LOWER MOKELUMNE RIVER PROJECT

FERC Project No. 2916-004

JOINT SETTLEMENT AGREEMENT

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LOWER MOKELUMNE RIVER
JOINT SETTLEMENT AGREEMENT

This Lower Mokelumne River Joint Settlement Agreement ("Agreement") for the Lower Mokelumne River Project, FERC No. 2916, regarding flow and non-flow measures appropriate for the lower Mokelumne River is entered into by and between East Bay Municipal Utility District ("EBMUD") and the U.S. Fish & Wildlife Service ("the Service"), and California Department of Fish & Game ("CDF&G"), collectively referred to as the "Resource Agencies." EBMUD, the Service and CDF&G are each referred to herein individually as "Party" and together as the "Parties."

WITNESSETH

WHEREAS, on March 10, 1981, the Federal Energy Regulatory Commission ("FERC") issued a license to EBMUD for the Lower Mokelumne River Project No. 2916.

WHEREAS, on July 1, 1991, the staff of the FERC initiated a license modification proceeding, Lower Mokelumne River Project No. 2916-004, to determine if modifications to the Lower Mokelumne River Project facilities or operations were appropriate for the conservation and development of fish and wildlife resources in the Mokelumne River.

WHEREAS, in 1992, the Service intervened in the FERC's license modification proceeding and proposed certain flow and non-flow measures to conserve and restore the anadromous fishery and improve other ecosystem values.

WHEREAS, on July 16, 1993, EBMUD made an Offer of Settlement in the FERC license modification proceeding, Lower Mokelumne River Project No. 2916-004.

WHEREAS, the Parties have engaged in extensive discussions in an effort to resolve issues in dispute in the license modification proceeding before the FERC and the differences between them regarding the flow and non-flow needs of the lower Mokelumne River, and to establish a more cooperative and mutually beneficial working relationship for the future.

WHEREAS, each of the Parties has separately concluded that greater protection and enhancement of the anadromous fishery resources of the lower Mokelumne River will result if EBMUD implements new instream flows and the Parties variously undertake certain non-flow measures.

WHEREAS, in February 1996, the Parties executed a Principles of Agreement setting forth elements of settlement, including flow and non-flow measures, to be reflected in a Joint Settlement Agreement.

WHEREAS, EBMUD has separately concluded that the flows and non-flow measures specified herein can be undertaken without unacceptably jeopardizing the Lower Mokelumne River Project as a reliable, high quality water supply.

WHEREAS, because EBMUD lacks authority to control diversions by other appropriators and riparians downstream of Camanche Dam, this Joint Settlement Agreement sets forth EBMUD's minimum water releases from Camanche Dam and non-flow related measures for the Mokelumne River Ecosystem (Pardee Reservoir to the Delta). The parties also recognize there are important resource management issues and opportunities downstream of Woodbridge Dam that will be considered by the Partnership Steering Committee for non-flow habitat measures.

WHEREAS, EBMUD has agreed to provide flows and the Parties have agreed to undertake certain non-flow measures as specified in this Joint Settlement Agreement.

WHEREAS, EBMUD acknowledges that it is subject to the terms of the Clean Water Act and the Porter-Cologne Act, including the water quality provisions of said acts.

WHEREAS, each of the Resource Agencies agrees to support this Joint Settlement Agreement including the flow and non-flow measures specified herein, believing they will provide reasonable protection and enhancement from current conditions with respect to EBMUD's contribution for the fish and wildlife resources of the lower Mokelumne River.

NOW, THEREFORE, EBMUD, the Service and CDF&G agree as follows:

A. Purpose and Scope.

The Parties intend this Agreement to resolve (1) the pending FERC Proceeding No. 2916-004; and (2) the pending Mokelumne River Water Rights Proceeding before the California State Water Resources Control Board (SWRCB). The Parties agree not to oppose the flows or non-flow measures set forth in this Agreement in any regulatory proceeding, or portion thereof, directed at EBMUD's obligation to protect the fish resources of the Mokelumne River Ecosystem. The Parties further agree that these resolutions are accomplished in a manner which:

- protects and maintains EBMUD's Lower Mokelumne River Project as a reliable, high quality water supply for EBMUD;
- contributes to EBMUD's ability to protect and maintain its water rights attendant to the Lower Mokelumne River Project;
- provides reasonable protection and enhancement from current conditions for the anadromous fishery and ecosystem of the lower Mokelumne River and constitutes

a reasonable contribution on the part of EBMUD toward state and federal fishery restoration goals for the River set forth in the California Salmon, Steelhead Trout, and Anadromous Fisheries Program Act and the CVPIA; and

- encourages cooperative action to achieve and to maintain these objectives over time.

B. Effective and Termination Dates.

This Agreement shall be effective on the date FERC issues a final order in License Modification Proceeding No. 2916-004, and shall remain in effect for the duration of the term of the FERC License No. 2916.

This Agreement shall terminate upon withdrawal from the Agreement of a Party pursuant to Section C below.

C. Action of the FERC.

Within 30 days after all Parties have initialed this Agreement, the Parties agree to submit jointly this Agreement as an Offer of Settlement to the FERC to resolve FERC License Modification Proceeding No. 2916-004 and jointly to request, as a fair and reasonable resolution of that proceeding, that following and subject to compliance with the Endangered Species Act (ESA) as described in Section J hereof, FERC amend EBMUD's existing license to include, in its entirety and without modification, Attachment 1 (pages 1-5) of this Agreement as the flow requirements for the Lower Mokelumne River Project No. 2916. Within 30 days of receiving notification of compliance with the ESA as described in Section J, each Party shall sign the Agreement and jointly submit it to FERC for final action.

