Lower Yuba River Fisheries Agreement

1. INTRODUCTION

1.1 *Parties*

The Parties to this Agreement are: Yuba County Water Agency; California Department of Fish & Game; and the following non-governmental organizations: South Yuba River Citizens League; Friends of the River; Trout Unlimited; and The Bay Institute.

1.2 *Purpose of Agreement*

This Lower Yuba River Fisheries Agreement applies to the Yuba Project as it affects the Lower Yuba River during the term of this Agreement.

1.2.1. Scope and Purpose of Agreement. This Agreement will be used to resolve and dismiss the litigation brought by certain Parties challenging the State Water Resources Control Board's Revised Water-Right Decision 1644 (RD-1644). The Parties agree that this Agreement fairly, reasonably and appropriately resolves the instream-flow, flow-fluctuation and water-temperature issues that have been raised in the litigation regarding RD-1644.

The Parties intend that their monitoring and data-collection actions will produce a useful database for the proceedings of the Federal Energy Regulatory Commission regarding the relicensing of YCWA's FERC License for the Yuba Project, which expires in 2016. The Parties also intend that this monitoring and data-collection be used to evaluate the biological provisions of this Agreement.

1.2.2. Issues Outside Scope of Agreement. This Agreement does not address or resolve the requirements in paragraph 8 on pages 180-181 of RD-1644 regarding fish losses at the North Canal or the South Canal, the requirements in RD-1644 regarding local districts' water rights, or any litigation concerning such requirements. These issues will be resolved through separate agreements and, if necessary, separate proceedings.

Except as provided in section 5.4.9, this Agreement does not address or resolve any issues that may arise during the FERC proceeding regarding the relicensing of YCWA's FERC License for the Yuba Project. This Agreement does not address or resolve any issues that may arise in FERC proceedings concerning projects in the Upper Yuba River basin, specifically, the Yuba Bear-NID, Drum-Spaulding, and South Feather Power Project relicensings.

This Agreement does not address or resolve any issues that may arise during or in separate proceedings, forums, or venues involving the Lower Yuba River, for example, the Upper Yuba River Studies Program (fish passage at Englebright Dam) or the

Daguerre Dam Fish Passage Improvement Project. This Agreement does resolve the issues regarding the amendments to RD-1644 that are described in Section 4.1 and the issues covered in Section 5.

1.3 *Yuba Accord*

YCWA has developed the Yuba Accord, which consists of this Agreement and several other elements. The other elements of the Yuba Accord are: (a) any necessary Conjunctive Use Agreements, under which YCWA and Member Units will implement programs to conjunctively use available surface water and groundwater supplies to ensure that local water supplies are not reduced to implement the Yuba Accord; (b) the Water Purchase Agreement between YCWA and DWR , under which YCWA will transfer water, including water made available by the instream-flow schedules in the Fisheries Agreement, to DWR, and DWR will make payments to YCWA that YCWA will use to make payments to the River Management Fund, to Member Units under any Conjunctive Use Agreements, and to fund flood-control and water-supply projects in Yuba County; and (c) an agreement, memorandum of understanding or similar document with PG&E amending or regarding the PG&E/YCWA Power Purchase Contract so that YCWA can implement the Fisheries Agreement, the Water Purchase Agreement and any Conjunctive Use Agreements. All of these elements of the Yuba Accord must be in place for any of the elements of the Yuba Accord to go into effect.

1.4 *NEPA/CEQA Compliance*

The Parties' approvals of this Agreement are based in part on their review of the statements and analyses in the EIR/EIS that has been prepared, certified and approved for the Yuba Accord.

2. DEFINITIONS

"ADR" means alternative dispute resolution.

"Agreement" means this Lower Yuba River Fisheries Agreement. This Agreement sometimes is referred to as the "Fisheries Agreement."

"CDFG" means the Department of Fish and Game of the State of California.

"CEQA" means the California Environmental Quality Act.

"Conference Year" mean a Water Year for which the North Yuba Index is less than 500 TAF, as described in Exhibit 2.

"Conjunctive Use Agreements" mean the agreements described in section 4.3.

"CVP" means the Central Valley Project, which is operated by Reclamation.

