SMUD placed a public notice on

bulletin boards at the Camino Post Office and at businesses located in central Camino on May 2, 2008.

During the June 2, 2008 public meeting, in response to a request to extend the deadline for submitting comments on the Draft Supplemental Analysis, SMUD extended the comment period two weeks, from June 16 to June 30, 2008. SMUD informed the State Clearinghouse of this extension in a letter dated June 6, 2008. SMUD also informed the public of this extension by: 1) mailing a postcard on June 6 to all entities on the mailing list; 2) filing a public notice with the El Dorado County Clerk and the Sacramento County Clerk on June 6; and 3) publishing a public notice in *The Sacramento Bee* and *Mountain Democrat* newspapers on June 11, 2008. Table 1.6-1 lists the entities that provided comments on the Draft Supplemental Analysis during the review period.

Table 1.6-1. Comments Received on the Draft Supplemental Analysis.	
Entity	**Date of Communication**
State and Local Agencies	
DWR, Division of Safety of Dams	May 14, 2008
California Department of Transportation	June 14, 2008
State Water Resources Control Board	June 30, 2008
Georgetown Fire District[1]	June 23, 2008
Citizens and Organizations (Written Comments)	
Bonnie Flint	June 2, 2008
Ann Wofford	June 11, 2008
Paul Siebert	June 20, 2008
Jim Summers	June 20, 2008
Bob Penn, Iowa Hill Action Committee	June 21, 2008
Lois Bailey-Hacker	June 23, 2008
Mike DeBord	June 25, 2008
Mike DeBord	June 26, 2008
PJ Hilton	June 26, 2008
Mark Stanley	June 29, 2008
Jeff Hansen	June 30, 2008
Karen Hansen, Iowa Hill Action Committee	June 30, 2008
Sue Britting, California Native Plant Society	July 1, 2008
Tom & Judy Shewmake	July 7, 2008
Public Meeting (Oral Comments)	
Richard Paradise	June 2, 2008
Lois Bailey-Hacker	June 2, 2008
Rich Jackson	June 2, 2008
Jim Summers	June 2, 2008
Mike DeBord	June 2, 2008
Bob Penn	June 2, 2008
Christa Campbell	June 2, 2008

[1] Although this letter is addressed to the FERC, it pertains to the UARP relicensing.

1.7 Final Supplemental Analysis and Certification

SMUD evaluated all written and oral comments received on the Draft Supplemental Analysis. Appendix H, Response to Comments on the Draft Supplemental Analysis, contains copies of written and oral comments received in response to the Draft Supplemental Analysis along with SMUD's responses to comments on environmental issues.

In the near future, SMUD's Board of Directors will review the project, the FERC Final EIS, and this Final Supplemental Analysis and decide whether to certify the CEQA document. The next step in the relicensing process is the issuance of the 401 Water Quality Certificate, pursuant to the Clean Water Act. This step is the responsibility of the SWRCB, which will rely on the FERC Final EIS and the Final Supplemental Analysis in its decision-making.

Upon issuance of the Water Quality Certificate, FERC will issue its licensing decision. Once the new license is issued, the SMUD Board of Directors will decide whether to accept the new license (i.e., approve the project). If the SMUD Board accepts the new license, and if the CEQA document identifies significant impacts that cannot be mitigated to a less-than-significant level, the SMUD Board of Directors must state in writing the reasons for its actions and include a Statement of Overriding Considerations in the record of the project approval and in the Notice of Determination.

1.8 Terminology Used in the Supplemental Analysis

This Supplemental Analysis uses the following terminology to describe environmental effects of the proposed action/project:

- **Significance Criteria:** A set of criteria used by the Lead Agency to determine at what level or "threshold" an impact would be considered significant. Significance criteria used in this document include factual or scientific information; regulatory standards of local, state, and federal agencies; and/or guiding and implementing goals and policies identified in local plans.
- **No Impact:** No impact would result in no change in the environment (no mitigation required).
- **Less-than-Significant Impact:** A less-than-significant impact would cause no substantial change in the environment (no mitigation required).
- **Significant Impact:** A significant impact would cause a substantial adverse change in the physical conditions of the environment. Significant impacts are identified by the evaluation of project effects using specified significance criteria. Mitigation measures and/or project alternatives are identified to reduce project effects to the environment.
- **Unavoidable Impact:** An unavoidable impact would occur when a substantial adverse change in the physical conditions of the environment results, and no feasible mitigation is available to reduce the impact to a less-than-significant level.

2.0 PROPOSED ACTION AND ALTERNATIVES

2.1 No-Project Alternative

The No-Project Alternative is described in the FERC Final EIS Section 2.1 No-Action Alternative.

2.2 SMUD's Proposal as Modified by FERC

A detailed description of SMUD's proposal is presented in SMUD's July 2005 Application for New License, Exhibit A – Project Description, Exhibit B – Project Operations, and Exhibit C – Project Construction (SMUD, 2005a). The SMUD Proposal as modified by FERC is described in the FERC Final EIS Section 2.1 Upper American River Project and Section 2.4 SMUD's Proposal, combined with the FERC Final EIS Section 2.7 Modifications to Applicants' Proposals.

With respect to environmental measures for the Iowa Hill Development, several mitigation and protection plans will be developed and implemented by SMUD in accordance with the Settlement Agreement and FERC staff recommendations contained in the Final EIS. These plans, as discussed in Section 3.3 of this document, will address many of the Advisory Committee's concerns and recommendations, which are summarized in Section 1.4.3 of this document.

2.3 Alternatives Considered but Eliminated from Detailed Study

The alternatives considered but eliminated from detailed study are described in the FERC Final EIS Section 2.4.5 Alternative Sites Analysis and in Section 2.8 Alternatives Considered but Eliminated from Detailed Study.

3.0 ENVIRONMENTAL ANALYSIS

3.1 General Description of the River Basin

The river basin description is described in the FERC Final EIS Section 3.1 General Description of the River Basin.

3.2 Cumulatively Affected Resources

The cumulatively affected resources description is described in the FERC Final EIS Section 3.2 Cumulatively Affected Resources.

3.3 Proposed Action and Action Alternatives

3.3.1 Introduction

As discussed in Section 1.4.3 of this document, the Advisory Committee has submitted to SMUD for analysis possible mitigation measures regarding the proposed action/project. In response to those comments, SMUD performed additional aesthetic resources, transportation and traffic, noise, and public health and safety (fire protection and naturally occurring asbestos) analyses. In addition, SMUD recently performed additional water quality studies to address concerns expressed by the SWRCB.

This section provides an integrated presentation of the environmental impacts and mitigation measures for the environmental resources of concern to the Advisory Committee for the proposed Iowa Hill Development: aesthetic resources; transportation/traffic; noise; and public health and safety (i.e., fire protection and naturally occurring asbestos). Socioeconomic concerns and measures identified by the Advisory Committee are either addressed in one or more of the above environmental resource sections, or in the document titled "Analysis of Non-Environmental Measures Recommended by the Iowa Hill Joint Advisory Committee", as discussed in Section 1.4.3 of this document. Potential effects of implementing the proposed action/project are identified, along with mitigation measures recommended to lessen those impacts.

This analysis is limited to the proposed action/project[3], which is defined as:

- SMUD's proposal as it was presented in its July 2005 Application for New License, Exhibit A – Project Description, Exhibit B – Project Operations, and Exhibit C – Project Construction; and

[3] No other action alternatives are evaluated in this document because there have been no changes to those alternatives since issuance of the FERC Final EIS; this analysis remains valid and applicable; no new information has been presented about them; and no concerns have been expressed about them.

- Environmental measures applicable to the UARP, including the Iowa Hill Development, contained in the February 2007 Relicensing Settlement Agreement for the Upper American River Project and Chili Bar Hydroelectric Project (Settlement Agreement), as modified by FERC staff as contained in the FERC Final EIS Section 2.7.5.

As required by the CEQA *Guidelines* §15125(a), the environmental setting describes the physical environmental conditions in the vicinity of the project "as they exist at the time the Notice of Preparation is published, or if no Notice of Preparation is published, at the time environmental analysis is commenced..." Because this document is a Supplemental Analysis to an EIS and the environmental setting has not changed from that presented in the March 2008 FERC Final EIS, the environmental setting is not restated in this document; instead, a reference is made to the Affected Environment section of the Final EIS.

As required by the CEQA *Guidelines* §15126, the effects of the project are defined as changes to the environmental setting that are attributable to the proposed action/project. In this Supplemental Analysis, impacts are identified and determined to be either: potentially significant, significant, cumulatively significant, significant unavoidable, less than significant, or no impact.

According to CEQA *Guidelines* §15382, a significant impact is "…a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project…" For each resource evaluated in this Supplemental Analysis, criteria for significance have been developed using factual or scientific information; regulatory standards of local, state, and federal agencies; and/or guiding and implementing goals and policies identified in local plans. Significance criteria vary for each resource issue analyzed in this Supplemental Analysis, and are defined at the beginning of each impact analysis section.

Mitigation measures identified in this Supplemental Analysis are characterized as: 1) necessary to reduce the identified impact below a level of significance; or 2) recommended to reduce the magnitude of a less-than-significant impact, and in the latter case, are called Environmental Improvement Measures (EIMs).

For ease of reference, the impacts have been numbered using the following naming and numbering convention:

- Aesthetic Resources: AES-X (where "X" is the number of the impact)
- Noise: NOI-X
- Public Health and Safety: PHS-X
- Transportation and Traffic: TRAN-X
- Water Quality: WQ-X

3.3.2 Resources not Supplemented in this Document

The following environmental resources are not discussed in this Supplemental Analysis because they were evaluated adequately in the FERC Final EIS, they were not identified as issues of concern by the Advisory Committee, and no additional study of these resources was performed:

- Air Resources[4]
- Aquatic Resources
- Cultural Resources
- Geology and Soils
- Land Use
- Recreational Resources
- Terrestrial Resources
- Threatened and Endangered Species
- Socioeconomic Resources[5]

3.3.3 Resources Supplemented in this Document

3.3.3.1 Water Quality

3.3.3.1.1 Environmental Setting

The environmental setting is described in the FERC Final EIS Section 3.3.2.1 Water Resources Affected Environment.

3.3.3.1.2 Background

With respect to the issue of water quality, the proposed action/project consists of: 1) the physical features (including their construction) and operational proposal for the UARP and Iowa Hill Development presented in SMUD's July 2005 Application for New License (Exhibit A – Project Description, Exhibit B – Project Operations, and Exhibit C – Project Construction); and 2) mitigation included in proposed Article 1-5, Item 10 – Water Quality – Metals Bioaccumulation Monitoring, and mitigation included in Article 1-42 – Water Quality and Water Pollution, both of the Settlement Agreement and fully adopted by FERC in the Final EIS.

3.3.3.1.3 Impacts of the Proposed Project

In accordance with CEQA and its Guidelines, the following is an assessment of the magnitude of potential impacts of the proposed project relative to specific thresholds.

---

[4] Naturally occurring asbestos is addressed in Section 3.3.3.5 Public Health and Safety.

[5] Several Advisory Committee measures which were submitted to SMUD under the heading of socioeconomics are addressed in one of the following sections of this document as noted in Table 1.4.3-1: Section 3.3.3.1 Water Quality, Section 3.3.3.5 Public Health and Safety, and Section 3.3.3.3 Transportation and Traffic.

Significance Criteria

For the purposes of this analysis, the proposed project would result in a significant impact on water quality if it would:

- Violate water quality standards or waste discharge requirements.
- Significant disturbance to reservoir sediment which causes enhanced mercury exposure to resident fish or causes subsequent bioaccumulation of mercury to tissue concentrations of fish indicative of adverse ecological effects.

Violate Numerical or Narrative Water Quality Standards

Impact WQ-1a: Turbidity and Pollutant Concentration Increase during Construction

Construction activities could cause exceedances of water quality criteria such as turbidity, nutrient concentrations, and water pollutants within Slab Creek Reservoir and the South Fork American River. Elemental mercury and methylmercury in the sediment of Slab Creek Reservoir could also be disturbed and re-suspended during construction of the reservoir intake/outlet structure. These effects would be short-term construction impacts. The effective use of Best Management Practices (BMPs) during construction activities will minimize erosion and sediment disturbance in the reservoir. Increases in turbidity, nutrient loading, and/or pollutant concentration will not result in a significant impact on water quality. As outlined in Article 1-42 (Water Quality and Water Pollution), SMUD will consult with the appropriate state and federal agencies in obtaining all necessary permits including, but not limited to the National Pollution Discharge Elimination System Permit, Waste Discharge Requirements, Section 404 Permit, Section 401 Certificate, Streambed Alteration Permit. In the application process to secure these permits, SMUD will provide construction details and timelines, as well as water quality protection plans, e.g., a Storm Water Pollution Prevention Plan, a Cofferdam and Deep Excavation Plan, and an Erosion and Sediment Control Plan.

The likelihood of construction activities in Slab Creek Reservoir creating significant turbidity and mercury concentration impacts is further reduced by the location and composition of the sediment wedge in the reservoir. The proposed site of the intake/outlet structure is downstream of the sediment wedge (*Technical Report on Iowa Hill Pumped-storage Development Turbidity Analysis*, provided in Appendix E). As a result, construction of the structure will not disturb the main sediment deposit in the reservoir, thereby minimizing the potential for turbidity or mercury re-suspension increases during the construction period. Concentrations of total and methylmercury in the sediment are low compared to other California reservoirs (Slab Creek Reservoir Sediment Investigations, provided in Appendix F), suggesting that any short-term sediment disturbance during construction of a cofferdam is not likely to result in significant increases in mercury in the water column. Because no significant impact would occur, no mitigation is required beyond the effective use of BMPs.

Impact WQ-1b: Turbidity and Mercury Concentration Increase during Operation

Operation of the new intake/outlet structure (pump and release of water) could impact water quality in Slab Creek Reservoir through re-suspension of reservoir sediments and associated sediment-bound mercury. However, as shown below, the impact will be less than significant. Because no significant impact will occur, no mitigation is required.

As described in Section 1.4.2, SMUD collected and analyzed additional hydrologic, bathymetric and water quality data pursuant to the request of the SWRCB. The results and findings of these efforts are documented in two reports: 1) *Technical Report on Iowa Hill Pumped-storage Development Turbidity Analysis,* provided in Appendix E; and 2) *Slab Creek Reservoir Sediment Investigation Report,* provided in Appendix F.

During typical operation of the Iowa Hill Development, water surface elevations in Slab Creek Reservoir are expected to fluctuate between elevations 1,833 and 1,847 feet (Section 3.2, Exhibit B, License Application, 2005). The preliminary design concept of the intake/outlet structure is a multi-port, octagonal structure with an invert elevation of 1,770 feet, or approximately 70 feet above the reservoir bottom. The final design of the structure will incorporate specifications to meet the dual needs of minimizing sediment disturbance and re-suspension during generation and fish entrainment during pumping.

The ability of release velocities to re-suspend bottom sediments is a function of the size of sediment, distance from the outlet ports, and level of compaction of the bottom sediments. Particle size distributions are available for six surface sediment samples collected in Slab Creek Reservoir during 2008. Results of the analysis indicate surface sediments are dominated by silt particles, with average distributions showing 3 percent sand, 79 percent silt, and 18 percent clay in the deep areas of the reservoir closest to the location of the proposed intake/outlet structure.

The classic Hjulstrom Diagram (Figure 3.3.3-1) delineates the zones of erosion, transport, and deposition as a function of grain size and velocity. The curve representing critical erosion velocity in the diagram represents the point at which sediment will be eroded by the energy of the velocity at the water/sediment interface. As depicted in the diagram, the sediment type most susceptible to erosion is very fine sand, which is eroded at velocities of approximately 0.66 fps (20 centimeters second [cm/sec], see Table 3.3.3-1).

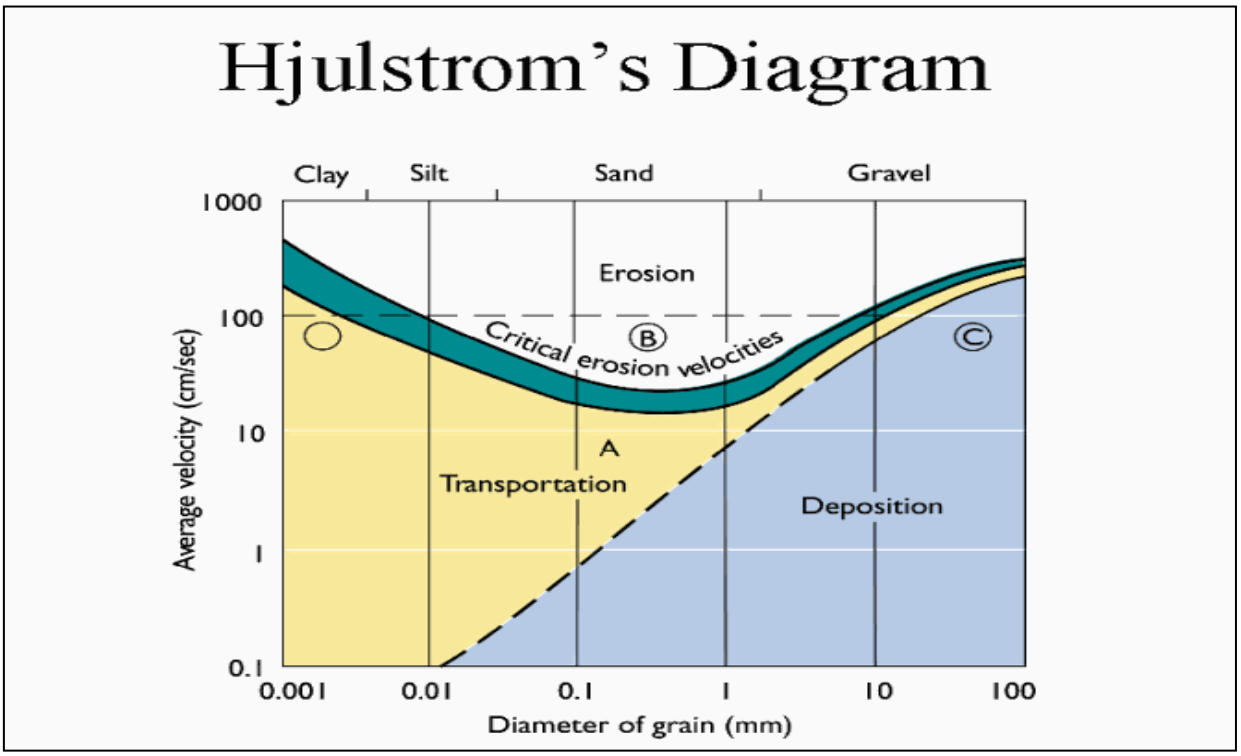

Figure 3.3.3-1. Hjulstrom Diagram delineating critical velocities for erosion.

Table 3.3.3-1. Critical Erosion Velocities from Hjulstrom Diagram.			
Sediment	Size	Critical Erosion	
Class	(mm)	(cm/s)	(ft/sec)
Clay	0.001	300	9.84
Silt	0.005	90	2.95
Silt	0.01	60	1.97
Silt	0.05	25	0.82
Very fine sand	0.1	20	0.66
Medium sand	0.5	25	0.82
Coarse sand	1	38	1.25

The critical erosion velocity of silt, which constitutes 79 percent of the sediment composition, varies with the size of the silt, which affects sediment compaction. The range of velocities is 0.82 to 2.95 fps. Clay, which constitutes 18 percent of the sediment composition, is eroded at velocities as high as 9.84 fps. The velocities of the Hjulstrom Diagram apply to those at the water/sediment interface, and represent lower values than those emanating from the intake/outlet structure. Given the reservoir bottom lies 60 to 70 feet from the intake ports in the proposed conceptual design, release velocities at the intake ports could be much higher than Hjulstrom's values and still not disturb the underlying sediments due to the dispersion of force with distance.

The probability of sediment erosion due to release velocities during generation mode operations at the Iowa Hill Development will be minimized by designing the intake/outlet structure to achieve velocities below the Hjulstrom Diagram critical erosion velocities for silt at the sediment/water interface. The final design specifications, developed in concert with fish entrainment design considerations, will describe the intake ports' surface area, their orientation relative to the reservoir sediments, and the distance between the ports and sediments.

Some initial re-suspension of unconsolidated silt sediments may occur over a short period while the existing sediment adjusts to the new flow conditions surrounding the intake/outlet structure. Further erosion of more consolidated sediments below the surface sediment will be less likely to occur because of the higher level of compaction and the increasing distance from the outlet ports. If a scour hole is created in the immediate vicinity of the structure, it is expected that further erosion of bottom sediments will be negligible and any active scouring will be of very short duration.

The chemistry of reservoir surface sediments that might be re-suspended during initial intake operations is shown in Table 3.3.3-2.

Table 3.3.3-2. Mercury and methylmercury concentrations in surface sediments from the deeper areas of Slab Creek Reservoir near the proposed intake/outlet structure location.

Sample depth interval (cm)	Depth to bottom of reservoir ft (m)	Total Hg (ng/g)	Methyl-Hg (ng/g)
0-2	165 (50.3)	46.2	0.394
2-4	165 (50.3)	46.3	nm
0-2	165 (50.3)	44.6	0.467
2-4	165 (50.3)	44.4	nm
0-2	120 (36.6)	74	0.637
2-4	120 (36.6)	41.5	nm
0-2	90 (27.4)	43.8	0.448
2-4	90 (27.4)	36.6	nm
	Geometric Mean	**46.2**	**0.479**

Source: DTA 2008. Freshwater sediment screening Threshold Effect Level (TEL) is 174 ng Hg/g dw sediment (Buchman, 1999). No screening level exists for methylmercury. Nm = not measured.

The mercury and methylmercury concentrations in Slab Creek Reservoir sediments are low, and are less than mercury screening TELs for organism exposure to bulk sediments (see Table 3.3.3-2 footnote). Although methylmercury screening values are not available, the low mercury values suggest that direct toxicity by exposure to sediments is unlikely.

Even though bulk in-place sediment concentrations are not of concern from a toxicological perspective, if re-suspended sediments occur, they might cause the water column concentrations of total mercury (T-Hg) to temporarily exceed ecological risk screening levels during brief periods of scour and re-suspension. After initial scour of unconsolidated surface (i.e., within the first two weeks of operation), continued operations are expected to achieve an equilibrium condition with no significant further sediment scour. In addition, periods between power generation events would allow any re-suspended sediment in a local plume to further dilute and disperse, thus further minimizing any potential for exposure of fish to toxic levels of re-suspended mercury. Because no significant impact will occur, no mitigation is required.

Result in Enhanced Mercury Bioaccumulation in Reservoir Fish

Impact WQ-2: Mercury Bioaccumulation

Construction or operations of the new intake/outlet could cause increased bioaccumulation of mercury by reservoir fish through increased exposure via sediment re-suspension, which could have human health implications if the fish were consumed by humans. The implementation of construction BMPs (Impact WQ-1a) and the analysis of operational impacts (Impact WQ-1b) suggest that this is an unlikely outcome of the project**.** Settlement Agreement Article 1-5, Item 10 requires ongoing bioaccumulation monitoring to address this issue.