In the event that the FERC does not by final, non-appealable Order implement without modification the flow requirements specified in Attachment 1 (pages 1-5) of this Agreement, then each Party shall have 30 days after the FERC Order becomes final and non-appealable to provide notice to the other Parties of its intent to withdraw from the Agreement or to accept the Agreement subject to the provisions reflected in the final, non-appealable Order of the FERC. A failure to provide such notice shall be deemed an acceptance of the Agreement.

D. Support of This Agreement.

The Parties agree that the provisions of this Agreement are in the public interest and represent EBMUD's reasonable obligation under FERC License No. 2916 and the Mokelumne River Water Rights Proceeding pending before the SWRCB to protect and enhance the fishery resources of the lower Mokelumne River and maintain the Lower Mokelumne River Project as a reliable, high quality water supply.

The Parties individually and collectively agree to support this Agreement and to work cooperatively to implement the terms of this Agreement. The Parties agree not to oppose the flows or non-flow measures set forth in this Agreement in any regulatory proceeding, or portion thereof, directed at EBMUD's obligation to protect the fish resources of the Mokelumne River Ecosystem. The Parties also agree that no Party shall take any action which has the purpose or effect of frustrating the accomplishment of the purposes and provisions of this Agreement.

The Parties agree that nothing in this Agreement is intended to nor shall be construed to abrogate, modify or waive any rights, duties or responsibilities of any Party under any federal or state law, order, license or permit, contract, or water rights determination.

E. Establishment of a Lower Mokelumne River Partnership.

EBMUD, the Service and CDF&G will establish a Lower Mokelumne River Partnership (the "Partnership") to develop joint action plans to protect the Mokelumne River Ecosystem (Pardee Reservoir to the Delta). The objectives of the Partnership shall include the:

- Protection and enhancement of the anadromous fishery;
- Protection and improvement of the Mokelumne River Ecosystem;
- Encouragement of stakeholder participation and cooperation; and
- Integration of Mokelumne River strategies with the Bay Delta Accord, CVPIA implementation, or similar measures.

1. Partnership Steering Committee.

One representative each from EBMUD, CDF&G , and the Service will serve as the Partnership Steering Committee responsible for guiding the Partnership, defining and developing annual action programs, schedules and cost estimates for projects and funding strategies to achieve them. EBMUD will chair the Steering Committee for the first year with the option for the Service, CDF&G and District to chair the Committee on an annual rotating basis in subsequent years. Actions of the Steering Committee are intended to be taken with full consideration of input from the Stakeholders Group (described below) and shall only be taken upon the unanimous approval of the Steering Committee. The Steering Committee will coordinate efforts to achieve the objectives of the Partnership through the flow requirements and anadromous fishery protection measures set forth in Section F below, the Ecosystem Protection measures set forth in Section G below, and the Technical Cooperation measures set forth in Section H below.

2. Establishment of a $2 million Partnership Fund.

Within 45 days of the FERC Order implementing this Agreement becoming final and non-appealable, EBMUD will establish, manage and maintain a $2 million fund (the "Partnership Fund") for the life of this Agreement, the annual income from which will provide operating support for the partnership programs. EBMUD will manage the Fund in a manner consistent with law and with an objective of maximizing its annual income. Annual interest earnings that remain unspent from year to year shall accrue in the fund and remain available for use of the Steering Committee during the term of the partnership agreement. The principal and any unspent earnings of the fund shall remain the property of EBMUD and will revert to EBMUD upon the expiration of this agreement or upon the withdrawal of any party to the agreement. EBMUD will report quarterly to the Steering Committee regarding the income earned and current balance of the Fund. Any expenses of administration of the Partnership Fund shall be paid separately by EBMUD and shall not be deducted from the Partnership Fund. The Resource Agencies will seek federal, state and other sources of funds ("Other Funds") to supplement the objectives of the Partnership. The Steering Committee will also solicit the financial participation and involvement of other public agencies, interest groups and private property owners along the lower Mokelumne River to advance the objectives of the Partnership.

EBMUD intends to provide this $2 million Partnership Fund in addition to its current level of effort in funding fishery studies, water quality and biological monitoring, habitat protection, and other operating support for its ongoing operations and responsibilities on the lower Mokelumne River.

It is not EBMUD's intention to reduce its current level of effort. EBMUD, however, reserves the right, at its sole discretion, to reprioritize and reprogram its efforts that are undertaken outside the Partnership Fund based upon improving science, information collected and its operational needs.

3. Water Quality And Resource Management Program.

Within 30 days of the signature of this Agreement in accordance with Section C, the Partnership Steering Committee agrees to begin development of a Water Quality and Resource Management Program. Within six (6) months of the FERC Order implementing this Agreement becoming final and non-appealable, the Partnership Steering Committee will finalize the Water Quality and Resource Management Program. EBMUD agrees to provide $200,000 to support the Partnership efforts in developing the final Water Quality and Resource Management Program. The Water Quality and Resource Management Program will define reasonable goals, measures, performance criteria, and responsive actions.