"DWR" means the Department of Water Resources of the State of California

"EIR/EIS" means the environmental impact report/environmental impact statement that YCWA and Reclamation have prepared for the Yuba Accord.

"Exhibit" and "exhibit" refer to exhibits to this Agreement, unless the context clearly indicates otherwise.

"FERC" means the Federal Energy Regulatory Commission.

"FERC License" means the license that was issued to YCWA by FERC for the operation of the Yuba Project and any amendments to that license that FERC has made or makes during the term of this license. The term of this license expires on April 30, 2016.

"FERC Annual License" means one or more annual licenses issued by FERC to YCWA for the operation of the Yuba Project following the expiration of the term of the FERC License.

"FERC Long-Term License" means the long-term license that FERC will issue to YCWA for the operation of the Yuba Project following the expiration of the term of the FERC License and the last FERC Annual License.

"FOR" means Friends of the River.

"Force Majeure Event" mean any of the *force majeure* events described in section 6.4.1.

"Groundwater Substitution Program" means a program in which water users in Yuba County will pump groundwater, or reduce water demands through fallowing, in lieu of receiving surface water from YCWA, and an equivalent amount of surface water then will be released from Englebright Dam to flow down the Lower Yuba River to the Feather River for a water transfer for uses outside of Yuba County. "Groundwater Substitution Program" does not include groundwater pumping made for other purposes, including, but not limited to, pumping made to reduce deficiencies in deliveries of surface water to water users in Yuba County that is not made in connection with a water transfer for use outside of Yuba County.

"Lower Yuba River" means the Yuba River from Englebright Dam to the Yuba River-Feather River confluence.

"Material Violation of Agreement Flow Schedules" is defined in section 6.1.1.

"Member Unit" means "Member Unit" as defined in section 2(g) of the Yuba Act.

"Narrows II Powerhouse Full Flow Bypass" means the action described in the NOAA Fisheries Biological Opinion for the Yuba Project (FERC No. 2246) dated November 4, 2005, at pages 5-7, and in FERC's Order Modifying and Approving Amendment of License for the Yuba Project dated November 22, 2005, at pages 5-6.

"NEPA" means the National Environmental Policy Act.

"NGOs" means SYRCL, FOR, TU and TBI.

"NOAA Fisheries" means the United States Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service

"Non-Material Violation of Agreement Flow Schedules" is defined in section 6.2.1.

"North Yuba Index" is defined in Exhibit 4.

"Operations Group" means the River Management Team Operations Group described in section 5.2.

"Parties" mean YCWA, CDFG, SYRCL, FOR, TU and TBI. Parties sometimes are referred to in this Agreement as the "Parties to this Agreement."

"PG&E" means the Pacific Gas and Electric Company.

"PG&E/YCWA Power Purchase Contract" means the contract dated May 13, 1966 between PG&E and YCWA regarding the operation of the Yuba Project for hydroelectric power generation.

"Planning Group" means the River Management Team Planning Group described in section 5.2.

"RD-1644" means Revised Water Right Decision 1644, adopted by the SWRCB on July 16, 2003.

"Reclamation" means the United States Department of the Interior, Bureau of Reclamation.

"Regulatory Change Event" means any of the regulatory change events described in section 6.4.2.

"River Management Fund" or "RMF" means the fund described in section 5.3.

"River Management Team" or "RMT" means the team described in section 5.2.

"RMT Participants In RMF Issues" means the Parties to this Agreement, NOAA Fisheries and USFWS.

"Schedule" and "Schedules" mean the flow schedules in Exhibit 1.

"Section" and "section" refer to sections of this Agreement, unless the context clearly indicates otherwise.

"Short-Term Phase 8 Bay-Delta Settlement Agreement" means the "Short-Term Agreement to Guide Implementation of Short-Term Water Management Actions to Meet Local Water Supply Needs and to Make Water Available to the SWP and CVP to Assist in Meeting the Requirements of the 1995 Water Quality Control Plan and to Resolve Phase 8 Issues," effective March 24, 2003, or a similar agreement.

"Significant Change" in the assumed operating assumptions for the Yuba Project is defined in Exhibit 10.

