

## **Appendix H-2 – SMUD’s Response to Comments**



## **APPENDIX H-2      RESPONSE TO COMMENTS ON THE DRAFT SUPPLEMENTAL ANALYSIS**

### **1      Construction Application – State Division of Safety of Dams**

Comment noted.

### **2      Final Transportation Management Plan**

As discussed in Section 3.3.3.3.2, SMUD will develop a final Transportation Management Plan prior to any construction. SMUD will consider the Caltrans Transportation Management Plan Guidelines in preparing the plan, and will provide a draft of the plan to the State Department of Transportation – District 3, among others, for a 90-day review.

### **3      Encroachment Permit – State DOT Right-of-Way**

Comment noted.

### **4      Add to Mailing List**

SMUD will add the State Department of Transportation – District 3, and the Department of Water Resources – Division of Safety of Dams, to its mailing list to receive future notices and other information relative to the Iowa Hill Development.

### **5      Mercury Bioaccumulation Data**

In further discussion with the State Water Resources Control Board staff on this issue, SMUD has agreed to prepare a plan to sample fish tissue mercury bioaccumulation at UARP reservoirs. The plan will focus on the need for and nature of a sampling program at each reservoir, including Slab Creek Reservoir and upstream areas, and will not conflict with the bioaccumulation monitoring program included in the UARP Relicensing Settlement Agreement. It will also broadly consider mercury concentrations in fish tissue in other waterbodies throughout California and measures that other agencies have undertaken to protect human health at these waterbodies. SMUD will implement the plan after approval by the State Water Resources Control Board.

SMUD has also agreed to develop a plan to perform a scientific inquiry into the relationship between the process of mercury methylation (the conversion of inorganic mercury to methylmercury) and UARP reservoir operation. The plan will include a review of the scientific literature regarding: 1) physical and chemical conditions in waterbodies that affect the methylation process; 2) locations where water management in reservoirs are known to influence the methylation process; and 3) methods applied to slow or eliminate methylation in mountain reservoirs. Data and information from the

UARP relicensing water quality studies will also be considered in the plan. SMUD will implement the plan after approval by the State Water Resources Control Board.

## **6 Iowa Hill Intake/Outlet Structure Design**

The final design of the Iowa Hill Intake/Outlet will be based on a variety of engineering and environmental considerations. The primary environmental considerations include fish entrainment when the project is operated in the pumping mode and turbidity during the generation/discharge mode. The final design of the intake/outlet structure will occur within the 2- to 3-year-long full-project design process that follows license issuance. During that time, SMUD will also perform two years of hardhead monitoring in Slab Creek Reservoir, as required by the UARP Relicensing Settlement Agreement. Information from the monitoring program will guide the final design from an entrainment perspective. The intake/outlet structure design process will be performed in consultation with appropriate resource agency staff, including the State Water Resources Control Board. The octagonal, multi-port conceptual design of the structure, described in SMUD's licensing application package, is based on a similar intake/outlet structure design for the Camp Far West Hydroelectric Project of the South Sutter Water District, which was designed and constructed under SMUD supervision in 1982.

## **7 Additional and Separate Project-level CEQA Documentation for the Iowa Hill Development**

The Final EIS and this document have already analyzed the potential significant environmental effects of the Iowa Hill Development. If in the future new information or changes in the design of the Iowa Hill Development lead to new significant adverse environmental effects, or a substantial increase in the severity of previously identified significant effects, SMUD will comply with applicable law to either supplement the Final EIR and Supplemental Analysis or prepare a subsequent EIR, as appropriate under the circumstances.

## **8 Fire Risk and Alternative Site Analysis for the Iowa Hill Development**

In evaluating alternative sites for the pumped-storage development, SMUD considered fire risk as a manageable issue across all sites. Fire risk is largely a short-term issue associated with the four to five years of project construction compared to environmental issues with more permanent effects such as building dams across existing waterways. The extreme fire risk designation assigned to the transmission line right-of-way between the Camino and White Rock powerhouses in the relicensing technical report was due to "the proximity of residential areas and Highway 50" (pg. 10, Fire Risk and Protection Technical Report, DTA 2004). While this heightened level of human activity (compared to upslope areas like Union Valley Reservoir) increased the probability of a fire start, the report concludes "Most of the fires in this area remain small, due to rapid response times for fire suppression" (pg. 10, Fire Risk and Protection Technical Report, DTA 2004). Thus, despite a higher risk of fire starting in the area, local fire suppression capabilities make it unlikely that any such fire would spread. Because the project will "reduce the risk of a fire start to a less-than-significant impact" and "will have a less-than-significant

impact on fire suppression”, it will not result in a significant impact on public health and safety by exposing people or structures to a significant risk of loss, injury, or death (see Section 3.3.3.5.3). Thus, including a detailed analysis of relative risk to public health and safety in the alternatives analysis is not warranted.

In response to comments of Mr. De Bord, during construction of the Iowa Hill Development, SMUD will restrict on-site smoking, debris burning, and equipment operation in a manner to minimize fire risk. Restricting these activities is common to timber harvest and forest thinning activities of the Sierra Pacific Industries and the USFS in the vicinity of the proposed upper reservoir site. The restrictions to be imposed by SMUD are described herein as various measures to be included in the Fire Protection Plan. As discussed in Section 3.3.3.5.3, Plan implementation will result in a less-than-significant impact on the risk of a fire start during project construction.