Various reports of resident aquatic invertebrate and fish tissue mercury levels upstream, within, and downstream of Slab Creek reservoir indicate that the river and reservoir have not shown evidence of problem concentrations of mercury in tissues. An extensive comparative study in the late 1990s revealed that the American River upstream of and downstream of Slab Creek Reservoir had some of the lowest tissue mercury levels in invertebrates found anywhere in this general region of the "gold country" of the western Sierra Nevada foothills (Slotton et al. 1997). None of the tissue samples of mercury in that study were indicative of levels of toxicological concern. More recently, staff from CDFG sampled fish from the reservoir for tissue mercury (CDFG 2008). Those results indicated tissue mercury concentrations for fish approaching, but mostly below, levels of toxicological concern. Baseline mercury bioaccumulation levels in aquatic organisms are naturally low in the project area. Average conditions are summarized in Table 3.3.3-3.

Table 3.3.3-3. Upstream, within-Reservoir, and Downstream Tissue Concentrations of Mercury (Hg) in Aquatic Invertebrates and Fish.

Location	Taxonomic Group F (fish) or I (invertebrates)	Average tissue concentrations of mercury (mg Hg/kg tissue), ww[a] or dw[a] basis.	Human health (HH[b]) or ecological (E[c]) screening values for tissue (mg Hg/kg tissue)	Reference
Upstream, South Fork American River 1 mile upstream of Slab Creek Reservoir	I: Mayflies, beetles, caddisflies, stoneflies	0.07 dw	0.30 ww (= approx. 1.2 dw) (E)	Slotton, et. al., 1997
Slab Creek Reservoir	F: Sacramento sucker	0.30 ww	0.30 ww (HH)	CDFG, 2008
Slab Creek Reservoir	F: Brown trout	0.11 ww	0.30 ww (HH)	CDFG, 2008
Slab Creek Reservoir	F: Sacramento pikeminnow	0.36 ww	0.30 ww (HH)	CDFG, 2008
Slab Creek Reservoir	F: Rainbow trout	0.06 ww	0.30 ww (HH)	CDFG, 2008
Downstream, South Fork American River downstream of Slab Creek Reservoir	I: Stoneflies	0.04 dw	0.30 ww (= approx. 1.2 dw) (E)	Slotton, et. al., 1997

[a]ww or dw refers to wet weight or dry weight basis of measurement.
[b]HH = Human health screening value of 0.3 mg/kg ww mercury for consumption of fish tissue. EPA, 2002.
[c]E = Ecological screening value of 0.3 mg/kg ww mercury for diet to birds. DOI, 1998.

The low probability of sediment re-suspension described in Impact WQ-1b, suggests the remote possibility of low levels of total mercury released into the Slab Creek Reservoir water column. The expected total mercury concentrations in water will not likely exceed the long-term chronic criteria concentrations, nor will the expected concentrations persist for the required duration of chronic exposure. Those EPA criteria were formulated to take bioaccumulation into account as a measure of potential toxicity. Mercury bioaccumulation in adult fish found deep in the reservoir is primarily through dietary exposure. The potential food invertebrates assessed in the project area are relatively low in mercury concentrations (Table 3.3.3-3). Therefore, additional bioaccumulation to fish is not expected to occur as a result of project operation. Because no significant impact would occur, no mitigation is required.

3.3.3.1.4 Analysis of Iowa Hill Joint Advisory Committee Water Quality Measures

Table 3.3.3-4 summarizes and groups similar water quality measures that were developed by the Advisory Committee. These water quality measures were included in the Advisory Committee's

Noise and Socioeconomics matrices. For each measure or group of measures, Table 3.3.3-4 indicates how the suggested measure is incorporated into the project description/design or why it has not been incorporated.

Table 3.3.3-4	**Analysis of Iowa Hill Joint Advisory Committee Water Quality Measures Recommended for Analysis.**
ADVISORY COMMITTEE ITEM NO.	**MEASURE SUMMARY AND ANALYSIS**
Noise 46[a] Socio 1[a]	**Comment:** Concerns of groundwater impacts due to blasting and tunneling – and how does one determine the impact? **Analysis:** During blasting and tunneling activities, groundwater may be encountered. At that time, standard construction practices (BMPs) would be implemented to manage or exclude groundwater from the construction area pursuant to the terms of a plan to manage groundwater flows, which will be filed with FERC pursuant to Article 1-43 of the Settlement Agreement. BMPs will include, but not be limited to, grouting sections of the tunnel before blasting then post-blasting grouting of sections exhibiting excess groundwater infiltration after blasting. Also, SMUD will monitor local creeks, seeps, and springs during construction to determine whether changes in flow are occurring due to construction activities. Once the project is operational, SMUD will monitor and intercept seepage from the upper reservoir in an effort to keep it from entering groundwater resources. The high pressure tunnel carrying water from the upper reservoir to the powerhouse will be, in part, either steel-lined or concrete-lined to avoid mixing project water with groundwater. Implementation of the groundwater management plan will result in no significant impact to groundwater due to blasting or tunneling activities.
Socio 3, 12[a]	**Comment:** Compensation for loss of well water due to the proposed project. **Analysis:** If water supply from a private well near the project declines during or after construction of the Iowa Hill Development, and is attributable to the development, SMUD will provide a replacement water supply.

[a] This measure was included in the Advisory Committee Noise or Socioeconomics Matrices, but is addressed here because of its relevance to water supply and quality issues.

3.3.3.2 Aesthetic Resources

3.3.3.2.1 Environmental Setting

The environmental setting is described in the FERC Final EIS Section 3.3.8.1 Affected Environment.

3.3.3.2.2 Background

With respect to the issue of aesthetic resources, the proposed action/project consists of: 1) the physical features (including construction) and operational proposal for the UARP and Iowa Hill Development presented in SMUD's July 2005 Application for New License (Exhibit A – Project Description, Exhibit B – Project Operations, and Exhibit C – Project Construction); 2) mitigation included in proposed Article 1-27 (Visual Resource Protection Plan) of the Settlement

Agreement, fully adopted by FERC in the Final EIS; and 3) mitigation included in proposed Article 1-44 (Compliance with Visual Quality Standards) of the Settlement Agreement, also fully adopted by FERC in the Final EIS.

Pursuant to Article 1-27, SMUD will develop and implement an Iowa Hill Visual Resources Protection Plan (Visual Plan) prior to any construction. The Visual Plan will include measures to reduce the visual appearance of the Iowa Hill Development project. Elements to be addressed in the Plan include: 1) measures to reduce color contrasts of those parts of the upper reservoir berm, transmission line towers, switchyard, and tunnel portal (e.g., painting, COR-TEN® steel, concrete tinting); 2) measures to limit nighttime light pollution during project construction and operation; 3) dust and erosion control, and re-vegetation of disturbed areas; and 4) measures to reduce visibility of construction activities.

3.3.3.2.3 Impacts of the Proposed Project

In accordance with CEQA and its Guidelines, the following is an assessment of the magnitude of potential impacts of the proposed project relative to specific thresholds.

Significance Criteria

For the purposes of this analysis, the proposed project would result in a significant impact on visual resources if it would:

- Result in physical changes to the landscape altering a recognized scenic vista or area of unique or outstanding visual character.
- Result in physical changes to the landscape altering a recognized scenic resource within a state scenic highway.
- Result in physical changes to the landscape altering the existing visual character or quality of the site and its surroundings.
- Introduce a new source of substantial light and glare that would alter existing day or nighttime views.

Impacts on a Scenic Vista or Area of Unique or Outstanding Visual Character

The upper reservoir, switchyard, transmission line, and tunnel portal will not be visible from any scenic vistas or area of unique or outstanding visual character. No impact will occur. Because no significant impact will occur, no mitigation is required.

Impacts on a Scenic Resource within a State Scenic Highway

The upper reservoir, switchyard, transmission line, and tunnel portal will not be visible from any scenic highway, and will have no effect on a scenic resource. No impact will occur. Because no significant impact will occur, no mitigation is required.

Impacts on the Existing Visual Character or Quality of the Site and its Surroundings

Potential impacts on visual resources would include the following:

Impact AES-1a: Dust Generated by Construction Activities

During construction, dust will be generated by earth-moving activities, construction vehicles and equipment, construction worker vehicles, materials delivery vehicles, and from areas within the construction zone that have been disturbed or where excavated material is stockpiled. Fugitive dust, if emitted in sufficient quantities, and if adverse weather conditions persist, could impair or degrade existing views. However, pursuant to Article 1-44 of the Settlement Agreement, SMUD will prepare and implement the Visual Plan. A specific provision in the Visual Plan will require the contractor to implement dust control measures at the construction site and along all dirt roads throughout the four-year construction period. The dust control measures will include the application of water or chemical dust suppressant on unpaved surfaces, and vacuum sweeping and water flushing of paved surfaces during construction. The Visual Plan will also contain a provision for re-vegetating disturbed areas to stabilize soils and minimize wind-generated fugitive dust emissions. Implementation of the Visual Plan with these provisions will result in a less-than-significant impact. After project construction is complete, no dust will be generated in large part because of the re-vegetation efforts and limited traffic, so no impact will occur. Because the impact is below the level of significance, no mitigation is required.

Impact AES-1b: Presence of Construction Equipment and Activities

Personal reactions to construction activities depend on the values, interests, and preconceived notions of the viewer. The presence of equipment and the construction activities is interesting to some residents, adding visual variety to the landscape. For others, construction equipment and associated activities detract from the views currently experienced. However, pursuant to Article 1-27 of the Settlement Agreement, SMUD will prepare and implement the Visual Plan. It will include measures to reduce visibility of construction activities, such as retaining as many perimeter trees as feasible during construction of the upper reservoir; parking equipment away from viewed areas; re-vegetating disturbed areas as soon as possible; and minimizing fugitive dust emissions, thereby reducing the potentially significant impact to a less-than-significant level. After project construction is complete, no construction equipment will be present, resulting in no impact. Because the impact is below the level of significance, no mitigation is required.

Impact AES-1c: Presence of the Facilities

The presence of the project facilities will alter the landscape from existing conditions. Although many of the primary project facilities, such as the powerhouse and water conveyance structures, will be underground or underwater in Slab Creek Reservoir, the new upper reservoir, tunnel portal, and electrical transmission facilities will be above-ground on currently forested lands. SMUD contracted with Maraizon International (Maraizon) to develop an interactive three-dimensional (3-D) visual simulation of the above-ground project facilities and surrounding area,

pursuant to a suggestion of the Advisory Committee. Visual simulation still images were prepared from nine residential viewpoints, and the visual effects of the project were assessed and documented in the *Iowa Hill Visual Resources Technical Report Addendum No. 1* (CH2M HILL 2008b), contained as Appendix C to this document. As shown in the 3-D visual simulations prepared for the upper reservoir (Figures 5B through 13 in Appendix C), visibility of the upper reservoir berm from various viewpoints is expected to be minimal as it will be largely subordinate within the viewsheds. With the mitigation measures already incorporated into the project design and the implementation of the Visual Plan pursuant to Article 1-27, the upper reservoir berm will borrow textures and colors from the surrounding landscape, reducing the visual contrast of the berm with the landscape. Further, in accordance, with Article 1-44, SMUD will work with the USFS to ensure the final berm design on USFS lands is consistent with the visual quality standards of the Eldorado National Forest Land and Resource Management Plan.

As shown in the 3-D visual simulation prepared for the tunnel portal area (Figure 4 in Appendix C), the tunnel portal along Slab Creek Reservoir will be visible. However, the presence and visibility of the tunnel portal must be considered in context with its surroundings. Major facilities already exist within proximity of the tunnel portal: Slab Creek Dam and Reservoir, intake structure, and boat launch ramp. In addition, visibility of the tunnel portal will be limited to the area on Slab Creek Reservoir directly in front of it. Visibility from the opposite bank is precluded by the steep terrain. This will result in a less-than-significant impact because the provisions of Articles 1-27 and 1-44 of the Settlement Agreement would be implemented. Moreover, SMUD will include in the Visual Plan a provision to reduce color contrasts at the tunnel portal by means such as painting or concrete tinting major elements of the portal. Also, in accordance with Article 1-44, SMUD will work with the USFS to ensure the final portal design is consistent with the visual quality standards of the Eldorado National Forest Land and Resource Management Plan. Because the impact is below the level of significance, no mitigation is required.

Introduction of a New Source of Substantial Light and Glare

The project will include some night lighting, and glare will be emitted from some project facilities.

Impact AES-2a: Project Night Lighting

Most construction work will occur during daylight hours. Some project construction activities, such as tunnel drilling, blasting, and mucking will require 24-hour-per-day construction once the work is started. It is possible that construction lighting may scatter offsite during the initial phase of this work. However, SMUD will include measures in the Visual Plan to limit nighttime light pollution during project construction and operation, resulting in a less-than-significant impact.

Other than during emergency maintenance work, there will be minimal night lighting associated with operation of the project. There will be one security light at two locations: one at the powerhouse tunnel portal entrance near Slab Creek Reservoir; and one at the ventilation shaft

portal, which is located approximately 400 feet downslope and to the west of the upper reservoir berm (DTA & Goodavish 2005). The security lights will be similar in intensity to residential security lights. There will also be emergency lighting at the switchyard. When in use, the emergency lights could create offsite night light scatter; however, this would be temporary and only during emergency maintenance work at the switchyard. Neither of the two security lights will create excessive offsite nighttime light scatter.

No additional mitigation beyond implementing measures to limit nighttime light pollution pursuant to the Visual Plan is required to mitigate the short-term impact that might occur during project construction.

During project operation, implementing provisions included in the Visual Plan will minimize the impact. Such provisions may include restricting lighting at project facilities during project operation to areas required for safety, security, and active maintenance/operation; ensuring that exterior lights will be hooded, and lights will be directed downward and onsite; using low-pressure sodium lamps and fixtures of a non-glare type; and using switched lighting circuits in areas where lighting is not required for normal operation, safety, or security, thus allowing those areas to remain un-illuminated (dark) at most times. These measures will reduce the light impact to below the level of significance.

Impact AES-2b: Project Glare

As shown in the 3-D visual simulations showing the project from various viewpoints, visibility of the project is expected to be minimal, and the level of glare from the project is expected to be low to non-existent (Appendix C). This will result in a less-than-significant impact. The provisions of the Visual Plan pursuant to Article 1-27 of the Settlement Agreement will be implemented as an Environmental Improvement Measure (EIM) to further reduce this impact. Because the impact is below the level of significance, no mitigation is required.

3.3.3.2.4 Analysis of Iowa Hill Joint Advisory Committee Visual Resource Measures

Table 3.3.3-5 summarizes and groups similar visual resources measures that were developed by the Advisory Committee. For each measure or group of measures, Table 3.3.3-5 indicates how the suggested measure is incorporated into the project description/design or why it has not been incorporated.

Table 3.3.3-5	Analysis of Iowa Hill Joint Advisory Committee Visual Resource Measures Recommended for Analysis.
ADVISORY COMMITTEE ITEM NO.	**MEASURE SUMMARY AND ANALYSIS**
1, 2, 3	**Comment:** Reduce potential visual impacts from the project by placing primary features underground and/or using existing facilities as much as possible. **Analysis:** This measure is incorporated into the project design. The following project features have been designed to be underground or underwater: the Iowa Hill Powerhouse and all water conveyance facilities, including the vertical shaft, high-pressure tunnel, manifolds, penstocks, low pressure tunnel, and the Slab Creek Reservoir intake-outlet structure. The Iowa Hill Development uses the existing Slab Creek Reservoir as the lower reservoir and ties into the existing UARP transmission system.
4, 4a, 4b, 7, 7a, 11, 16, 18, 27	**Comment:** Reduce the visual appearance of the upper reservoir berm by planting vegetation, coloring, screening, placing boulders, and/or contouring it to fit in with the natural terrain. Planting should consider erosion control of soil placed on the berm for vegetation. **Analysis:** SMUD has considered all of the suggested measures. The analysis of each suggestion is provided below: (1) Planting live vegetation on the upper reservoir berm is not preferable. Such a measure would require placing additional soil on the top and outer sides of the rock berm prior to planting the vegetation. Adding live vegetation will require ongoing watering, trimming, fertilizing, and other maintenance activities. In addition, soil erosion down the slopes of the dam could occur. Planting vegetation could also compromise the integrity of the dam due to the vegetation's roots. (2) The requirement to consider measures to reduce color contrasts of the upper reservoir berm is included in the Visual Plan. The 3-D visual simulations suggest that a dark gray tint appears to blend with the surrounding environment when viewed from a distance of approximately 0.8 to 1.2 miles. Another option is to offset the natural rock color of the berm by draping it with a dark camouflage patterned mesh material, which will be investigated during the implementation of the Visual Plan. (3) Screening the berm to reduce visibility is also required by the Visual Plan. As shown in the 3-D visual simulations, preserving as many trees around the berm perimeter during construction will not only reduce construction activity visibility, but will also create a permanent screen, minimizing overall berm visibility (see Appendix C). (4) Placing boulders atop the upper reservoir berm is not prudent for several reasons: (a) from the residential viewpoints (approximately 0.8 to 1.2 miles away), the boulders would have to be very large to be seen. The mass and weight of such large boulders may be too much for the current design of the berm, compromising the integrity of the dam; (b) there are no large boulders at the project site, so they would need to be located, purchased and transported to the upper reservoir site, adding significant costs to the project; and (c) the nearby landscape does not have similar rock outcrops, so adding large boulders to the berm would not appear natural. (5) Contouring the upper reservoir berm so that the top appears irregular is not desirable because it would make the berm larger and more visible than is currently designed. That is because the berm must be a certain size/height to impound the necessary volume of water, then to contour it to make the top appear irregular, additional rock would need to be added in random locations along the top of the designed berm.
5	**Comment:** Reduce the visual appearance of the transmission line and switchyard by using COR-TEN® steel for mono-pole towers. **Analysis:** This measure is included in the project description through implementation of the Visual Plan. These articles include provisions for colors, materials, and the use of COR-TEN® steel.

Table 3.3.3-5 Analysis of Iowa Hill Joint Advisory Committee Visual Resource Measures Recommended for Analysis.	
ADVISORY COMMITTEE ITEM NO.	**MEASURE SUMMARY AND ANALYSIS**
8	**Comment:** Reduce visual appearance of the tunnel portal to the powerhouse. **Analysis:** This measure is incorporated in the project design through the placement of the portal. The tunnel portal has limited visibility in the surrounding area: 1) it is only visible from within Slab Creek Reservoir when the viewer is directly in front of and facing the portal; and 2) it is not visible from the opposite bank because the steep terrain precludes access except possibly at a few residences located on the canyon rim. In addition, through implementation of the Visual Plan, the concrete at the tunnel portal will be tinted to reduce the contrast with the surrounding landscape, and the disturbed areas would be re-vegetated, which will also reduce the contrast.
9, 9a, 19	**Comment:** Retain as many high site timber resources as possible around the construction site to minimize aesthetic effects and to soften the visual effects of construction activities. **Analysis:** This measure is included in the project description through implementation of the Visual Plan. The Visual Plan will include provisions for locating clearings, spoils piles, and project facilities involved in construction activities, and the identification of other measures to reduce the visibility of project construction activities.
10, 10a, 10b, 13	**Comment:** Develop a new 3-D visual simulation to help the individuals in the community understand the visual effect of the project from their properties and validate the model, if necessary, with balloons. Using a model, simulate the project areas 10 years into the future as if the Iowa Hill Development was not constructed. **Analysis:** This measure was addressed. Pursuant to this comment, a 3-D visual simulation model was developed, and still images from several viewpoints were prepared to demonstrate the potential visibility of the project from those viewpoints (Appendix C). The 3-D visual simulation technology is considered state-of-the-art, and the use of balloons to validate the model is deemed unnecessary. The model (visual simulations) was not developed to simulate the project area 10 years into the future as if the development was not constructed. The visual character of the upper construction site in 10 years will not differ significantly from its appearance under present conditions, except that vegetation at the site is expected to be larger.
12, 18	**Comment:** Control erosion on disturbed land by implementing Best Management Practices. **Analysis:** This measure is included in the project description through the implementation of the Visual Plan, which requires provisions for erosion control and re-vegetation of disturbed areas.

Table 3.3.3-5	Analysis of Iowa Hill Joint Advisory Committee Visual Resource Measures Recommended for Analysis.
ADVISORY COMMITTEE ITEM NO.	**MEASURE SUMMARY AND ANALYSIS**
14, 15, 23	**Comment:** Reduce visibility of the upper reservoir by either making it smaller, lowering its overall elevation by 18 feet, or building a secondary berm around it with planted trees (i.e., a screening berm). **Analysis:** The suggested measures are not incorporated into the project description for the following reasons: **Lowering the Upper Reservoir Berm by 18 Feet or Making the Berm Smaller:** Lowering the berm would significantly decrease project value without discernibly altering the visibility of the berm sections that would rise above the tree line. As seen in the 3-D visual simulations of the project (Figures 5B through 13 in Appendix C), the current height of the upper reservoir berm does not create a dominant feature in the view. Because the few residences with the potential to see the berm are between 0.8 and 1.2 miles away, an 18-foot reduction in berm height would not create discernible difference in view. Lowering the berm 18 feet would require one of the following: 1) a shallower reservoir by excavating to the same depth as the proposed project; or 2) creating a reservoir the same size as the proposed project by excavating deeper. Regardless of which engineering plan is implemented, the result would be a reduction in project value, as explained below. Under the smaller reservoir scenario, the loss of the top 18 feet would reduce storage capacity by approximately 20 percent[b]. This capacity reduction would diminish the operational range, flexibility, and ultimately, the value of the Iowa Hill Development. The current size of the upper reservoir has been determined to fit the operational[c] and economic[d] needs of SMUD. The cost savings by building a lower berm would not offset the large reduction in project value (through lost power generation) and, if the reservoir were sufficiently smaller, could make the Iowa Hill Development economically unfeasible. Maintaining the upper reservoir size by excavating 18 feet deeper into the mountain would create a substantial volume of unneeded rock and the lowered reservoir would require a smaller berm. In contrast, the proposed project represents a balanced cut-and-fill design, where the volume of excavated rock is equivalent to the amount needed to construct the berm. The deeper excavation would exacerbate two concerns raised by the Advisory Committee regarding construction noise and traffic. First, the deeper excavation of the reservoir would require additional surface blasting, thereby increasing noise during the initial stages of construction. This increase would be contrary to the Advisory Committee's desire to minimize noisy activities. Second, once excavated, the unneeded rock would be transported from the construction site to an offsite disposal area, adding heavy truck traffic to local roads in Camino as well as increasing project costs. **Secondary Berm:** The concept of a secondary berm with tree plantings to screen the primary berm is not feasible for two reasons: a lack of readily available material to construct the berm, and the steep grade of the mountain on the west side. Rock for a secondary berm would have to be transported to the site, creating heavy truck traffic on local roadways in Camino. In addition, the mountain on the northwest side of the berm is very steep, which would make construction of a secondary berm there very difficult. A secondary berm would also require the removal of more trees around the main berm, which would increase the berm visibility in the short-term. The success of tree plantings on the secondary berm is uncertain given that the trees would be perched above the natural groundwater of the mountain.
17, 22	**Comment:** Minimize tree removal during road widening. **Analysis:** This measure is included in the Visual Plan. The Visual Plan will include provisions for clearings and erosion control, which both

Table 3.3.3-5	Analysis of Iowa Hill Joint Advisory Committee Visual Resource Measures Recommended for Analysis.
ADVISORY COMMITTEE ITEM NO.	**MEASURE SUMMARY AND ANALYSIS**
	address tree removal. The Visual Plan also requires a provision to reduce the visibility of construction activities, which includes road use. In implementing this aspect of the Visual Plan, SMUD will minimize the removal of trees to the extent possible during road widening.
20, Socio 17[e]	**Comment:** Use an offsite biomass plant to dispose of cleared brush, and provide a water source for dust control to reduce visual impacts associated with dust and smoke. **Analysis:** This measure is not in the Visual Plan. Removing cleared brush to an offsite biomass plant would be expensive and would create additional truck traffic on local Camino roads and other roads leading to a biomass plant if located outside of the Camino area. In addition, trucking vegetation long distances to burn at a biomass plant (the closest biomass plant is in Woodland, CA) may not be an ecologically sound approach from a global warming perspective. During site clearing, trees and other vegetation will be cut, moved to a central staging point or landing, and either removed as logs and/or chip form, or burned onsite. To minimize the potential of onsite brush burning to create a significant visual impairment, SMUD will implement the Fire Protection Plan (see Section 3.3.3.5 of this document), which will include complying with Forest Practice Rules, the California Public Resources Code, and Special Use Permit Requirements of USFS. For dust control, SMUD will include a specific provision in the Visual Plan requiring the contractor to implement dust control measures at the construction site and along all dirt roads throughout the construction period. The dust control measures will include the application of water or chemical dust suppressant on unpaved surfaces, and vacuum sweeping and water flushing of paved surfaces during construction. The Plan will also contain a provision for re-vegetating disturbed areas to stabilize soils and minimize wind-generated fugitive dust emissions.
24	**Comment:** Conform to the visual resource requirements and standards of the USFS. **Analysis:** This measure is included in the project description through the implementation of Articles 1-27 and 1-44 of the Settlement Agreement. These articles include provisions for the project meeting the USFS visual quality standards, for review of the project design by the USFS, and for periodic meetings with the USFS to review opportunities for improving the project's ability to blend in with the surrounding landscape.

