ATTACHMENT A

CDFG ALTERNATIVE

State of California - The Resources Agency ARNOLD SCHWARZENEGGER, Governor
DEPARTMENT OF FISH AND GAME
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October 17, 2005

ORIGINAL

Mr. Jeff McPheeters
Manager, Northern Hydro Region
Southern California Edison Company
Hydro Generation Division
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Dear Mr. McPheeters:

Comments on the Settlement Proposal recommended by Southern California Edison for relicensing of the Big Creek Hydroelectric Projects Big Creek Nos. 2A, 8 and Eastwood (FERC No. 67), Big Creek No. 3 (FERC NO. 120), Mammoth Pool (FERC No. 2085, and Big Creek Nos. 1 & 2 (FERC No. 2175)
San Joaquin River Watershed
Fresno County

The Department of Fish and Game (Department) is charged, under State law, with responsibility as California's principal steward of public trust for fish and wildlife resources (see State Fish and Game Code, Sections 1802, 711.4). In that capacity, we are participating, along with Southern California Edison (Licensee), other agencies, and stakeholders in the Alternative Licensing Procedure (ALP) process for the above listed Hydroelectric Projects. We have reviewed the current Settlement Proposal advanced by the Licensees, along with alternative proposals that were submitted by other Stakeholders that are participating in the ALP Collaborative. We understand that the final Settlement Agreement anticipated to be developed by the ALP Collaborative will propose resource recommendations that include fish and wildlife protection, mitigation and enhancement measures, which will be submitted to the Federal Energy Regulatory Commission (FERC) for inclusion in the FERC license for the above referenced hydroelectric Projects.

We believe that the ongoing collaborative process is one useful forum for the scoping of issues and for stakeholder involvement in developing protective resource measures. The Department generally concurs with the individual measures that have been proposed thus far within the Collaborative, and we offer some additions herein. We hope to eventually become a signatory to the Settlement Agreement when it is finalized by the ALP Collaborative. Based on a review of the current Settlement

proposal, and our ongoing participation in the Collaborative, the Department has the following comments on the Settlement Agreement Proposal that has been developed thus far, along with the draft recommendations proposed by the group.

AQUATIC RESOURCES

Downstream Anadromous Fisheries and Temperature Control Issues:

Our Department is the jurisdictional agency which enforces the California Fish and Game Code. Section 5937 of this Code states that "the owner of a dam shall allow sufficient water at all times to pass through a fishway, or in the absence of a fishway, allow sufficient water to pass over, around or through the dam, to keep in good condition any fish that may be planted or exist below the dam."

The Department is concerned that current Project operations, water storage and seasonal patterns, and quantities of water releases from Project reservoirs fail to keep in good condition fish below Project dams several downstream reaches of the San Joaquin River watershed. These fishes' condition, survival and recovery are partially dependent upon adequate releases of water now held and used seasonally within the subject Project reservoirs. This concern includes the maintenance of stream channel and floodplain function, normally associated with regular interval flows which form and maintain the fish habitat characteristics. The operation of Project reservoirs is proportionally responsible for direct, indirect and cumulative fishery impacts in the tributaries and San Joaquin River. The issues associated with downstream fishery protection, including Section 5937 have not been adequately addressed by the ALP to date.

Downstream of the subject Project locations, and dependent upon their operations, is Friant Dam, operated by the U. S. Bureau of Reclamation (USBR). Behind Friant Dam is Millerton Lake, with a total volume of 578,000 acre feet. The dam dynamically regulates a much larger quantity of water each year; however, the seasonal inflow to Millerton Lake is largely dependent upon the timing and volumes of water releases made upstream at the Big Creek Project system reservoirs (4 under ALP; 3 others under traditional relicensing). Thus, the Big Creek system operation has direct, indirect and cumulative effects on reservoir operations and protection of fishery resources well downstream in the watershed.

Last year, in Natural Resources Defense Council (NRDC) v. Rodgers, a federal district court in Sacramento ruled that the USBR had violated Section 5937 by failing to release sufficient flows to keep in good condition the downstream fish populations, including anadromous salmon runs that were ultimately extirpated in the late 1940s when Friant Dam became fully operational. The federal court will be determining remedies for the USBR's Section 5937 violation in a trial commencing in February, 2006

with a decision expected by May, 2006. That decision is anticipated to include recommended flows for downstream fisheries pursuant to Section 5937. Preliminary analyses of the appropriate instream flows needed for fishery recovery purposes indicate that the timing of releases from the upstream reservoirs operated by the Licensee (with a total volume of about 630,000 acre feet) may be useful in seasonally supplementing any Friant Dam fishery releases in certain water years. Coordinated operations of the Big Creek system to supplement any flows from Friant Dam required by the federal court may assist in providing for optimum fishery flows downstream. It is the Department's opinion that modifications will eventually need to be made in Big Creek Project operations in order to proportionally mitigate for the direct, indirect and cumulative effects of those operations on downstream fisheries, and keep those fisheries in good condition as suggested by Section 5937. Project modifications should eventually be coordinated with Friant Dam operations. Although Friant Dam was a prime contributing factor to the decline of downstream freshwater and anadromous fisheries, the Big Creek Project dams also had proportional impacts. Again, the Department believes such proportional impacts must be addressed through operational changes such as flows release of appropriate temperature and timing.

