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Comments due by 5:00 PM on November 14, 2011 to:

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Attachment A

California Environmental Quality Act Findings and Mitigation Monitoring and Reporting Plan

Sacramento Municipal Utility District Upper American River Hydroelectric Project Federal Energy Regulatory Commission Project No. 2101

Sacramento Municipal Utility District (SMUD) is lead agency under the California Environmental Quality Act (CEQA) for purposes of the Federal Energy Regulatory Commission (FERC or Commission) relicensing of the Upper American River Hydroelectric Project (FERC No. 2101, Project or UARP). The State Water Resources Control Board (State Water Board), charged with issuing water certification for the UARP, is a responsible agency under CEQA. CEQA prohibits an agency from approving a project for which significant effects have been identified, unless the agency can make one or more of a set of three findings set forth in Public Resources Code section 21081, subdivision (a):

(1) Changes or alterations have been required in, or incorporated into, the project which mitigate or avoid the significant effects on the environment.

(2) Those changes or alterations are within the responsibility and jurisdiction of another public agency and have been, or can and should be, adopted by that other agency.

(3) Specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the environmental impact report. (See also Cal. Code Regs., tit. 14, § 15091.)

When significant effects are subject to a finding under paragraph (3) of subdivision (a), the public agency must find that specific overriding economic, legal, social, technological, or other benefits of the project outweigh the significant effects on the environment, if the agency approves the project. (Pub. Resources Code, § 21081, subd. (b).)

CEQA requires public agencies to prepare a program for monitoring or reporting on the revisions which it requires in the project and the measures it has imposed to mitigate or avoid significant environmental effects. (CEQA Guidelines, § 15097, subdivision (a).)

SMUD relied on the National Environmental Policy Act (NEPA) Final Environmental Impact Statement (EIS) prepared jointly by the Commission and the United States Forest Service (USFS) together with a supplemental analysis that augmented the NEPA document to ensure consistency with CEQA. Under Public Resources Code section 21002.1, subdivision (d), when issuing an approval for an aspect of a project for which a lead agency has performed CEQA review, a responsible agency considers only the aspects of the project that the agency is required by law to carry out or approve. The State Water Board therefore provides the following CEQA findings and Mitigation Monitoring and Reporting Plan that concern potentially significant impacts to water resources identified by SMUD as part of the CEQA review.

Geology and Soil Resources

Impact G-1: The reduction in streamflow associated with current Project operations has led to an accumulation of sediment and poor geomorphic conditions in the following stream reaches: Rubicon River below Rubicon Reservoir Dam, Gerle Creek below Loon Lake Reservoir Dam, and South Fork Silver Creek below Ice House Reservoir Dam.

Compliance with the requirement to implement pulse flows as described in Condition 2, the sediment management portion of the adaptive management program in Condition 9-F and the requirement to develop and implement a stabilization plan for the Gerle Creek channel below Loon Lake Dam in Condition 8-G will reduce the impacts to a less-than-significant level. Under Conditions 2, 9-F, & 8-G the geomorphic conditions and sediment load of the affected stream reaches will improve compared to existing conditions.

Monitoring to assure that impacts of the project on geology and soil resources are mitigated is required in Condition 8-H, which provides for implementation of a geomorphology monitoring program throughout the term of the new license.

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the geological and soil resources in the vicinity of the Project.

Water Resources

Impact WR-1: Potential impacts to water quality may occur due to upland erosion and/or sediment deposition into rivers and streams affected by UARP operations or maintenance. Implementation of the Project includes construction activities associated with the reconstruction, restoration and development of new and existing recreation facilities as well as the use, maintenance and enhancement of roads in the vicinity of the Project facilities.

Compliance with Condition 13, which requires that SMUD develop and implement a Recreation Implementation Plan that includes consultation with the State Water Board and the Central Valley Regional Water Quality Control Board (Central Valley Water Board) to determine water quality permitting requirements and obtain coverage, if required, under the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance activities (Order No. 2009-0009-DWQ, National Pollutant Discharge Elimination System (NPDES) No. CAS0000002, as amended by Order No. 2010-0014-DWQ) (Construction General Permit),

will assure that adequate measures are implemented to reduce or avoid impacts to water quality from construction activities related to recreation facilities. In addition, Condition 14 requires that SMUD prepare and implement a Transportation Management Plan that identifies water quality permits required for road maintenance and construction activities and includes measures to control Project-related erosion associated with road usage and maintenance. Condition 14 requires that all road maintenance and construction activities must meet United States Forest Service (USFS) and Army Corps of Engineers specifications and that construction and maintenance activities shall maintain natural fluvial and colluvial sediment transport to the Project reaches, as far as feasible. The requirement to update the plan every five years and provide the USFS-approved plan to the Deputy Director of the Division of Water Rights (Deputy Director) provides a means to monitor implementation of the plan and to address changes in conditions through the license term.