4. Additional Voluntary Participation.

The Resource Agencies recognize that aside from the upper one-half mile of the lower Mokelumne River corridor owned by EBMUD and included in its FERC project lands, the majority

of the riparian area and associated uplands are privately owned and not subject to the control of EBMUD. The Parties agree that the voluntary participation of these other property owners will be necessary to achieve certain long term objectives for protecting the lower Mokelumne River ecosystem. For actions involving access to the property of, and agreements with, other property owners along the lower Mokelumne River, the Resource Agencies will take the lead and EBMUD and other stakeholders will provide support.

5. Establishment of a Lower Mokelumne River Stakeholders Group.

A Stakeholders Group will be established consisting of EBMUD, the Service, CDF&G, and other stakeholders in the lower Mokelumne River invited to participate including but not limited to Amador, Calaveras and San Joaquin Counties, Woodbridge Irrigation District, the City of Lodi, North San Joaquin Water Conservation District, the Committee to Save the Mokelumne and other interested environmental groups, Native Americans, and private property owners along the river.

The role of the Stakeholders Group will be to:

- Encourage the voluntary participation and cooperation of other stakeholders along the river to contribute financial and in-kind resources, provide access to the river for enhancement work and participate in implementing the Partnership action plans and objectives;

- Recommend ecosystem protection and improvement priorities and measures to the Partnership Steering Committee for annual action plans in conjunction with additional resources available from other stakeholders; and

- Serve as a communications and coordination forum for stakeholders in discussing common concerns and developing joint action plans to address issues.

F. Flow Requirements and Anadromous Fishery Protection.

The Parties agree that water demands in the Mokelumne River basin during the planning horizon of 1996 to 2020 and until the expiration of the FERC license (year 2031) will increase. The Parties also agree that the frequency of critically dry year flows may increase. In order to ensure that protection of the fishery resource continues in the future to be reasonably balanced with other demands, the Parties agree that additional measures are needed and agree that the following additional actions will be implemented. Upon the FERC Order implementing this Agreement becoming final and non-appealable, EBMUD agrees to operate its Lower Mokelumne River Project in accordance with the flow requirements specified in Attachment 1 (pages 1-5) attached hereto and incorporated herein in its entirety by this reference.

1. Adaptive Management of River Operations.

The Parties agree that the flows specified in Attachment 1 and the other elements of the Agreement provide reasonable protection and enhancement from current conditions for the anadromous fishery and ecosystem of the lower Mokelumne River and meet EBMUD's obligation to protect the anadromous fishery and other resources in the lower Mokelumne River pursuant to FERC License No. 2916-004 and the pending SWRCB Water Rights Proceeding. To increase opportunity for optimizing fishery habitat and other ecosystem values consistent with this Agreement, the parties agree to implement an adaptive management approach with operations of the Lower Mokelumne River Project. This could require responsive actions based on changing river conditions. To accomplish this, the Parties agree that, with the prior written concurrence of CDF&G and the Service, EBMUD may reschedule or modify the flows specified in Attachment 1, provided the total quantity of water released in any given year will not be less than the quantity of water provided by the flow requirements specified on Attachment 1 for that type of water year.

2. Gainsharing Increases in Flows.

EBMUD agrees to increase instream flows beyond the flows specified in Attachment 1 by an amount equal to 20% of the actual yield of additional water supplies developed by EBMUD from new facilities until reaching a maximum quantity of 20 TAF[1] which will be available at the joint written request of CDF&G and the Service. Gainsharing water will be available in any year in which carryover storage in EBMUD's storage at the Lower Mokelumne River Project on November 5th is projected to be at the maximum allowable levels according to the US Corps of Engineers permit. But when carry-over storage on November 5th is less than the maximum allowable, such gainsharing water may be used only once during any drought sequence.[2] Such gainsharing water for flow augmentation will be provided upon the completion of construction and initial fill of EBMUD's

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[1] EBMUD estimates its need for water to be 160 TAF by 2020 not counting gainsharing. The District anticipates that conservation and reclamation projects will be implemented sufficient to meet 75 TAF of that need for water in order to manage customer demand so it does not exceed 230 MGD through 2020. EBMUD would provide 20% of the yield from future water storage or conjunctive use projects needed to meet this remaining estimated 85 TAF need for water by 2020 up to a maximum of 20 TAF when such storage projects come on line and water from such projects is available to District customers. This gainsharing water could then be used annually if carry-over storage in the EBMUD Mokelumne storage on November 5th is at maximum allowable levels but may be used only once in each drought sequence.

[2] "Drought sequence" is defined as beginning whenever November 5th carry-over storage levels in Pardee and Camanche Reservoirs are projected to be less than maximum allowable levels under terms of the U.S. Army Corps of Engineers flood control manual, and ending when carry-over levels recover to maximum allowable storage levels.

share of any new reservoir on the Mokelumne River or the expansion of any existing EBMUD reservoir on the Mokelumne River or when EBMUD begins to take stored ground water into its system from any conjunctive use program. Water available to the Resource Agencies in any year under this gainsharing program may be added to carry over storage but shall not affect subsequent water year type determination. This additional gainsharing water will be available from any source other than conservation, reclamation projects, and the Amador Canal pipeline project, and shall be available only once during each drought sequence.