Historically, spring-run Chinook salmon (about 120,000 per year), fall-run Chinook salmon (about 25-30,000 per year) and steelhead rainbow trout (undetermined numbers) annually migrated up the San Joaquin River to spawn each year within the Project's reach. Spring-run salmon were documented to over-summer in the upper (cooler) reaches of the river at elevations up to 6,500 feet; i.e., well within the boundaries of the subject power licenses. A significant percentage of the spring run's access to cooler over-summer habitat was blocked in 1916 by the construction of Kerckhoff Dam by (then) Pacific Power and Light Company (FERC Project No. 96; Pacific Gas and Electric Company). After that time, a smaller population of spring-run salmon persisted within the remaining summer habitat downstream. Kerckhoff Reservoir storage is very small, consequently, this Project was, and still is, operated as a run-of-the-river power plant. This reservoir has insufficient storage capacity to alter major water flow volumes, or to modify downstream temperatures, yet is of sufficient height to block fish migrations upstream.

The Big Creek Project reservoirs were constructed after 1916. While this series of Project dams may not have directly obstructed the upstream salmon and steelhead migrations, they did directly, indirectly and cumulatively affect the timing and magnitude of water releases; essentially by storing spring snowmelt runoff, then releasing the water later in the summer and fall periods, for power production. A subtle increase in fall flows may have been beneficial for the upstream migrant fall-run salmon, and steelhead below the dams, but the seriously reduced spring water flows downstream of Kerckhoff Dam remain a serious concern today. We have completed 50-plus years of research on the other major San Joaquin River tributaries, which indicates that today, salmon populations in the San Joaquin watershed are strongly dependent upon the

timing, volumes and temperatures of spring flows originating from the upper watershed areas. As the Big Creek Projects are within this upper watershed, and did have the impacts described, we feel it is entirely appropriate and necessary to address these issues in this relicensing venue.

Flow volumes during migration periods are a critical controlling factor in the survival of juvenile salmon as they migrate to the Pacific Ocean and, juvenile survival is directly and strongly related to adult salmon production. Consequently, there is little question that the Big Creek Project facilities and operations have directly contributed to reduced spring and fall-run salmon populations in the San Joaquin River watershed. To supplement fishery restoration in the lower watershed, stored Big Creek Project water may need to be released to downstream reservoirs and thence the river earlier in the drier series of years. To the extent other uses of Millerton Lake water are allowed in the NRDC v. Rodgers litigation, then water from the upstream Big Creek reservoirs may be useful in larger volumes in many more years.

It is apparent to us that: (i), the federal court has found that the federal Friant Unit of the Central Valley Project is governed by Section 5937, (ii) fish protection and recovery downstream of Friant Dam, is expected to be required by the court, (iii) such protection and recovery may be supplemented by the operations of the upstream reservoirs of the Big Creek Project now undergoing license renewals, (iv) the FERC and USBR should work collaboratively to determine the relationship of upstream storage to fishery flow requirements downstream (including the San Joaquin River below Friant Dam), (v) direct, indirect and cumulative impacts of Project operations on downstream fisheries should be addressed in the NEPA analysis associated with the Project relicensing proceedings, with appropriate mitigation and enhancement considered, and (vi) water quality (e.g. temperature) issues should be addressed in the State Water Resources Control Board (SWRCB) Section 401 water quality certification and elsewhere as necessary. In conclusion, it is our position that the downstream fishery protection mandate under Section 5937 has not been adequately addressed in the ALP or the Licensee's current Settlement Proposal. Because each of the Hydroelectric Projects participates directly, indirectly and cumulatively affecting the downstream flow quantity and quality (e.g., temperature) issues, we request that these effects be specifically considered in the process of developing license articles and provisions for the individual licenses, and the Big Creek system comprehensively. These effects should also be considered in the CEQA and NEPA process related to the Project. Our downstream fishery and water quality concerns were identified and documented as significant issues during the collaborative proceedings, in particular, during discussions related to CAWG-13 Anadromous Fish technical study.

We emphasize that today, the Central Valley spring-run Chinook salmon Evolutionarily Significant Unit (ESU) is listed as "threatened" under the Federal Endangered Species Act (ESA). Populations of Central Valley spring-run Chinook

salmon are significantly reduced below historical levels. Within the San Joaquin River Basin, the spring-run Chinook salmon population has been extirpated, (although a few adults originating from northern Central Valley watersheds stray into the San Joaquin in wet years). The loss of the huge historical San Joaquin Basin contingent of spring-run in the Central Valley rivers is a major basis for their ESA listing.

Central Valley fall-run Chinook salmon are classified as a "Species of Concern" under the federal ESA , , in part due to the tenuous year-to-year status of their populations in many of the San Joaquin River tributary streams. Although currently not protected under the ESA, recovery of fall-run Chinook salmon and recovery will involve all of the water operations mitigation measures discussed herein that will be cross-coordinated among and/or between the various other water operators within the major San Joaquin River tributaries, so as to achieve a coordinated schedule of flows and temperatures, and to cumulatively satisfy the Federal Clean Water Act water quality standards as adopted by the State Water Resources Control Board within the downstream Delta and Estuary.