As discussed in Section 1.0, when a project requires compliance with both CEQA and NEPA as is the case here, California Public Resources Code section 21083.7 requires the lead agency to use the EIS rather than prepare an EIR whenever possible, if the EIS was prepared before the EIR was required and complies with CEQA guidelines. For this reason, this document does not repeat the alternatives analysis contained in the Final EIS. The Final EIS identifies a location for the pumped-storage development (Iowa Hill) that avoids significant environmental impacts, while attaining the project’s basic objectives. Alternative sites considered in the Final EIS are generally associated with greater environmental impacts (damming existing waterways, disrupting areas of high recreation), while not attaining the same business and operational benefits as the Iowa Hill site. Alternative configurations of the Iowa Hill site were also considered from an environmental and business perspective, including powerhouse alternatives (above- vs. below-ground), intake/outlet facilities in Slab Creek Reservoir (surface vs. underwater), and five transmission line alternatives. (Further information can be found in SMUD’s Application for New License July 2005, Vol. 1, Ex. B, sec. 2.1.) Alternative transportation routes recommended by the Iowa Hill Joint Advisory Committee (Advisory Committee) have also been evaluated in this document and will be further refined in the final Transportation Management Plan. See also, Comment 16.

**9 Opposed to Iowa Hill Development**

Comment noted.

**10 Road Use and Maintenance**

As described in Section 3.3.3.3.2, SMUD will develop and implement a final Transportation Management Plan prior to any construction. The plan will address, among other things, the condition of all roads along the selected routes and will include a plan to maintain, repair, and/or upgrade them, as necessary.

## 11 **Hydroelectric Power**

Hydrology studies performed during the relicensing process revealed the UARP actually increases summer flow volumes above natural levels in tributaries of the American River. This is particularly true in the South Fork American River downstream of the Chili Bar Project Dam. Seasonal water storage in UARP reservoirs results in significantly higher volumes of water flowing in this segment of the river. Control of these higher-than-natural flows has led to a substantial increase in recreation opportunities, including commercial and private whitewater boating.

## 12 **SMUD Customer-Owners**

During the past seven years many SMUD customer-owners have participated in the UARP relicensing process, which includes the proposal to construct and operate the Iowa Hill Development. SMUD has conducted relicensing outreach meetings with various groups, including customer-owners, and has included information about the relicensing and the Iowa Hill Development in its newsletter, *Connections*, provided to customer-owners with monthly billings. SMUD's Internet site has, and will continue to provide, extensive information about the UARP relicensing and the Iowa Hill Development. SMUD's periodic relicensing newsletter, *The Confluence*, has kept interested parties, including customer-owners, informed of the Iowa Hill Development. *The Sacramento Bee*, a regional newspaper, has also published several stories on the UARP relicensing and the Iowa Hill Development, and SMUD included all UARP relicensing public notices in *The Sacramento Bee*. In addition, the SMUD Board of Directors has addressed various aspects of the UARP relicensing during several Board meetings over the past few years, which were open to the public and televised in SMUD's service territory.

## 13 **Businesses Located along Transportation Routes**

Table D-1 of SMUD's Iowa Hill Pumped-storage Development Transportation Route Technical Report (CH2MHILL, January 2008) lists the businesses and organizations located along the various transportation routes under consideration for the Iowa Hill Development. Because the only access to Wofford Acres Vineyards and Barsotti Juice Company is via North Canyon Road, they should be included as businesses located along North Canyon Road. In the Final EIS (pg. 5-13), FERC staff recommends SMUD develop a final Transportation Management Plan in consultation with the Advisory Committee that identifies preferred access routes using criteria or similar criteria employed in the Transportation Route Technical Report. In developing the final Transportation Management Plan, SMUD will add these two businesses to the criterion *Impacts to Visitor Trips to Area Businesses*.

## 14 **Characterization of Mitigation Measures**

In a general sense, measures which avoid, minimize or reduce an effect are adequate types of mitigation actions under CEQA.

**15 Iowa Hill Construction Work Hours**

As stated in Section 3.3.3.4.2, SMUD will include in the Iowa Hill Construction Noise Plan a scheduling plan for noisy construction activities, such as surface blasting, to minimize conflicts with local residents. Most construction work will be performed between the hours of 7:00 a.m. to 7:00 p.m. on weekdays. Construction activities that are not noisy, such as subterranean work, may be performed outside these hours and on weekends. The specific time restrictions for noisy activities were developed and approved by the Advisory Committee.

**16 Site Alternatives; Net Energy Loss**

Alternatives were evaluated in the FERC Final EIS, including the No Action Alternative, SMUD's Proposal with the Iowa Hill Development, Federal Government Takeover, Non-power License, and Project Retirement. In evaluating SMUD's Proposal with the Iowa Hill Development, FERC performed an Alternative Sites Analysis. This analysis considered environmental, business, and operations perspectives of a number of alternative sites. (Further information can be found in SMUD's Application for New License July 2005, Vol. 1, Ex. B, sec. 2.1.) As discussed in Section 1.0, when a project requires compliance with both CEQA and NEPA as is the case here, California Public Resources Code section 21083.7 requires the lead agency to use the EIS rather than prepare an EIR whenever possible, if the EIS was prepared before the EIR was required and complies with CEQA guidelines. For this reason, this document does not repeat the alternatives analysis contained in the Final EIS. See also, Comment 8.