Table 3.3.3-5	Analysis of Iowa Hill Joint Advisory Committee Visual Resource Measures Recommended for Analysis.
ADVISORY COMMITTEE ITEM NO.	**MEASURE SUMMARY AND ANALYSIS**
25	**Comment:** Reduce the number of construction and operation night lights and lit areas that can be seen from nearby residents. **Analysis:** This measure is included in the project description through the implementation of the Visual Plan. The Plan includes a provision for addressing measures to limit night-time light pollution during project construction and operation.
26	**Comment:** Reduce the visibility of fencing at the upper reservoir and tunnel portal areas. **Analysis:** This measure is included in the project description through implementation of the Visual Plan and the Iowa Hill Visual Resources Protection Plan. The articles include provisions for reducing the visual appearance of facilities by addressing facility configurations, materials, and colors, which would include addressing project site perimeter fencing.

[a] Some Advisory Committee numbered items are not listed in Table 3.3.3-5 because either: 1) they have been completed by the Advisory Committee; 2) are not recommended by the Advisory Committee for analysis; or 3) are outside the scope of CEQA because they are unrelated to a physical change in the environment.
[b] For more details, see Exhibit B of the UARP License Application (SMUD 2005a) at SMUD's Relicensing Web site at: http://hydrorelicensing.smud.org/.
[c] For more details regarding operational plans for the Iowa Hill Development, see Exhibit B of the UARP License Application (SMUD 2005a) at SMUD's Relicensing Web site at: http://hydrorelicensing.smud.org.
[d] For more details regarding the economic value of the project, see the Preliminary Draft Environmental Assessment of the License Application (SMUD 2005a) at SMUD's Relicensing Web site at: http://hydrorelicensing.smud.org.
[e] This measure was included in the Advisory Committee Socioeconomic Matrix, but is addressed here because of its relevance to visual issues.

3.3.3.3 Transportation and Traffic

3.3.3.3.1 Environmental Setting

The environmental setting is described in the Access Roads discussion in the FERC Final EIS Section 3.3.7.1 Land Use Affected Environment.

3.3.3.3.2 Background

With respect to the issue of transportation and traffic, the proposed action/project consists of: 1) the physical features (including their construction) and operational proposal for the UARP and Iowa Hill Development presented in SMUD's July 2005 Application for New License (Exhibit A – Project Description, Exhibit B – Project Operations, and Exhibit C – Project Construction); 2) mitigation included in proposed Article 1-30 (Transportation System Management) of the Settlement Agreement, fully adopted by FERC in the Final EIS; and 3) development and implementation of a final Iowa Hill Transportation Management Plan, required by FERC in the Final EIS (FERC 2008).

SMUD will develop and implement the final Iowa Hill Transportation Management Plan prior to any construction. The Plan will address: 1) a description of road segments to be constructed or upgraded to provide access to the upper and lower sites, including an evaluation of whether the Iowa Hill Southwest Connector route should be part of the primary access route to the upper reservoir; 2) use of carpools and vanpools; 3) a map of preferred access routes to be used by different vehicles and for different purposes, including fire evacuation, based on criteria or similar criteria to that used in the Transportation Route Technical Report (CH2M HILL 2008a); 4) a description of the condition of all roads along the selected routes and a plan to maintain, repair, and/or upgrade them, as necessary; 5) detailed survey, engineering plans, and environmental resources studies of new roads; 6) an emergency access policy; 7) traffic control measures and an annual employee awareness program to reduce conflicts between construction traffic and school buses, seasonal tourist traffic, and periods of heavy local resident use; 8) provisions to ensure that SMUD and its contractors comply with all applicable federal, state, and local laws, ordinances, regulations, and standards, and provisions for monitoring enforcement; 9) a provision that all temporary signs, lighting, and traffic control devices during construction shall conform to applicable standards; and 10) a project public communication measure to allow citizens a mechanism and point-of-contact to voice any concerns. SMUD will provide a draft of the plan to specific agencies and the Advisory Committee for a 90-day review, and will file a revised plan, including evidence of agency consultation, with FERC within 180 days after the review period. SMUD will implement those portions of the plan approved by FERC.

3.3.3.3.3 Impacts of the Proposed Project

In accordance with CEQA and its Guidelines, the following is an assessment of the magnitude of potential impacts of the proposed project relative to specific thresholds.

Significance Criteria

For the purposes of this analysis, the proposed project would result in a significant impact on transportation/traffic if it:

- Causes an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections).
- Exceeds, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways.
- Results in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.
- Substantially increases hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- Results in inadequate parking capacity.
- Conflicts with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).

Increase in Traffic that is Substantial Relative to the Existing Traffic Load and Capacity of the Street System

Impact TRANS-1: Construction Traffic Increase

The peak Iowa Hill Development construction workforce is estimated at 235 persons, with an average vehicle occupancy of 1.3 persons per vehicle, resulting in up to approximately 180 vehicle trips accessing the project sites (for a total of 360 daily trips). In implementing the final Iowa Hill Transportation Management Plan, SMUD will evaluate several alternative routes through the Camino area leading to the upper and lower construction sites. A preliminary evaluation of Advisory Committee-recommended alternative routes is provided in Appendix D of this document (Iowa Hill Pumped-storage Development Transportation Route Technical Report, CH2M HILL 2008a). Some of the evaluated routes consist entirely of existing road segments, and others are a mixture of existing segments and new roads, such as the Mace-Cable Connector and the Southwest Connector. Adding construction traffic to the existing road segments of the alternative routes used by residents and/or businesses would result in an increase in average daily traffic of between 6 percent[6] and 58 percent[7] (see Table 1 of the Transportation Route Technical Report in Appendix D for a description of the alternative routes). In addition to the transportation of workers to the construction sites, there will be a peak of 25 delivery truck

[6] Carson Road from Larsen Drive to Cable Road.
[7] Larsen Drive from Carson Road to Barkley Road.

trips per day during project construction. These project construction traffic increases (construction worker plus deliveries) could adversely affect existing traffic load during the project construction period on the roads that comprise the routes to the upper reservoir and lower tunnel portal project sites. However, SMUD will include in the final Transportation Plan a specific provision that requires the use of carpools and/or vanpools, offsite queuing, traffic scheduling, and use of multiple routes. These requirements will reduce project-induced traffic congestion to a less-than-significant impact, as described below.

Offsite queuing at a staging area will serve as a park-and-ride location for the construction workers, and/or staging for materials and equipment transported to the construction sites on large vehicles, such as semi-trucks with trailers. Construction workers will park their vehicles at the staging area and travel to and from the project site in carpools or vanpools. Semi-trucks with trailers will also stage at the area, and then be escorted to the work site during specified time frames. One or more staging areas may be used.

Carpools with five people per vehicle or vanpools with 15 people per vehicle will reduce the number of daily vehicle trips to the project sites. Carpools will reduce the number of daily trips from 360 to 72 per day, and the vanpools will reduce the 360 trips to 24 trips per day. Further, the Transportation Plan requires a map of different routes (primary and secondary) to be used by different vehicles for different purposes. Implementation of this measure will spread the carpool or vanpool trips between different routes to the upper and lower sites, as well as between primary and secondary routes.

Scheduling the construction workday to avoid periods of peak traffic hours will also aid in reducing the impact on local traffic. As required in the Transportation Plan, most of the morning construction worker traffic will occur between 5:30 a.m. and 6:30 a.m., and most of the afternoon traffic will occur between 3:30 p.m. and 4:30 p.m., which are times of day that are outside the normal business commuting hours. Limiting the majority of construction work to weekdays will keep construction traffic off Camino area roads on the weekends when traffic volumes increase, particularly in fall and early winter due to Apple Hill tourism (see Tables 1 and 2 of the Transportation Route Technical Report, Appendix D). Twenty-five delivery and/or large trucks are expected to be accessing the project sites daily during the peak construction period. Most deliveries and large truck traffic associated with project construction will occur between 9:00 a.m. and 2:00 p.m., a non-peak hour traffic period, which is also outside of the hours that school bus traffic would occur. Therefore, during the peak construction period, an average of five truck trips per hour would occur between 9:00 a.m. and 2:00 p.m.

The operation of the Iowa Hill Development will not result in a traffic impact because it will generate a low amount of traffic, expected to be up to a maximum of 16 trips per day (CH2M HILL and DTA 2005) i.e., up to eight vehicles with two staff in each vehicle entering and leaving the project sites. Because the impact is below the level of significance, no mitigation is required.

Exceed an El Dorado County Level of Service Standard

Impact TRANS-2: Construction Traffic and LOS of Roads

When the peak construction force is traveling to and from the project construction sites, it is expected that the Level of Service (LOS)[8] along the roads that comprise the routes to the upper and lower project sites will decline.

The provisions of the Transportation Plan (specifically the measure to use carpools or vanpools) will be implemented to reduce the potential impact on LOS. Reducing the number of project construction worker vehicles on the road will minimize the impact on the local roads' LOS during the project construction period. Scheduling the construction workdays to start and end outside peak traffic hours, as discussed in TRANS-1, will also reduce the impact on roadway LOS.

Project operation will not result in a change in roadway LOS because it will generate up to 16 trips per day (up to eight vehicles with two staff in each vehicle entering and leaving the project sites). Because the impact is below the level of significance, no mitigation is required.

Impacts on Air Traffic

There are four general aviation airports in El Dorado County: Placerville Airport, Georgetown Airport, Cameron Airpark, and Lake Tahoe Airport. The public airport closest to the Iowa Hill Development site is the Placerville Airport (SMUD, 2005).

Implementation of the proposed Iowa Hill Development (construction or operation) will have no impact on air traffic because no project facilities are located near the airport, none will affect air navigation, and project materials and equipment are not expected to be delivered by air transport. Because no significant impact will occur, no mitigation is required.

Substantially Increase Hazards Due to a Design Feature or Incompatible Uses

There are two components to this discussion: hazards due to the roadway design, and hazards due to incompatible uses.

Impact TRANS-3a: Roadway Design

All of the roads leading to the project construction sites currently have one or more physical characteristics that are considered unsafe (see Table 3 of the Transportation Route Technical Report, Appendix D), e.g., have sharp turns; are narrow or single lane; are graveled; or have deteriorated pavement, gravel, or dirt. Improvement to roads that comprise the selected routes to the upper and lower sites will be required prior to the start construction to allow passage of construction vehicles and equipment.

[8] Level of Service (LOS) is a measure of the amount of traffic congestion on a road or at an intersection.

The provisions of the Transportation Plan (specifically, the measures to consult with the USFS and the El Dorado County Department of Transportation [EDCDOT] regarding necessary improvements to roads; a determination of multiple routes to be used by different vehicle types for different project purposes; and the implementation of traffic control procedures, measures, and devices, and employee awareness training) will be implemented to reduce existing and potential roadway safety hazards. Roadway improvements performed to allow passage of project construction vehicles will also be a benefit to the public accessing those roadways.

Project operation will not increase the existing roadway safety hazard because it will generate a low amount of traffic, expected to be up to 16 trips per day (up to eight vehicles with two staff in each vehicle entering and leaving the project sites), and will occur on the roads after they are improved. Because the impact is below the level of significance, no mitigation is required.

Impact TRANS-3b: Incompatible Uses

The peak Iowa Hill Development construction workforce is estimated at 235 persons, with an average vehicle occupancy of 1.3 persons per vehicle, resulting in up to approximately 180 vehicle trips accessing the project sites (for a total of 360 daily trips). In addition to the transportation of workers to the construction sites, there will be a peak of 25 delivery truck trips per day during project construction. These construction-related uses of the local roads (construction worker plus deliveries) are potentially incompatible with other uses, such as school buses, other delivery vehicles, personal vehicles, or children walking to and from school bus stops daily. However, SMUD will include a number of specific provisions in the Transportation Plan to reduce the incompatibility with these uses, as discussed below.

As discussed above in Impact TRANS-1, SMUD will include in the Transportation Plan a specific provision that requires the use of carpools and/or vanpools, offsite queuing, traffic scheduling, and use of multiple routes. These requirements will reduce incompatibility with local road use by commuters and Apple Hill tourism to less-than-significant.

Scheduling of construction traffic will also reduce incompatibility with school buses and children walking to and from bus stops. As required in the Transportation Plan, most of the morning construction worker traffic will occur between 5:30 a.m. and 6:30 a.m., in advance of the morning school bus pick-up times of 7:00 a.m. to 8:00 a.m. Most material deliveries to the construction sites will occur between 9:00 a.m. and 2:00 p.m. when children are in school. The 3:30 p.m. to 4:30 p.m. construction traffic will overlap with school bus drop-off times (2:00 p.m. to 4:30 p.m.). However, as part of the worker safety awareness training, vanpool drivers will be informed of all school bus stops and drop-off times along designated access routes to minimize conflicts with the buses and children walking along roads. These measures will reduce construction-related incompatible uses to below the level of significance.

The operation of the Iowa Hill Development will not result in a significant potential for conflicts between project vehicles and other road uses because it will generate a low amount of traffic, expected to be up to 16 trips per day (up to eight vehicles with two staff in each vehicle entering

and leaving the project sites). Because the impact is below the level of significance, no mitigation is required.

Impacts on Existing Parking Capacity

Impact TRANS-4: Construction Worker Parking

The available space at the upper and lower construction sites is inadequate to accommodate parking for the180 construction worker vehicles that will arrive during the peak construction period. Space is similarly limited along the roads of Camino. Construction worker vehicles parked along local roads and in the town of Camino would result in parking impacts for those who currently park there. In addition, between Labor Day and Christmas Eve each year, the annual apple harvest event known as Apple Hill attracts approximately 500,000 visitors to the Camino area, creating an even greater parking challenge along the roads of Camino.

To reduce the impact on parking along local roads and in town, the Advisory Committee recommended that SMUD assess several potential staging areas located near U. S. Highway 50. A staging area could serve as an off-street park-and-ride location for the construction workers. It would also be used to process and stage materials and equipment in transit to the construction sites on large vehicles, such as semi-trucks with trailers. Construction workers would park their vehicles at the staging area and travel to and from the project site in carpools or vanpools. Semi-trucks with trailers could stage at the area, and then be escorted to the work site during specified time frames. One or more staging areas could be used.

The Transportation Plan includes provisions for carpools or vanpools and use of offsite queuing as described above. Implementation of these provisions will eliminate the need for construction vehicle parking on local roads and minimize parking occurring at the construction sites.

Project operation will not result in an impact on existing parking because it would require few vehicles (up to 16 staff using eight vehicles to access the project on a daily basis). This small number of vehicles will be accommodated by the parking space created at the upper reservoir and the lower tunnel portal area. Because the impact is below the level of significance, no mitigation is required.

Conflict with Adopted Policies, Plans, or Programs Supporting Alternative Transportation

The El Dorado County Transportation Authority provides transit service in Camino. In addition, taxi service, and vanpool and carpool services are available in the County. Due to the winding character and narrowness of the roads in the vicinity of the project, local roads in the area are not ideal for walking and bicycling. Because the expected project-induced traffic impacts will occur only during project construction, and will not be a permanent increase in traffic, they will not conflict with existing or future policies, plans, or programs regarding alternative transportation methods. Because no significant impact would occur, no mitigation is required.

3.3.3.3.4 Analysis of Iowa Hill Joint Advisory Committee Transportation Measures

Table 3.3.3-6 summarizes and groups similar transportation measures that were developed by the Advisory Committee. For each measure or group of measures, Table 3.3.3-6 indicates how the suggested measure is incorporated into the project description/design or why it has not been incorporated.

Table 3.3.3-6	Analysis of Iowa Hill Joint Advisory Committee Transportation Measures Recommended for Analysis[a].
ADVISORY COMMITTEE ITEM NO.	**MEASURE SUMMARY AND ANALYSIS**
2, 2a, 13, 13a, 29, 35, 36, 65, 66, 67, 81, 81a, 86, 109, 110	**Comment:** Minimize or avoid conflicts between construction traffic and: 1) peak morning and afternoon traffic; 2) school bus traffic; 3) Apple Hill traffic (weekends); 4) bus charters; 5) educational tours; 6) walking and bicycling activities; and 7) El Dorado transit. Need to consider daylight savings time and national and religious holidays. Prohibit weekend work. Build bicycling/walking lanes. Consider the Advisory Committee Transit Matrix as a mitigation measure. **Analysis:** These measures are included in the project description through implementation of the Transportation Plan. Project construction hours are planned to be 6:30 a.m. to 3:30 p.m. on weekdays (with no work on national holidays), except for certain short-term construction activities (such as blasting or tunneling) that may require work on that specific task to occur 24 hours a day, 7 days a week. Project construction truck deliveries will typically occur between 9:00 a.m. and 2:00 p.m. In addition, carpools and vanpools, along with construction worker parking/vehicle staging areas will be developed at the start of construction. These parking/staging areas will provide vehicle parking space for construction workers who will be shuttled from the parking area to the work sites, and will also serve as a waiting area for delivery trucks that would be escorted to the sites. These measures will be implemented through the provisions of Transportation Plan. With the implementation of the Transportation Plan, conflicts with these other activities (school and charter buses, peak traffic, Apple Hill visitors, walking and bicycling) will be minimized, thereby precluding the need to implement supplemental measures such as building bicycling/walking lanes.
3, 6, 18, 27, 57, 58, 59	**Comment:** Establish offsite queuing areas for construction personnel and materials and equipment parking and deliveries. Consider potential park-and-ride/staging areas identified in Advisory Committee Transit Matrix. **Analysis:** This measure is included in the project description through the implementation of the Transportation Plan. It addresses the use of carpools and vanpools and the use of offsite parking/vehicle staging areas for project construction worker parking and the queuing of delivery trucks.
4, 4a, Socio 23[b]	**Comment:** Establish vanpools and carpools to minimize trips from offsite queuing area to construction site during times specified in the Advisory Committee Transit Matrix. Expand shuttle operations during the Apple Hill season. **Analysis:** Use of vanpools and/or carpools is included in the project description through the implementation of Transportation Plan. It addresses the use of carpools and vanpools and the use of offsite parking/vehicle staging areas for project construction worker parking and the queuing of delivery trucks. Expanding Apple Hill shuttle operations is unnecessary because project construction will be limited primarily to weekdays.
5	**Comment:** All temporary construction signage should comply with applicable standards. **Analysis:** This measure is included in the project description through implementation of the Transportation Plan. It specifies that all temporary signs, lighting, and traffic control devices during construction must conform to applicable agency standards.
9, 9a, 9b, 17, Socio 9[b]	**Comment:** Repair roads to pre-construction condition throughout the construction period. Video the routes to determine the pre-construction and post-construction conditions, provide funding, develop a plan and maintenance schedule for repairs to routes. Apply for all required El Dorado County and CalTrans permits and implement required mitigation. **Analysis:** The intent of this measure is included in the project description through the Transportation Plan. The Transportation Plan specifies