Central Valley steelhead rainbow trout are also listed as threatened under the ESA and, like fall-run Chinook salmon, are represented by seriously reduced San Joaquin River populations. Recovery of steelhead and fall-run Chinook salmon is a focus of our present concern. The present-day total absence of populations of these species within their historical upper main-stem San Joaquin River habitat is a key factor in their current status in California. They are now geographically restricted to habitats below low-elevation dams in the other major San Joaquin River tributaries, and even those populations are subject to the modifications made by those dams to natural water flows and temperatures.

We believe that the collective operations of SCE's four subject upstream hydroelectric Projects (along with the three SCE hydroelectric Projects currently in traditional relicensing) and the other hydroelectric licenses within the other tributaries of the San Joaquin River watershed, materially affect the hydrological, thermal and water quality regimes on much of the San Joaquin River watershed. If those operations and/or the associated facilities are appropriately modified, downstream fish populations can be maintained in good condition.

Restoration objectives for all of these anadromous species are shared by the Department, the United States Fish and Wildlife Service (USFWS), NOAA Fisheries, and the joint Federal-State CALFED Bay-Delta Authority. The restoration objectives are also reiterated within the Federal Central Valley Project Improvement Act (CVPIA), which specifically calls for measures intended to double the natural production of anadromous fish populations throughout the Central Valley watersheds. The CALFED Bay-Delta Authority and the USFWS's Anadromous Fish Restoration Program (pursuant to the CVPIA) have jointly expended in excess of $30 million on anadromous fish

restoration projects within the San Joaquin River watershed over the past decade. This has included millions of dollars expended specifically within the San Joaquin River watershed to recover historically reduced salmon spawning and rearing habitats and fish screens.

We understand that the USBR is currently developing a comprehensive water temperature model for Millerton Lake, for the lower San Joaquin River watershed, in recognition of the importance of water temperatures downstream of Friant Dam to anadromous fish survival, reproduction, and ultimate recovery. Further studies, hydrologic and temperature modeling, are necessary to determine appropriate, contributional Project releases for fisheries downstream of Friant Dam.

In summary, the Department requests that the Project Licenses be conditioned to require a study of fishery requirements downstream of the Project dams, including a proportionate contribution to flows and water quality (e.g. temperature) downstream of Friant Dam in coordination with any flows required by the NRDC v. Rodgers litigation. A public review of such study results should be required at an appropriate time interval, similar to the review provisions included in other projects in the San Joaquin River watershed (see FERC License No. 2299, New Don Pedro Project, on the Tuolumne River). We request that such a review would be combined with a well-focused license re-opener condition that would allow consideration and adoption of additional or revised license conditions/articles on one or more of the Big Creek licenses currently in relicensing (ALP or Traditional). The review should include the results of the upstream operational and temperature modeling conducted by the Licensee for the ALP process, linked together with the model developed by the USBR, along with other ongoing basin-wide modeling to assess the direct, indirect and cumulative impacts of the Projects and evaluate and define alternative operational strategies over the next five years (2005-2010). Changes in License conditions or other outcomes could occur thereafter.

In development of the NEPA documentation for the subject Project licenses, we request that an appropriate analysis be provided, which takes into consideration the current (at the time) products of the above- described modeling efforts, thermal tolerance criteria of the San Joaquin River salmon, as developed and described above. The NEPA documentation should also address the direct, indirect and cumulative impacts of the continued operation of upstream reservoirs upon the downstream anadromous fish populations and the already-costly efforts to restore these historically numerous populations, at least to the doubling goal, as established by Congress in the CVPIA, and as necessary to satisfy ESA requirements.

Finally, the NEPA document should be structured in such a manner that ESA and NEPA compliance associated with subsequent decisions to add/revise license articles and any protection, mitigation and enhancement measures adopted, can be accomplished efficiently. We have many years of pragmatic experience and scientific

information concerning the runs of salmon within the major San Joaquin River tributaries and along the San Joaquin River, including the subject Project areas. We can provide this assistance upon request.

Resident Fish Instream Flow Recommendations:

Based on its review of instream flow studies, geomorphology studies, and other aquatic technical studies prepared for the current relicensing, the Department has developed recommended instream flows for the twenty-three (23) stream reaches of the Upper San Joaquin River and tributaries that are affected by the Projects (not including the stretches below Friant Dam). These recommended instream flows are summarized in an attachment to this letter (Attachment A). The general rationale for the Department's flow recommendations includes the following concepts:

1) In general the Department recommends more gradual transitions during seasonal changes in required minimum flows (ramping criteria). This avoids abrupt changes in water levels, which could result in the stranding of fish, macroinvertebrates, and other aquatic organisms and will serve to provide a more natural annual hydrological regime.

2) The recommended flows reflect improved provision of increased flows for spring spawning fish, and increased thermal protection for the stream fisheries and other aquatic organisms, along with fish passage in late summer and fall, when low water levels often result in temperatures that are deleterious to cold water fish.

3) For diverted reaches that are located at lower elevations within the upper San Joaquin River watershed, the Department recommends that higher flows for spring spawning fish and other aquatic organisms be initiated earlier than at high elevations, in order to coincide with earlier warm up of these lower elevation areas.