In response to a comment of Mr. Seibert, given the laws of thermodynamics, it is impossible to create a power-generating facility that results in net-energy gain. All generating plants convert one form of energy into another, whether it involves converting potential energy from gas into electrical energy or converting kinetic energy of falling water into electrical energy. In doing so some of the source energy is always lost as heat, friction, or other energy forms. Because the upper and lower reservoirs of the Iowa Hill site are close to one another, power generation at this site has a higher energy conversion factor (higher efficiency) than alternative sites that would have required use of longer tunnels and penstocks to convey the water (i.e., higher frictional losses). The benefit of the Iowa Hill Project from the perspective of GHG emissions and resource consumption are described in response to Comment 29.

**17 Public Review of Transportation Management and Noise Control Plans**

SMUD will develop the final Iowa Hill Transportation Management Plan and an Iowa Hill Construction Noise Plan prior to construction. Before finalizing these plans, SMUD will provide a draft of each plan to the Advisory Committee for a 90-day review. The Advisory Committee's review will incorporate opportunities for public review and comment on the draft plans. Preparation of the final Transportation Plan will require additional analysis under CEQA if the plan includes substantial changes in the design of the Iowa Hill Development which lead to new significant adverse environmental effects

or a substantial increase in the severity of previously identified significant effects. SMUD will also provide a draft of the Transportation Management Plan to the US Forest Service, California Department of Transportation, and the El Dorado County Department of Transportation for review.

## **18 Construction Blasting Noise**

There are no federal requirements, reports, or guidelines for blasting that specifically apply to the Iowa Hill Development. However, in 1983 the U.S. Bureau of Mines (now the Department of Interior's Office of Surface Mining) released *Report of Investigations 8507: Structure Response and Damage Produced by Ground Vibrations from Surface Mine Blasting*. This report contains guidelines on blasting for surface mining operations; additionally, there are federal requirements regulating surface mining blasting (30 CFR Part 816, §816.61, §816.62, §816.64, §816.66, §816.67 and §817.68). While these requirements do not directly apply to the project (because the project does not include surface mining), they nevertheless serve as a guide for industry "best practice". SMUD will use these best practices during all blasting activities associated with construction. In this sense, blasting will meet federal and industry standards.

While Section 3.3.3.4.3 does disclose that construction blasting will exceed the El Dorado County General Plan noise standard at several residences, mitigating circumstances will result in minimal effect. First, blasting will be temporary and intermittent; it will be scheduled and will occur twice per work day over a period of approximately 24 months. Second, as excavation proceeds from above-ground to subsurface, blasting noise will attenuate. Third, the Iowa Hill Construction Noise Plan will include provisions that restrict noisy activities, such as above-ground blasting, to the hours of 7 a.m. to 7 p.m. The Noise Plan will also include noise and seismic monitoring during construction.

## **19 Identification of Properties Suffering a Loss of Value**

The Iowa Hill Property Value Assessment Technical Report (CH2MHILL and DTA 2005) includes maps showing the parcel locations of various properties that may lose value following construction of the Iowa Hill Development. However, the property value loss estimates were based on the information from the Visual Resources Technical Report (DTA and Martha Goodavish Planning and Design 2005). An addendum of this visual resources report has recently been completed in the form of a 3-D visual simulation that more accurately portrays the visibility of the Iowa Hill Development from different parcels in the vicinity of Iowa Hill (see Appendix C). The 3-D simulation shows that the visual impact of the Iowa Hill Development will be notably less than the 2005 estimates. Also, new measures to minimize visual impacts were generated by the Advisory Committee and are addressed in Section 3.3.3.2. These measures were specifically designed to minimize visual impacts and resultant property value losses.



**20 Roads Not Ideal for Walking and Bicycling**

The intent of the statement “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” is to document the existing conditions of the local roads relative to their conduciveness for walking and bicycling. The purpose of the statement is not to imply people do not walk or bicycle on local roads. As described in Section 3.3.3.2, the final Iowa Hill Transportation Management Plan will include measures to reduce the impact on local traffic, including the annual employee awareness program. The annual employee awareness program will educate employees on existing uses of local roads (e.g., walking, bicycling, and school bus routes) to minimize conflicts between construction traffic and those uses.

**21 Land Use Compatibility and Designations**

The FERC Final EIS assesses the effects of the proposed Iowa Hill Development on land use (pg. 3-297). In addition, the Final EIS addresses a similar comment concerning consistency with land uses and local land use designation (see Comment 53 and Response, pg. A-22). The analysis on land use compatibility and consistency with local land management and direction contained in the Final EIS complies with the CEQA Guidelines. Further, pursuant to well-settled law, the Federal Power Act establishes a comprehensive federal scheme for regulating hydroelectric power projects on navigable waters which occupies the field and preempts state and local laws, including land use permitting authority.<sup>1</sup>

**22 Use of the Final EIS to meet CEQA Requirements**

As discussed in Section 1.0, when a project requires compliance with both CEQA and NEPA as is the case here, California Public Resources Code section 21083.7 requires the lead agency to use the EIS rather than prepare an EIR whenever possible, if the EIS was prepared before the EIR was required and complies with CEQA guidelines. This document incorporates discussions of mitigation measures and growth-inducing impacts which are not within the Final EIS because they are not required by NEPA. Taken together, these documents comply with applicable CEQA statutes and guidelines.