Table 3.3.3-6	Analysis of Iowa Hill Joint Advisory Committee Transportation Measures Recommended for Analysis[a].
ADVISORY COMMITTEE ITEM NO.	**MEASURE SUMMARY AND ANALYSIS**
	that all roads that will be used for the project will be described and evaluated in consultation with the USFS and EDCDOT. The evaluation will document the existing condition of the roads and the road upgrades that will need to be used for project construction. Roads repaired as part of this project will be left in a condition equal to or superior to their existing condition. The Transportation Plan also includes monitoring provisions to ensure SMUD and its contractors comply with applicable laws, ordinances, regulations, and standards. Settlement Agreement Article 1-30 establishes a process for addressing road construction and maintenance needs.
10, 14, 22, 28, 33, 38, 39, 42, 47-53, 60, 69, 71, 83-85, 100-108	**Comment:** Use one or more alternative traffic routes to the upper and lower construction sites identified in the Advisory Committee Transit Matrix. Study construction of a new road to access the upper construction site from the lower construction site. Prohibit routes that involve left turns across U. S. Highway 50 oncoming traffic. Consider existing traffic conditions in downtown Camino in the selection of transportation routes. **Analysis:** This measure is included in the project description through the implementation of the Transportation Plan, which addresses the identification and use of multiple routes to the upper and lower construction sites, with different routes to be used by different vehicle types, and for different purposes. SMUD will conduct an environmental evaluation of the Southwest Connector, a road that would provide access to the upper site from the lower site (see the Transportation Route Technical Report, Appendix D). SMUD will also evaluate routes that require left-hand turns across U.S. Highway 50. Some routes with this turn may not pose traffic problems if, for example, they are used by construction workers arriving at the queuing locations around 6:00 a.m. in the morning, when cross traffic on U.S. Highway 50 is light. Routes included in the Advisory Committee Transit Matrix are evaluated in the Transportation Route Technical Report. SMUD will use this report in preparation of the final Transportation Plan submitted to FERC. Characteristics considered in selecting different routes include: route length, road widths and condition, road geometry and slope, existing traffic volumes, school bus routes, and the number and types of businesses along the roads.
15, 25, 49, 99	**Comment:** Evaluate the use of existing grade-separated on-ramps and off-ramps along U. S. Highway 50, or build a new underpass or interchange for project-related traffic as defined in the Advisory Committee Transit Matrix. **Analysis:** In preparing the Transportation Plan, SMUD will consider multiple routes for multiple purposes, including the need to utilize existing grade-separated on- and off-ramps. If an existing ramp is selected for use in the Transportation Plan, but deemed inadequate for use by construction vehicles, SMUD will improve it to meet project access requirements. SMUD considered the cost and feasibility of constructing a new underpass at Carson Road and U. S. Highway 50. Costs for constructing the improvement, plus acquisition of right-of-way were estimated at $25 million to $102 million, depending on the complexity of the interchange. The feasibility of constructing an improvement is directly proportional to the cost of the additional construction, i.e., lower construction costs are preferred. This improvement would affect nine parcels of land, requiring the acquisition of two acres, the displacement of two residences, and payment for minor improvements and restoration costs on seven parcels. It will also result in a minor impact on the Apple Mountain Village Business Center. Due to the potential impacts and high cost of this measure, it will not be recommended for implementation.
16, 91	**Comment:** Transport explosives safely and notify residents when explosives are transported to site. **Analysis:** This measure is included in the project description through the implementation of the Transportation Plan, which includes a

Table 3.3.3-6	Analysis of Iowa Hill Joint Advisory Committee Transportation Measures Recommended for Analysis[a].
ADVISORY COMMITTEE ITEM NO.	**MEASURE SUMMARY AND ANALYSIS**
	provision for requiring compliance with applicable laws, ordinances, regulations, and standards. This will include following regulatory requirements for transporting and use of explosives, and public notification.
19, 20, 20a, 41	**Comment:** Require construction traffic to follow designated construction vehicle routes and adhere to traffic regulations including speeding. **Analysis:** This measure is included in the project description through the implementation of the Transportation Plan, which includes provisions requiring the identification of different routes to be used by different vehicle types and for different purposes, implementation of traffic control measures during project construction, and mandatory attendance for construction personnel at an annual employee environmental awareness program. In addition, the Transportation Plan includes a provision requiring compliance and monitoring compliance with applicable laws, ordinances, regulations, and standards.
23, 23a, 23b, 23c, 31	**Comment:** Recognize federal, state and local transportation-related requirements for land use, fire protection, and traffic, including obtaining all necessary permits for use of El Dorado County roads such as Cable Road, if required. **Analysis:** This measure is included in the project description through the implementation of the Transportation Plan, which includes a provision requiring compliance with applicable laws, ordinances, regulations, and standards.
24a, 24b, 24c, 24d	**Comment:** Minimize cutting of trees or tree limbs along roadways, including existing roads to be widened or new roads to be built. **Analysis:** This measure is included in the project description through the Visual Plan to be developed pursuant to Article 1-27 of the Settlement Agrement, and the proposed Iowa Hill Development Visual Resources Protection Plan described in Section 3.3.3.2 of this document. These articles include provisions for locating clearings and the identification of other measures to reduce the visibility of project construction activities.
34, 45, 94	**Comment:** Notify local jurisdictions of the CEQA process and potential transportation routes being considered, including: 1) Mayor and Placerville City Council; 2) El Dorado County Planning Department and Transportation Department; 3) all applicable school districts; and 4) California Department of Forestry and Fire Protection, and local fire districts. **Analysis:** All of the suggested entities are included on the mailing list for this document.
32	**Comment:** Plow roads used to access construction sites. **Analysis:** This measure is included in the project description through the implementation of Article 1-30 of the Settlement Agreement. It requires SMUD to prepare a snow plowing plan annually, and submit it to the USFS for review. During preparation of that plan, SMUD will coordinate with the USFS and the EDCDOT regarding shared responsibilities for the removal of snow on USFS and County roads.
43, 45, 70, 73, 74, 79	**Comment:** Ensure all roadway beds are designed to carry the weight and size of construction traffic. Widen and improve roads, if necessary. **Analysis:** This measure is included in the project description through the implementation of the Transportation Plan. It specifies that all roads that will be used for the project will be described and evaluated in consultation with the USFS and EDCDOT. The evaluation will document the existing condition of the roads and the road upgrades that will be necessary to be used for project construction.
55	**Comment:** Improve access road from Slab Creek Dam to the Powerhouse Tunnel Portal. **Analysis:** This measure is included in the project description through the implementation of the Transportation Plan. It requires that all roads

Table 3.3.3-6	Analysis of Iowa Hill Joint Advisory Committee Transportation Measures Recommended for Analysis[a].
ADVISORY COMMITTEE ITEM NO.	**MEASURE SUMMARY AND ANALYSIS**
	proposed for use for the project will be described and evaluated in consultation with the USFS and EDCDOT. The evaluation will document the existing condition of the roads and road upgrades necessary for project construction. SMUD will widen and improve this access road, as described in the Iowa Hill Development Project Description.
63	**Comment:** Require workers to live onsite or in nearby existing housing to minimize commuter traffic. **Analysis:** SMUD considered requiring project construction workers to live at the upper reservoir site, but it is undesirable for several reasons: 1) there is insufficient SMUD-owned land at the upper reservoir site to accommodate construction of the upper reservoir, its berm, switchyard, and transmission line, plus construct lodging of sufficient size to accommodate approximately 200 workers; 2) the acquisition of additional land to construct a worker lodging facility adjacent to the upper reservoir site is uncertain and would add to project costs; and 3) the cost for a temporary lodging facility, sized for 200 workers, and including site and access road preparation and transport and set-up of sleeping/bath, laundry, recreation room, and kitchen and dining quarters is estimated at $3.5 million, plus food costs. This temporary facility would add substantially to the cost of the project. If such a facility were set up, utilities such as electricity, water, and sewage disposal would also need to be developed, and the environmental impacts of developing such a facility would need to be evaluated.
75, 97, 113	**Comment:** Ensure that all vehicles needed for construction comply with California air quality standards. Control dust along Slab Creek Road. **Analysis:** This measure is included in the project description through the implementation of Transportation Plan. It requires SMUD and its contractors to comply with applicable laws, ordinances, regulations, and standards. The suggestion to reduce dust emissions is addressed in the Visual Plan. A specific provision in the Visual Plan will require the contractor to implement dust control measures at the construction site and along all dirt roads throughout the four-year construction period. The dust control measures will include the application of water or chemical dust suppressant on unpaved surfaces, and vacuum sweeping and water flushing of paved surfaces during construction. The Visual Plan will also contain a provision for re-vegetating disturbed areas to stabilize soils and minimize wind-generated fugitive dust emissions.
77, 77a	**Comment:** Place litter bags in all vans and vehicles traveling to the construction sites. **Analysis:** The intent of this measure is incorporated into the project description, pursuant to the Transportation Plan that requires all project construction workers and contract material delivery drivers to attend a mandatory employee environmental awareness program. The program will address each worker's responsibility to refrain from littering onsite or while traveling to and from the project sites. In addition, trash receptacles at the parking/staging areas and the construction sites will have tight-fitting lids to reduce the potential for animals to open the receptacles and spread trash across the sites.
78, 78a	**Comment:** Ban smoking in vehicles en route to the construction area, and no smoking in the construction area. **Analysis:** Banning smoking in vehicles en route to the construction area is included in the project description through the implementation of the Fire Protection Plan. The plan addresses reducing the risk of starting fires while driving to and from the work sites. Smoking will be banned in the carpool and vanpool vehicles that will transport construction workers. This measure will be implemented for fire safety reasons and as a courtesy to non-smoking passengers and pool drivers traveling in the same vehicles. Smoking issues will be included in the

Table 3.3.3-6	Analysis of Iowa Hill Joint Advisory Committee Transportation Measures Recommended for Analysis[a].
ADVISORY COMMITTEE ITEM NO.	**MEASURE SUMMARY AND ANALYSIS**
	mandatory employee environmental awareness program. Onsite smoking restrictions will be implemented during project construction, pursuant to the Fire Protection Plan, to reduce the risk of starting fires when operating mechanical equipment. The plan will not necessarily designate the entire construction area as a no smoking zone, but will restrict smoking to specified areas. The provision will comply with the California Public Resources Code (CPRC 4423.4) which restricts smoking in forest environments to a 3-foot circle of barren soil. The provision will include designated smoking zones onsite that are free of vegetation and other flammable materials. Project construction workers will be notified of appropriate designated onsite smoking areas during attendance at their mandatory employee environmental awareness program.
80, 80a	**Comment:** Provide "Sharing the Road" training for both community members and for SMUD employees. **Analysis:** This measure is included in the project description through the implementation of the Transportation Plan. It requires all project construction workers and contract material delivery drivers to attend a mandatory employee environmental awareness program. The program will include notification of the prescribed transportation routes to the project sites, allowable parking areas, queuing protocols, allowable delivery periods, and avoiding conflicts with other vehicles, bicycles, and pedestrians, along with environmental, fire safety, and other site-specific issues.
88	**Comment:** Ban the use of JAKE brakes as part of the contract with the construction contractor. **Analysis:** This measure is addressed in Section 3.3.3.5 Public Health and Safety, Table 3.3.3.5-1.
92	**Comment:** Analyze Cable Road with respect to narrowness. **Analysis:** Cable Road is noted to have sharp turns, is a single-lane road in certain locations, is narrow in certain locations, has deteriorated pavement sections, and also has sections of deteriorated gravel and dirt. Improvements will be made prior to the start of project construction if it is part of the selected project route for construction and operation. Additional routes to the upper reservoir site proposed by the Advisory Committee will be studied as part of the Transportation Plan (e.g. the Southwest Connector)
111	**Comment:** Integrate any El Dorado County capital improvement projects for county roads into selection of routes to the construction sites. **Analysis:** The 2004 El Dorado County General Plan Circulation Element does not indicate improvements on Cable Road, Iowa Hill Road, Larsen Drive, North Canyon Road, or Slab Creek Road prior to the completion of the Iowa Hill Development. SMUD will coordinate with EDCDOT regarding the roads to be used as project transportation routes and necessary road improvements, and will obtain all required permits for road improvements that are necessary to construct and operate the project.
112	**Comment:** Integrate accident information into the selection of routes to the construction sites. **Analysis:** Vehicle accident data from the EDCDOT for the local roads in the Camino area will be reviewed prior to selection of the project construction routes to the upper and lower sites, in conjunction with a review of existing traffic volumes and existing physical roadway characteristics.
Socio 34[b], Socio 37	**Comment:** Improve and use Copperton Road to reduce traffic on Cable Road. **Analysis:** Improvements and use of Copperton Road will be considered in the final Transportation Plan as a means of overcoming some of

Table 3.3.3-6 Analysis of Iowa Hill Joint Advisory Committee Transportation Measures Recommended for Analysis[a].	
ADVISORY COMMITTEE ITEM NO.	**MEASURE SUMMARY AND ANALYSIS**
	the limitations of Cable Road (e.g., sharp turns, single-lane in locations) if Cable Road is one of the selected routes for project construction.
Socio 43[b]	**Comment:** Assess the number of water trucks moving from the lower to upper project sites, potentially having to pass through much of the Camino community en route. **Analysis:** The number of water trucks that would pass through Camino for project construction is unknown at present because the source of water for construction activities is unknown. However, regardless of source, water trucks are not expected to substantially alter the estimated 25 truck trips per day that were discussed in the traffic impact analysis.

[a] Some Advisory Committee numbered items are not listed in Table 3.3.3-6 because either: 1) they have been completed by the Advisory Committee; 2) are not recommended by the Advisory Committee for analysis; or 3) are outside the scope of CEQA because they are unrelated to a physical change in the environment.
[b] This measure was included in the Advisory Committee Socioeconomic Matrix, but is addressed here because of its relevance to transportation issues.

3.3.3.4 Noise

3.3.3.4.1 Environmental Setting

The environmental setting is described in the FERC Final EIS Section 3.3.12.1 Affected Environment.

3.3.3.4.2 Background

With respect to the issue of noise, the proposed action/project consists of: 1) the physical features (including their construction) and operational proposal for the UARP and Iowa Hill Development presented in SMUD's July 2005 Application for New License (Exhibit A – Project Description, Exhibit B – Project Operations, and Exhibit C – Project Construction); and 2) mitigation included in proposed Article 1-48 (Iowa Hill Construction Noise Plan) of the Settlement Agreement, fully adopted by FERC in the Final EIS.

Pursuant to Article 1-48, SMUD will develop and implement an Iowa Hill Construction Noise Plan prior to any construction. The Noise Plan will address construction noise. Elements to be addressed in the Plan include: 1) vehicle idling; 2) advance notification of any materials transport and construction activities within 0.5 mile of the tract; 3) notices for residents indicating the nature, timing, and duration of all materials transport and construction activities occurring within 0.5 mile of their residences; 4) a Noise Hot Line telephone system for reporting construction noise disturbances; 5) monitoring to address compliance with the above measures; and 6) actions to mitigate violations of the above measures. Monitoring reports will be filed with the USFS on a monthly basis throughout project construction, and would list any noise disturbance complaints received. The Noise Plan will also address: a) a scheduling plan for noisy construction activities, such as surface blasting, to minimize conflicts with local residents; b) measures to minimize unnecessary vehicle noise, including noise associated with muffler maintenance; and c) noise and seismic monitoring, with monitoring reports filed with El Dorado County on a monthly basis, throughout the project construction activity. Monitoring reports will also list any noise disturbance complaints received, and any additional actions needed to minimize noise disturbances.

3.3.3.4.3 Impacts of the Proposed Project

In accordance with CEQA and its Guidelines, the following is an assessment of the magnitude of potential impacts of the proposed project relative to specific thresholds.

Significance Criteria

For the purposes of this analysis, the proposed project would result in a significant noise impact if it would:

- Expose persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
- Expose persons to or generation of excessive groundborne vibration or groundborne noise levels.
- Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.
- Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

Impacts from Noise Levels that Exceed the El Dorado County Noise Standard

Impact NOI-1: Construction Noise Exceeding County Standards

As indicated in the FERC Final EIS, some of the residences close to the project area may be exposed to high noise levels during the project construction period. Blasting at the project site will exceed the El Dorado County General Plan maximum allowable noise limit at several residences; however, the blasting will meet federal and industry standards, would be of relatively short duration while activities are aboveground or just below the surface, and would be less disruptive over time as activities progress underground. In addition, traffic due to project construction would not exceed General Plan traffic noise limits (FERC 2008).

In accordance with Article 1-48 of the Settlement Agreement, SMUD would prepare and implement a Noise Plan to minimize noise emissions due to project construction. The plan will contain a variety of measures including minimizing inappropriate vehicle idling; notices to residents of the nature, timing, and duration of materials transport and construction activities; and the creation of a noise hotline. The Plan will also include a scheduling plan for noisy construction, muffler maintenance requirements, and a noise and seismic monitoring plan with monthly reports identifying disturbance complaints received on the hotline and additional actions to minimize noise.

Development and implementation of a plan to control construction noise will minimize, but not eliminate, the potential effects of noise during construction (FERC 2008). Noise impacts may still temporarily and intermittently exceed the El Dorado County noise standard. This will result in an unavoidable impact on ambient noise levels.

Impacts from Excessive Ground-borne Vibration or Ground-borne Noise Levels

Impact NOI-2: Construction-related Blasting

Blasting will occur at the project site twice per work day over a period of approximately 24 months during project construction. It will be conducted by a qualified firm in accordance with

the criteria to minimize damage established by the United States Bureau of Mines (USBM[9]) 1983 document titled, "Report of Investigations 8507: Structure Response and Damage Produced by Ground Vibrations From Surface Mine Blasting." In addition, federal requirements regulate surface mining blasting (30 CFR Part 816, §816.61, §816.62, §816.64, §816.66, §816.67 and §817.68). Although these requirements do not directly apply to the project (because the project does not include surface mining), they nevertheless serve as a guide or industry "best practice." In this sense, blasting will meet federal and industry standards and will be temporary and intermittent, resulting in a less-than-significant impact.

SMUD will use these best practices during all blasting activities that occur during project construction activities, as well as during blasting that may occur during pre-construction investigations. Also, in preparing the Noise Plan, SMUD will include a specific provision requiring monitoring of seismic vibrations during blasting activities. Because no significant impact will occur, no mitigation is required.

Impacts from a Substantial Permanent Increase in Ambient Noise Levels in the Project Vicinity

Impact NOI-3: Project Operation Noise

As indicated in the FERC Final EIS, the stationary noise source (the turbine/generating units) at the project site will be placed in an underground powerhouse and will not affect noise levels on the surface.

In addition, traffic noise will occur from up to 16 vehicle trips per day for employees and periodic deliveries and maintenance activities, and will be minor. Further, the 230-kV transmission line will be designed to ensure that corona noise does not exceed 50 dBA at the edge of the right-of-way (FERC 2008). Project operation will, therefore, result in a less-than-significant impact on ambient noise levels. Because no significant impact will occur, no mitigation is required.

Impacts from a Substantial Temporary or Periodic Increase in Ambient Noise Levels in the Project Vicinity Above Existing Conditions

Impact NOI-4

See discussion under Impact NOI-1.

Mitigation

[9] The USBM has been disbanded, but the Department of Interior's Office of Surface Mining still endorses this report and its guidelines.

No additional mitigation beyond implementing the provisions of Article 1-48 of the Settlement Agreement and the proposed Supplement to Article 1-48 is available. The impact is unavoidable, temporary, and intermittent during project construction.

3.3.3.4.4 Analysis of Iowa Hill Joint Advisory Committee Noise Measures

Table 3.3.3-7 summarizes and groups similar noise measures that were developed by the Advisory Committee. For each measure or group of measures, Table 3.3.3-7 indicates how the suggested measure is incorporated into the project description/design or why it has not been incorporated.

Table 3.3.3-7	Analysis of Iowa Hill Joint Advisory Committee Noise Measures Recommended for Analysis[a].
ADVISORY COMMITTEE ITEM NO.	**MEASURE SUMMARY AND ANALYSIS**
1, 2, 7	**Comment:** Establish a noise hotline and assign a person to investigate and resolve noise complaints as well as inform the public of noisy activities. **Analysis:** This measure is included in the project description through development of the Noise Plan required by Article 1-48 of the Settlement Agreement. In accordance with the article, SMUD will include in the Noise Plan a specific provision requiring a noise hotline and information regarding noisy activities.
3, 8, 9, 21, 32, 33	**Comment:** Schedule noisy construction, such as blasting, during the hours of 7:00 a.m. to 7:00 p.m., Monday thru Friday. Treat holidays, special events, and weekends separately from the work week. **Analysis:** This measure is included in the project description through the implementation of Article 1-48 of the Settlement Agreement. In accordance with the article, SMUD will include in the Noise Plan a specific provision requiring most construction work be performed between the hours of 7:00 a.m. to 7:00 p.m. on weekdays. SMUD will also work with community leaders to identify special events and schedule noisy construction activities to avoid these events. Construction activities that are not noisy, such as subterranean work, may be performed outside these hours and on weekends.
4, 34, 37, 42	**Comment:** Monitor blasting, using noise and seismic reading equipment, at a few locations during construction and pre-construction activities and consider muffling blasting noise with blast curtains, backfill, or other techniques. **Analysis:** This measure is included in the project description through implementation of the Noise Plan. In preparing the Noise Plan, SMUD will include a specific provision that requires noise and ground vibration monitoring during construction blasting. The supplemental measures also will address actions needed to mitigate construction-related noise. The actions or techniques to minimize noise required by the Noise Plan have not been determined yet, but may include blast curtains, backfill, or other techniques to muffle construction noise, depending on noise source, location, and level.
5	**Comment:** Conduct pre-construction environmental surveys and establish buffers as necessary. **Analysis:** This measure is included in the project description through the implementation of Article 1-12 of the Settlement Agreement. Article 1-12 requires completion of a biological evaluation, including surveys, be completed before commencing any new construction or maintenance authorized by a new license (which will include the construction of the Iowa Hill portion of the UARP). As part of the biological evaluation, SMUD will implement suitable measures as needed in consultation with the resource agencies.
6, 6a, 41	**Comment:** Ensure project operation noise levels do not exceed 35 dBA at the nearest residence. **Analysis:** As indicated in the FERC Final EIS, noise effects associated with operation of the project will not be significant because the stationary noise source (the turbine/generating units) will be placed in an underground powerhouse, not affecting noise levels at the surface (FERC 2008). SMUD will monitor operational noise levels after commissioning to ensure noise levels comply with license conditions. Noise levels that do not comply will be identified and remedies to reduce to compliance levels will be implemented as quickly as possible.
Tran-88[b]	**Comment:** Ban the use of JAKE brakes as part of the contract with the construction contractor. **Analysis:** Regarding terminology, Jake Brake® is a registered trademark of Jacobs Vehicle Systems™. The term "Jake Brake" is sometimes