4) The Department's recommended instream flows are assumed to be Minimum Instream Flow (MIF), or inflow, whichever is less. Regular frequencies of high channel and floodplain maintenance flows are to occur as well.

5) The management of sediment accumulating at Project facilities is critical to healthy stream ecosystems. The sediment management program for the Big Creek system is a key element of the Licenses.

Some flow recommendations may need to be re-evaluated based on the need to coordinate flow releases with Friant Dam operations in the future.

Mammoth Pool Silver Iodide Monitoring:

The Licensee currently contracts for the application of silver iodide in the watershed to enhance rainfall in the upper San Joaquin River watershed which is intended to increase water yields for Project operations. Silver iodide applications are delivered using both aerial application and ground generating stations. Water quality studies conducted in support of the current Project relicensings have identified elevated levels of silver in composite liver samples of adult trout in Mammoth Pool Reservoir. Muscle tissues (filet) in sampled fish did not demonstrate elevated silver levels. While silver levels in fish muscle tissues do not appear to be present at levels that would adversely affect humans or wildlife, live sample results are of concern to the Department. Consumption of fish that contain elevated levels of silver in liver tissue may not pose a threat to humans, who normally consume only muscle (filet) tissue. However, raptors and other large wildlife that regularly consume the entire carcass, including liver tissues, may eventually consume and bioaccumulate sufficient silver to cause deleterious effects. Wildlife at other trophic levels may be more sensitive. In addition, the source of the uptake of the silver in fish tissues, which may be macroinvertebrates such as crayfish, should be identified.

The Department recommends that a monitoring program, designed to identify trends in the levels and source(s) of silver accumulation in pertinent fish tissues (e.g. liver and muscle), and the tissues and whole bodies of aquatic organisms regularly consumed by fish (such as crayfish or other macroinvertebrates), over time, should be conducted on appropriate intervals (e.g. every 3 years) during the term of the license for the Mammoth Pool Project area. The program should be conducted in the balance of the Project reservoirs and stream reaches, but with longer sampling intervals (e.g. every 5-10 years) as warranted by the geography of, silver iodide application, and as more limited "spot" sampling suggests. The program should be developed in consultation with the Department, SWRCB, the United States Fish and Wildlife Service (USFWS), and other appropriate agencies. A schedule/table describing the various monitoring and reporting elements for silver in fish and macroinvertebrates should be defined as a Project license term.

Project Reservoir Minimum Pools:

The Department recommends that retention of water in Project reservoirs for recreational resources be balanced with the needs of resident trout and downstream anadromous fisheries. Current operational minimum pools in the Project area do not appear to adversely affect the fisheries within Project reservoirs; however, changes in reservoir operations developed during the ALP may result in different operational scenarios, related to timing of flows and minimum pool levels, which could affect aquatic resources in reservoirs or downstream. Monitoring for impacts to aquatic

resources in reservoirs should be included as part of the resource monitoring program developed for inclusion in the Settlement Agreement. Provisions for remedial actions should be included.

Fish Entrainment Mortality:

The Department has the authority, based upon Fish and Game Code Chapter 3, Articles 1 through 5, et seq., to require installation of fish screens on power diversion facilities that the Department has determined to cause entrainment of a significant number of fish. Based upon our review of the entrainment studies conducted for the relicensing, the Department will propose that drop tube intakes in the Project area, primarily those diversions that provide water to the Ward Tunnel, be screened to exclude and not impinge adult fish. Larval and juvenile fish, invertebrates and other wildlife will continue to be lost there and elsewhere in the Projects area. In addition to construction of the screens described above, the Department will require that additional mitigation for ongoing fish loss from entrainment/impingement at Project facilities and diversions to offset these losses. Despite the results of the entrainment studies conducted by consultants for the Licensee, which found that entrainment in Project facilities does not appear to be substantial, the Department is aware that entrainment loss does occur, we deem it significant, and will require mitigation. We encourage the Licensee to consult with us as soon as possible to define the scope and mechanism(s) to satisfy this mitigation obligation in a pragmatic manner.

Data used to Determine Fish Densities in Project Reaches:

The Department is concerned that data used as a reference for fish densities within the Project area is limited to those found in the report entitled "Fish Population and Yield Estimates from California Trout Streams" (Eric Gerstung, CDFG, 1973). The Department considers the fish density numbers in this report to be relatively low, and likely not representative of the range of current fish densities in Project reaches. More recent data is available, which we understand that the Licensee obtained from our Wild Trout Program office in Sacramento. It appears that this more recent data was not used, and that the Licensee has relied entirely on fish density information contained in the "Gerstung" report. The Department continues to recommend that more recent information be used to provide more current reference information for fish densities in the Project area and as a basis in environmental documentation or evaluations.