**23 Number of Truck Trips and Traffic Counts**

The number of delivery truck trips per day documented in the Final EIS – approximately 25 – is an estimated number prepared by an engineer based on the conceptual plan for the Iowa Hill Development. The Final EIS analysis on construction traffic impacts, along with the additional analysis contained in Section 3.3.3.3, complies with applicable CEQA statutes and guidelines. The methodology for counting existing traffic is described in the

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<sup>1</sup> See, e.g., *California v. FERC*, 495 U.S. 490, 496 (1990); *First Iowa Hydro-Elec. Coop. v. Fed. Power Comm'n*, 328 U.S. 152, 181 (1946); *Sayles Hydro Ass'n v. Maughan*, 985 F.2d 451,456 (9<sup>th</sup> Cir. 1993); *Town of Springfield v. State of Vt. Envtl. Bd.*, 521 F. Supp. 243, 249-250 (D.Vt. 1981); *Weyerhaeuser Co.*, 55 F.E.R.C. ¶ 61,079, 61,248 (1991).

Iowa Hill Pumped-storage Development Transportation Route Technical Report, Appendices B and C (CH2MHILL January 2008).

**24 Draft Transportation Management Plan**

A Draft Transportation Management Plan for the Iowa Hill Development, dated January 2005, was prepared and released for agency and public review in early February 2005 (CH2MHILL & DTA January 2005). SMUD also included the draft Transportation Management Plan in its Application for New License filed with FERC in July 2005 (see SMUD Application for New License, Volume 2B). Copies of the Application for New License were also distributed to agencies and other interested parties in July 2005. The Final EIS analysis on construction traffic impacts, along with the additional analysis contained in Section 3.3.3.3 of this document, complies with applicable CEQA statutes and guidelines.

**25 Air Quality Analysis**

SMUD's 2005 Application for New License included an air quality analysis of construction activities for the Iowa Hill Development (see Section 5.3.11). This air quality analysis considered emissions from mobile crushers and a concrete batch plant, among other construction activities (see Attachment 1 to Section 5.3.11). The air quality analysis presented in the Final EIS (pg. 3-348) is based in part on SMUD's analysis and data provided in the Application for New License. The analysis of air emissions from construction activities contained in the Final EIS is sound and complies with CEQA guidelines. Likewise, the Final EIS assessment of construction noise (pgs. 3-356 and 3-357), supplemented with the analysis contained in Section 3.3.3.4 of this document, complies with the CEQA guidelines.

In response to a comment of Mr. Summers, SMUD has not increased our traffic estimate by 67 percent. In fact, by adopting the Advisory Committee measures to create offsite queuing areas and the use of vanpools, our traffic estimate is reduced from previous levels. Furthermore, traffic volumes on any given road will be reduced by implementing a plan to use alternate routes for different purposes.

**26 Road Improvements and Staging Areas**

The FERC Final EIS assesses the effects of the proposed Iowa Hill Development relative to road improvements (pgs. 3-292 to 3-295 and pgs. 3-336 to 3-339). The transportation and traffic analysis contained in the Final EIS, as supplemented by the analysis contained in Section 3.3.3.3, complies with the CEQA guidelines. As stated in Section 3.3.3.3, SMUD will develop a final Iowa Hill Transportation Management Plan prior to any construction. This plan may include new road construction and one or more staging areas. Potential new roads and staging areas were recommended for evaluation by the Advisory Committee to help reduce the impacts from construction traffic. If SMUD proposes a new road in the final Transportation Management Plan, the plan will include surveys, engineering plans and environmental studies for the road. To the extent additional analysis is needed for any proposed new roads or staging areas contained in the

final Transportation Management Plan, SMUD will conduct the analysis prior to construction. Preparation of the final Transportation Plan will require additional analysis under CEQA if the plan includes substantial changes in the design of the Iowa Hill Development which lead to new significant adverse environmental effects or a substantial increase in the severity of previously identified significant effects.

**27**     **Operational Noise**

The FERC Final EIS assesses the effects of the proposed Iowa Hill Development relative to operational noise (pgs. 3-357 and 3-358). The operational noise analysis contained in the Final EIS, as supplemented by the analysis contained in Section 3.3.3.4 of this document, complies with the CEQA guidelines. As stated in Section 3.3.3.4, SMUD will monitor operational noise levels after commissioning to ensure noise levels comply with license conditions. Should a noise exceedance occur, it will be remedied as quickly as possible.

**28**     **Narrow Roads**

Appendix D contains an evaluation of the alternative routes' roadway features, including narrow lanes. As stated in Section 3.3.3.3, SMUD will develop a final Iowa Hill Transportation Management Plan prior to any construction. This plan will identify the road segments to be upgraded, and will include a plan to upgrade them.

**29**     **Greenhouse Gases**

Global climate change is an alteration of the average weather of Earth, measured by wind patterns, storms, precipitation and temperature. Global temperatures are affected by naturally occurring and human-generated atmospheric gases. These gases allow sunlight into the atmosphere, but prevent radiative heat from leaving. Called the greenhouse effect, this phenomenon is thought to cause global climate change.

In connection with increases in the release of human-generated gases, the greenhouse effect is believed to have led to an increase in the average temperature of Earth's atmosphere and oceans. In the 20th century, Earth's average surface temperature rose  $1.1 \pm 0.4^\circ$  Fahrenheit ( $0.6 \pm 0.2^\circ$  Celsius).<sup>2</sup> The prevailing scientific opinion is that most warming occurring during the past 50 years is the result of human activities.<sup>3</sup> The weight of scientific authority indicates that increased release of carbon dioxide (CO<sub>2</sub>) and other greenhouse gases (GHGs) are the primary human-caused activity causing global warming. GHGs are released by burning fossil fuels, clearing land, and agricultural activities.