Implementation of Conditions 13 and 14 will reduce potential impacts to water resources associated with erosion or sediment deposition to a less-than-significant level.

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment.

Impact WR-2: Construction and operation of the Iowa Hill Development may cause water quality impairments in Slab Creek Reservoir, such as turbidity due to sediment deposition, erosion or mobilization associated with both construction activities and pump-storage operations.

Mitigation Measure WR-2: Mitigation measures are needed to ensure that the final design of the intake/outlet structure incorporates features that prevent sediment mobilization or deleterious turbidity within Slab Creek Reservoir during operation of Iowa Hill. Condition 16 has been added to require that SMUD consult with the State Water Board to assure that features that minimize sediment mobilization within Slab Creek Reservoir are incorporated into the final design during the intake/outlet structure design process, and reserves authority for the Deputy Director to disapprove design plans that do not adequately address sediment mobilization and turbidity concerns.

In addition, compliance with Condition 17, which requires that SMUD obtain coverage under the Construction General Permit prior to initiating construction activities, will assure that best management practices, including those identified in Condition 17 and in the required Stormwater Pollution Prevention Plan, are implemented. Condition 35 also provides the ability for the State Water Board to modify the water quality certification if monitoring results indicate that water quality objectives are being violated.

Water quality monitoring described in Condition 17 will allow verification that water quality standards are being met during and after construction of Iowa Hill. Condition 8J requires in situ measurement of turbidity downstream of Slab Creek Dam four times each year after issuance of the new Project license throughout the license term.

Implementation of Conditions 16, 17 and 35 will mitigate the potential impact to water resources associated with the construction and operation of Iowa Hill to a less-than-significant level.

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment.

Impact WR-3: Tunnel construction for the Iowa Hill Development may lead to adverse impacts to groundwater quantity or quality.

Condition 19 requires that SMUD develop and implement a plan, subject to Deputy Director approval, to manage groundwater inflow during construction, minimize groundwater loss, and to monitor groundwater quality and quantity, including creeks and springs in the vicinity of Iowa Hill, for five years once construction is complete. As described in Condition 19, the plan must identify corrective measures to be taken if the tunnel boring operation encounters more groundwater than originally predicted for the Project or more water than expected from the completed tunnel seeps. The plan must also include potential mitigation measures for all impacts identified during and/or after the construction of the Iowa Hill Development.

Monitoring required in Condition 19 will assure that potential impacts to groundwater resources are mitigated.

Implementing Condition 19 will mitigate the potential impact to groundwater resources to a lessthan-significant level.

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment.

Impact WR-4: Project operations may cause potentially significant impacts to water quantity due to the manipulation of reservoir levels and/or the timing or quantity of instream flow in Project-affected stream reaches.

Condition 1 specifies minimum instream flows in Project-affected stream reaches, and Condition 5 requires that SMUD maintain specified reservoir elevations. Condition 2 requires SMUD to release pulse flows in certain stream reaches. Condition 3 requires SMUD to adhere to certain ramping rates for controlled releases.

Condition 6 requires SMUD to develop and implement a streamflow and reservoir elevation gaging plan that specifies the monitoring and reporting required to measure compliance with Conditions 1, 2, 3 and 5.

Implementing Conditions 1, 2, 3, and 5 will reduce impacts to water resources associated with Project operations to a less-than-significant level.

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment.

Impact WR-5: Project operations may cause potentially significant impacts to water quality by altering streamflow in a manner that violates water quality objectives contained in the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins.

Condition 1, which specifies minimum instream flows in Project-affected reaches, is expected to maintain adequate water temperatures under most water-year-types and climatic conditions. Condition 1 also provides for the release of additional water in Silver Creek below Junction and Camino Dams in wet years if the flow requirements do not maintain adequate water temperatures. Condition 22 reserves the authority of the State Water Board to require the Licensee to develop a mercury management plan if research and/or water quality and metals bioaccumulation monitoring specified in Conditions 8.J and 9.H indicate that the reservoirs,

operations of Iowa Hill or other aspects of power operations increase the mobilization or methylation of mercury.

Monitoring and reporting required in Condition 8-J will provide a means to assess compliance with water quality standards for the list of constituents shown in Table 23 in the water quality certification. Condition 8-I specifies requirements for water temperature monitoring.