Hatchery Support for Stocking of Project Impoundments and Project-Affected Reaches

The Project attracts a high amount of public recreation use, which includes angling in Project affected reservoirs and stream/river reaches. This has become an important economic element in the nearby, mountain communities, and is an attractive feature for stimulating recreational expenditures in the Fresno Metropolitan area and elsewhere. This intensifies fishing pressure in Project stream reaches, reservoirs and nearby waters. The Department also recognizes that the Project, as a whole, has adversely affected the upper basin fishery by changes in timing and amount of instream

flows from those that occurred historically, in addition to the level of entrainment and entrapment in Project facilities and diversions. Therefore, the Department requests that the Licensee reimburse the Department for the ongoing cost for fish stocking, along with efforts for fish production and monitoring, that are needed to sustain a high quality recreational fishery in Project impoundments and Project affected reaches and nearby waters in the upper San Joaquin River watershed. The current cost, as estimated by the Department, is in the range of $300,000 each year. This excludes mitigation for entrainment and entrapment losses discussed above. This amount would need to be provided on a consistent basis over the term of the renewed License, and re-evaluated annually, and adjusted for inflation and increasing levels of use over time. We encourage the Licensee to consult with us as soon as possible to define the scope and mechanisms to satisfy this mitigation obligation.

1600 Stream Alteration Maintenance Agreement for Sediment Maintenance:

A Stream Alteration Maintenance Agreement is currently in place that addresses the ongoing annual removal of sediment, vegetation, and other debris from many of the small and mid-sized impoundments in the upper San Joaquin River watershed. This Agreement expires on July 31, 2006. We recommend that this Agreement be updated (perhaps for a longer term) upon its expiration, to ensure that adequate fish and wildlife protection is implemented during sediment management activities at Project facilities. Recommended sediment management plans may be attached to and incorporated into this Agreement consistent with, or in addition to sediment management measures approved by the ALP Collaborative and FERC.

TERRESTRIAL RESOURCES

Mammoth Pool Deer Protection:

The Department recommends the continuation of License conditions included in the present FERC License, with one exception described below. These original measures were intended to protect deer by avoiding or partially mitigating impacts during migrations and/or residence in the area of Mammoth Pool Reservoir. The original conditions included the requirement that the Licensee construct ramps in the vicinity of Mammoth Pool Dam to facilitate the entry and exit of deer that must swim the reservoir. As stated previously by Department staff during the collaborative meeting process, this measure has not been completed to date, and we now recommend that this item be deleted from the current list of protective measures. The Department does not continue to recommend the construction of deer access ramps near the Mammoth Pool spillway, as these were located in solid rock, and not conducive to efficient use by deer.

The Department remains concerned about the potential accumulation of trash and debris in the reservoir, which could cause deer to drown while swimming the reservoir. The technical report for the mule deer study indicated that SCE does not

regularly remove large debris from Mammoth Pool. Although no trash or other debris was observed in the reservoir during the deer migration study conducted in 2002 for this relicensing, historically, floating trash and debris are observed at both the entry and exit points along the defined deer migration routes, which could increase mortality of migrating deer.

To ensure that the presence of debris is monitored, and that any build up of debris is removed in a timely way to protect migrating deer that swim the reservoir during annual migrations, the Department recommends that the Licensee provide annual photo documentation of the area of primary concern to the Department, along with an estimate of the aerial extent of debris buildup well in advance of the deer migration periods. This area is located at the floating boom above the spill way. If, based on the Department's review of the photograph, and other information regarding the aerial extent of any debris buildup present, the Department considers the buildup sufficient to expose deer to increase mortality, the Licensee would be requested to remove the debris before migrations begin. This measure should be added as a condition of the license and/or and element of the Settlement Agreement.

Wildlife Mortality

The technical studies that were conducted for the current relicensing did not identify significant wildlife mortality within the Project area. However, because the study design was not intended to obtain such information, the study would not likely identify the subtle, ongoing and significant mortality that occurs to diverse wildlife species as a result of Project reservoirs, operations (particularly in spill years) and Project associated traffic. The wildlife mortality observed in the study and generally by our staff on a regular basis is indicative of the wildlife mortality that occurs as a result of these Projects. The Department receives reports of deer and other wildlife mortality at Mammoth Pool and other Project reservoirs over time. We believe that as recreational uses at Project reservoirs has increased, traffic to/from recreational destinations has increased, and the wildlife loss due to road kill or injury has and will continue to increase. Based on the above discussion and the Department's knowledge of wildlife and their migrations and use of the Project area, it is clear that a level of Project-induced wildlife mortality occurs now and will continue through the term of relicensing.

We believe this loss is significant due to the consequences suffered at population levels over the life of the Projects. For instance, a loss of a single doe (deer) may seem insignificant on the surface. But, when the consequential losses of fawns that the lost doe and their successive offspring would have produced over their lifetimes are considered, the impact of each mortality expands substantially. This represents "opportunity loss" to the population and to the beneficial uses. It is the Department's position that deer and other wildlife are lost on a consistent basis over time due to the Projects. Therefore, appropriate mitigation measures should be implemented as an element of this relicensing.