The Parties understand that EBMUD makes no guarantee regarding the timing for the development of new water storage facilities or projects eligible for gainsharing. The Parties, nevertheless, remain optimistic that such efforts will occur, at least partially, during EBMUD's water supply management program current planning period running through 2020 in order to meet the reasonable water supply needs of EBMUD. EBMUD understands that it is important to the Resource Agencies that the non-flow and the gainsharing measures outlined in this Agreement be planned and coordinated to meet agreed resource goals.

3. Surplus Water.

EBMUD agrees to notify the Resource Agencies of the availability for sale of surplus Mokelumne River water.

4. Ramping Rates.

The Parties agree that when flood control releases are not being made, river flow changes should be gradual but should not decrease by more that 50 cfs per day during the October 16 through March 31 spawning and incubation period and by not more than 100 cfs per day at other times except in the case of emergencies.

5. Managing Camanche Reservoir Hypolimnion.

The Parties agree that EBMUD will use its best efforts to maintain Pardee and Camanche Reservoir stratification with a minimum of 28 TAF of hypolimnetic volume in Camanche Reservoir through October whenever Pardee Reservoir volume exceeds 100 TAF. The Parties also agree that EBMUD will strive to maintain dissolved oxygen and to reduce hydrogen sulfide levels in the Camanche Reservoir hypolimnion during the period from May through October by using its Hypolimnetic Oxygenation System (HOS). This provision shall be incorporated into the Water Quality and Resource Management Program.

6. Expansion and Upgrade of the Mokelumne River Fish Hatchery.

The Parties agree that EBMUD will provide funding to expand and upgrade the Mokelumne River Fish Hatchery in accordance with the EBMUD Hatchery Master Plan (1996), up to a maximum of $12.5 million. The Parties agree to support the expansion and upgrade of the fish

hatchery as an integral part of a strategy to supplement the natural production of and to meet the mitigation requirement for anadromous fish in the lower Mokelumne River. EBMUD will construct the fish hatchery in accordance with final design plans and final construction cost estimates approved by CDF&G. During construction, EBMUD and CDF&G will meet at the request of either party to discuss actual construction costs and jointly develop modifications as needed. EBMUD and CDF&G will jointly work to ensure that total project costs do not exceed $12.5 million. EBMUD agrees that it will continue its existing financial support for operations and maintenance actions at the Mokelumne River Fish Hatchery. CDF&G agrees that it will continue to be responsible for the operation and maintenance of the fish hatchery as well as for hatchery production during construction of the hatchery expansion and upgrade.

7. Integration of Natural Production Strategies.

The Parties agree that CDF&G will, to the extent feasible, integrate natural production strategies when implementing its hatchery management operations. The parties agree that a trap and truck program, predator management practices and angling regulations, including provisions to prevent damage to redds from wading, could have some benefit to the fishery resource. However, the amount of such benefit is currently unknown. Trapping and trucking of anadromous salmonids shall take place during critical years with approval of the Partnership Steering Committee. Predator management activities shall only take place with the approval of the Partnership Steering Committee. The California Fish & Game Commission has the authority to adopt angling regulations in California. Upon approval of the Partnership Steering Committee, the Committee may request the Commission to adopt angling regulations for the lower Mokelumne River to prevent damage from redds from wading.

8. Satisfaction of EBMUD's Contribution Toward State and Federal Restoration Goals.

The Parties agree that implementation of the flow requirements and non-flow measures set forth in this Agreement constitutes a reasonable contribution by EBMUD to provide reasonable protection and enhancement from current conditions for the anadromous fishery and ecosystem of the lower Mokelumne River, and constitutes a reasonable contribution on the part of EBMUD toward state and federal fishery restoration goals for the River set forth in the California Salmon, Steelhead Trout, and Anadromous Fisheries Program Act and the CVPIA.

G. Ecosystem Protection.

The Parties agree to establish a Lower Mokelumne River Ecosystem Protection Program to encourage cooperative joint action to protect and to improve the natural production of anadromous fish and the natural resource habitat of the lower Mokelumne River ecosystem.

1. **Ecosystem Action Priorities.**

The Parties agree to work cooperatively through the Steering Committee using income from the Partnership Fund and Other Funds to develop and to implement measures, which will be consistent with the principles of this Agreement, to protect and enhance the natural production of anadromous fish and the habitat of the lower Mokelumne River corridor ecosystem. Such measures may include:

- **Identify riparian values and biological diversity** in the Mokelumne River Ecosystem. Support riparian management actions which improve the lower Mokelumne River Ecosystem, including: Planting trees and shrubs along the river corridor to provide shade cover for moderating instream temperatures, and selective removal of undesirable vegetation to improve habitat conditions. These efforts will be made in cooperation with the U.S. Natural Resources Conservation Service (formerly Soil Conservation Service) and property owners.

- **Improve spawning gravels** in the lower Mokelumne River above tidewater to correct compaction of existing gravels, adding new gravels and creating gravel berms, cleaning gravels, and measures to reduce sediments to improve instream spawning habitat.

- **Encourage fencing and barriers to prevent cattle and livestock from reaching the banks of the river** to enhance bank stability and to protect riparian corridor values. Upon approval of the Partnership Steering Committee, CDF&G would assume the lead in working in cooperation with private property owners along the river corridor, subject to available funding.

- **Identify, design and install screens on diversion facilities** to prevent unintended fish losses in cooperation with diverters. Upon approval of the Partnership Steering Committee, CDF&G would assume the lead for these activities, subject to available funding.