"Surface Water Supplemental Transfer" means a transfer of surface water from storage in New Bullards Bar Reservoir for use outside of Yuba County, where: (a) the transferred water is not part of a Lower Yuba River flow that is reasonably needed to meet the requirements in section 5.1.1 or section 5.1.5 (or operational buffers for such requirements); (b) the release of water from storage in New Bullards Bar Reservoir is in addition to releases reasonably needed to reach a September 30 storage target of 650,000 acre-feet, and instead causes the September 30 New Bullards Bar Reservoir storage to be less than 650,000 acre-feet; and (c) the transfer is not part of a Groundwater Substitution Program.

"SWRCB" means the California State Water Resources Control Board.

"SWP" means the State Water Project, which is operated by DWR. The SWP also is known as the "State Water Facilities," as defined in Water Code section 12934, subdivision (d).

"SYRCL" means the South Yuba River Citizens League.

"TBI" means The Bay Institute.

"Technical Variation of Agreement Flow Schedules" is defined in section 6.2.5.

"Technical Working Group" means the River Management Team Technical Working Group described in section 5.2.

"TU" means Trout Unlimited.

"USFWS" means the United States Department of the Interior, Fish and Wildlife Service.

"Water Purchase Agreement" "means the long-term water-purchase agreement between YCWA and DWR that is described in section 4.2.

"Water Year" means a 12-month period from an October 1 through the following September 30.

"YCWA" means the Yuba County Water Agency.

"YFA" means this Lower Yuba River Fisheries Agreement.

"Yuba Act" means the Yuba County Water Agency Act, California Statutes 1959, Chapter 788, as amended.

"Yuba Project" means FERC Project No. 2246, which sometimes is called the "Yuba River Development Project" or the "Yuba River Project."

"Yuba Accord" means the Lower Yuba River Accord described in section 1.3.

3. TERM OF FISHERIES AGREEMENT

3.1 *Term of Lower Yuba River Fisheries Agreement*

This Agreement will become effective once the conditions precedent, described in Section 4, have been satisfied. The term of this Agreement then will be from the effective date until FERC issues a new FERC Long-Term License for the Yuba Project, unless this Agreement is terminated earlier pursuant to section 6.1.5 or section 6.1.7.

4. CONDITIONS PRECEDENT

This Agreement will become effective when all of the following conditions have been met.

4.1 *State Water Resources Control Board Actions*

This Agreement will not become effective unless and until the SWRCB adopts, without any substantial modifications, all of YCWA's petitions to change to YCWA's water rights permits and RD-1644 that are described in this Section 4.1.

The Parties understand that the SWRCB may reject or modify some or all of the proposed changes in these petitions. If the SWRCB rejects or substantially modifies any of these proposed changes, then the Parties will make a good faith effort to try to reach agreement on appropriate revisions to this Agreement to accommodate the rejections or modifications made by the SWRCB. However, if the Parties do not reach such agreement, then this Agreement will not go into effect.

4.1.1. Revisions To RD-1644 Instream Flow Requirements. This Agreement will not become effective unless and until the SWRCB adopts an order granting, without any substantial modifications, YCWA's petition to the SWRCB to make the changes described in this section, and the order: (a) amends paragraph 1 on pages 173-176 and Appendix 1 of RD-1644 to make the changes that are shown in Exhibits 7, 8 and 9; (b) deletes paragraphs 2, 3 and 10 on pages 176-179 and 181-183 of RD-1644; and (c) finds that implementing the order, the amendment of YCWA's FERC License described in section 4.1.2 and this Agreement provide a level of protection for fishery resources in the Lower Yuba River during the term of this Agreement that is equivalent to or better than that which RD-1644 would provide.

While the SWRCB will maintain its lawful authority over YCWA's water rights, nothing in this Agreement will be construed as limiting or expanding that authority, and all Parties will retain their rights to disagree, object to or challenge any attempted exercise of that authority.

4.1.2. Amendment of YCWA's FERC License. (This condition precedent, which was described in earlier drafts of this Agreement, has been satisfied.)