The primary GHGs are carbon dioxide (CO<sub>2</sub>), methane, and nitrous oxide. Carbon dioxide is released through respiration of both plants and animals, decomposition of dead

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<sup>2</sup> Intergovernmental Panel on Climate Change (IPCC), 2007. *Climate Change 2001: The Scientific Basis*, <[www.grida.no/climate/ipcc\\_tar/wg1/index.htm](http://www.grida.no/climate/ipcc_tar/wg1/index.htm)> [as of August 11, 2008].

<sup>3</sup> *Id.*

organic matter, and evaporation from the oceans. These natural sources release about 150 billion tons of CO<sub>2</sub> each year. By comparison, human-caused emissions from burning fossil fuels, waste incineration, deforestation and industrial activities generate about 7 billion tons of CO<sub>2</sub> annually. In 2002, California's CO<sub>2</sub> emissions totaled 360 million tons, with 98 percent coming from fossil fuel combustion.<sup>4</sup> Methane is produced naturally when organic matter decomposes in environments lacking sufficient oxygen; anthropogenic sources include mining and burning of fossil fuels, digestive processes in cattle and other ruminants, rice cultivation, and waste management. Human activities cause approximately 60 percent of methane emissions, and methane accounts for approximately nine percent of total climate change emissions.<sup>5</sup> Nitrous oxide is produced naturally by microbial processes in soil and water, and is produced by humans during agricultural activities, industrial processes such as fossil fuel-fired power plants and vehicle emissions. Nitrous oxide accounts for approximately five percent of total GHG emissions.<sup>6</sup>

Neither CEQA nor the guidelines mention or provide any methodology for analyzing a project's effects on GHGs. Pursuant to Senate Bill 97 (Chapter 185, 2007) the Governor's Office of Planning and Research is in the process of developing CEQA guidelines for the mitigation of GHG emissions. However, the guidelines are not required to be drafted until July 1, 2009, and need not be adopted by the Resources Agency until January 1, 2010. In the absence of such guidance, a review of the scientific literature shows that it is still too early to reliably determine the effect of local land use changes on global climate change.<sup>7</sup> Before concrete guidance can be developed on evaluating the climate change impacts of a particular project, researchers likely will need to advance the field of study by combining state-of-the-art modeling, field observations, and satellite imagery.<sup>8</sup> Nonetheless, as discussed below, relicensing of the UARP and the proposed Iowa Hill Development will have a long-term, significant positive effect on regional emissions of GHGs.

### *Impacts on Global Climate Change*

The UARP currently provides energy to the Sacramento region without the use of fossil fuels and produces no GHGs. During the original construction of the UARP, existing vegetation was removed, thereby minimizing GHG emissions over the life of the reservoirs. The Iowa Hill Development will have a positive impact on GHG emissions, primarily by providing substantial quantities of on-peak, low-emission hydroelectric

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<sup>4</sup> California Environmental Protection Agency, Governor Schwarzenegger and the Legislature, March 2006 at 11, <[www.climatechange.ca.gov/climate\\_action\\_team/reports/2006report/2006-04-03\\_FINAL\\_CAT\\_REPORT.PDF](http://www.climatechange.ca.gov/climate_action_team/reports/2006report/2006-04-03_FINAL_CAT_REPORT.PDF)> [as of August 11, 2008].

<sup>5</sup> IPCC 2007, *supra*; Energy Information Administration, 2003. *Greenhouse Gases, Climate Change, and Energy*, <<http://www.eia.doe.gov/bookshelf/brochures/greenhouse/Chapter1.htm>> [as of August 11, 2008].

<sup>6</sup> Energy Information Administration, 2003. *Greenhouse Gases, Climate Change, and Energy, supra*.

<sup>7</sup> IPCC, *Climate Change 2007: The Physical Science Basis* (2007); National Research Council, *Radiative Forcing of Climate Change: Expanding the Concept and Addressing Uncertainties* (2005); IPCC, *IPCC Meeting on Current Understanding of the Processes Affecting Terrestrial Carbon Stocks and Human Influences Upon Them* (2003).

<sup>8</sup> National Research Council, *Radiative Forcing of Climate Change: Expanding the Concept and Addressing Uncertainties* (2005).

energy as a substitute for production from GHG-emitting, gas-fired plants. Wind and solar are inconsistent energy sources, with availability being subject to day-to-day weather conditions. The Iowa Hill Development will use energy from these renewable sources during off-peak hours, and excess energy provided by existing fossil fueled power plants, to pump water to the upper reservoir for later generation during on-peak and super-peak hours. The Iowa Hill Development will, therefore, allow SMUD to overcome the intermittency issues of renewable resources such as wind and solar. By “managing” the energy produced from the resources, the Iowa Hill Development will increase their reliability, and in the long-term, promote the construction of more wind and solar facilities. This new source of peak energy production eliminates the need for 400 MW of less efficient fossil-fuel-driven peaking power plants in the Sacramento region. Consequently, no new base-loaded, fossil-fuel power plants will be required for the operation of the proposed Iowa Hill Development.