- **Encourage cooperative action and enforcement to reduce poaching** on the lower Mokelumne River.

- **Cooperative actions to improve fish passage at Woodbridge Dam.** The Parties will work cooperatively with Woodbridge Irrigation District and other parties to improve the coordination of efforts to ensure that the natural resources of the lower Mokelumne River below Camanche Dam are protected. While no commitments of funds for improvements to Woodbridge Dam have been made nor implied by any Party to this Agreement, each Party agrees to work cooperatively with Woodbridge Irrigation District to seek CVPIA Restoration Fund, Category III or other funds to implement agreed improvements.

- **Expand coded-wire tagging to include all fish released from the Mokelumne River Fish Hatchery,** if it is part of a statewide strategy to coded-wire tag all salmon released in California fish hatcheries in cooperation with commercial salmon trawlers, the Resource Agencies, and the California Fish and Game Commission.

- **Update and maintain database on biological diversity and habitat characteristics of aquatic resources at various instream flows.**

- **Other ecosystem improvement actions to be determined by the Steering Committee.**

- **Develop and implement a Water Quality and Resource Management Program.**

H. Mokelumne River Technical Cooperation

The Parties agree to coordinate their respective fishery and habitat studies, monitoring programs, and research efforts to advance the shared knowledge and science about the Mokelumne River. The following actions will be undertaken to support this objective:

1. Mokelumne River Technical Advisory Committee (MRTAC).

The Parties agree that for the interim, the MRTAC will remain the key forum for sharing technical information about the fishery, river operations and other data about the current conditions and planned actions affecting the river. EBMUD, the Service and CDF&G will continue actively to support the MRTAC as a technical information sharing forum.[3]

2. Mokelumne River Science Database.

The Parties agree to convert the technical notebook developed during the negotiation of this Agreement into a Mokelumne River Science Database to be available to the Parties (under the guidance of the Partnership Steering Committee). The database will be jointly maintained by the parties and will summarize existing science, data and research efforts and will be updated and maintained over time by adding new data, studies and research efforts undertaken by any Party using a standard agreed upon format and protocol. EBMUD agrees to provide a one time contribution of up to $50,000 toward establishing this Mokelumne River Science Database.

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[3] The need for the MRTAC will be reviewed periodically by the Steering Committee with input from the Stakeholders Group.

3. Mokelumne River Symposium.

The Parties agree to sponsor periodic symposiums to provide opportunities for scientists, biologists and other professionals who have conducted studies or research on the Mokelumne River Ecosystem to present their papers and participate in peer group discussions about the river corridor and its ecosystem. These papers will be published and become part of the growing Mokelumne River Science Database. A growing professional partnership between EBMUD, the Resource Agencies and others interested in the Mokelumne River will be supported by each agency to build shared values, objectives and agreed upon strategies to protect and enhance the ecosystem of the Mokelumne River corridor. EBMUD will provide up to $10,000 per year for ten years to support the establishment of this Symposium.

4. Adaptive Management Changes in Water Operations Plans.

EBMUD will inform and regularly consult with the Resource Agencies about anticipated changes in its real-time Lower Mokelumne River Project operations to discuss issues or points of concern. The parties intend for this communication to be informal, candid and focused on protecting the environmental resources while assuring water supply reliability.

5. Measuring Progress.

The Parties agree through the Partnership Steering Committee to engage in an ongoing process to measure the success of the flow requirements, non-flow measures and other actions contained in this Agreement. Measures of success shall be developed as a part of the Water Quality and Resource Management Program, and shall be based upon agreed criteria including counts of returning anadromous fish, redd surveys, fry/smolt condition factors, fry and smolt outmigration, and habitat quality taking into account different water year types or other criteria agreed to by the Parties.

The Parties agree that progress must be assessed annually and over time. Assessment of salmonids will be based on successive multi-year cycles to match the life cycle of the anadromous fishery. (E.g.: The first assessment is anticipated to take place in six years after two consecutive life cycles with subsequent future review to be determined by the Steering Committee.)

The Parties agree that in the event that the flow and non-flow measures employed during the first six year evaluation period fail to achieve the goals identified by the Partnership Steering Committee in the Water Quality and Resource Management Program, they will meet and attempt to reach consensus on new strategies for accomplishing the goals and objectives.

The Parties agree that after ten years following the effective date of this Agreement, they shall cooperate in the preparation of a report that describes the successes and failures with respect to agreed upon short and long-term goals and milestones reached. This report shall include findings that relate to protection of the anadromous fishery and ecosystem values of the Mokelumne River

based on the scientific data gathered during and prior to the ten year period. This report shall include the joint and or independent views of the Parties and recommendation for continued or new flow and non-flow measures. This ten year report shall be completed within six months following the ten year period end date.

6. EBMUDSIM.

EBMUD agrees, upon execution of appropriate non-disclosure agreements, to make EBMUDSIM computer runs available to the Parties for the purpose of facilitating a common understanding of river operations, hydrology, and the assessment of alternative approaches.

7. Inter-Agency Communication and Coordination.

The Parties agree to encourage a healthy interchange between their technical staff to build trust and professional respect, to share technical information and views, and to coordinate their efforts on issues related to the lower Mokelumne River to avoid surprises, misunderstandings and miscommunications in the future.