A broad array of mitigation strategies should be considered and implemented in a Wildlife Mortality Mitigation Program. Some of these strategies to offset the mortality impact can be conducted at areas outside of the Project boundary in order to provide population benefits to the species involved. For instance, improvement of fawning or wintering habitat for the San Joaquin Mule deer herd to increase productivity is an appropriate mitigation measure to offset losses to this herd caused by Project operations. Since these habitat types may not exist directly on the Project area, SCE and the Department would need to collaborate with the landowner(s) and implement projects, with funding from the Wildlife Mortality Mitigation Program. This mitigation will need to be conducted on an ongoing basis during the entire lifespan of the Project's license in recognition of the ongoing wildlife mortality. Similar to the Fish Entrainment and Hatchery Support mitigation funding, a consistent source of funding over the term of the license is necessary for an effective program. The Department encourages the Licensee to consult with us as soon as possible to define and develop the scope and mechanism(s) to satisfy this component of Project's mitigation obligation.

Bear Mitigation:

The Department is very concerned about recurring bear/human and other wildlife incidents at facilities in the Project area, especially in the town of Big Creek, which is a residential area for SCE employees. The bears are attracted to improperly stored food and garbage, causing potentially dangerous conflicts with humans. Bears conditioned in a manner that present human safety or property damage, may be removed or killed under State law. Thus, a Project induced impact (human development and mishandling of refuse), results in wildlife mortality, threats to safety and property damage in some cases. The Department strongly recommends that the Licensee purchase, employ and maintain bear proof dumpsters at all facilities within its scope of responsibility in and adjacent to the FERC Project area and within the town of Big Creek for the duration of the relicensing period. The dumpsters should be of a quality and design equivalent to those effectively used in our local National Parks. We also recommend that the Licensee assist the Department by developing and monitoring a mandatory educational program on proper food storage and garbage disposal for its employees and visitors, so that some bear/human incidents are prevented throughout the Project area. The Department can identify specific sites for these containers and for educational material dispersal in consultation with our many partners in the Project area.

Department Access to Restricted FERC Project Areas:

The Department regularly conducts wildlife and aquatic surveys and enforcement activities in portions of the Upper San Joaquin River watershed, which may require access to Project roadways that are currently closed to public access by locked gates. The Department will need to continue to access these areas during the renewed license term, and requests continued cooperation by the Licensee in granting access to these restricted areas. As in the past, Department staff will contact the Licensees as

appropriate, and check out necessary keys to obtain access to these areas, with the exception of Department law enforcement personnel who will have access to restricted areas at all time. Law enforcement personnel will make prior arrangements with the Licensee to ensure that they have appropriate keys and/or lock combinations to restricted areas. No additional demand for fish and wildlife enforcement efforts are anticipated under the above conditions of this relicensing.

We hope that these comments will assist you in completing the development of conditions and License articles for inclusion in a viable Settlement Agreement and conditions for relicensing of the subject Projects. If you have any questions concerning these comments, please contact Ms. Julie Means, Environmental Scientist, or Mr. Dale Mitchell, Environmental Program Manager, at the address on this letterhead or telephone number, extension 141. Thank you for this opportunity to provide the Department's comments.

Sincerely,

W.E. Loudermilk

W. E. Loudermilk
Regional Manager

Attachment

cc: See Pages 14 -16

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Ms. Julie Means
Department of Fish and Game

ATTACHMENT A

Department of Fish and Game
Minimum Instream Flow Recommendations
For the Southern California Edison
Upper San Joaquin River Hydroelectric Projects
Big Creek ALP Relicensing

Huntington-Shaver Area

Stream: Balsam Creek Reach: Diversion to Big Creek

Month	DFG wet year	DFG dry year
Oct	2	1
Nov	1	1
Dec	1	1
Jan	1	1
Feb	1	1
Mar	2	1
Apr	3	2
May	3	2
Jun	2	1
Jul	2	1
Aug	2	1
Sep	2	1

wet year = above average and wet water year types
dry year = below normal, dry, and critically dry water year types

ATTACHMENT A

DFG Minimum Instream Flow Recommendations

Huntington-Shaver Area

Stream: Balsam Creek Reach: Forebay to Diversion

Month	DFG wet year	DFG dry year
Oct	2	1.5
Nov	1.5	1.5
Dec	1.5	1.5
Jan	1.5	1.5
Feb	1.5	1.5
Mar	1.5	1.5
Apr	3	3
May	4	3
Jun	3	3
Jul	2	1.5
Aug	2	1.5
Sep	2	1.5

wet year = above average and wet water year types
dry year = below normal, dry, and critically dry water year types

ATTACHMENT A

DFG Minimum Instream Flow Recommendations

Huntington-Shaver Area

Stream: Big Creek Reach: Dam 4 to Dam 5

Month	DFG wet year	DFG dry year
Oct	10	7
Nov	7	7
Dec	7	7
Jan	7	7
Feb	7	7
Mar	7	7
Apr	20	15
May	20	15
Jun	20	15
Jul	15	10
Aug	15	10
Sep	15	10

wet year = above average and wet water year types
dry year = below normal, dry, and critically dry water year types

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DFG Minimum Instream Flow Recommendations

Huntington-Shaver Area

Stream: Big Creek Reach: Dam 5 to the San Joaquin River

Month	DFG wet year	DFG dry year
Oct	10	8
Nov	8	8
Dec	8	8
Jan	8	8
Feb	8	8
Mar	8	8
Apr	20	15
May	20	15
Jun	20	15
Jul	15	10
Aug	15	10
Sep	10	10

wet year = above average and wet water year types
dry year = below normal, dry, and critically dry water year types