The Iowa Hill Development’s design minimizes GHG emissions as well. As proposed, the Iowa Hill Development consists not only of a new upper reservoir, new underground powerhouse and a new 2.5-mile transmission tie-in, but also uses the existing Slab Creek Reservoir and the existing 230 kV transmission lines. This efficient use of existing resources significantly reduces emissions from construction. To further reduce construction emissions, the first major step of the construction process will be to build the transmission line tie-in to the existing 230 kV lines. This tie-in line will convey power to the construction site throughout the remaining construction period, obviating the need to use construction-site power generators. The new reservoir should also cause minimal GHG emissions as it will be small (approximately 100 acres) and will not flood standing vegetation that would decay in water.

The Iowa Hill Development also minimizes traffic-related GHG emissions. During the long-term, the Iowa Hill Development will result in little GHG emission as it will be operated remotely and visited for maintenance purposes by only a few vehicles per day. During construction, the Iowa Hill Transportation Management Plan will reduce GHG emissions by including the use of vanpools from staging areas to the construction sites.

#### *Impacts of Global Climate Change on Existing Resources*

The Iowa Hill Development will also help offset the impacts that climate change may have on the UARP. Because the intake/outlet structure will be deep in the lower reservoir, the Iowa Hill Development can reuse the stored water many times simply by pumping it back to the upper reservoir. By comparison, conventional hydroelectric projects can only use water one time before passing it downstream. The ability to reuse water will become critically important as climate change in the Sierra Nevada range reduces snowpack volumes and alters runoff patterns.

Operation of the proposed Iowa Hill Development is described fully in SMUD’s Application for New License, Exhibit B, and a financial evaluation is detailed in Exhibits D and H.

### **30 Cultural Resources**

The reference to “three prehistoric, or native american [sic], sites and 29 historic sites in or near the Iowa Hill project area” does not appear in the UARP Ethnographic and Ethnohistoric Resources Technical Report. On the contrary, the UARP and Iowa Hill Pumped-storage Development Archaeological Resources Inventory Technical Report, in pertinent part to the Iowa Hill Area of Potential Effect (APE), states “Newly identified sites consist of three railroad segments associated with operation of the Michigan-California Lumber Company, and a portion of a late 19<sup>th</sup> century road known as Chute Camp Road. Two previously documented sites are the remains of turn-of-the-century mining activities; and a historic road segment.” These findings will be included in a Historic Properties Management Plan for the UARP (including the Iowa Hill Development) developed in consultation with Tribes, the Federal Energy Regulatory Commission, State Office of Historic Preservation, Advisory Council on Historic Preservation, U.S. Forest Service, and U.S. Bureau of Land Management.

### **31 Biological Reports**

Impacts on biological resources associated with the construction and operation of the Iowa Hill Development are fully addressed in the Final EIS, and are based on information derived from a variety of technical reports performed in consultation with state and federal resource agencies. Protection and mitigation measures for terrestrial species are described in the Final EIS, including measures to mitigate impacts on bats, owls, and deer. If SMUD determines the Southwest Connector is needed for project transportation purposes, a separate study will be performed to evaluate impacts on wildlife of constructing and using this route.

The bald eagle study for the Iowa Hill Development did not reveal the presence of a bald eagle nest directly above the proposed tunnel portal. Conducted in 2004 and 2005, the study found two solitary, non-territorial bald eagles along Slab Creek Reservoir. Additional surveys will be performed prior to the commencement of construction activities at the Iowa Hill Development construction site. The California spotted owl is not a state or federal endangered species. However, this species is afforded the following special status designations: California Department of Fish and Game Species of Concern, U.S. Fish and Wildlife Service Birds of Conservation Concern, U.S. Bureau of Land Management and Forest Service Sensitive Species, and Eldorado National Forest Management Indicator Species. The relationship between spotted owl Protected Activity Centers and the Iowa Hill Development are discussed in detail in the Final EIS.

### **32 Alternative Transportation Routes Evaluation**

As described in Section 1.4.3, 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 Development on the surrounding communities. Among other measures, the Advisory Committee identified several alternative transportation routes for construction vehicles. One of the routes

included the construction of a new road from the lower reservoir site to the upper reservoir site (the alignment of which has not been surveyed), referred to as the Southwest Connector. SMUD assessed these alternative routes and filed a Transportation Route Technical Report with FERC in January 2008 for its evaluation. The Final EIS evaluates transportation-related effects of the Iowa Hill Development on pgs. 3-292 to 3-295 and pgs. 3-336 to 3-339, and states the following relative to route evaluation:

*Ultimately, SMUD may spread various types of construction traffic out among multiple routes to alleviate congestion, to reduce costs and improve construction efficiency, and to act in the best interest of the community. The routes of the construction traffic will be defined in the final Transportation Management Plan. The plan should also address the feasibility of the SW Connector and therefore the use of the preferred routes to the upper construction site. Selection of an alternative route in consultation with the Advisory Committee would help address public safety concerns raised by local residents and reduce user conflict on the existing local roads (pg. 3-295, Final EIS).*

If SMUD proposes a new road in the final Transportation Management Plan, the plan will include surveys, engineering plans, and environmental studies for the road. To the extent additional analysis is needed for any proposed new road contained in the final Transportation Management Plan, SMUD will conduct the analysis prior to construction. Preparation of the final Transportation Plan will require additional analysis under CEQA if the plan includes substantial changes in the design of the Iowa Hill Development, which lead to new significant adverse environmental effects, or a substantial increase in the severity of previously identified significant effects.