The Parties agree to develop a protocol to inform each other in a timely manner when they become aware of any situation that they believe constitutes an ecological or operational emergency. Such protocol shall be developed within three months of execution of this Agreement.

8. Permits.

The Resource Agencies and/or EBMUD, as appropriate, will seek and secure any permits or regulatory authorization needed to implement the programs or measures contained in this Agreement.

I. Settlement of Outstanding Issues.

The Parties agree that this Agreement resolves the outstanding issues between and among them regarding EBMUD's obligations to lower Mokelumne River flows and Mokelumne River Ecosystem non-flow measures needed to provide reasonable protection and enhancement beyond current conditions for the anadromous fishery and riparian habitat for purposes of:

- **FERC Proceeding 2916-004.** The Parties will jointly submit an initialed copy of this Agreement to the FERC and, in accordance with Section C hereof, recommend and support in writing acceptance of the flow and non-flow measures set forth in this Agreement as a just and reasonable resolution of the issues raised in the pending FERC matter *Lower Mokelumne River Project Proceeding # 2916-004.*

- **Submission to the SWRCB.** Following signature of this Agreement by all Parties as provided in Section C and following a FERC Order consistent with this

Agreement in Lower Mokelumne River Project Proceeding No. 2916-004 becoming final and non-appealable, EBMUD will submit this Agreement to the State Water Resources Control Board as satisfaction of EBMUD's lower Mokelumne River flow and non-flow obligations in the pending Mokelumne River Water Rights Proceeding. The Resource Agencies agree that they will not recommend to the State Water Resources Control Board flows or non-flow measures affecting EBMUD for the lower Mokelumne River in the Mokelumne River Water Rights Proceeding which are inconsistent with those set forth in this Agreement.

- **Fish Guidance Fence Improvement.** The Parties agree that the improvements made by EBMUD to the fish guidance fence in 1995 satisfied the FERC license requirements in 1995 based on available information, and may satisfy the FERC license requirements for permanent improvements, provided EBMUD demonstrates to FERC that the improvements now in place are reasonably effective in preventing fish movements past the fish guidance fence during the period in which the panels are in place.[4] The Resource Agencies agree that the fish guidance fence panels will be installed on or before October 1 of each year and removed on or about January 1 of each year.

J. Section 7 Consultation

To ensure that ESA compliance is accomplished, the Parties will continue to engage in informal Section 7 consultation for those species over which the Service exercises program responsibilities in accordance with Section 3 of the ESA (16 U.S.C. 1532). Pursuant to Section C of this Agreement, upon initialing of the Settlement Agreement, the parties will submit the Agreement to the FERC and the FERC will be requested by the Parties to make its final determination of affect as required by the Interagency Cooperative Regulations (50 CFR 402.14) for those species over which the Service exercises program responsibilities, and to confer as appropriate with the National Marine Fisheries Service (NMFS) in accordance with 50 C.F.R. 402.10 for the steelhead trout which is currently proposed for listing by the NMFS. Throughout any Section 7 consultation and/or conference process, EBMUD will be involved as a "designated non-Federal representative" and as the "applicant" described in 50 CFR 402.08.

In the event any Section 7 consultation and/or conference referenced above results in recommended conditions or mitigations that are materially different from the terms and conditions of this Agreement, then any Party shall have 30 days after said consultation and/or conference is final and

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[4]EBMUD is developing a monitoring plan (to be available on November 15, 1996) to be coordinated and concurred in by the Resource Agencies. The monitoring plan will address adequate monitoring implementation guidelines and provisions for remedial measures if the guidance fence is not effective. Planning for remedial measures may include a benefits analysis and related studies.

complete or 30 days after the FERC Order becomes final and non-appealable, to provide notice to the other Parties of its intent to withdraw from the Agreement.

K. Dispute Resolution.

In the event any Party to this Agreement believes there is an issue over the interpretation of, or compliance with, any provision of this Agreement, then, prior to that Party initiating a judicial or administrative proceeding, that Party shall provide written notice of said issue to the other Parties.

The Parties shall then meet and confer within (14) days of said written notice, or at a later date by mutual agreement, in an effort to resolve said issue.

If the matter cannot be resolved after 60 days from the date of the meeting, the Parties will enter into a non-binding mediation process. The mediator shall be approved by all Parties and the cost of the mediator borne equally amongst the parties. The non-binding mediation process shall not exceed 60 days without mutual agreement of all Parties.

If non-binding mediation does not resolve the issue, the complainant may file a protest of non-compliance with the FERC.

L. Choice of Law.

This Agreement shall be interpreted under the laws of the State of California and applicable federal law.

M. Authority.

The undersigned representative of each Party certifies that he or she is fully authorized by the Party whom he or she represents to enter into the terms and conditions of this Agreement and legally to bind such Party.

N. Execution in Counterparts.

This Agreement may be executed in counterparts. A copy with all original executed signature pages affixed shall constitute the original Agreement, and shall be retained by EBMUD.

EBMUD shall distribute true copies of the Agreement with the executed signature pages to all Parties to this Agreement.

IN WITNESS WHEREOF, the Parties have caused this Lower Mokelumne River Joint Settlement Agreement to be executed in Oakland, California.