Table 3.3.3-7	Analysis of Iowa Hill Joint Advisory Committee Noise Measures Recommended for Analysis[a].
ADVISORY COMMITTEE ITEM NO.	**MEASURE SUMMARY AND ANALYSIS**
	incorrectly used to refer to compression release type engine brakes in general. Instead, it correctly refers to all of Jacobs Vehicle Systems retarding products. The intent of this comment is to eliminate the loud noise that is sometimes emitted from heavy-duty trucks when they attempt to slow down using their engine brakes (as opposed to using the wheel brakes). Banning the use of engine brakes in an attempt to eliminate noise pollution reduces the safety of the trucks, which would then need to rely solely on using the wheel brakes that have a reduced stopping power as the brake lining temperature increases. It would also be an ineffective solution to noise emissions from heavy-duty trucks because the loud noise generated is not from the engine brakes, but from an illegally modified or defective/deteriorated exhaust system (an inadequate muffler or no muffler). An unmuffled truck engine exhaust is 21 decibels louder than the same engine that is properly muffled. The federal government requires all vehicles manufactured since 1978 to meet noise requirements when delivered to the customer. Today, trucks are required to emit noise levels of less than 80 dBA, at a distance of 50 feet. Most high profile professional fleets adequately maintain their trucks and equip them with appropriate mufflers to reduce the noise for both the driver and the communities driven through (Jacobs Vehicle Systems, 2008). Although banning engine brakes is not practical, the more general intent of this measure to minimize truck noise is included in the project description through the Noise Plan process required by Article 1-48. SMUD will include a specific provision in the Noise Plan regarding minimizing unnecessary vehicle noise, including requiring muffler maintenance.
7, 20	**Comment:** Limit noise associated with transportation on North Canyon Road and in Camino by limiting vehicle speed on Cable Road, using shuttle buses or vans, properly maintaining equipment, limiting idling, and limiting heavy trucks to 7:00 a.m. to 7:00 p.m. **Analysis:** This measure is included in the project description through the implementation of Article 1-48 of the Settlement Agreement (the Noise Plan) and the Transportation Plan. SMUD will include specific provisions in the plans required by these articles, including the use of carpools and vanpools, implementing traffic control measures (which may include construction speed limits on certain roads that comprise the construction transportation routes), limiting vehicle idling, requiring muffler maintenance, and additional actions needed to mitigate noise (such as properly maintaining noisy equipment). Further, SMUD will include in the Transportation Plan a provision that confines most heavy truck deliveries to project sites to between 9:00 a.m. and 2:00 p.m. on weekdays.
7, 11, 25, 26, 45	**Comment:** Develop a public communication policy that: 1) provides notice for noisy activities within 0.5 mile of the project boundary; 2) communicates potential noise impact to the community; and 3) reports to all regulatory agencies as required, with periodic status report to the El Dorado County Board of Supervisors and posting on SMUD's Licensing Web site. **Analysis:** This measure is included in the project description through the Noise Plan process required by Article 1-48 of the Settlement Agreement. The Noise Plan will include notification to residents regarding materials transport and construction activities occurring within 0.5 mile of their residences; and noise and blasting monitoring, with monitoring reports filed with El Dorado County and the USFS on a monthly basis. SMUD will also post project status reports on its Iowa Hill Web site at: http://hydrorelicensing.smud.org/iowahill, and will submit project status reports to El Dorado County.
13	**Comment:** End each work day before 7:00 p.m. because traffic will continue well beyond that time due to workers going home. **Analysis:** As indicated in the FERC Final EIS, most project construction worker trips to the project sites will occur between 5:30 a.m. and

Table 3.3.3-7 Analysis of Iowa Hill Joint Advisory Committee Noise Measures Recommended for Analysis[a].	
ADVISORY COMMITTEE ITEM NO.	**MEASURE SUMMARY AND ANALYSIS**
	6:30 a.m., and will exit the project sites between 3:30 p.m. and 4:30 p.m. (FERC 2008). Therefore, under normal circumstances, construction traffic will end before 7:00 p.m. It is possible that certain temporary construction activities may require work outside these hours, but these activities will likely involve small numbers of workers. Underground work in the project tunnels and powerhouse construction sites may extend through the entire day with multiple shifts, but worker transit to and from the construction sites will involve vanpools, as described in the Transportation Plan. In those circumstances, construction traffic will occur at the beginning and end of the three daily shifts (timing of the shifts to be determined at a later date). The Transportation Plan includes a provision for the use of carpools and vanpools for construction workers, which will reduce construction worker-related traffic substantially (assuming 10 to 15 workers to a van). If work proceeds throughout the night, the only construction traffic during the late-night hours will consist of vanpools carrying workers. As described above, SMUD will confine the majority of heavy truck traffic to between 9:00 a.m. and 2:00 p.m. on weekdays.
22, 23, 27, 35, 36	**Comment:** Monitor noise compliance during all construction activities at designated monitoring points and consider: 1) financial penalties, as required by agencies with jurisdiction; 2) halting construction activities not in compliance for 1 to 2 weeks until compliant; and 3) preparing construction contracts that include accountability for noise compliance. **Analysis:** The intent of this measure to minimize noise impacts during Iowa Hill Development construction is addressed through the Noise Plan. The Noise Plan will include a provision addressing noise impacts develop during construction. The means by which noise issues are addressed will depend on the nature of the issue and action options available. This may include a combination of scheduling changes, implementation of mitigation measures such as use of noise curtains, modifying worker environmental awareness programs, and/or modifying noisy activities. Construction company contracts will reserve SMUD's right to control contractors' work accordingly.
43	**Comment:** Provide written confirmation of commitment to abide by the El Dorado County General Plan Noise Element. **Analysis:** SMUD intends to comply with all federal, state, and local regulations to the maximum extent possible when constructing and operating the Iowa Hill Development. SMUD is committed to using a combination of mitigation techniques including equipment noise controls and administrative measures to provide the most effective means to minimize effects of construction activity noise on people living nearby or visiting the area near Iowa Hill. As indicated in the FERC Final EIS, during some phases of project construction, exceedances of the County General Plan noise standards are likely to occur (FERC 2008).
47	**Comment:** Address noise impacts if chipping is used to clear brush/timber. **Analysis:** This measure is included in the project description through the implementation of Article 1-48 of the Settlement Agreement (the Noise Plan). This includes notification to residents, scheduling noisy construction activities, noise monitoring, and identifying additional actions (based on the noise monitoring results) needed to reduce construction-related noise levels.

[a] Some Advisory Committee numbered items are not listed in Table 3.3.3-7 because either: 1) they have been completed by the Advisory Committee; 2) are not recommended by the Advisory Committee for analysis; or 3) are outside the scope of CEQA because they are unrelated to a physical change in the environment.
[b] This measure was included in the Advisory Committee Transportation Matrix, but is addressed here because of its relevance to noise issues.

3.3.3.5 Public Health and Safety

This section addresses two public health and safety topics: Fire Risk and Protection and Naturally Occurring Asbestos.

3.3.3.5.1 Fire Risk and Protection Environmental Setting

This section focuses on fire protection and fire risk. The environmental setting is described in the FERC Final EIS Section 3.3.7.1 Land Use Affected Environment – Fire Risk and Protection, supplemented by the following (Continental Resource Solutions, 2008).

Hazard Factors

Fire hazard factors include the amount of fuel that is available to burn, weather conditions (particularly relative humidity and wind), and slope and aspect (steeper slopes increase fire intensity and south-facing slopes are more likely to have high intensity fires).

The typical fire weather conditions occur in the rainless period between June and October. Very hot dry weather with low humidity typically occurs each year, creating weather conditions conducive for burning, provided that there is an ignition or fire start. A fire starting under these conditions typically spreads up-canyon, and is driven by typical afternoon winds blowing from west to east. The canyon serves to funnel airflow, and twists and turns can create erratic and unpredictable fire behavior. In the late fall and early winter, down-canyon winds from the north and east can produce intense wind-driven fires.

The project area is located in a mixed conifer forest with an abundance of forest fuels. During the pre-settlement period, the forest was characterized by frequent low intensity fires that reduced vegetation densities and quantities, but left a general low-density tree cover. The project area has not directly experienced a large wildfire within the last 35 years. The combination of human activities, principally timber harvesting and fire suppression, has resulted in high densities of vegetation, which could fuel catastrophic stand-replacing fires, even under moderate weather conditions.

The California Department of Forestry and Fire Protection (Cal Fire) has identified the project area as being located in an area of Very High Hazard Fuels.

In the past few years, two major fuel reduction activities occurred in the project area: the Iowa Hill Timber Sale and the Independence Fuels Reduction Project. The Iowa Hill Timber Sale included 357 acres of thinning to remove both fuels and vegetation "ladders" that can spread fire in tree crowns, and subsequent treatment to reduce surface fuels. The Independence Fuels Reduction Project covered approximately 1,260 acres, and established a system of fuel reduction zones along primary ridges in the Iowa Hill, Cable Road, Ghost Mountain, Blair Mill Road, and Forebay Road areas. Treatments included prescribed burning, mastication, tractor piling, hand piling, mechanized understory thinning, and hand thinning. Treatments were designed to tie in

with fuel reduction work accomplished in the Iowa Hill and Badger Hill areas, and with past treatments in the Ghost Mountain Area. These measures have been designed to reduce the intensity of a fire and increase the ability of suppression crews to contain and reduce the spread of a major wildfire. The chief elements of these treatments include the removal of small trees and brush to remove the ladder fuels that lead to crown fires. These treatments have been followed up by under burning surface fuels during appropriate times, when the risk of escapes is low.

The Iowa Hill Development upper reservoir area affected by recent clearing activities includes approximately 150 acres on property owned by SMUD, Sierra Pacific Industries, and federal lands within the Eldorado National Forest. The 87-acre SMUD property contains a dense forest stand, with an abundance of pole-sized trees and brush in the understory. The ridge-tops located on the adjacent National Forest land have been treated to reduce fire hazard. Adjacent private lands have not been treated to the same extent. Adjacent forest industry property has been regenerated to young-even-aged plantations and is generally too steep to economically create effective fuel-breaks.

Risk Factors

Risk refers to the probability of a fire to start. Fires are generally either human- or lightning-caused. Human-caused fires are more likely to occur in areas with much human activity, e.g., roads and residences. The project area is located in an area that is considered high risk for a fire start due to its proximity to human activity, particularly U.S. Highway 50 and residences in the nearby communities of Camino and Pollock Pines. Lightning is also a risk factor, but is not as significant in the vicinity of the project as it is in higher elevations.

Within Cal Fire's Amador - El Dorado Unit (in which the proposed project is located), the four leading causes of vegetation fires have been vehicle, arson, debris burning, and equipment. Equipment fires generally occurred under conditions not governed by fire plans or permits, such as mowers and weed eaters. Fires resulting from debris burning have shown a decrease over the previous 10-year average due to a concerted educational program. Debris fires were more likely to escape due to lack of required clearance.

Communities at Risk

The project area is located in the Wildland-Urban Interface within 1.5 miles of residential development associated with the community of Camino. Pollock Pines, located four miles from the project, is listed in the Federal Register (January 4, 2001, Vol. 66, Number 3, pages 751-777) as Urban Wildland Interface Communities within the Vicinity of Federal Lands that are at High Risk from Wildfire.

Road Access and Evacuation

The major access to the upper construction site is Cable Road, a mostly narrow single-lane road with turnouts. The USFS identified conditions on Cable Road as hazardous due to the dense

vegetation along road edges, which, in the event of a major wildfire, could prevent or delay the deployment of emergency vehicles. Within National Forest lands, vegetation along Cable Road has been treated to reduce fuel hazard, which has reduced the hazard originally identified by the USFS.

Emergency vehicles traveling from Camino would follow Cable Road, in the event of an emergency incident at the upper reservoir site. Due to tight radius curves, however, this road is not suitable for the passage of lowboys hauling bulldozers. Access for lowboy traffic is possible on the proposed Southwest Connector route or via Badger Hill Road from Pollock Pines. Badger Hill Road includes a portion of road without public right-of-way (i.e., a portion of the road is privately owned). In an emergency situation, Cal Fire and/or USFS emergency response personnel would access the upper reservoir site via Badger Hill Road, regardless of roadway jurisdiction.

Fire Suppression Resources

The project area includes both private and federal lands. The private lands are within the State's Responsibility Area (SRA), and the National Forest lands are within the responsibility of the USFS. All private and federal lands in the project area are within the State's Direct Protection Area (DPA), with Cal Fire as the lead agency. DPA lands include federal lands Cal Fire has contractually agreed to protect because Cal Fire resources are better positioned to provide protection.

In the event of a fire in the area, federal, state, and local resources would be dispatched based on availability and need. Interagency or mutual aid agreements allow agencies to respond beyond their jurisdictions to maximize the use of fire-fighting resources and ensure that the closest available resources respond. The existing fire-fighting infrastructure that could respond initially to a fire at the project site includes resources from Cal Fire, USFS, and local fire departments within the El Dorado County Fire Protection District.

The Amador-El Dorado Unit, with headquarters in Camino, is the responsible local Cal Fire unit with responsibility for wildland fire protection within the State's DPA. Fire stations in El Dorado County include:

- Danaher Station, #20 Camino – response time is 35 minutes
- Garden Valley Station #50, Garden Valley – response time is 65 minutes
- El Dorado Station #43, Placerville – response time is 50 minutes
- Pilot Hill Station #70, Pilot Hill – response time is 80 minutes

During the summer field season, specific resources include nine engines and four 15-person crews.

Cal Fire's Amador-El Dorado Unit's initial fire-fighting success[10] in controlling interior (timber) wildfires during the 1991 to 2004 period was 97 percent. During that period, there were 1,352 fires, and 46 fires increased in size beyond a 3-acre threshold.

The Eldorado National Forest is the local USFS unit responsible for fire protection for Federal Responsibility Areas. The USFS is the major agency providing mutual aid to the State's DPA. Suppression resources on the Eldorado National Forest include:

- Engine 54, Crystal Station – response time is 90 minutes
- Engine 53, Pacific Station – response time is 60 minutes
- Engine 64, Kyburz Station – response time is 70 minutes
- Engine 66, Sly Park – response time is 50 minutes
- Dozer 3, Type 2 (D-6) Sly Park Station – response time is 60 minutes
- Helicopter 516, Type 2 helicopter – response time is 10 minutes
- Eldorado National Forest Hotshots (Sly Park) – response time is 50 minutes
- Hand Crews: Type 2, 10-person crews
  - Crew 516, Helishots, Pacific RD – response time is 60 minutes
  - Crew 33, Georgetown Station – response time is 95 minutes
  - Crew 36, Sly Park Station – response time is 50 minutes

The El Dorado County Fire Protection District has three stations relatively close to the project: Placerville, Pollock Pines, and Camino. Each station maintains an engine, an ambulance, and a four-person crew. These units primarily respond to vehicle and structure fires in the local communities, but are available to assist both Cal Fire and the USFS.

Regulatory Setting

Several fire protection regulations are applicable to the project. They fall under the jurisdiction of the federal, state, and local government agencies. These are discussed below.

Eldorado National Forest – USFS

Part of the proposed project will be located on National Forest lands, and the USFS requires that fire prevention and response plans be prepared for any activity that could potentially increase wildfire hazard, such as land clearing and timber harvest (FSM 5121.3 – Fire Prevention and Response Plan). These plans must describe the responsibilities and obligations of permittees, contractors, and operators for fire prevention, fire reporting, suppression, and activity fuels treatment. A plan for a special-use activity, such as the proposed project, will incorporate state requirements, and generally includes other requirements beyond those required by the State. A Timber Settlement Sale Contract is required for the removal of National Forest timber, and contains standard provisions that deal with fire risk and hazard issues within the National Forest.

[10] Success is defined as those fires that are controlled before unacceptable damage and cost are incurred.

Many of the standard and special provisions reference the California Public Resources Code (CPRC) and include the following:

- Equip diesel and/or gasoline-operated engines, both stationary and mobile, with functional spark arrestors, with the exception of equipment powered by exhaust-driven turbo-charged engines or motor vehicles equipped with a maintained muffler.
- Furnish and have available for emergency use on each piece of equipment used in conjunction with performance of the work, hand tools and/or equipments as specified in CPRC 44247, 4428 and 4429). Such items include fire extinguishers, axes, pulaskis, shovels, and 5-gallon backpack pumps.
- Furnish a water tank truck or trailer with at least 300 gallons of water and 300 feet of one-inch fire hose.
- Before burning vegetation debris, obtain permits and inform the USFS when burning will take place.
- No smoking during the fire season, except in a barren area or in an area cleared to mineral soil at least three feet in diameter (CPRC 4423.4).
- Use only electric caps for blasting. In areas with slash, a watch person or patrolmen equipped with a shovel and a water-filled backpack can (5-gallon) with hand pump, shall remain in the immediate area for an hour after blasting has been completed.
- Clear equipment services areas, parking areas, and gas and oil storage areas of all flammable material for a radius of at least ten feet.
- Notify the USFS regarding any fires along roads or within the project area as soon as feasible (after initial control action is taken, i.e., within one hour).
- Develop a communications system connecting the operation to the USFS and/or Cal Fire Dispatch Center. The system must be capable of contacting the designated Dispatch Center within five minutes of discovery of a fire in the project area.
- Provide a Fire Patrol Person, whose sole responsibility is to patrol the operation for prevention and detection of fires and to take suppression action where necessary.

State of California – California Department of Forestry and Fire Protection

Construction activities in wildland environments are governed by the CPRC and Forest Practice Rules (Title 14 California Code of Regulations (14 CCR) Section 195, et seq.). Both the CPRC and Forest Practice Rules contain requirements to reduce the risk of fires resulting from construction or vegetation clearing activities. Cal Fire is the agency with jurisdiction to enforce these rules and regulations. Clearing activities on SMUD lands and other private lands will require a Conversion Permit and Timber Harvesting Plan, which will contain conditions to reduce fire risk and hazard. The following measures are primarily intended to address accidental fires associated with timber harvest activities, but may be applicable to the proposed project:

- Roads must be kept passable during the dry season until all snag and slash disposal has been completed (Section 918.3).

- Persons engaged in timber operations must observe smoking and warming[11] fire limitations and the operator must specify procedures to guide action of his employees or other persons in his employment consistent with these limitations (Sections 918.4 and 918.5).
- Operators shall provide a diligent fire watch service at the scene of any blasting or welding operations (Section 918.7).
- Operators shall conduct a diligent aerial or ground inspection within the first two hours after cessation of felling, yarding[12], or loading operations each day during the dry period when fire is likely to spread (Section 918.8).

The CPRC specifies clearance around all transmission lines that would be built in association with the project, as follows:

- CPRC Section 4292 requires at least a 10-foot clearance around each pole, tower, switch, or transformer in forest or brush-covered land.
- CPRC 4293 requires at least a 6-foot clearance for transmission line operation between 72,000 volts and 110,000 volts, and a 10-foot clearance for transmission lines operating at 110,000 volts or more.

El Dorado Fire Safe Council

The El Dorado Fire Safe Council was organized in 2001. Its mission is to protect the citizens of El Dorado County and their property from the effects of catastrophic wildfire through education, cooperation, innovation, and action. The Fire Safe Council is composed of representatives from both the public and private sector, and is primarily an agent to provide education to residents to make their communities fire safe.

3.3.3.5.2 Fire Risk and Protection Background

With respect to the issue of fire, the proposed action/project consists of: 1) the physical features (including their construction) and operational proposal for the UARP and Iowa Hill Development presented in SMUD's July 2005 Application for New License (Exhibit A – Project Description, Exhibit B – Project Operations, and Exhibit C – Project Construction); 2) mitigation included in proposed Article 1-34 (Fire Management and Response Plan) of the Settlement Agreement; and 3) development and implementation of a Fire Risk and Protection Plan (Fire Protection Plan) for Iowa Hill, required by FERC in the Final EIS (FERC 2008).

SMUD will develop and implement the Fire Protection Plan prior to any construction. The Fire Protection Plan will be developed to reduce fire risk associated with construction and will address: 1) measures to reduce the risk of fires when operating mechanical equipment on the construction site and while driving to and from the work sites; 2) measures for the storage and handling of flammable materials; 3) measures for construction site firefighting; 4) fire safety

[11] A warming fire is similar to a campfire; it is used to warm a crew on a cold/rainy day.
[12] Yarding refers to dragging logs from the woods to a landing.

awareness training as part of the annual employee environmental awareness program;
5) emergency procedures including notification and evacuation procedures and routes; and
6) provisions including monitoring measures to ensure SMUD and its contractors will comply, as appropriate, with all applicable Laws, Ordinances, Regulations, and Standards (LORS). A summary of the applicable LORS will be included in the plan.

3.3.3.5.3 Impacts of the Proposed Project on Fire Risk and Protection

In accordance with CEQA and its Guidelines, the following is an assessment of the magnitude of potential impacts of the proposed project relative to specific thresholds.

Significance Criteria

For the purposes of this analysis, the proposed project would result in a significant impact on public health and safety if it would:

- Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

More specifically:

- Are activities associated with this project consistent with state and federal agency regulations?
- Will implementation of the project significantly increase the risk of a fire start?
- Will implementation of the project significantly hamper fire suppression efforts if a fire starts in the project area?
- Will implementation of the project cause a significant risk for emergency vehicle access?
- Will implementation of the project significantly affect construction workers and/or the public to safely evacuate in the event of a fire?

Consistency with Federal, State, and Local Regulations Pertaining to Fire Protection

Pursuant to the Fire Protection Plan, SMUD will require all construction activities to be consistent with all existing federal, state, and local regulations regarding fire protection. Implementing the Fire Protection Plan, which will incorporate the Forest Practice Rules (14 CCR Section 895, et seq.) to reduce fire hazards, will eliminate inconsistencies with fire protection regulations.

Once construction is complete, SMUD will modify the Fire Prevention and Response Plan prepared for the UARP pursuant to Settlement Agreement Article 1-34, to incorporate the Iowa Hill Development. This Plan will also ensure compliance with Forest Practice Rules during project operation and maintenance.

No additional mitigation beyond implementing provisions included in the Fire Protection Plan and the Fire Prevention and Response Plan are required.

Expose People or Structures to a Significant Risk of Loss, Injury, or Death from a Wildland Fire

Impact PHS-1: Fire Start Risk

During project construction, the potential for starting a fire (known as the fire risk) increases during clearing of the upper reservoir site (expected to last approximately four months). There will be a temporary increase in fuel loading, i.e., a temporary increase in the fire hazard, during site clearing when trees and other vegetation will be cut, moved to a central staging point or landing, and either removed as logs and/or chip form, or burned onsite. However, SMUD will include in the Fire Protection Plan a specific provision that requires all construction activities to comply with the Forest Practice Rules, the California Public Resources Code, and Special Use Permit Requirements from the USFS. These requirements will reduce the risk of a fire start to a less-than-significant impact.

Further, SMUD will also incorporate into the Fire Protection Plan the limitations and requirements of the Project Activity Level (PAL) system obtained from the USFS before starting each workday during the Fire Precautionary Period, also known as the fire season, defined as May 1 to December 1. The PAL system uses a sliding scale of permitted work that is related to weather conditions. SMUD will also include provisions requiring hazardous fuels to be treated through burning and/or chipping of residuals after the removal of merchantable saw-logs. Burning will be conducted during permitted burn periods and with the required clearance to prevent escapes. Fire safety awareness training will be conducted as part of the annual employee awareness program. The program will include restrictions related to smoking at the project site. Oversight of the smoking restrictions will be the responsibility of a full-time fire patrolman that will be required by a separate provision of the Plan. Lastly, SMUD will include a detailed program for the storage and handling of flammable and explosive materials.

Once the trees and other vegetation are removed, chipped, or burned onsite, the fire hazard at the upper reservoir site will be decreased when compared to existing conditions.

Operation of the upper reservoir and tunnel portal are not expected to cause any impacts related to additional fire starts. There is a possibility for additional fire starts from operation of the switchyard and transmission line. SMUD will implement the provisions of the UARP Fire Prevention and Response Plan to reduce the operation-related impacts to less than significant. Because no significant impact would occur, no mitigation is required.

Maintaining and operating the switchyard and transmission line in accordance with the Fire Prevention and Response Plan prepared for the UARP (a Plan that will be developed pursuant to the Settlement Agreement Article 1-34), and the California Public Resources Code will result in a less-than-significant impact. No additional mitigation beyond implementing provisions

included in the Fire Protection Plan and the UARP Fire Prevention and Response Plan and complying with federal, state and local regulations pertaining to fire prevention are required.