Conditions 1 and 22 will reduce impacts to a less-than-significant level.

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment.

Impact WR-6: Recreational activity within and nearby the UARP reservoirs may increase the concentration of human pathogens, which could lead to the violation of water quality objectives for bacteria.

Monitoring and reporting to assess compliance with water quality standards is required under Condition 8-J for popular swim beaches located within Project impoundments. Conditions 8-J and 35 allow the Deputy Director to modify the water quality certification if monitoring results indicate that water quality objectives for bacteria are being violated or if regulations, policies, or orders are issued for on-site wastewater treatment systems by the State Water Board. Condition 13 requires recreation improvements, including sanitation and toilet facility improvements at specific sites.

Conditions 8-J, 13 and 35 will reduce impacts to water resources associated with recreational activity to a less-than-significant level.

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment.

Impact WR-7: Operation of the Iowa Hill Development may lead to potentially significant impacts by reducing water temperature within Slab Creek Reservoir and downstream in the South Fork American River (SF American River) that could adversely affect hardhead (within Slab Creek Reservoir) and foothill yellow-legged frogs (in the SFAR downstream of Slab Creek Reservoir).

Condition 20 requires that SMUD develop and implement a hardhead monitoring plan, which includes a requirement to monitor water temperatures in shallow water edge habitat in Slab Creek Reservoir. If temperatures are not supportive of hardhead, the Deputy Director has reserved jurisdiction to require additional mitigation measures that will be developed when Iowa Hill becomes operational. Condition 20-D prohibits the operation of Iowa Hill from causing reductions of water temperatures below 12^oC in the SF American River downstream of Mosquito Bridge.

Temperature monitoring and reporting to assess compliance with Condition 20-D is required in Condition 8-I.

Conditions 20 and 8-I will mitigate impacts to sensitive native aquatic species to a less-thansignificant level.

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment.

Impact WR-8: Project operations may lead to conditions that promote the growth of nuisance algae in Project-affected stream reaches.

Condition 1, which requires a new streamflow regime throughout the Project area, is expected to reduce the growth of nuisance algae, which can adversely affect water quality, in the two areas where it is most likely to occur: Silver Creek below Junction Reservoir Dam and South Fork Rubicon River below Robbs Peak Reservoir Dam. If the flows do not address the problem completely, or if nuisance algae becomes established at levels that adversely affects water quality in any other project areas, Condition 9-G requires that SMUD reduce or eliminate excessive algae growth in any Project-affected stream reach, through submission and implementation of a plan subject to Deputy Director approval.

Monitoring required in Condition 8F will be used to verify that the new flows are effective at preventing nuisance algae from adversely affecting water quality in the Project vicinity.

Compliance with Conditions 1 and 9-G will reduce Project impacts associated with the growth of nuisance algae to a less-than-significant level.

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment.

Aquatic Resources

Impact AR-1: Project operations and associated impacts on instream flow have the potential to significantly affect resident fish communities (rainbow trout, hardhead and brown trout) by altering the quantity or quality of habitat, and/or interfering with fish movement into or out of Project impoundments.

Condition 1 specifies minimum streamflows that have been developed to benefit resident fish communities in Project-affected stream reaches. Condition 5 requires that SMUD maintain specified reservoir elevations in Project impoundments and that Gerle Creek Reservoir levels allow upstream fish passage between August and October. The new reservoir level requirements will provide for improved fish movement into and out of Project impoundments.

Monitoring specified in Condition 6, which requires SMUD to develop and implement a streamflow and reservoir elevation gaging plan, will allow for an assessment of compliance with Conditions 1 and 5. Monitoring required in Condition 8-A for rainbow trout, hardhead and brown trout will provide information to assess the status of fish populations in Project-affected streams and impoundments to determine whether resource objectives are being met.

Implementation of Conditions 1 and 5 will reduce the potential impact on resident fish communities to a less-than-significant level.

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment.

Impact AR-2: Project operations require that instream flows be periodically adjusted to provide pulse flows, recreation flows or other flow adjustments that are necessary based on water year

type and monthly requirements. Rapid adjustments of instream flow may cause stranding or other adverse impacts to aquatic species.

Compliance with Condition 3, which specifies ramping rates for certain stream reaches, and, will reduce the Project impacts to aquatic species associated with rapid flow adjustments to a less-than-significant level.

Condition 6, which specifies gaging requirements for streamflow and reservoir elevations, will provide monitoring information to verify compliance with Condition 3.

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment.

Impact AR-3: Project dams and impoundments can hinder the downstream movement of large woody debris, which may lead to adverse impacts to aquatic species due to the reduction in habitat complexity that occurs when large woody debris is absent from the stream channel.