UNITED STATES FISH & WILDLIFE SERVICE

Date: 3/23/98

By: _____
Wayne S. White
State Supervisor
United States Fish & Wildlife Service

CALIFORNIA DEPARTMENT OF FISH & GAME

Date: 3/23/98

By: _____
Banky Curtis
Regional Manager, Region II
California Department of Fish & Game

EAST BAY MUNICIPAL UTILITY DISTRICT

Date: 3/23/98

By: _____
Dennis M. Diemer
General Manager
East Bay Municipal Utility District

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Normal Above Year Flows
Mokelumne River Minimum Flow Schedule (1)

Life Stage	Period	Days	Agreed Release From Camanche Dam (cfs)	Expected Flow Below Woodbridge Dam (cfs)
Adult Immigration	10/1-10/15 (2)	15	325	100
Spawn/Incubation	10/16-10/31 (2)	16	325	100
	11/1-11/30 (3)	30	325	100
	12/1-12/31 (3)	31	325	100
Incubation/Alevin	1/1-1/31 (3)	31	325	100
	2/1-2/28 (3)	28	325	100
Fry Rearing	3/1-3/31 (3)	31	325	100
	4/1-4/15 (4),(5)	15	325	150
	4/16-4/30 (4),(5)	15	325	150
Fry Rearing/Juvenile Rearing/ Outmigration	5/1-5/31 (5)	31	325	300
	6/1-6/30 (5)	30	325	300
Oversummer	7/1-9/30	92	100	25
	Total Days	365		

NOTES:

(1) Due to changes in water conditions or to optimize fishery conditions, EBMUD may modify the above Flow Standards upon written concurrence of CDF&G and USFWS, provided the total quantity of water released for fishery purposes in Normal and Above year types is not less than the quantity provided by this flow schedule.

(2) During October, EBMUD will maintain minimum flows of 325 cfs below Camanche Dam and 100 cfs below WID's dam in Normal and Above year types.

(3) During the period when WID dam boards are pulled out and Lodi Lake is empty (approximately Nov. 1 through March 31), EBMUD shall make minimum releases of 325 cfs from Camanche Dam in Normal and Above year types. This release from Camanche dam is expected to provide at least 100 cfs below WID dam during this period. However, EBMUD shall not be obligated to increase releases above 325 cfs during this period in Normal and Above year types.

(4) During April, EBMUD will maintain minimum flows of 325 cfs below Camanche Dam and 150 cfs below WID's dam in Normal and Above year types.

(5) For the months of April, May, and June during Normal and Above year types, additional release of up to 200 cfs is required depending on combined Pardee and Camanche storage levels relative to the maximum allowable for the end of the prior month as follows:

Less than 10 TAF below maximum allowable storage (BMAS), additional release is 200 cfs for subsequent month.
10 TAF <= BMAS < 20 TAF, additional release is 150 cfs for subsequent month.
20 TAF <= BMAS < 30 TAF, additional release is 100 cfs for subsequent month.
30 TAF <= BMAS < 40 TAF, additional release is 50 cfs for subsequent month.

Below N[illegible]' Year Flows
Mokelumne River Minimum Flow Schedule (1)

Life Stage	Period		Days	Agreed Release From Camanche Dam (cfs)	Expected Flow Below Woodbridge Dam (cfs)
Adult Immigration	10/1-10/15	(2)	15	250	100
Spawn/Incubation	10/16-10/31	(2)	16	250	100
	11/1-11/30	(3)	30	250	100
	12/1-12/31	(3)	31	250	100
Incubation/Alevin	1/1-1/31	(3)	31	250	100
	2/1-2/28	(3)	28	250	100
Fry Rearing	3/1-3/31	(3)	31	250	100
	4/1-4/15	(4),(5)	15	250	150
	4/16-4/30	(4),(5)	15	250	150
Fry Rearing/Juvenile Rearing/	5/1-5/31	(5)	31	250	200
Outmigration	6/1-6/30	(5)	30	250	200
Oversummer	7/1-9/30		92	100	20
	Total Days		365		

NOTES:

(1) Due to changes in water conditions or to optimize fishery conditions, EBMUD may modify the above Flow Standards upon written concurrence of CDF&G and USFWS, provided the total quantity of water released for fishery purposes in Below Normal year types is not less than the quantity provided by this flow schedule.

(2) During October, EBMUD will maintain minimum flows of 250 cfs below Camanche Dam and 100 cfs below WID dam in Below Normal year types.

(3) During the period when WID dam boards are pulled out and Lodi Lake is empty (approximately Nov. 1 through March 31), EBMUD shall make a minimum release of 250 cfs from Camanche Dam in Below Normal year types. This release from Camanche dam is expected to provide at least 100 cfs below WID dam during this period. However, EBMUD shall not be obligated to increase releases above 250 cfs during this period in Below Normal year types.

(4) During April, EBMUD will maintain minimum flows of 250 cfs below Camanche Dam and 150 cfs below WID's dam in Below Normal year types.

(5) For the months of April, May, and June in Below Normal year types, additional release of up to 200 cfs is required depending on combined Pardee and Camanche storage levels relative to the maximum allowable for the end of the prior month as follows:

Less than 10 TAF below maximum allowable storage (BMAS), additional release is 200 cfs for subsequent month.
10 TAF <= BMAS < 20 TAF, additional release is 150 cfs for subsequent month.
20 TAF <= BMAS < 30 TAF, additional release is 100 cfs for subsequent month.
30 TAF <= BMAS < 40 TAF, additional release is 50 cfs for subsequent month.