### **33 Fire Risk and Protection Study Plan**

Although CalFire was not involved in the development of the 2003 Fire Risk and Protection Plan, they were not excluded as SMUD's Alternative Licensing Process (ALP) was entirely open with 42 separate stakeholders participating. Nevertheless, implementation of the study plan included consultation with CalFire staff and use of CalFire data and maps. Thus, CalFire was involved. The phrase "could live with it" was developed and adopted by all 41 stakeholders, and is commonly used in multiple-party, consensus-based proceedings to indicate that a chosen course of action satisfies the overall concerns of all parties.

### **34 Relicensing Agreements**

The studies performed during the public relicensing process were produced between the years 2003 and 2005. The Application for New License was filed with FERC in July 2005 with all technical reports appended. The El Dorado-SMUD Cooperation Agreement was signed in November 2005, and the comprehensive Relicensing Settlement Agreement was signed in February 2007. Thus, water flow requirements and monetary payments embodied in either agreement were based on factual information available to all parties. While it is difficult to determine the definition of "environmental

groups” in this comment, SMUD’s public relicensing process attracted a total of 41 participating stakeholders, for example Friends of the River, California Native Plant Society, American Whitewater, California Sportfishing Protection Alliance, and Center for Sierra Nevada Conservation.

**35 Adequacy of CEQA Analysis Compared to Other Projects**

The environmental review process for UARP relicensing is no different from the requirements of a timber harvest plan. This Supplemental Analysis describes road locations, hours of operation, and travel routes. Final determinations of these issues will be included in the final Transportation Management Plan submitted to FERC before construction begins. As discussed in the Final EIS, SMUD must prepare this final plan in consultation with the Iowa Hill Joint Advisory Committee, among others. Endangered species, sensitive species, and water course impacts have been investigated in a series of technical reports and evaluated in the Final EIS.

**36 Feedback on Technical Reports**

This letter does not provide comments on the Draft Supplemental Analysis or the Final EIS. Rather, it is a copy of a letter dated May 10, 2005 submitted by Karen Hansen, et al, to SMUD, among others including FERC, providing feedback on five Iowa Hill technical reports, concerns about public involvement in the relicensing process, and a request to remove the proposed Iowa Hill Development from the UARP relicensing. SMUD considered the May 10, 2005 letter in preparing its July 2005 Application for New License, as well as in forming the Advisory Committee and developing mitigation plans addressed in this document.

Relative to the Iowa Hill technical reports, the Final EIS analysis of the impacts of the Iowa Hill Development along with the additional technical reports and analysis contained in this document, comply with applicable CEQA guidelines. Efforts to involve the public in the relicensing process, including the Advisory Committee process to date, have been effective and meet the public involvement criteria of CEQA. The Final EIS addresses the appropriateness of considering the Iowa Hill Development at time of relicensing, concluding it is reasonable and appropriate to consider the Iowa Hill Development at the same time as considering the existing UARP (pg. A-3, Final EIS).

**37 Conservation of Pine Hill Plants**

Comment noted.

**38 Consumptive Water Diversion**

The project description does not include a diversion point and storage capacity for consumptive water use by El Dorado County. Such an action/project is not referenced in either the Final EIS or this document. The El Dorado-SMUD Cooperation Agreement, entered into by the parties in November 2005, calls for a potential future project or projects that are not a part of the relicensing; the agreement provides for CEQA analysis



by El Dorado County for any future water rights proceeding(s) or project(s) that may fall under the agreement.

**39 Impacts to Nearby Residents**

The impacts of construction and operation of the Iowa Hill Development on residents living at APN 100-030-50, located 400 feet east of the upper reservoir project boundary, are assessed in the Final EIS in the following sections: aesthetics – including dust from construction (pgs. 3-311 to 3-312); noise (pgs. 3-356 to 3-358); and property values (pgs. 3-331 to 3-334). Because the effects are adequately assessed in the FERC Final EIS, they are not reproduced in this document.

**40 Relicensing Process Participation**

In a letter to FERC dated, June 23, 2008, the Georgetown Fire District (GFD) alleges irregularities in the relicensing process. Although this claim is not cognizable under CEQA, we nonetheless address it here. The UARP Alternative License Process (ALP) was open to all interested parties. GFD was among the 41 participants that signed the ALP protocols and agreed to participate in the process that began in the summer of 2001; the Georgetown Public Utilities District and several other governmental agencies from El Dorado County also participated. When the process transformed into the Settlement Negotiations Group (SNG) in 2004, many of the process participants, including GFD, signed the SNG protocols. As is the case in every relicensing, many of the participants in the ALP and SNG, including private citizens, were unable to engage consultants or legal advisors; that is not a requirement or a necessity for participation as the FERC processes are designed to accommodate all interested stakeholders, regardless of means. Participation was available by phone for those who were unable to attend in person. Written comments were also accepted and made part of the record. Therefore, GFD had ample time and a variety of opportunities to engage in both the ALP and SNG processes, but chose not to do so. It cannot be heard to complain now that its interests were ignored or unrepresented due to the fault of others or alleged inequities in the process.