Compliance with Condition 10, which requires that mobile instream large woody debris that accumulates upstream of Project dams be deposited downstream of the dams when conditions are safe enough to allow the debris to be moved, will reduce the impacts to aquatic species associated with lack of large woody debris to a less-than-significant level.

Condition 10 also requires SMUD to report annually on the efforts made during the year to deposit large woody debris below the dams, which will provide monitoring information to assure compliance with Condition 10.

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment.

Impact AR-4: Operation of the Iowa Hill Development may cause potentially adverse impacts to aquatic species within Slab Creek Reservoir due to entrainment into the intake/outlet structure that will be located within the reservoir.

Compliance with Condition 16, which requires SMUD to consult with the State Water Board, USFS, California Department of Fish and Game (CDFG) and United States Fish and Wildlife Service (USFWS) during the intake/outlet structure design process, will assure that the final design incorporates features that minimize entrainment potential. Condition 16 requires Deputy Director approval of certain aspects of the final design that includes features related to the reduction or avoidance of fish entrainment.

Fish community monitoring and reporting for Slab Creek Reservoir as required in Condition 20-A and Condition 20-C will provide information to assess whether entrainment is being successfully avoided or minimized.

Compliance with Condition 16 will reduce the potential impact to aquatic species associated with entrainment in Slab Creek Reservoir to a less-than-significant level.

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment.

Terrestrial Resources

Impact TR-1: Project operations affect reservoir levels and instream flows, which may cause potentially significant impacts to riparian vegetation or wetlands along Project-affected stream reaches or in the vicinity of Project impoundments. Diverting flows or reducing the intensity of peak flows may alter riparian vegetation composition, lead to channel encroachment, or decrease riparian cover, while reservoir fluctuation may reduce wetland abundance and species diversity.

Compliance with Condition 1 that specifies minimum streamflows in Project-affected stream reaches, Condition 2 that requires implementation of pulse flows in specific stream reaches and Condition 5 that requires SMUD to maintain specified reservoir elevations will reduce the Project impacts to riparian vegetation and/or wetlands to a less-than-significant level.

Monitoring required for Condition 8-E will provide information to periodically assess the status of the riparian plant community at established study sites throughout the license term. Condition 6, which specifies gaging requirements for streamflow and reservoir elevations, will provide monitoring information to verify compliance with Conditions 1, 2 and 5.

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment.

Impact TR-2: Project operations may adversely affect sensitive amphibian species due to flow fluctuations and/or altered water temperature conditions associated with required flow releases.

Condition 3 specifies ramping rates for specific reaches, which are designed to avoid significant impacts on sensitive amphibian species. Conditions 9-A, 9-B, 9-C and 9-D identify adaptive management measures for flow requirements that avoid spill events at times that would negatively impact sensitive amphibians and that establish the appropriate water temperature trigger associated with foothill yellow-legged frog breeding activity. Condition 20-D prohibits the operation of Iowa Hill from further reducing water temperatures below 12°C in the SF American River downstream of Mosquito Bridge.

Amphibian monitoring and reporting required in Conditions 8-C and 8-D together with water temperature monitoring required in Condition 8-I will provide a means to monitor Project impacts to sensitive amphibian species.

Conditions 3, 9-A, 9-B, 9-C, 9-D, and 20-D will reduce the Project impacts to sensitive amphibian species to a less-than-significant level.

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment.

Impact TR-3: Project operations may adversely impact bald eagles due to the potential for disturbance of bald eagle nesting sites.

Condition 8-L requires that the Licensee develop a bald eagle monitoring plan subject to approval by the Deputy Director that identifies bald eagle nesting sites located in the vicinity of the Project in order to avoid impacts to bald eagles from Project-related activities.

Compliance with Condition 8-L will reduce the Project impacts on bald eagles to a less-thansignificant level.

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment.

Threatened and Endangered Species Resources

Impact TE-1: Project operations and facilities have the potential to adversely impact California red-legged frogs, which are listed as threatened under the federal Endangered Species Act (ESA). Although California red-legged frogs have not been found in or near Project impoundments or Project-affected stream reaches, they have been observed in the vicinity (less than 5 miles) of the Project as recently as 2003.

Compliance with Condition 8-C, which requires SMUD to develop and implement a monitoring program for sensitive amphibian species, will provide information on the presence of red-legged frogs in the immediate vicinity of the Project. If monitoring indicates that California red-legged frogs are present in the immediate vicinity of the Project, Condition 8-C requires that SMUD consult with the State Water Board to determine whether additional measures are necessary to conserve red-legged frogs. Compliance with Condition 31 disallows any act that will result in take without proper authorization.