4.1.3. Feather River Point of Diversion/Rediversion. (This condition precedent, which was described in earlier drafts of this Agreement, has been deleted from this Agreement and no longer is a condition precedent in this Agreement.) YCWA retains its rights to pursue a Feather River diversion facility and to re-divert Yuba Project water from the Feather River at this facility after the end of the term of this Agreement

4.1.4. Changes To Implement Water Purchase Agreement. This Agreement will not become effective unless and until the SWRCB adopts an order granting, without any substantial modifications, YCWA's petition to the SWRCB to amend YCWA's water-right Permit 15026 to add, during the term of the Water Purchase Agreement, the SWP and CVP points of diversion/rediversion and places of use that are necessary to implement the Water Purchase Agreement. This Agreement also will not become effective unless and until the SWRCB includes in its order approving this petition: (a) all mitigation measures for the Water Purchase Agreement identified in the EIR/EIS (except for any mitigation measures that YCWA finds, and CDFG and the NGO's concur, are infeasible under section 15091(a)(3) of the CEQA Guidelines) that concern matters within the SWRCB's jurisdiction, and (b) a specific reservation of jurisdiction to add, amend, revise, supplement, or delete terms and conditions in the order described in the preceding sentence regarding the Water Purchase Agreement, where the order approving this petition and reserving jurisdiction requires the SWRCB to review its order regarding the Water Purchase Agreement before May 2016 or during the Clean Water Act section 401 process for the new FERC Long-Term License, whichever is earlier, to determine whether, and if so, how, to exercise this jurisdiction, after notice to interested parties and an opportunity for a hearing. CDFG's and the NGOs' concurrence described in the preceding sentence shall not be unreasonably withheld.

4.2 *Water Purchase Agreement*

This Agreement also will not become effective unless and until: (i) YCWA and DWR execute the Water Purchase Agreement; and (ii) the Water Purchase Agreement goes into effect. YCWA will advise the other Parties to this Agreement in writing when these events have occurred.

4.3 *Conjunctive Use Agreements*

This Agreement also will not become effective unless and until YCWA executes Conjunctive Use Agreements with a sufficient number of YCWA's Member Units so that YCWA can meet its obligations under this Agreement and Water Purchase Agreement. However, YCWA may determine that it does not need to execute any Conjunctive Use Agreements for this Fisheries Agreement to become effective, and that YCWA instead will execute agreements with Member Units for the Groundwater Substitution Program at later dates, as necessary for that program. YCWA will advise the other parties to this Agreement in writing when either a sufficient number of Conjunctive Use Agreements have been executed, or YCWA has determined that it does not need to execute any Conjunctive Use Agreements, for this Fisheries Agreement to become effective.

4.4 *Agreement, Memorandum of Understanding or Similar Document With PG&E*

This Agreement also will not become effective unless and until YCWA executes an agreement, memorandum of understanding or similar document with PG&E to make the necessary amendments to, or understandings regarding, the 1966 YCWA/PG&E Power Purchase Contract so that YCWA can implement this Agreement, the Water Purchase Agreement and any necessary Conjunctive Use Agreements. YCWA will advise the other parties to this Agreement in writing when this agreement, memorandum of understanding or similar document with PG&E has been executed.

4.5 *Incidental Take Authorization*

(This condition precedent, which was described in earlier drafts of this Agreement, has been satisfied.)

5. <u>OBLIGATIONS OF PARTIES</u>

5.1 *Lower Yuba River Instream Flows*

5.1.1. <u>Specific Flow Schedule</u>. Except as otherwise provided in this Agreement, YCWA will comply with the Schedule 1-6 and A-B instream flow requirements in Exhibit 1 (plus the 30,000 acre-feet of additional water in Schedule 6 Water Years that is described in section 5.1.3) during all times while this Agreement is in effect. The instream flow requirements in these schedules will be maintained as measured by a five-day running average of the mean daily stream flows with instantaneous flows never less than 90