Impacts on Fire Suppression Capability

The presence of the project (either during project construction or operation) will not impact existing fire break projects in the vicinity that were designed to aid firefighters to take aggressive action if a wildfire starts. The construction phase of the project presents the greatest risk of a fire (i.e., the clearing phase of project construction); however, there will be a sufficient number of people and equipment available to initially respond to a fire at or near the proposed project. Employees working at the site will have fire orientation training at the beginning of project construction, pursuant to a requirement to be included in the Fire Protection Plan. SMUD will also include in the Plan fire safety awareness training as part of the annual employee environmental awareness program. Equipment such as bulldozers will be available to construct fire lines and safety zones and will be equipped to work at night (if necessary), consistent with federal and state law.

Construction of the upper reservoir will result in the site being cleared of most hazardous fuels, which will create an anchor point to aid firefighters when taking action against any wildfires that spread up the SFAR Canyon or Iowa Creek Canyon. Construction activities will not reduce fire suppression capabilities in the project area due to road closures. The only existing road that will be affected by the project is a USFS road that spurs off of Cable Road and passes through the proposed reservoir site on its way to an existing fuel treatment area. The road will be rerouted around the reservoir at the start of construction, providing ongoing connectivity during project construction and operation.

Once constructed, the upper reservoir will provide a usable source of water for fire suppression. Currently, the only large water source in the project area is Slab Creek Reservoir, which, because of its location at the bottom of a deep canyon poses a level of risk to firefighting helicopters. The proposed upper reservoir site will provide a safer location for helicopter pilots to fill their water buckets during fire suppression activities. Because no significant impact would occur, no mitigation is required.

Impacts on Access for Fire Suppression Crews and Emergency Vehicles

There are two components to this issue: 1) access to the upper reservoir site by emergency vehicles (primarily fire suppression crews); and 2) impacts of construction worker evacuation on emergency vehicle access into Camino residential areas and on evacuation of residents from the neighborhoods during a fire emergency. Each is discussed below.

Impact PHS-2: Roadway Conditions Affecting Emergency Access

During project construction, emergency access to the upper construction site could be affected by the condition of roads leading to the site. The existing access to the upper site is Cable Road, a narrow single-lane road with occasional turnouts. The road is currently adequate for accessing

the upper site by most fire-fighting equipment that would be used for wildland fire-fighting. However, Cal Fire would not be able to access the upper site with its larger engines or lowboys using Cable Road as it currently exists. If Cable Road is used as the primary access to the upper site, it will be upgraded by gravelling the road to the project site and adding drainage. Any road upgrade will improve access, resulting in a benefit to Cal Fire suppression crews.

Improvements to Cable Road to make it adequate for project construction and operation access may not be enough to provide emergency access for large fire-fighting equipment including engines and lowboys. In that case, Badger Hill Road would be required for the transport of lowboys for large engines, bulldozers, and other heavy equipment. A portion of Badger Hill Road is under County jurisdiction, and a portion is in private ownership. If a fire emergency occurs at the upper reservoir site, Cal Fire and/or USFS crews would access the site via Badger Hill Road regardless of roadway jurisdiction. Any improvements needed to Badger Hill Road for large emergency vehicles would be incorporated into the Transportation Plan. The use of Badger Hill Road for emergency access to the upper reservoir site would mitigate the impact to less than significant.

Another alternative route recommended by the Advisory Committee includes a new road known as the Southwest Connector (see the Transportation Route Technical Report, Appendix D, for a detailed description of this road). The specific alignment of the Southwest Connector has yet to be determined, and therefore it has not been thoroughly evaluated with respect to environmental impacts. Conceptually, however, the Southwest Connector would allow for the passage of emergency vehicles and heavy equipment traffic (lowboys) and would improve emergency access when compared to existing conditions. Emergency response times from Camino would be improved by as much as 10 to 15 minutes. The availability of the Southwest Connector as a route to the upper construction site could reduce or eliminate the need to use Badger Hill Road for emergency access, could provide an additional route to the upper reservoir site (providing multiple project site access routes for varying needs including project deliveries, construction workers, emergency access, and large vehicles and equipment), and is considered a benefit due to improved emergency response times.

In preparation of the Transportation Plan, SMUD will evaluate the feasibility of constructing the Southwest Connector, including studying impacts to environmental resources such as vegetation, wildlife, and cultural resources, and may incorporate the new road as part of an upper construction site access route in the final Transportation Plan submitted to FERC. In addition, implementation of Settlement Agreement Article 1-34 UARP Fire Management and Response Plan, the Transportation Plan, and the Fire Protection Plan will include provisions for further evaluation of all access roads to the project area for their suitability for the passage of emergency response vehicles.

Construction and operation of the project will have a less-than-significant impact on fire suppression and emergency access response to the lower construction site at the tunnel portal. Slab Creek Road provides access to the site, and after proposed improvements, it will provide adequate passage of large emergency response vehicles.

Any roads built for access to the upper and lower construction sites will be maintained during project operation, providing the same level of emergency response vehicle access as during project construction. If project improvements to Cable Road are insufficient for passage of large fire-fighting equipment, the Southwest Connector or Badger Hill Road will provide access to the upper site during project operation, and any improvements to Cable Road will result in a continued benefit to fire suppression and emergency response crews accessing the area. Because the impact is below the level of significance, no mitigation is required.

Impacts on Emergency Evacuation

Impact PHS-3: Construction Traffic Affecting Emergency Evacuation

During project construction, a peak of 180 construction worker vehicles will be accessing the upper and lower project sites in the morning and leaving them at the end of the construction work day, resulting in an increase of 360 vehicle trips on local roads per day. This will be a significant increase in the local roadways' average daily traffic volumes. This additional traffic may cause traffic congestion, which could effect an emergency evacuation of the area if/when one is required. However, as required by the Transportation Plan and the Fire Protection Plan, SMUD will evaluate alternative access routes to the upper reservoir site and define evacuation procedures and routes. If a suitable additional route to the upper reservoir site is identified, such as the Southwest Connector, access to and from the upper site would be doubled. In addition, implementation of the Fire Protection Plan and Transportation Plan will require most workers to use carpools or vanpools. Thus, if an emergency evacuation is declared, construction workers will leave the construction sites in the multi-person vehicles that transported them to the site in the morning, resulting in minor increases in local roadway traffic during project construction. SMUD will not evacuate large vehicles or equipment from the construction site during a fire emergency. Further, pursuant to the Fire Protection Plan, which will be reviewed and approved by state and federal fire agencies, SMUD will identify the evacuation procedures and routes to be used during an emergency. Implementing these measures will reduce the impact to a less-than-significant level.

After project construction is complete, no impact on emergency evacuation of the area is expected due to the few vehicles required for transporting project operation staff that will perform maintenance of project facilities. Project operation will generate up to 16 trips per day (up to eight vehicles with two staff in each vehicle entering and leaving the project sites). Also, once Iowa Hill construction is complete, the new development will be added to the UARP Fire Prevention and Response Plan required by Settlement Agreement Article 1-34. A requirement of this Plan is that SMUD address community road escape routes. Because the impact is below the level of significance, no mitigation is required.

3.3.3.5.4 Analysis of Iowa Hill Joint Advisory Committee Fire Protection Measures

Table 3.3.3-8 summarizes and groups similar fire protection measures that were developed by the Advisory Committee. For each measure or group of measures, Table 3.3.3-8 indicates how the suggested measure is incorporated into the project description/design or why it has not been incorporated.

Table 3.3.3-8	Analysis of Iowa Hill Joint Advisory Committee Fire Protection Measures Recommended for Analysis[a].
ADVISORY COMMITTEE ITEM NO.	**MEASURE SUMMARY AND ANALYSIS**
1, 4, 17a	**Comment:** Interface with fire protection and emergency services to define what is required for a road to be acceptable for emergency fire evacuation. **Analysis:** This measure is included in the project description through the implementation of the Fire Protection Plan. SMUD will include a specific provision in the Plan that requires consultation with Cal Fire, and the USFS on the issue of emergency vehicle access, as well as evacuation procedures.
2, 6, 21	**Comment:** Develop an evacuation plan with evacuation routes. **Analysis:** This measure is included in the project description through the implementation of the Transportation Plan and the Fire Protection Plan, both to be prepared in consultation with fire response agencies and filed with FERC for approval. In the Transportation Management Plan, SMUD will identify the routes for evacuation. In the Fire Risk and Protection Plan, SMUD will include a specific provision addressing emergency and evacuation procedures and routes.
3a, 3b, Socio 16[b]	**Comment:** Work with adjacent property owners around the Iowa Hill project to assist in the costs of removing underbrush (ladder effect) to help reduce the risk of fire to the broader area. **Analysis:** Clearing brush and other ladder fuels on adjacent properties will not reduce the risk of a fire start at the project construction sites. Fuel reduction activities serve to reduce the spread and intensity of a wildfire. The California Public Resources Code currently requires landowners to provide 100 feet of defensible space adjacent to structures, which will better enable suppression crews to take action to protect these structures. SMUD's Fire Protection Plan will include detailed provisions related to compliance with state and federal agency restrictions on issues such as fuels management, smoking, and use of flammable materials. After project construction is complete, SMUD will operate the Iowa Hill Development consistent with the UARP Fire Prevention and Response Plan. This Plan will require consideration of ongoing vegetation management at all UARP developments, including the Iowa Hill Development transmission line tie-in. In addition, the upper reservoir will be connected to areas that have been recently treated (fuel reduction) on the National Forest. Once constructed, the upper reservoir will provide an additional fire-fighting water source, which will improve the ability of suppression forces to control a wildfire in the area.
5, 5a	**Comment:** Designate the entire construction project area including ingress and egress roads as a "Non-Smoking Construction Zone" and post applicable signs to this effect. **Analysis:** The intent of this measure is included in the project description through the implementation of the Fire Protection Plan. SMUD will include a specific provision regarding smoking restrictions in the fire safety awareness training. The provision will not designate the entire construction area as a no smoking zone, but will restrict smoking to specified areas. The provision will comply with the California Public Resources Code (CPRC 4423.4), which restricts smoking in forest environments to a 3-foot circle of barren soil. The provision will include designated smoking zones onsite that are free of vegetation and other flammable materials. Oversight of the smoking restrictions will

Table 3.3.3-8	Analysis of Iowa Hill Joint Advisory Committee Fire Protection Measures Recommended for Analysis[a].
ADVISORY COMMITTEE ITEM NO.	**MEASURE SUMMARY AND ANALYSIS**
	be the responsibility of a full-time fire patrolman that will be required by a separate provision of the Plan.
7	**Comment:** Do not burn vegetation cleared from the upper or lower construction sites. **Analysis:** Any burning of vegetation cleared during construction activities will be tightly controlled by the Fire Protection Plan. SMUD will include a provision in the Plan that limits any burning during construction. The provision will require that burning of construction and logging slash will only be done pursuant to a permit issued by the USFS and/or Cal Fire, and will occur outside the fire weather season. The provision will require that SMUD have equipment and personnel onsite to ensure complete combustion of burn piles and prevent escapes.
8	**Comment:** Provide a fire observation tower and staff this tower or provide an observation camera throughout the construction period. **Analysis:** The intent of this measure is included in the project description through the implementation of the Fire Protection Plan. Pursuant to the requirement of the Plan to address monitoring to ensure that workers comply with applicable LORS, SMUD will include a specific provision requiring a patrolman be present during construction activities. A patrolman walking/driving the project sites would provide fire detection superior to an immobile observation tower or camera.
9	**Comment:** Build a water storage facility at the project site that will serve fire response personnel in combating a construction-related fire. **Analysis:** This measure is included in the project description through the implementation of the Fire Protection Plan. Pursuant to the requirement of the Plan to address construction site firefighting, SMUD will include a specific provision requiring at least one mobile water tank truck or trailer onsite that will hold a minimum of 300 gallons of water. The truck/trailer will have mobile capacity and enough hose length to provide water to douse a fire start at the project site.
10	**Comment:** Provide the necessary financial resources to fire responders to ensure rapid air support to the Iowa Hill Project area including consideration for a fire fighting helicopter stationed in close proximity to the project area. **Analysis:** This suggestion has not been included in the project description because it is unnecessary given the specific provisions that SMUD will include in the Fire Protection Plan. The Plan will include several provisions that will render the potential for a fire to start to a less-than-significant level. The current fire response and suppression resources in the project vicinity are adequate to respond if a fire starts, and no additional resources are necessary.
13, Socio 38[b]	**Comment:** Suspend all Iowa Hill Project construction-related activities during seasonal peak fire danger periods (based on specific criteria) and totally during any drought years. **Analysis:** The intent of this measure is included in the project description through the implementation of the Fire Protection Plan. In response to the requirement of the Plan to reduce the risk of fires when operating equipment on the construction site, SMUD will include a specific provision for using the Project Activity Level (PAL) system, which incorporates specific criteria related to fire threat. In this sense, construction activities will be governed by fire weather conditions predicted daily by the USFS, as part of the PAL system. The PAL system provides for progressive restrictions on activities as weather -related fire risks increase during the peak fire season or in drought years.
15	**Comment:** Initiate immediate fuels management mitigation in the project area. **Analysis:** The Fire Protection Plan will reduce the potential fire impact from the project to less than significant. At the inception of

Table 3.3.3-8	Analysis of Iowa Hill Joint Advisory Committee Fire Protection Measures Recommended for Analysis[a].
ADVISORY COMMITTEE ITEM NO.	**MEASURE SUMMARY AND ANALYSIS**
	construction, when vegetation is being cleared from the site, the Plan will require SMUD to manage fuels in such as way as to minimize the chances of a fire start. Prior to construction activities, it is not necessary to initiate immediate fuels management in the project area.
16	**Comment:** Fund a SMUD-independent fire prevention officer (with required vehicle and equipment), with law enforcement authority on both public and private lands to enforce a Fire Protection Plan. **Analysis:** Both the USFS and the Cal Fire have statutory authority to issue fines for violations of fire-related laws and codes. In the Fire Protection Plan, SMUD will include a provision for the employment of a full-time fire patrolman who will perform inspections of equipment and fire conditions and provide results of these inspections to the USFS and Cal Fire.
17, 22	**Comment:** Develop a Fire Protection Plan prior to construction initiation that is reviewed and approved by Cal Fire, USFS, and local county fire officials. **Analysis:** As part of the Fire Protection Plan, SMUD will submit to FERC a detailed set of measures for fire protection during construction of the project. The details of the Plan will consider construction initiation and review by appropriate state and federal land management and fire protection agencies.
20	**Comment:** Provide fire safety awareness/orientation for all workers at the Project site. **Analysis:** This measure is included in the project description through the implementation of the Fire Protection Plan. SMUD will include a provision in the Plan that requires all contractors and their employees working at the project site to complete annual onsite fire safety awareness/orientation.
24, Socio 32[b]	**Comment:** Extend fire water service lines with hydrants on a portion of Cable Road that will be used for construction access to provide protection for all homes on the route. Establish fire hydrant protection for housing directly adjacent to the Iowa Hill Development and along the access/egress route. **Analysis:** Installing fire hydrants along Cable Road or other access/egress routes will not influence the probability of a fire start at the project construction sites, although it will improve fire protection for the homes along Cable Road and other routes. SMUD's Fire Protection Plan includes provisions related to compliance with state and federal agency restrictions on fuels management, smoking, and use of flammable materials that collectively will result in a less-than-significant impact to fire risk. This will pertain to houses along Cable Road as well as houses directly adjacent to the Iowa Hill Development. As discussed in Section 3.3.3.5.1 (Fire Risk and Protection Environmental Setting) in the event of a fire in the area, federal, state and local resources would be dispatched depending on need. This comprehensive coverage should provide sufficient means to extinguish a fire along access routes that are without fire hydrants. Regarding Cable Road and other access routes where fire starts may occur, SMUD will include provisions in the Fire Protection Plan and/or the Transportation Plan requiring project vehicles to adhere to fire safety standards related to maintenance and operation. SMUD will also include as part of the employee fire safety awareness training program, restrictions regarding smoking during transportation to and from the project construction sites. Finally, as required by the Transportation Plan, SMUD will develop a map of different access routes (primary and

Table 3.3.3-8 Analysis of Iowa Hill Joint Advisory Committee Fire Protection Measures Recommended for Analysis[a].	
ADVISORY COMMITTEE ITEM NO.	**MEASURE SUMMARY AND ANALYSIS**
	secondary) to be used by different vehicles for different purposes. This assessment of different routes may result in Cable Road serving as a secondary access route to the upper construction site, which alone will reduce the probability of a project-related fire start originating on the road.

[a] Some Advisory Committee numbered items are not listed in Table 3.3.3-8 because either: 1) they have been completed by the Advisory Committee; 2) are not recommended by the Advisory Committee for analysis; or 3) are outside the scope of CEQA because they are unrelated to a physical change in the environment.
[b] This measure was included in the Advisory Committee Socioeconomic Matrix, but is addressed here because of its relevance to fire protection issues.

3.3.3.5.5 Naturally Occurring Asbestos Environmental Setting

Naturally occurring asbestos was not addressed in the FERC Final EIS, and is, therefore, addressed in its entirety here.

A geotechnical investigation technical report entitled "Sacramento Municipal Utility District Upper American River Project (FERC Project No. 2101) Iowa Hill Pumped-storage Development Phase 2 Subsurface Exploration Geotechnical Investigation Technical Report" was prepared in August 2004. The purpose of the geotechnical investigation was to obtain preliminary subsurface geotechnical information to confirm siting of the proposed underground powerhouse and lower reservoir intake/outlet structure. The geotechnical investigation included geologic mapping, a geophysical survey, rock coring and sampling, physical laboratory testing, related environmental compliance and documentation, and preparation of a report. The report documents the rock types and seismicity of the project area, and provides the primary basis for determining the rock types present in the project area for this naturally occurring asbestos discussion.

An initial review of the California Department of Conservation's map entitled "A General Location Guide for Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring Asbestos" (2000), prepared at a scale of 1:1,100,000, did not indicate the project area as being located in an area containing ultramafic[13] rocks (California DOC 2000). Similarly, an initial review of the El Dorado County map entitled "Asbestos Review Areas, Western Slope, County of El Dorado, State of California" (2005) did not indicate the project area as being located in an area of known naturally occurring asbestos (El Dorado County 2005).

Project facilities will be sited on generally hard unweathered metamorphic rock that consists primarily of interbedded quartzite and phyllite, and hard unweathered quartz diorite, a granitic rock. Serpentinite was not indicated as being present in the project area (MWH, 2004).

The project area has historically experienced relatively low seismic activity. No active or potentially active[14] faults pass through or near the project area. Several faults that are active or potentially active are located within 62 miles (100 km) of the project area (MWH 2004).

3.3.3.5.6 Naturally Occurring Asbestos Background

Asbestos is a term used for several types of naturally occurring fibrous minerals that are a human health hazard when airborne. The most common type of asbestos is chrysotile, but other types

[13] Ultramafic rocks are igneous rocks that form in high temperature environments well below the surface of the earth. By the time they are exposed at the surface by uplift and erosion, ultramafic rocks may be partially to completely altered to serpentinite, a type of metamorphic rock in which small amounts of chrysotile asbestos are common.

[14] The California Geological Survey (CGS) classifies faults as active if they have displaced soils within Holocene time (younger than 11,000 years), and faults that have produced earthquakes within Quaternary time (the last 2 to 3 million years) are classified as potentially active.

such as tremolite and actinolite are also found in California. Asbestos is classified as a known human carcinogen by state, federal, and international agencies and was identified as a toxic air contaminant by the California Air Resources Board (CARB) in 1986. All types of asbestos are hazardous and may cause lung disease and cancer (OPR 2007).

Serpentinite[15] may contain chrysotile asbestos, especially near fault zones. Asbestos can also be associated with other rock types in California, although much less frequently. Serpentinite is known to be present in 44 of California's 58 counties, and is known to occur within El Dorado County. Asbestos can be released from serpentinite when the rock is broken or crushed. At that time, the asbestos fibers may become airborne, causing air quality and human health hazards (OPR 2007).

The State of California Governor's Office of Planning and Research has directed that lead agencies analyze the impacts of naturally occurring asbestos on the environment through the CEQA review process (OPR 2007).

3.3.3.5.7 Impacts of the Proposed Project on Public Health from Naturally Occurring Asbestos

Significance Criteria

For the purposes of this analysis, the proposed project will result in a significant public health impact if it would:

- Create a significant hazard to the public or the environment through the reasonably foreseeable release of naturally occurring asbestos into the environment.

Impacts from Release of Naturally Occurring Asbestos during Project Construction or Operation

Naturally occurring asbestos is not known to occur in the project area. Therefore, it is not expected to be released into the air during project construction or operation. Because no significant impact will occur, no mitigation is required.

3.4 No-Action/No Project Alternative

The impacts presented for the No-Action/No Project Alternative[16] are described in the FERC Final EIS Section 3.4 No-Action Alternative.

[15] Serpentinite is a rock consisting almost entirely of one or more serpentine minerals (hydrous magnesium silicate minerals, of which lizardite, antigorite, and chrysotile are the most common). Of these three minerals, only chrysotile is an asbestos mineral.

[16] The No-Action Alternative is a NEPA term. The No Project Alternative is a CEQA term. Because this is a supplemental CEQA analysis to an EIS, both nomenclature are used here.

3.5 Irreversible and Irretrievable Commitment of Resources/Significant Irreversible Changes

The Significant Irreversible Changes discussion[17] is described in the FERC Final EIS Section 3.5 Irreversible and Irretrievable Commitment of Resources.

3.6 Cumulative Effects

The Cumulative Effects discussion is described in the FERC Final EIS Sections 3.3.2.3 (Water Resources), 3.3.4.3 (Terrestrial Resources), 3.3.5.3 (Threatened and Endangered Species), 3.3.6.3 (Recreational Resources), 3.3.9.3 (Cultural Resources), 3.3.11.3 (Air Resources), and 5.2 (Cumulative Effects Summary).

3.7 Unavoidable Impacts

The Unavoidable Impacts discussion is described in the FERC Final EIS Sections 3.3.1.3 (Geology and Soils), 3.3.2.4 (Water Resources), 3.3.3.3 (Aquatic Resources), 3.3.4.4 (Terrestrial Resources), 3.3.5.4 (Threatened and Endangered Species), 3.3.6.4 (Recreational Resources), 3.3.7.3 (Land Use), 3.3.8.3 (Aesthetic Resources), 3.3.9.4 (Cultural Resources), 3.3.10.3 (Socioeconomic Resources), 3.3.11.4 (Air Resources), and 3.3.12.3 (Noise Resources).

3.8 Relationship Between Short-term Uses and Long-term Uses

The Relationship between Short-term Uses and Long-term Uses discussion is described in the FERC Final EIS Section 3.6, Relationship Between Short-term Uses and Long-term Uses.

3.9 Growth-Inducing Impacts

This section discusses potential growth-inducing effects that could result from the proposed action/project. This section first describes the affected environment, describing the growth rate within SMUD's service territory and the need for SMUD to respond to future energy load requirements, and the socioeconomic status of El Dorado County. This current environment forms the baseline for the discussion of the effects of proposed action/project. Next, this section analyzes the environmental effects of the proposed action/project, and concludes that the proposed action/project will not result in any growth-inducing effects.