Compliance with Conditions 8-C and 31 will assure that appropriate wildlife protection measures are implemented should red-legged frogs be discovered in the Project area, and will reduce the potential impacts to threatened and endangered species to a less-than-significant level.

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment.

Impact TE-2: Project operations have the potential to adversely affect the Valley Elderberry Longhorn Beetle, a species that is listed as threatened under the federal ESA. Elderberry plants, which serve as the habitat for the Valley Elderberry Longhorn Beetle, were found within the Project area at locations associated with transmissions lines.

Compliance with Condition 25, which requires SMUD to develop and implement a vegetation and invasive weed management plan that incorporates the USFWS' Valley Elderberry Longhorn Beetle Conservation Guidelines¹, will assure that measures are taken to protect and conserve the habitat of the beetle.

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment.

Recreation Resources

Impact RR-1: Construction and operation of the Iowa Hill Development may prevent or alter recreational access to Slab Creek Reservoir.

¹ U.S. Department of the Interior Fish and Wildlife Service, Sacramento Fish and Wildlife Office Conservation Guidelines for the Valley Elderberry Longhorn Beetle, July 1999.

Compliance with Condition 21, which requires SMUD to develop and implement a plan, subject to Deputy Director approval, that addresses recreational access during and after construction of the Iowa Hill Development, will reduce impacts to recreation access to a less-than significant level.

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment.

Impact RR-2: Project operations affect reservoir elevations in the impoundments, which may significantly affect recreational opportunities. For example, reservoir elevations that are too low may prevent the use of recreational facilities such as boat ramps.

Compliance with Condition 5, which requires that SMUD to maintain specified reservoir elevations during the summer recreation season, in order to avoid or minimize recreational impacts of reduced reservoir levels, will reduce this impact to recreation access associated with reservoir elevations to a less-than-significant level.

Monitoring and reporting of reservoir levels required in Conditions 6 and 7 will provide a means to assess compliance.

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment.

Impact RR-3: Project operations affect instream flow in Project-affected stream reaches, which can affect recreational boating opportunities in the Project vicinity.

Condition 4 requires SMUD to provide specified recreation flows in certain stream reaches, which will increase recreational boating opportunities.

Monitoring and reporting of instream flow required in Conditions 6 and 7 will provide a means to assess compliance.

Compliance with Condition 4 will reduce adverse impacts to recreational boating opportunities to a less-than-significant level.

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment.

Impact RR-4: Operation of the Iowa Hill Development may lead to potentially hazardous hydraulic conditions within Slab Creek Reservoir in the vicinity of the intake/outlet structure that may adversely impact recreational activities.

Condition 16 requires that SMUD consult with the USFS, CDFG, USFWS and the State Water Board during the intake/outlet structure design process to assure that the final design minimizes the potentially hazardous hydraulic conditions in Slab Creek Reservoir that might affect recreational activity. The design must include safety features, including boat restraining barriers, warning signs, and other guidance to the public as needed, and must follow the FERC *Guidelines for Public Safety at Hydropower Projects*. The Deputy Director may require changes in the plan to address recreational impacts.

Compliance with Condition 16 will reduce adverse impacts to recreational activities in Slab Creek Reservoir to a less-than-significant level.

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment.

Impact RR-5: Operation of the Project may cause impacts to recreational fishing opportunities in Project-affected stream reaches and/or Project impoundments.

Condition 15 requires that SMUD match the amount and type of fish stocked by CDFG, up to a total of 50,000 pounds each, of fish per year, to be distributed among Loon Lake, Union Valley, and Ice House Reservoirs as determined by CDFG.

Condition 15 requires that SMUD provide annual notification to the Deputy Director by July 1 regarding the fish stocking arrangements for that year, which will assure compliance with the fish stocking requirement.

Compliance with Condition 15 will reduce adverse impacts to recreational fishing opportunities to a less-than-significant level.

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment.

Aesthetic Resources

Impact AE-1: Project operations affect reservoir elevations in the impoundments, which may alter the aesthetic quality for visitors to the Project.

Compliance with Condition 5, which requires SMUD to maintain specified reservoir elevations, will reduce this impact to a-less-than-significant level and will improve the aesthetic quality for visitors to the Project compared to the existing condition.

Monitoring and reporting requirements that address reservoir elevations are contained in Conditions 6 and 7, which will be used to assess compliance with Condition 5.

Changes or alterations have been required in, or incorporated into, the Project which mitigate or avoid the significant effects on the environment.