Dry Year Flows

Mokelumne River Minimum Flow Schedule (1)

Life Stage	Period		Days	Agreed Release From Camanche Dam (1) (cfs)	Expected Flow Below Woodbridge Dam (cfs)
Adult Immigration	10/1-10/15	(2)	15	220	80
Spawn/Incubation	10/16-10/31	(2)	16	220	80
	11/1-11/30	(3)	30	220	80
	12/1-12/31	(3)	31	220	80
Incubation/Alevin	1/1-1/31	(3)	31	220	80
	2/1-2/28	(3)	28	220	80
Fry Rearing	3/1-3/31	(3)	31	220	80
	4/1-4/15	(4)	15	220	150
	4/16-4/30	(4)	15	220	150
Fry Rearing/Juvenile Rearing/	5/1-5/31		31	220	150
Outmigration	6/1-6/30	(5)	30	100	20
Oversummer	7/1-9/30		92	100	20
	Total Days		365		

NOTES:

(1) Due to changes in water conditions or to optimize fishery conditions, EBMUD may modify the above Flow Standards upon written concurrence of CDF&G and USFWS, provided the total quantity of water released for fishery purposes in Dry year types is not less than the quantity provided by this flow schedule.

(2) During October, EBMUD will maintain minimum flows of 220 cfs below Camanche Dam and 100 cfs below WID dam in Dry year types.

(3) During the period when WID dam boards are pulled out and Lodi Lake is empty (approximately Nov. 1 through March 31), EBMUD shall make minimum releases of 220 cfs from Camanche Dam in Dry year types. This release from Camanche dam is expected to provide at least 80 cfs below WID dam during this period. However, EBMUD shall not be obligated to increase releases above 220 cfs during this period in Dry year types.

(4) During April, EBMUD will maintain minimum flows of 220 cfs below Camanche Dam and 150 cfs below WID's dam in Dry year types.

(5) During June, outmigrating smolts will be trapped, tagged, and transported around the Delta in Dry year types.

Critically Year Flows

Mokelumne River Minimum Flow Schedule (1)

Life Stage	Period		Days	Agreed Release From Camanche Dam (cfs)	Expected Flow Below Woodbridge Dam (cfs)
Adult Immigration	10/1-10/15	(2)	15	100	15
Spawn/Incubation	10/16-10/31	(2)	16	130	75
	11/1-11/30	(3)	30	130	75
	12/1-12/31	(3)	31	130	75
Incubation/Alevin	1/1-1/31	(3)	31	130	75
	2/1-2/28	(3)	28	130	75
Fry Rearing	3/1-3/31	(3)	31	130	75
	4/1-4/15	(4)	15	130	75
	4/16-4/30	(4)	15	130	75
Fry Rearing/Juvenile Rearing/	5/1-5/31	(5)	31	100	15
Outmigration	6/1-6/30	(5)	30	100	15
Oversummer	7/1-9/30		92	100	15
	Total Days		365		

NOTES:

(1) Due to changes in water conditions or to optimize fishery conditions, EBMUD may modify the above Flow Standards upon written concurrence of CDF&G and USFWS, provided the total quantity of water released for fishery purposes in Critically Dry year types is not less than the quantity provided by this flow schedule.

(2) During October, EBMUD will maintain minimum flows of 130 cfs below Camanche Dam, and will maintain minimum flows of . 15 cfs from Oct. 1 - 15 and 75 cfs from Oct. 16 - 31 below WID dam in Critially Dry year types.

(3) During the period when WID dam boards are pulled out and Lodi Lake is empty (approximately Nov. 1 through March 31), EBMUD shall make minimum releases of 130 cfs from Camanche Dam in Critically Dry year types. This release from Camanche dam is expected to provide 75 cfs below WID dam during this period. However, EBMUD shall not be obligated to increase releases above 130 cfs during this period in Critically-Dry year types.

(4) During April, EBMUD will maintain minimum flows of 130 cfs below Camanche Dam and 75 cfs below WID's dam in Critically Dry year types.

(5) During May and June outmigrating smolts will be trapped, tagged, and transported around the Delta in Critically Dry year types.

Attachment 1

WATER YEAR TYPE DETERMINATION

Year Type	Normal/Above	Below Normal	Dry	Critically Dry
Oct. - Mar. (1) (Pardee/Camanche Storage)	Max Allowable (2)	Max Allowable to 400 TAF	399 TAF to 270 TAF	269 TAF or Less
Apr. - Sep. (3) (Unimpaired runoff)	890 TAF or More	889 TAF to 500 TAF	499 TAF to 300 TAF	299 TAF or Less (4)

Notes:

(1) October through March minimum flows are determined by total Pardee and Camanche storage on November 5th. Year type storage limits are based on the capacities of Pardee and Camanche Reservoirs in 1995.

(2) Maximum allowable storage on November 5th, shall be determined in accordance with the Army Corps of Engineer's Water Control Manual for Camanche Dam and Reservoir dated September, 1981.

(3) April through September minimum flows are determined by the water year unimpaired runoff into Pardee Reservoir as forecasted by DWR in the April 1st Bulletin 120 Report except when combined Pardee/Camanche Nov. 5 storage is projected to be less than 200 TAF.

(4) April through September minimum flows shall be critically dry whenever Nov. 5 combined Pardee/Camanche storage is projected to be 200 TAF or less based on the runoff forecast in DWR bulletin 120, beginning April 1st.

2/5/96