3.9.1 Pertinent Technical Reports

- *Socioeconomic Impact Technical Report* (CH2M HILL 2004) – This report provides information pertaining to the social and economic effects to both El Dorado County and the Sacramento region. It discusses population, housing, and economic development at the regional level (El Dorado County and Sacramento region), and the recreational resources, local government fiscal resources, public services in the Crystal Basin area, and

[17] Irreversible and Irretrievable Commitment of Resources is a NEPA term. Significant Irreversible Changes is a CEQA term. Because this is a supplemental CEQA document to an EIS, both nomenclatures are used here.

infrastructure at the local level of the UARP. The impact analysis includes the benefits and costs associated with the UARP.

- *Socioeconomic Assessment of Iowa Hill Construction and Operations Technical Report* (CH2M HILL and DTA 2005) – This report provides information pertaining to the social and economic effects to both El Dorado County and the Sacramento region. The report discusses the affected environment, and the benefits and effects of the proposed Iowa Hill Development.

3.9.2 Affected Environment

In 2004, Sacramento County had an estimated population of 1,335,400 (1,382.4 persons per square mile). This reflects an increase of 28 percent from the 1990 census. By 2030, the population of Sacramento County is expected to reach 2,293,000 (CH2M HILL 2004). As of January 1, 2004, Sacramento County had 512,912 housing units, of which 359,751 were single-family units, 137,577 were multiple-family units, and 15,584 were mobile units. New housing authorizations in Sacramento County in 2002 totaled 12,854; about 80 percent were single-family units and 20 percent were multiple-family units. These authorizations were valued at approximately $2.3 billion.

In 2004, El Dorado County had an estimated population of 168,100 (98.2 persons per square mile). This reflects an increase of 36 percent from the 1990 census of 127,300 (CH2M HILL 2004). By 2030, the population of El Dorado County is expected to reach 250,173. Although it is estimated that 235 workers will be employed for the construction of the Iowa Hill Development, most workers are likely to come from the Sacramento region. The operation of the Iowa Hill Development is expected to result in 2 new direct operation and maintenance jobs and 12 secondary jobs.

3.9.3 Growth Inducing Effects of the Proposed Action

To determine the growth-inducing effects of the proposed action/project in Sacramento and El Dorado counties, SMUD compared the effects of the proposed action/project on current expected levels of growth within these counties, which make up the baseline conditions. For the purpose of this Supplemental Analysis, a growth-inducing effect results if the project encourages growth in excess of existing land use plans, growth management plans, or policies for the areas by: 1) fostering economic or population growth or additional housing; 2) removing obstacles to growth; 3) requiring new community services or facilities; or 4) encouraging other activities that cause significant environmental effects. The environmental consequences, including growth-inducing effects, of consumptive water withdrawals from proposed action/project facilities by other parties is not addressed in this document because to do so would require speculation. Consumptive water withdrawal requires acquisition of a water right from the SWRCB; any proposal would need to comply with CEQA and/or NEPA on its own merit. No water rights of this nature have been granted at this writing.

3.9.3.1 Effects on Sacramento County

The proposed action/project will not result in growth-inducing effects in Sacramento County, where the power from the UARP and Iowa Hill Development will be used. The new license will maintain existing UARP capacity while adding additional pumped-storage capacity to help meet peak demand, provide grid management and ancillary services, and manage the increasing use of non-dispatchable generation resources, such as wind power. The population of the greater Sacramento region has been growing at an annual rate of approximately two percent, and is expected to continue growing at this rate throughout the next decade. This growth will occur regardless of whether the proposed action/project is approved. The plan approvals that have accommodated and planned for this level of population growth in the Sacramento region are analyzed in the Environmental Impact Reports for the General Plans and General Plan Updates of the Cities and Counties within the Sacramento region. See, e.g., EIP Associates, *Sacramento County General Plan Update Subsequent Environmental Impact Report* § 4.2 (1993). Those discussions are hereby incorporated by reference.

As a municipal utility district, SMUD has an obligation to meet increasing energy demands of its territory, which will grow according to local and regional land use plans, growth management plans and policies. To meet this obligation, SMUD must either produce the power itself, or buy power from the market, either through long-term contracts or on the wholesale short-term and spot energy markets. Given the instability of the cost of power, increased reliance on the short-term spot energy market can have undesirable economic effects, resulting in unpredictable spikes in retail energy prices. To produce the economical power necessary to meet increasing energy demand, SMUD plans in advance by building new power plants or purchasing long-term power contracts. A new power project takes several years to get through the necessary planning, licensing, and construction before it is able produce power. The Iowa Hill Development is critical to SMUD's meeting the projected increased peak demand for electricity in the Sacramento region by adding a 58 percent increase in the total capacity of the UARP. This will have a less-than-significant effect on growth in the Sacramento region.

3.9.3.2 Effects on El Dorado County

Construction and operation of the Iowa Hill Development will not have a long-term effect on population trends in El Dorado County. During the construction phase, hundreds of jobs will be available, while project operation will add a very small number of jobs to SMUD's workforce. This construction-related increase in available jobs will not result in population growth in El Dorado County because the jobs are temporary and they may not all be filled by El Dorado County workers. As a result, construction of the Iowa Hill Development will not have any adverse effect on local services including schools, housing, and law enforcement. It will also not result in an increased demand for public services and utilities because of the small number of permanent operation jobs created by the new UARP development.

The only potential growth-inducing effect is the potential for improved access to the Iowa Hill area, which may enhance future residential development in the area. Currently, there are 28 privately-owned parcels that could be further developed. Development at Iowa Hill is presently

limited by lack of utilities (water, sewer, natural gas, and electricity), rather than lack of access. Increased access caused by the proposed Iowa Hill Development, therefore, will not facilitate further development of the Iowa Hill area without the development of utilities to serve the area. Therefore, the proposed action/project's effect on growth is less-than-significant.

3.10 Environmentally Superior Alternative

An evaluation of the three alternatives (SMUD's Proposal, Upper American River Project-Only Alternative, and Modifications to Applicants' Proposals) was conducted by FERC in its Final EIS to identify which alternative would result in the least environmental impact.

SMUD concurs with FERC in its recommendation that the proposed action/project, as defined in Section 3.3.1 above, is the Environmentally Superior Alternative. The factors considered in FERC's analysis and its conclusions are discussed in the FERC Final EIS Sections 5.1 Comprehensive Development and Recommended Alternative, and 5.1.1 Upper American River Project.

4.0 LITERATURE CITED

Buchman, M. F. 1999. NOAA Screening Quick Reference Tables. NOAA HAZMAT Report 99-1. Seattle, WA. Coastal Protection and Restoration Division, National Oceanic and Atmospheric Administration, 12 pp.

California Department of Conservation (DOC). 2000. A General Location Guide for Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring Asbestos. Open-File Report 2000-19. Compiled by Ronald K. Churchill and Robert L. Hill. August. Accessed online at ftp://ftp.consrv.ca.gov/pub/dmg/pubs/ofr/ofr_2000-019.pdf.

California Department of Transportation. 2004. California Supplement to FHA Manual of Uniform Traffic Control Devices. May.

CDFG, 2008. Upper American River Project Slab Creek Reservoir Fish Study.

CH2M HILL. 2008a. Iowa Hill Pumped-Storage Development, Transportation Route Technical Report. Upper American River Project. (FERC Project No. 2101). January.

CH2M HILL. 2008b. Iowa Hill Pumped-Storage Development, Visual Resources Technical Report, Addendum No. 1. Upper American River Project. (FERC Project No. 2101). January.

CH2M HILL. 2004. Socioeconomic Impact Technical Report. Upper American River Project. FERC No. 2101. October.

CH2M HILL and Devine Tarbell & Associates, Inc. 2005. Socioeconomic Assessment of Iowa Hill Construction and Operations Technical Report. Upper American River Project (FERC No. 2101). January.

CH2M HILL and Devine Tarbell & Associates, Inc. 2005. Iowa Hill Pumped-storage Development Draft Transportation Management Plan. Upper American River Project (FERC No. 2101). January.

Continental Resource Solutions, Inc. 2008. Fire Protection Report. Iowa Hill Pumped-storage Facility. Upper American River Project. FERC Project No. 2101. Unpublished Draft. January 13.

Devine Tarbell and Associates, Inc. (DTA). 2008. Slab Creek Reservoir Sediment Investigation Report. Devine Tarbell and Associates, Inc., Sacramento, CA.

DTA and Goodavish. 2005. Iowa Hill Visual Resources Technical Report. Upper American River Project. FERC Project No. 2101. January.

EIP Associates. *Sacramento County General Plan Update Subsequent Environmental Impact Report* § 4.2 (1993).

El Dorado County. 2008. El Dorado County Zoning Designations. Printed February 25, 2008.

El Dorado County. 2005. Asbestos Review Areas, Western Slope, County of El Dorado, State of California Map. July 21.

El Dorado County. 2004. El Dorado County General Plan Land Use Designations. Printed February 25, 2008.

EPA. 2002. National Recommended Water Quality Criteria. EPA-822-R-02-047.

Federal Energy Regulatory Commission (FERC) and U. S. Department of Agriculture Forest Service. 2008. Final Environmental Impact Statement for Hydropower License. Upper American River Hydroelectric Project, FERC Project No. 2101-084, California, and Chili Bar Hydroelectric Project, FERC Project No. 2155-024, California. March.

Federal Energy Regulatory Commission (FERC) and U. S. Department of Agriculture Forest Service. 2007. Draft Environmental Impact Statement for Hydropower License. Upper American River Hydroelectric Project, FERC Project No. 2101-084, California, and Chili Bar Hydroelectric Project, FERC Project No. 2155-024, California. September.

Federal Highway Administration. 1999. FH137/Wentworth Springs Road Final Environmental Impact Statement.

Federal Highway Administration. 2004. Manual of Uniform Traffic Control Devices. July.

Jacobs Vehicle Systems. 2008. Vehicle Noise Levels and Compression Release Engine Braking, and Frequently Asked Questions. Accessed online at: http://www.jakebrake.com.

MWH. 2004. Iowa Hill Pumped-storage Development Phase 2 Subsurface Exploration Geotechnical Investigation Technical Report. Upper American River Project. FERC Project No. 2101. August.

Sacramento Municipal Utility District. 2007. Relicensing Settlement Agreement for the Upper American River Project and Chili Bar Hydroelectric Project. Upper American River Project, FERC Project No. 2101. Chili Bar Hydroelectric Project, FERC Project No. 2155. January.

Sacramento Municipal Utility District. 2005a. Application for New License. Upper American River Project. FERC Project No. 2101. July.

Sacramento Municipal Utility District. 2005b. El Dorado County – SMUD Cooperation Agreement. Effective date: November 22, 2005.

Sacramento Municipal Utility District. 2008. Draft CEQA Supplement to FERC/USFS Final Environmental Impact Statement for Hydropower License and Analysis of Iowa Hill Joint Advisory Committee Comments. Upper American River Project. FERC Project No. 2101. April.

Slotton, D. G., S. M. Ayers, J. E. Reuter, and C. R. Goldman. 1997. Gold Mining Impacts on Food Chain Mercury in Northwestern Sierra Nevada Streams (1997 Revision). Final Report. Division of Environmental Studies, U.C. Davis.

State of California, Governor's Office of Planning and Research. State Clearinghouse and Planning Unit. 2007. Memorandum to All CEQA Lead Agencies from Terry Roberts, State Clearinghouse Director Addressing Naturally Occurring Asbestos in CEQA Documents. August 1.

Stillwater Sciences. 2008. Technical Report on Iowa Hill Pumped-storage Development Turbidity Analysis. Upper American River Project. FERC Project No. 2101. January.

U. S. DOI, 1998. National Irrigation Water Quality Program Information Report #3. Guidelines for Interpretation of Biological Effects of Selected Constituents in Biota, Water, and Sediment. Dept. of Interior.

5.0 LIST OF PREPARERS

Sacramento Municipal Utility District
Scott Flake, Manager, Power Generation Department
Dave Hanson, Project Manager, Hydro Relicensing
Joe Davis, Hydro Relicensing Consultation Coordinator
Leslie A. Dunsworth, Assistant General Counsel

CH2M HILL
John Carrier, Program Manager – Senior Reviewer
Wendy Haydon, Environmental Planner – Project Manager
Robert Antel, Graphic Designer
Mark Bastasch, Environmental Engineer
Loren Bloomberg, Senior Transportation Engineer
Jason Bone, GIS Specialist
Earl Byron, Senior Technologist – Aquatic Science
Trin Campos, Principal Project Manager
Michaun Clay, GIS Specialist
Angela Finton, Graphic Designer
Mike Haskell, GIS Specialist
Bhanu Kala, Transportation Engineer
Brian Nichols, Field Technician
Thomas Priestley, Senior Technologist – Visual Resources
Pete Rude, Water Resources Engineer
Bruce Stevens, Chief Cost Estimator
Hans Strandgaard, Senior Bridge Engineer
Kyle Winslow, Numerical Modeling Specialist
Dave Withers, Field Technician
Tim Wright, Roadway Engineer

Continental Resource Solutions, Inc.
Brad Seaburg, Principal

6.0 LIST OF RECIPIENTS

Final CEQA Supplemental Analysis Mailing List (CD Only)

Jeff Hansen
1966 Cable Road
Camino CA 95709

David Bolster
1961 Larsen Drive
Camino CA 95709

Mike DeBord
6090 Keeble Lane
Camino CA 95709

Carol Gleichman
Advisory Council on Historic Preservation
12136 West Bayaud Ave., Suite 330
Lakewood CO 80228

Alan Ehrgott
American River Conservancy
P O Box 562
Coloma CA 95613

Dave Steindorf
California Stewardship Director
American Whitewater
4 Baroni Drive
Chico CA 95928

Bill Center
American River Recreation & Camp Lotus
P O Box 623
Lotus CA 95651

Frank Fryman
Bureau of Indian Affairs
2800 Cottage Way
Sacramento CA 95825

Mike Ammon
California Dept. of Boating & Waterways
200 Evergreen, Suite 100
Sacramento CA 95815

Katherine Hill
California Dept. of Fish & Game
1701 Nimbus Road, Suite A
Rancho Cordova CA 95670

Nancee Murray
Senior Staff Counsel
California Dept. of Fish & Game
1416 Ninth Street, 12th Floor
Sacramento CA 95814

Stafford Lehr
California Dept. of Fish & Game
1701 Nimbus Road, Suite A
Rancho Cordova CA 95670

Jim Micheaels
California Dept. of Parks & Recreation
7806 Folsom-Auburn Road
Folsom CA 95630

Thomas Hannigan
California Dept. of Water Resources
P O Box 942836, Room 1115-1
Sacramento CA 94236

William J. Keese
California Energy Commission
1516 Ninth Street
Sacramento CA 95814

Winston Hickox
California Envir. Protection Agency
1001 I Street
Sacramento CA 95814

Hans Kreutzberg
California Office of Historic Preservation
1416 Ninth Street, Room 1442-7
Sacramento CA 95814

Nathan Rangel
California Outdoors
P O Box 475
Coloma CA 95613

Mary Nichols
California Resources Agency
1416 Ninth Street, Suite 1311
Sacramento CA 95814

Christa Campbell
Camino Action Committee
P O Box 112
Camino CA 95709

Tom Heflin
Camino Action Committee
2569 Larsen Drive
Camino CA 95709

Craig Thomas
Center for Sierra Nevada Conservation
6221 Shoo Fly Road
Kelsey CA 95667

Jim & Nancy Summers
P O Box 923
Camino CA 95709

Hilde Schweitzer
P O Box 852
Lotus CA 95651

Sue Britting
P O Box 377
Coloma CA 95613

Ed Knapp
2516 Audubar Court
Camino CA 95709

Chris Shutes
California Sportfishing Protection Alliance
1608 Francisco Street
Berkeley CA 94703

Mel Johnson
City of Sacramento
1395 – 35th Avenue
Sacramento CA 95822

Martha Lennihan
City of Sacramento Counsel
2311 Capitol Avenue
Sacramento CA 95816

William Hetland
El Dorado County Water Agency
3932 Ponderosa Road, Suite 200
Shingle Springs CA 95682

Jack Sweeney
El Dorado County Board of Supervisors
District 3
330 Fair Lane
Placerville CA 95667

Doug Leisz
El Dorado County Citizens for Water
2399 Kingsgate Road
Placerville CA 95667

Louis Green
El Dorado County Counsel's Office
330 Fair Lane
Placerville CA 95667

Fred Schaefer
El Dorado County Water Agency Counsel
3932 Ponderosa Road, Suite 200
Shingle Springs CA 95682

Tom Gallier
General Manager
El Dorado Irrigation District
2890 Mosquito Road
Placerville CA 95667

Ron Stork
Friends of the River
915 – 20th Street
Sacramento CA 95814

Bernard Carlson
Friends of El Dorado County
5864 Dolomite Drive
El Dorado CA 95623

Hank White
Georgetown Divide Public Utility District
P O Box 4240
Georgetown CA 95634

Ray Larsen
Larsen Farms
2420 Apple Vista Lane
Camino CA 95709

Hal Cole, Mayor
South Lake Tahoe City Council
1052 Tata Lane
South Lake Tahoe CA 96150

Carl Hagen
Mayor, City of Placerville
487 Main Street
Placerville CA 95667

Gary Davis
Mayor, City of Elk Grove
8400 Laguna Palms Drive
Elk Grove CA 95758

Andy Morin
Mayor, City of Folsom
50 Natomas Street
Folsom CA 95630

Andrew Meredith
Mayor, City of Galt
380 Civic Drive
Galt CA 95632

Heather Fargo
Mayor, City of Sacramento
915 I Street, Room 205
Sacramento CA 95814

Eric Theiss
National Marine Fisheries Service
650 Capitol Mall, Suite 8-300
Sacramento CA 95814

Stephen Bowes
National Park Service
1111 Jackson Street, Suite 700
Oakland CA 94607

David Breninger
Placer County Water Agency
P O Box 6570
Auburn CA 95604

Gary Carlton
Regional Water Quality Control Board
11020 Sun Center Drive, #200
Rancho Cordova CA 95670

Nicholas Fonseca
Shingle Springs Band of Miwok Indians
P O Box 1340
Shingle Springs CA 95682

Tim Feller
Sierra Pacific Industries
P O Box 1450
Cedar Ridge CA 95924

Jennifer Watts
State Water Resources Control Board
P O Box 2000
Sacramento CA 95812

Art Champ
U.S. Army Corps of Engineers
1325 J Street
Sacramento CA 95814

Jim Eicher
U.S. Bureau of Land Management
63 Natoma Street
Folsom CA 95630

Deane Swickard
U.S. Bureau of Land Management
63 Natoma Streeet
Folsom CA 95630

Jack Gipsman
Office of General Counsel
U.S. Department of Agriculture
33 New Montgomery, 17th Floor
San Francisco CA 94105

Wayne White
U.S. Fish & Wildlife Service
2800 Cottage Way, Suite W-2605
Sacramento CA 95825

William Foster
U.S. Fish & Wildlife Service
2800 Cottage Way, Suite W-2605
Sacramento CA 95825

Beth Paulson
U.S. Forest Service
100 Forni Road
Placerville CA 95667

Duane Nelson
U.S. Forest Service
4260 Eight Mile Road
Camino CA 95709

Ramiro Villalvazo
Forest Supervisor – Eldorad Nat'l. Forest
U.S. Forest Service
100 Forni Road
Placerville CA 95667

Diana Rubiaco
U.S. Forest Service
7887 Highway 50
Pollock Pines CA 95726

Patricia Trimble
U.S. Forest Service
7600 Wentworth Springs Road
Georgetown CA 95634

Bob Hawkins
U.S.D.A. – Forest Service
1323 Club Drive
Vallejo CA 94592

Marianna Aue
State Water Resources Control Board
1001 I Street, 14th Floor
Sacramento CA 95814

Waldo Walker, Chairman
Washoe Tribe Archive Cultural Center
919 US Highway 395 N
Gardenerville, NV 89410-8968

George Osborne
El Dorado Irrigation District
Board of Directors - District 1
2890 Mosquito Road
Placerville CA 95667

Bill George
El Dorado Irrigation District
Board of Directors – District 3
2890 Mosquito Road
Placerville CA 95667

Bob Penn
2521 Sky Ranch Lane
Camino CA 95709

Lois Bailey-Hacker
2380 Apple Tree Lane
Camino CA 95709

Ann Wofford
1900 Hidden Valley Lane
Camino CA 95709

Jan Escamilla
3300 Cableview Court
Placerville CA 95667

Phyllis Banducci
State of California – Dept. of Forestry and Fire Protection
2840 Mt. Danaher Road
Camino CA 95709

Judy Morris
1816 Cable Road
Camino CA 95709

Karen Hansen
3681 Dogwood Lane
Placerville CA 95667-9034

Maryann Argyres
4220 North Canyon
Camino CA 95709

Richard & Peggy Paradise
3280 Cableview Court
Placerville CA 95667

Rich Jackson
2664 Cable Road
Camino CA 95709

Steve Miller
Mayor, City of Citrus Heights
6237 Fountain Square Drive
Citrus Heights CA 95621

David Sander
Mayor, City of Rancho Cordova
3121 Gold Canal Drive
Rancho Cordova CA 95670

Vicky Yorty
El Dorado County Fire Safe Council
P O Box 1237
Pollock Pines CA 95726

Placerville City Council
City Hall
3101 Center Street
Placerville CA 95667

Richard Shepard
El Dorado County – Dept. of Transportation
2850 Fairlane Court
Placerville CA 95667

Nancy Lynch Ed.D., Superintendent
Placerville Union School District
1032 Thompson Way
Placerville CA 95667

Lawrence Appel
Deputy Director/Planning
El Dorado County Development Services
2850 Fairlane Court, Building C
Placerville CA 95667

Vicki Barber, Superintendent
El Dorado County Office of Education
6767 Green Valley Road
Placerville CA 95667

Sherry Smith, Superintendent
El Dorado Union High School District
4675 Missouri Flat Road
Placerville CA 95667

Elizabeth Haines, Superintendent
Camino Union School District
3060 Snows Road
Camino CA 95709

Susan Spencer, Superintendent
Pollock Pines School District
2701 Amber Trail
Pollock Pines CA 95726

Bill Holmes, Amador-El Dorado Unit
California Dept. of Forestry and Fire Protection
2840 Mt. Danaher Road
Camino CA 95709

Shanda Hahn, Superintendent
Mother Lode Union School District
3783 Forni Road
Placerville CA 95667

Ruben Grijalva, Director
California Dept. of Forestry and Fire Protection
P.O. Box 944246
Sacramento CA 94244