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DFG Minimum Instream Flow Recommendations

Huntington-Shaver Area

Stream: Ely Creek Reach: Below the Diversion

Month	DFG wet year	DFG dry year
Oct	1	1
Nov	1	1
Dec	1	1
Jan	1	1
Feb	1	1
Mar	1	1
Apr	3	2
May	3	2
Jun	3	1
Jul	2	1
Aug	2	1
Sep	1	1

wet year = above average and wet water year types
dry year = below normal, dry, and critically dry water year types

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DFG Minimum Instream Flow Recommendations

Huntington-Shaver Area

Stream: NF Stevenson Creek Reach: Below Tunnel 7 to Shaver Lake

Month	DFG wet year	DFG dry year
Oct	12	12
Nov	12	12
Dec	12	12
Jan	8	8
Feb	8	8
Mar	8	8
Apr	25	20
May	25	20
Jun	20	20
Jul	15	12
Aug	15	12
Sep	12	12

wet year = above average and wet water year types
dry year = below normal, dry, and critically dry water year types

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DFG Minimum Instream Flow Recommendations

Huntington-Shaver Area

Stream: Pitman Creek Reach: Below the Diversion

Month	DFG wet year	DFG dry year
Oct	2	1.5
Nov	1.5	1.5
Dec	1.5	1.5
Jan	1.5	1.5
Feb	1.5	1.5
Mar	1.5	1.5
Apr	5	3
May	5	3
Jun	5	3
Jul	3	1.5
Aug	2	1.5
Sep	2	1.5

wet year = above average and wet water year types
dry year = below normal, dry, and critically dry water year types

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DFG Minimum Instream Flow Recommendations

Lower San Joaquin River

Stream: Rock Creek Reach: Below the Diversion

Month	DFG wet year	DFG dry year
Oct	2	2
Nov	2	2
Dec	2	2
Jan	2	2
Feb	2	2
Mar	4	3
Apr	4	3
May	4	3
Jun	3	2
Jul	2	2
Aug	2	2
Sep	2	2

wet year = above average and wet water year types
dry year = below normal, dry, and critically dry water year types

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DFG Minimum Instream Flow Recommendations

Lower San Joaquin River

Stream: Ross Creek Reach: Below the Diversion

Month	DFG wet year	DFG dry year
Oct	1	.5
Nov	1	.5
Dec	1	.5
Jan	1	.5
Feb	1	.5
Mar	2	2
Apr	3	2
May	3	2
Jun	2	1
Jul	1	.5
Aug	1	.5
Sep	1	.5

wet year = above average and wet water year types
dry year = below normal, dry, and critically dry water year types

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DFG Minimum Instream Flow Recommendations

Lower San Joaquin River

Stream: San Joaquin River Reach: Dam 6 to Redinger

Month	DFG wet year	DFG dry year
Oct	75	50
Nov	25	25
Dec	25	20
Jan	25	20
Feb	25	20
Mar	75	60
Apr	100	80
May	100	80
Jun	100	80
Jul	75	60
Aug	75	50
Sep	75	50

wet year = above average and wet water year types
dry year = below normal, dry, and critically dry water year types

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DFG Minimum Instream Flow Recommendations

Lower San Joaquin River

Stream: San Joaquin River Reach: Mammoth Pool to Dam 6

Month	DFG wet year	DFG dry year
Oct	120	100
Nov	100	100
Dec	80	80
Jan	75	60
Feb	75	60
Mar	75	60
Apr	120	120
May	150	120
Jun	150	100
Jul	120	100
Aug	120	100
Sep	120	100

wet year = above average and wet water year types
dry year = below normal, dry, and critically dry water year types

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DFG Minimum Instream Flow Recommendations

Lower San Joaquin River

Stream: Stevenson Creek Reach: Shaver Lake to San Joaquin River

Month	DFG wet year	DFG dry year
Oct	8	5
Nov	5	5
Dec	5	5
Jan	5	5
Feb	5	5
Mar	5	5
Apr	15	10
May	15	10
Jun	10	9
Jul	8	8
Aug	8	8
Sep	8	8

wet year = above average and wet water year types
dry year = below normal, dry, and critically dry water year types

DFG Minimum Instream Flow Recommendations

South Fork San Joaquin River

Stream: Bear Creek Reach: Below the Diversion

Month	DFG wet year	DFG dry year
Oct	7	7
Nov	7	7
Dec	6	5
Jan	4	4
Feb	4	4
Mar	4	4
Apr	12	10
May	12	10
Jun	10	9
Jul	8	7
Aug	7	7
Sep	7	7

wet year = above average and wet water year types
dry year = below normal, dry, and critically dry water year types

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DFG Minimum Instream Flow Recommendations

South Fork San Joaquin River

Stream: Mono Creek Reach: Downstream of Mono Diversion

Month	DFG wet year	DFG dry year
Oct	30	25
Nov	25	25
Dec	20	20
Jan	20	20
Feb	20	20
Mar	30	20
Apr	35	30
May	35	30
Jun	30	25
Jul	30	25
Aug	30	25
Sep	30	25

wet year = above average and wet water year types
dry year = below normal, dry, and critically dry water year types