SMUD has maintained an open policy regarding discussions with GFD. SMUD participated in meetings and exchanged correspondence with GFD and State Senator Dave Cox. GFD is correct that SMUD's December 2005 letter to GFD directed GFD to the El Dorado Water and Power Authority (EDWAPA) as the designated agency representing El Dorado County interests within the UARP relicensing process pursuant to the El Dorado - SMUD Cooperation Agreement effective November 22, 2005 (Cooperation Agreement), an off-license agreement and the product of a separate negotiation process. The Cooperation Agreement not only addressed water issues important to the citizens and governmental entities within El Dorado County, it also represents a settlement regarding issues related to the current relicensing of the UARP. Section 4.4 of the Cooperation Agreement, in pertinent part, provides for initial and annual payments to El Dorado County to be used for impacts of the UARP "on facilities owned or services provided by, or any resource or other interest within the jurisdiction of, the County. . . . The determination of which specific uses of payments by SMUD under

this Article IV are consistent with the limitations of this Section are to be made by the County in its sole discretion.” (El Dorado – SMUD Cooperation Agreement, section 4.4). Thus, GFD should direct its requests to El Dorado County.

#### **41 Impacts Associated with UARP Operations**

In a letter to FERC dated June 23, 2008, the Georgetown Fire District (GFD) alleges impacts to its services from UARP operations due to the “opening of an improved road in 2002”. The road improvement referred to is the paving of Wentworth Springs Road from Georgetown to Ice House Road. This road neither lies within the UARP Project Boundary nor was it improved by or at the request of SMUD. Because the road was constructed in 2002, any impacts attributed to it are within the relicensing project baseline for purposes of NEPA and CEQA and are not to be examined in this Supplemental Analysis.

GFD would have been better served by raising its concerns regarding impacts to its fire suppression and emergency services associated with the road improvement project to the attention of local, state, and federal agencies conducting their environmental review processes. In fact, GFD’s letter acknowledges “the project EIR”, noting it “predicted an increase from 325 to 602 percent in the use of that route and a significant increase in the number of fires per year.” It appears that full scale environmental reviews, including impacts to public services, were conducted for the project by the lead agency (Federal Highway Administration), the responsible agency (El Dorado County Department of Transportation) under NEPA and CEQA, respectively, and that many agencies were involved. (Federal Highway Administration FH137/Wentworth Springs Road Final EIS, 1999; *see also* <http://www.ceqanet.ca.gov/NODdescription.asp?DocPK=510525>; <http://www.ceqanet.ca.gov/DocDescription.asp?DocPK=501794>; <http://www.ceqanet.ca.gov/DocDescription.asp?DocPK=505560>.)

#### **42 Enforcement Oversight**

The Mitigation Monitoring Plan in Appendix B addresses enforcement of the mitigation. As discussed in the plan, SMUD, and ultimately FERC, will be responsible for enforcing all mitigation measures. In addition, the State Water Resources Control Board will have enforcement authority for all measures contained in its Section 401 Water Quality Certification.

#### **43 Smoking Ban**

The issue of banning smoking at the construction sites and along the transportation routes is discussed in Table 3.3.3-8. SMUD will include a specific provision regarding smoking restrictions in the fire safety awareness training for all workers. The provision will restrict smoking to specified areas and will comply with the California Public Resources Code.

**44 County Animal Control Services**

The El Dorado – SMUD Cooperation Agreement provides for payments by SMUD to El Dorado County to minimize, avoid, or mitigate socioeconomic impacts attributable to the construction of the Iowa Hill Development. This would include Animal Control services provided by the County.

**45 Iowa Hill Decommissioning Plan**

If for some reason, the Iowa Hill Development is not viable after it is constructed, FERC will require a decommissioning plan for the facility that addresses removal of existing infrastructure.

**46 Iowa Hill Joint Advisory Committee**

As described in Section 1.4.3, 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 Development on the surrounding communities. The Advisory Committee consisted of individuals representing SMUD (two representatives), El Dorado County (two representatives), the Camino Advisory Committee, the Apple Hill Growers' Association, and the Iowa Hill Action Committee. The Iowa Hill Joint Advisory Committee, through its public process, established five ad hoc committees (Transportation, Visual, Noise, Fire Protection, Socioeconomic). The public participated in the Advisory Committee meetings, where the recommendations of the ad hoc committees were developed, reviewed, and approved. Section 3.3 documents which of the Advisory Committee measures SMUD will implement (see Tables 3.3.3-4; 3.3.3-5; 3.3.3-6; 3.3.3-7; and 3.3.3-8).

**47 Combining Upper Reservoir Berm Recommendations**

A review of Table 3.3.3-5 reveals Advisory Committee recommendations to lower the berm height 18 feet or build a secondary berm for tree planting were evaluated on the basis of rock spoil and other considerations. As described in the table, lowering the berm height by 18 feet faced the more significant issues of reduced storage capacity and project value without a significant change in berm visibility. The secondary berm also faced the challenges of a very steep hillslope on the western flank of the berm, the removal of more trees to create the secondary berm, and the uncertainty of successful tree planting on the berm. Finally, these recommendations are unnecessary as the visual impacts of the berm were found to be less than significant with the implementation of the Visual Plan combined with consultation with the U.S. Forest Service to ensure the berm is consistent with the visual quality standards of the Eldorado National Forest Land and Resource Management Plan.

**48 Invest in Solar and Battery Packs**

Comment noted.

**49**     **Procedural**

The FERC Final EIS addresses the appropriateness of considering the Iowa Hill Development at time of relicensing, concluding it is reasonable and appropriate to consider the Iowa Hill Development at the same time as considering the existing UARP for relicensing (pg. A-3, Final EIS).

**50**     **Southwest Connector**

As described in Response 32 above, the final Transportation Management Plan will address the feasibility of the Southwest Connector. If the Southwest Connector is included in the preferred route to the upper reservoir site, the extent to which the Southwest Connector affects the need for a vertical material handling system will be addressed in the final Construction Plan.