Thomas & Judy Shewmake
P.O. Box 836
Camino CA 95709

Duane Watson
2115 Chute Camp Road
Camino CA 95709

Jane Arteaga
5001 Slab Creek Road
Camino CA 95709

Rich Wade
Sierra Pacific Industries
3950 Carson Road
Camino CA 95709

Paul & Ann Wofford
4830 Tono Way
Sacramento CA 95841

Michael & Gwin Langley
7418 Stock Ranch Road, # 1106
Citrus Heights CA 95621

Michael & Eleanor Kuehn
3809 Kingbird Lane
Camino CA 95709

Larry Meyers
Native American Heritage Commission
915 Capital Mall, Room 364
Sacramento CA 95814

Mike Zumot, Acting Chief
Dept. of Water Resources
Division of Safety of Dams
P O Box 942836
Sacramento CA 94236-0001

Alyssa Begley, Chief
Office of Transportation Planning-South
Dept. of Transportation, District 3
P O Box 942874
Sacramento CA 94274-0001

Bonnie Flint
P O Box 988
Camino CA 95709

Paul Seibert
P O Box 806
Camino CA 95709

P J Hilton
P O Box 418
Camino CA 95709

William Mahl, President
Board of Directors
Georgetown Fire District
P O Box 420
Georgetown CA 95634

Final CEQA Supplemental Analysis
Mailing List (Letter Only)

John Young
American Land & Leisure
434 Antelope Court
Elverta CA 95626

Steve Hall
Assoc. of California Water Agencies
910 K Street
Sacramento CA 95814-3512

Rich Gresham
American River Watershed Group
251 Auburn Ravine Road, Suite 201
Auburn CA 95603

Elizabeth Ayres
Bureau of Reclamation
7794 Folsom Dam Road
Folsom CA 95630

Director
Calif. Adventures/U.C. Berkeley
5 Haas Clubhouse
Strawberry Canyon Rec. Area
Berkeley CA 94720

Lester Snow
CalFed
1416 – 9th Street, Suite 1155
Sacramento CA 95814

Jim Bramham
California Assoc. of 4WD Clubs
117 Otto Circle
Sacramento CA 95822

Director
California Canoe & Kayak
12401 Folsom Blvd., Suite 205
Rancho Cordova CA 95742

Valerie Nera
California Chamber of Commerce
P O Box 1736
Sacramento CA 95812-1736

California Department of Conservation
801 K Street, MS 24-01
Sacramento CA 95814

John "Rusty" Areias
California Dept. of Parks & Recreation
P O Box 942896
Sacramento CA 94296

Ken Simmons
California Dept. of Parks & Recreation
P O Box 265
Coloma CA 95613

Gary Hester
California Dept. of Water Resources
P O Box 219000
Sacramento CA 95821

Gary Heath
California Electricity Oversight Board
770 L Street, Suite 1250
Sacramento CA 95814

Cheryl Rubin
Calfornia Forest Products Commission
853 Lincoln Way, Suite 208
Auburn CA 95603

Eva Butler
California Native Plant Society
2707 K Street, #1
Sacramento CA 95816

Janice Calpo
California Office of Historic Preservation
P O Box 942896
Sacramento CA 95814

LaVeta Stelzmiller
California Republican Assembly – EDC
1400 Big Oak Court
Placerville CA 95667

Michael Peevey
California Public Utilities Commission
505 Van Ness Avenue
San Francisco CA 94102-3298

Jim Crenshaw
California Sportfishing Protection Alliance
1248 East Oak Avenue, Suite D
Woodland CA 95695

Roger Niello
California State Assembly
P O Box 942849, Room 2016
Sacramento CA 94249-0005

Alan Nakanishi
California State Assembly, District 10
P O Box 942849, Room 5175
Sacramento CA 94249-0010

Dave Jones
California State Assembly, District 9
P O Box 942849
Sacramento CA 94249-0009

Bill Deitchman
California State Parks
501 El Dorado Street
Auburn CA 95603

Mike Machado
California State Senate, District 5
State Capitol
Sacramento CA 95814

Deborah Ortiz
California State Senate, District 6
State Capitol, Room 4032
Sacramento CA 95814

Richard De Chant
Chili Bar Put-in
P O Box 939
Kernville CA 93238-0939

Mark Bergstrom
California Trout
870 Market Street, No. 859
San Francisco CA 94102

Director
California Waterfowl Association
4630 Northgate Blvd., Suite 150
Sacramento CA 95834

John Buckley
Central Sierra Envir. Resource Center
P O Box 396
Twain Harte CA 95383

Charles Bertolette
2636 Fairover Drive
Placerville CA 95667

Jon Murray
133 Blue Jay Drive
Placerville CA 95667

John L. Fonseca
P O Box 463
Coloma CA 95613

Justin States
13530 Olympic Drive
Truckee CA 96161

Evert Palmer
City of Folsom
50 Natoma Street
Folsom CA 95630

Dr. Trent Saxton
680 Placerville Drive
Placerville CA 95667

Al Mosier
59 Ardsley Circle
Sacramento CA 95823

Stan Eisner
City of Placerville
487 Main Street
Placerville CA 95667

Lori Lei "Rico" K. Ozaki
City of Sacramento Counsel
2311 Capitol Avenue
Sacramento CA 95816

Michael Hanford
County of El Dorado
330 Fair Lane
Placerville CA 95667

Dan Crandall
Current Adventures Kayaking
P O Box 828
Lotus CA 95651

Kerry O'Hara
Office of the Regional Solicitor
U.S. Department of Interior
2800 Cottage Way, Room E-1712
Sacramento CA 95825

Jim Lynch
Devine Tarbell & Associates, Inc.
2720 Gateway Oaks Drive, Suite 300
Sacramento CA 95833

John Devine
Devine Tarbell & Associates, Inc.
970 Baxter Boulevard
Portland ME 04103

Dave Lindgren
Downey Brand
555 Capitol Mall, 10th Floor
Sacramento CA 95814

Steve Brown
Ducks Unlimited
1760 N. Hunter
Stockton CA 95204

Karen McDaniels
Earth-Trek Expeditions
P O Box 1010
Lotus CA 95651-1010

Steve Heipel
EDAW
2022 J Street
Sacramento CA 95814

G. William King, Ph.D
EDC BOS-appointed Fish & Game Comm.
2681 Cameron Park Drive, Space 41
Cameron Park CA 95682

Bob Granade, President
El Dorado County Builders Exchange
3430 Robin Lane, Suite 7
Cameron Park CA 95682

Noah Rucker-Triplett
El Dorado County Parks & Recreation
3000 Fairlane Court, Suite 1
Placerville CA 95667

Karen Kitchens
El Dorado County Builders' Exchange
3430 Robin Lane, Suite 7
Cameron Park CA 95682

Brian Deason & Chad Miller
EDC & Georgetown Divide RCDs
100 Forni Road, Suite A
Placerville CA 95667

Jeanne Hall
EDC Chamber of Commerce
542 Main Street
Placerville CA 95667

Harry Dunlop
EDC Citizens for Water
1014 Diamante Robles Court
Diamond Springs CA 95619-9731

Jon Vegna
El Dorado County Dept. of Transportation
2850 Fairlane Court
Placerville CA 95667

Richard Nichols
El Dorado County Grand Jury
P O Box 472
Placerville CA 95667

Thomas Davis
EDC Indian Council, Inc.
5901 Lynx Trail
Pollock Pines CA 95726

Doug Noble
EDC Planning Department
2850 Fairlane Court
Placerville CA 95667

Mark Egbert
EDC Resource Conservation District
100 Forni Road
Placerville CA 95667

Steve Proe
EDC Taxpayers for Quality Growth
P O Box 141
Rescue CA 95672

George Cuttrell
EDC Department of General Services
345 Fair Lane
Placerville CA 95667

Duane Wallace
El Dorado County Water Agency
3932 Ponderosa Road, Suite 200
Shingle Springs CA 95682

Debbie Manning
EDH Chamber of Commerce
P O Box 5055
El Dorado Hills CA 95762

Wayne Lowery
EDH Community Services District
1021 Harvard Way
El Dorado Hills CA 95762

Lysa Daniels
El Dorado Indian Council
P O Box 120
West Sacramento CA 95691

Roseanne Chamberlain
El Dorado LAFCO
550 Main Street, Suite E
Placerville CA 95667

Earl Withycombe
Environmental Council of Sacramento
909 – 12th Street, Suite 1188
Sacramento CA 95814

Mike Bean
Gold Country Paddlers
P O Box 364
Coloma CA 95613

Fred Krupp
Environmental Defense Fund
257 Park Avenue South
New York NY 10010

Valerie Zentner
EDC Farm Bureau
2460 Headington Road
Placerville CA 95667-5216

Lillian Brumbelle
Placer County Farm Bureau
10120 Ophir Road
Newcastle CA 95658

Denis Lewis
Sacramento County Farm Bureau
8970 Elk Grove Boulevard
Elk Grove CA 95624

Ann Miles
Federal Energy Regulatory Commission
888 First Street, N.E. - PJ-11.6
Washington DC 20426

Frank Winchell, Ph.D
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington DC 20426

James Fargo
Federal Energy Regulatory Commission
888 First Street, N.E. – PJ-11.7
Washington DC 20426

Takeshi Yamashita
FERC
901 Market Street, Suite 350
San Francisco CA 94103

Mark Robinson
Federal Energy Regulatory Commission
888 First Street, N.E. – PJ-11
Washington DC 20426

Hossein Ildari
Federal Energy Regulatory Commission
888 First Street, N.E. – PJ-12.1
Washington DC 20426

Rob Ferroggiaro
Federation of Fly Fishers
9270 Oakleaf Way
Granite Bay CA 95746

Katherine Evatt
Foothill Conservancy
20123 Shake Ridge Road
Volcano CA 95687

James Marquez
Foothill Indian Education Alliance
P O Box 1418
El Dorado CA 95623

Stewart Foreman
Freeland, Cooper & Foreman
150 Spear Street, Suite 1800
San Francisco CA 94105

Robert Brown
Georgetown Fire District
P O Box 420
Georgetown CA 95634

Mike Barton
Gold Rush River Rafting
P O Box 1070
Lotus CA 95651

Ray Pethal
Hangtown Bass Anglers
5716 Pleasant Valley Road
El Dorado CA 95623

Julie Wentworth
Ice House Resort
P O Box 839
Pollock Pines CA 95726

Bradley Pearson
Kit Carson Lodge
4521 Holiday Hill Court
Shingle Springs CA 95682

Kim Longworth
League of Women Voters of California
801 – 12th Street, Suite 220
Sacramento CA 95814-2930

Norm Rupp
League to Save Sierra Lakes
P O Box 267
Kirkwood CA 95646

Deborah Sliz
Morgan Meguire LLC
1225 I Street, N.W., Suite 600
Washington DC 20005

Scott Underwood
Mother Lode River Trips
P O Box 138
Coloma CA 95613

Linda Church Ciocci
National Hydropower Association
One Massachusetts Ave., N.W., Suite 720
Washington DC 20001

Steve Edmondson
National Marine Fisheries Service
777 Sonoma Avenue, Room 325
Santa Rosa CA 95404

Richard Roos-Collins, J.D.
Natural Heritage Institute
100 Pine Street, Suite 1550
San Francisco CA 94111

Leo Winternitz
Sacramento Water Forum
660 J Street, Suite 260
Sacramento CA 95814

Gary Estes
Protect American River Canyons
4135 Eagles Nest Road
Auburn CA 95603

Barry Nelson
Natural Resource Defense Council
111 Sutter Street, 20th Floor
San Francisco CA 94104-4540

Ann Notthoff
Natural Resources Defense Council
40 W. 20th Street
New York NY 10011

Steve McCormick
Nature Conservancy
201 Mission Street, 4th Floor
San Francisco CA 94105

David Guy
Northern California Water Association
455 Capital Mall, Suite 335
Sacramento CA 95814

Jennifer Darcangelo
Office of Historic Preservation
1415 – 9th Street, Room 1442-7
Sacramento CA 95814

David Moller
Pacific Gas & Electric Company
P O Box 770000, Mail Code N11D
San Francisco CA 94177

Alan Soneda
Pacific Gas & Electric Company
P O Box 770000, Mail Code N11C
San Francisco CA 94177

Tom Studley
Pacific Gas & Electric Company
3400 Crow Canyon Road
San Ramon CA 94583

President
Placerville Downtown Association
P O Box 2156
Placerville CA 95667

Dudley Reiser
R2 Resource Consultants, Inc.
15250 NE 95th Street
Redmond WA 98052

Sean Christman
Rapid Descent Adventures
P O Box 85
Twin Bridges CA 95735

Robert Meacher
Regional Council of Rural Counties
801 – 12th Street, Suite 600
Sacramento CA 95814

Ray Nutting
Regional Council of Rural Counties
330 Fair Lane
Placerville CA 95667

Regional Council of Rural Counties
415 Placerville Dr., Suite R
Placerville CA 95667

John Hofmann
Regional Council of Rural Counties
801 – 12th Street, Suite 600
Sacramento CA 95814

Greg Vaughn
Regional Water Quality Control Board
11020 Sun Center Drive, #200
Rancho Cordova CA 95670-6114

Mike Cohen
River Management Advisory Committee
P O Box 125
Coloma CA 95613

Donna McMasters
River Management Advisory Committee
P O Box 582
Coloma CA 95613

Manny Shaffer
River Management Advisory Committee
P O Box 516
Coloma CA 95613

Tommy Anderson
River Management Advisory Committee
P O Box 597
Coloma CA 95613

Randy Calvin
River Rat Raft Rentals
9840 Fair Oaks Boulevard
Fair Oaks CA 95628

Director
River Riders Whitewater Tours
1911 Douglas Blvd., Suite 85-345
Roseville CA 95661

Danny Lulla
River Runners Inc.
P O Box 433
Coloma CA 95613

Lester Clemenson
Robbs Valley Resort
P O Box 1419
El Dorado CA 95623

Peter Nolan
Rotary Club of Cameron Park
P O Box 366
Shingle Springs CA 95682

President
Rotary Club of El Dorado Hills
P O Box 5202
El Dorado Hills CA 95762

President
Rotary Club of Placerville
2020 Smith Flat Road
Placerville CA 95667

Dick Horn
Rotary Club of South Lake Tahoe
P O Box 778
South Lake Tahoe CA 96156

Jack Connelly
Rough & Ready Jeep Club
5119 Ada Lane
Sacramento CA 95838

Don Nottoli
Sacramento Board of Supervisors
700 H Street, No. 2450
Sacramento CA 95814

Roger Dickinson
Sacramento Board of Supervisors
700 H Street, No. 2450
Sacramento CA 95814

Jimmie Yee
Sacramento Board of Supervisors
700 H Street, No. 2450
Sacramento CA 95814

Susan Peters
Sacramento Board of Supervisors
700 H Street, No. 2450
Sacramento CA 95814

Roberta McGlashan
Sacramento Board of Supervisors
700 H Street, No. 2450
Sacramento CA 95814

Ray Kerridge
Sacramento City Manager
915 I Street, Room 205
Sacramento CA 95814

Gary Stonehouse
Sacramento City Planning Department
915 I Street
Sacramento CA 95814

Ron Suter
Sacramento County Parks Department
4040 Bradshaw Road
Sacramento CA 95827

Keith DeVore
Sacramento County Public Works
827 – 7th Street, Room 301
Sacramento CA 95814

Sacramento Metro
Chamber of Commerce
One Capitol Mall, Suite 300
Sacramento CA 95814

Felix Smith
Save the American River Association
4720 Talus Way
Carmichael CA 95608

Alan Wade
Save the American River Association
2916 – 25th Street
Sacramento CA 95818

Bob Burrows
Save the American River Association
2541 Rio De Oro Way
Sacramento CA 95826

Catherine Fonseca
Shingle Springs Band of Miwok Indians
P O Box 1340
Shingle Springs CA 95682

Nicholas Fonseca
Shingle Springs Band of Miwok Indians
P O Box 1340
Shingle Springs CA 95682

Jeff Murray
Shingle Springs Band of Miwok Indians
P O Box 1340
Shingle Springs CA 95682

Susan Davidson
Water Forum
660 J Street, #260
Sacramento CA 95814

John Tillman
Sierra Disposal
P O Box 1189
Lotus CA 95651

Melinda Eppler
Sierra Health Foundation
1321 Garden Highway
Sacramento CA 95833

Brian C. Lee
Sierra Lions Club
2004 Harwich Court
El Dorado Hills CA 95762

Steve Barber
South Fork Dialogue Group
8035 South Lake Circle
Granite Bay CA 95746

Duane Wallace
South Lake Tahoe Chamber of Commerce
3066 Lake Tahoe Blvd.
South Lake Tahoe CA 96150

Honorable Arnold Schwarzenegger
State of California
Sate Capitol
Sacramento CA 95814

Carolyn Doty
Shingle Springs/Cameron Park Chamber of Commerce
P O Box 341
Shingle Springs CA 95682

Ellen Day
Taxpayers Assoc. of El Dorado County
P O Box 13
Placerville CA 95667

Scott Wilcox
Stillwater Sciences
279 Cousteau Place, Suite 400
Davis CA 95616

Lloyd G. Carter
Streams Natural Resources
59787 Cascade Road
North Fork CA 93643

Karen Schambach
The Center for Sierra Nevada Conservation
6221 Shoo Fly Road
Kelsey CA 95643

Susan Welter
The River Store
P O Box 472
Lotus CA 95651

Cathy Locke
The Sacramento Bee
1835 Prairie City Road, Suite 500
Folsom CA 95630

Lorraine Hall
Tributary Whitewater Tours
20480 Woodbury Drive
Grass Valley CA 95949

Charlton Bonham
Trout Unlimited
1808 B – 5th Street
Berkeley CA 94710

Chuck Mills
Trust for Public Land
1107 – 9th Street, Suite 1050
Sacramento CA 95814

Maryann Owens
U.S. Fish & Wildlife Service
2800 Cottage Way, Suite W-2605
Sacramento CA 95825

Tom Cavanaugh
U.S. Army Corps of Engineers
1324 J Street
Sacramento CA 95814

Larry Vinzant
U.S. Army Corps of Engineers
1325 J Street
Sacramento CA 95814

Michael Walsh
U.S. Army Corps of Engineers
1325 J Street
Sacramento CA 95814

Jeff Horn
U.S. Bureau of Land Management
63 Natoma Street
Folsom CA 95630

Thomas Dang
U.S. Bureau of Reclamation
3310 El Camino Ave., Suite 300
Sacramento CA 95821

Roger Patterson
U.S. Bureau of Reclamation
2800 Cottage Way
Sacramento CA 95825

Roderick Hall
U.S. Bureau of Reclamation
7794 Folsom Dam Road
Folsom CA 95630

Jack Mills
U.S. Bureau of Land Management
2800 Cottage Way, Suite W-1834
Sacramento CA 95825

David Farrel
U.S. Environmental Protection Agency
75 Hawthorne Street, MS-CMD-2
San Francisco CA 94105

Mike Hoover
U.S. Fish & Wildlife Service
2800 Cottage Way, Room W-2605
Sacramento CA 95825-1846

Deborah Giglio
U.S. Fish & Wildlife Service
2800 Cottage Way, Room E-1803
Sacramento CA 95825

Mike Taylor
U.S. Forest Service
100 Forni Road
Placerville CA 95667

Vicki Jowise
U.S. Forest Service
100 Forni Road
Placerville CA 95667

Sue Norman
U.S. Forest Service
35 College Drive
South Lake Tahoe CA 96150

Katy Coulter
U.S. Forest Service
100 Forni Road
Placerville CA 95667

Don Yasuda
U.S. Forest Service
100 Forni Road
Placerville CA 95667

Matt Johnson
U.S. Forest Service
7887 Highway 50
Pollock Pines CA 95726

Gordon Sloan
U.S. Forest Service
2730 Savannah Highway
Charleston SC 29414

Dirk Rodriguez
U.S. Forest Service
100 Forni Road
Placerville CA 95667

Dawn Lipton
U.S. Forest Service
100 Forni Road
Placerville CA 95667

Don Errington
U.S. Forest Service
7887 Highway 50
Pollock Pines CA 95726

Mona Janopaul
U.S. Forest Service
201 – 14th Street, S.W.
Washington DC 20250

Lester Lubetkin
U.S. Forest Service
100 Forni Road
Placerville CA 95667

Ken Pence
U.S. Forest Service
100 Forni Road
Placerville CA 95667

Bradley E. Powell
USFS – Pacific SW Region 5, MRM-Lands
1323 Club Drive
Vallejo CA 94592

Frank Mosbacher
U.S. Forest Service
100 Forni Road
Placerville CA 95667

Cindy Oswald
U.S. Forest Service
4260 Eight Mile Road
Camino CA 95709

Jann Williams
U.S. Forest Service
100 Forni Road
Placerville CA 95667

Judy Tartaglia
U.S. Forest Service
100 Forni Road
Placerville CA 95667

Larry Taylor
U.S. Forest Service
100 Forni Road
Placerville CA 95667

Ron Hancock
U.S. Forest Service
4260 Eight Mile Road
Camino CA 95709

Honorable John T. Doolittle
U.S. House of Representatives
2410 Rayburn House Office Building
Washington DC 20515

Honorable Doris Matsui
U.S. House of Representatives
2310 Rayburn House Office Building
Washington DC 20515-0505

Honorable Lynn Woolsey
U.S. House of Representatives, Dist. 3
2263 Rayburn House Office Building
Washington DC 20515

Honorable Dianne Feinstein
U.S. Senate
SH-331 Hart Senate Office Building
Washington DC 20510-0504

Honorable Barbara Boxer
U.S. Senate
112 Hart Senate Office Building
Washington DC 20510

David Keyser
United Auburn Indian Community of the
Auburn Rancheria
661 Newcastle Road, Suite 1
Newcastle CA 95658

Michael Swiger, Esq.
VanNess Feldman
1050 Thomas Jefferson St., NW, 7th Floor
Washington DC 20007-3877

Troy Tanga / Dan Raleigh
Whitewater Connection
P O Box 270
Coloma CA 95613-0270

Janet Goldsmith
Attorney
400 Capital Mall, 27th Floor
Sacramento CA 95814

Stacy Evans, Project Manager
Pacific Gas and Electric Company
P O Box 770000, MC N11D
San Francisco CA 94177

California Air Resources Board
P O Box 2815
Sacramento CA 95812-2815

Final CEQA Supplemental Analysis
Mailing List for IHJAC (E-mail Only)

Iowa Hill Joint Advisory Committee Participants notified via e-mail of Final CEQA Supplemental Analysis due to mailing addresses not provided

Betty Linville
Bill & Maureen Terry
Charles Downs
Charles Fallon
Charlotte Kosn
Dan & Mavis Proud
David & Jessica Ilse
Donna Parker
Duane & Carol Watson
Ed Tharp
Gloria Ross
Gordon Lee
Jason Cry
Jerrie Reese
Jim & Barbara Webb
John Cleveland
Jon & Bev Coble
Keith Millard
Mark & Robin Stanley
Mike & Fran Rothwell
Mike Hamann
Nancy Stone
Norm Krizl
Pat Kernan
Patty Jackman
Pete Hilton
Rick LaFrance
Robert Coffey
Roy Valdez
Tom Stumbaugh
Whitey & Helen Atchley