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DFG Minimum Instream Flow Recommendations

South Fork San Joaquin River

Stream: S. Fork San Joaquin River Reach: Florence Lake to Bear Creek

Month	DFG wet year	DFG dry year
Oct	40	35
Nov	35	35
Dec	30	25
Jan	30	25
Feb	30	25
Mar	30	25
Apr	45	40
May	45	40
Jun	45	40
Jul	40	35
Aug	40	35
Sep	40	35

wet year = above average and wet water year types
dry year = below normal, dry, and critically dry water year types

DFG Minimum Instream Flow Recommendations

Upper Basin Tributaries

Stream: Bolsillo Creek Reach: Below the Diversion

Month	DFG wet year	DFG dry year
Oct	1	1
Nov	1	1
Dec	1	1
Jan	1	1
Feb	1	1
Mar	1	1
Apr	3	3
May	4	3
Jun	4	3
Jul	3	1
Aug	2	1
Sep	1	1

wet year = above average and wet water year types
dry year = below normal, dry, and critically dry water year types

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DFG Minimum Instream Flow Recommendations

Upper Basin Tributaries

Stream: Camp 62 Creek Reach: Below the Diversion

Month	DFG wet year	DFG dry year
Oct	1	.5
Nov	.5	.5
Dec	.5	.5
Jan	.5	.5
Feb	.5	.5
Mar	.5	.5
Apr	5	4
May	5	4
Jun	5	4
Jul	2	1
Aug	2	1
Sep	1	1

wet year = above average and wet water year types
dry year = below normal, dry, and critically dry water year types

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DFG Minimum Instream Flow Recommendations

Upper Basin Tributaries

Stream: Chinquapin Creek Reach: Below the Diversion

Month	DFG wet year	DFG dry year
Oct	1	.5
Nov	1	.5
Dec	1	.5
Jan	.5	.5
Feb	.5	.5
Mar	.5	.5
Apr	3	2
May	3	2
Jun	2	2
Jul	1	1
Aug	1	1
Sep	1	1

wet year = above average and wet water year types
dry year = below normal, dry, and critically dry water year types

DFG Minimum Instream Flow Recommendations

Upper Basin Tributaries

Stream: Crater Creek Reach: Below the Diversion

Month	DFG wet year	DFG dry year
Oct	2	2
Nov	2	2
Dec	2	2
Jan	2	2
Feb	2	2
Mar	2	2
Apr	8	5
May	8	5
Jun	6	5
Jul	4	2
Aug	3	2
Sep	2	2

wet year = above average and wet water year types
dry year = below normal, dry, and critically dry water year types

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DFG Minimum Instream Flow Recommendations

Upper Basin Tributaries

Stream: Hooper Creek Reach: Below the Diversion

Month	DFG wet year	DFG dry year
Oct	3	2
Nov	2	2
Dec	2	2
Jan	2	2
Feb	2	2
Mar	2	2
Apr	6	4
May	6	4
Jun	6	4
Jul	4	3
Aug	4	3
Sep	3	3

wet year = above average and wet water year types
dry year = below normal, dry, and critically dry water year types

* = or natural flow whichever is less

DFG Minimum Instream Flow Recommendations

Upper Basin Tributaries

Stream: N. Slide Creek Reach: Below the Diversion

DFG concurs with the USFS recommendation to remove this non-operating diversion from service. If that does not occur, then the MIF* are as follows:

Month	DFG wet year	DFG dry year
Oct	1	.75
Nov	1	.75
Dec	1	.75
Jan	1	.75
Feb	1	.75
Mar	1	.75
Apr	3	2
May	2	2
Jun	1	.75
Jul	1	.75
Aug	1	.75
Sep	1	.75

wet year = above average and wet water year types
dry year = below normal, dry, and critically dry water year types

* = or natural flow whichever is less

DFG Minimum Instream Flow Recommendations

Upper Basin Tributaries

Stream: S. Slide Creek Reach: Below the Diversion

DFG concurs with the USFS recommendation to remove this non-operating diversion from service. If that does not occur, then the MIF* are as follows:

Month	DFG wet year	DFG dry year
Oct	1	.75
Nov	1	.75
Dec	1	.75
Jan	1	.75
Feb	1	.75
Mar	1	.75
Apr	3	2
May	2	2
Jun	1	.75
Jul	1	.75
Aug	1	.75
Sep	1	.75

wet year = above average and wet water year types
dry year = below normal, dry, and critically dry water year types

* = or natural flow whichever is less

DFG Minimum Instream Flow Recommendations

Upper Basin Tributaries

Stream: Tombstone Creek Reach: Below the Diversion

DFG concurs with the USFS recommendation to remove this non-operating diversion from service. If that does not occur, then the MIF* are as follows:

Month	DFG wet year	DFG dry year
Oct	6	4
Nov	4	3
Dec	4	3
Jan	4	3
Feb	4	3
Mar	4	3
Apr	6	4
May	6	4
Jun	6	4
Jul	6	4
Aug	6	4
Sep	6	4

wet year = above average and wet water year types
dry year = below normal, dry, and critically dry water year types

* = or natural flow whichever is less