percent of the applicable flow requirements specified in the schedules. In addition, instantaneous flows will not be less than the applicable flow requirements specified in the schedules for more than 48 consecutive hours unless CDFG concurs to a longer period of time, which may not exceed 5 days. During the parts of September of Schedule A Water Years when the Narrows II Powerhouse is shut down for normal maintenance and the Narrows II Powerhouse Full Flow Bypass is not available for operation, the Smartville Gage requirements will be 700 cfs or the full release capacity of the Narrows 1 Powerhouse at the Englebright Reservoir level that occurs at that time, whichever is less. The specific flow schedule that will be implemented at any time will be determined by the value of the North Yuba Index and the rules in Exhibit 2, with the adjustments described in Exhibit 3 (if applicable). The North Yuba Index is defined in Exhibit 4. The procedure for calculating the North Yuba Index is described in Exhibit 5. Based on the historical hydrological record, it is predicted that Schedules 1 through 6 and Conference Years will be in effect for approximately the percentages of time listed in Exhibit 6.

5.1.2. Right To Request Specific Performance Of Flow Schedules. Each Party to this Agreement will have the right to ask a court of competent jurisdiction to order YCWA to specifically perform its obligations under this Agreement. This right will include the rights to ask the court to issue a temporary restraining order, a preliminary injunction or a final injunction after entry of judgment. YCWA will not oppose such a request on the grounds that any other Party lacks standing, failed to join necessary parties or has adequate remedies at law.

Consistent with the portion of section 7.8 regarding the location of execution of this Agreement, each Party agrees that any action requesting specific performance of this Agreement may be filed in Yuba County or Sacramento County. In any such action, any Party may file a motion under California Code Civil Procedure section 394, provided that: (a) such motion is filed within 30 days of the filing of the initial action; and (b) in lieu of requesting a transfer of the action to another county, such motion instead requests that the action remain in the original county but that the chairperson of the Judicial Council assign a disinterested judge from a neutral county to hear the action. For the purposes of any such motion under Code of Civil Procedure section 394, the Parties further agree that Alameda, Marin, Nevada, Sacramento and Yuba Counties are not neutral counties from which a disinterested judge may be assigned.

5.1.3. Groundwater-Substitution Program. YCWA will operate a groundwater-substitution program in Water Years when Schedule 6 is in effect, which will result in an additional 30,000 acre-feet of water not shown in Schedule 6 flowing in the Lower Yuba River at the Marysville Gage during the portions of such Water Years when this water is transferable to the Water Purchase Agreement transferees. Subject to the preceding requirement of transferability, the River Management Team, through a decision by its Planning Group, will determine the flow schedule for the 30,000 acre-feet during each Schedule 6 Water Year. This flow schedule will be set to achieve maximum fish benefit during the transfer period.

5.1.4. Temporary Alteration of Flow Schedule. The River Management Team (through a decision by its Planning Group) may decide to temporarily alter the applicable instream flow requirements in Schedules 1 through 6 at any time during the term of this Agreement, so long as the agreed-to instream flows comply with the applicable requirements of YCWA's FERC license and YCWA's water-right permits.

Any agreed upon alterations to the instream flows must: (a) occur only during March through October; (b) not cause decreases from the flows specified in Schedules 1 through 6 of more than 20%; (c) not shift water from the amounts specified in Schedules 1 through 6 by more than 6 weeks; (d) not reduce the amount of stored water remaining in New Bullards Bar Reservoir at the end of the calendar year during which the temporary alteration occurs below the amount that would occur without the temporary alteration; and (e) not result in a net decrease in the total amount of water released for the applicable schedule of instream flow requirements for the calendar year. The process in section 6.6.3 will apply to any RMT decision to temporarily alter schedules. Absent River Management Team consensus, no changes to applicable instream flow requirements in Schedules 1 through 6 will occur while this Agreement is in effect.

5.1.5. Conference Years. During Conference Years, YCWA will operate the Yuba Project so that: (a) flows in the Lower Yuba River comply with the instream flow requirements in YCWA's FERC License, except that YCWA will not pursue any of the flow reductions authorized by article 33(c) of that license, plus any additional instream flows agreed to by the River Management Team's Planning Group; and (b) total diversions at Daguerre Point Dam (including Browns Valley Irrigation District's diversions into its Pumpline Canal) do not exceed 250,000 af/yr.

If Conference Year conditions are present or imminent, then YCWA, in consultation with the Member Units, will prepare a strategic management plan that will state affirmative steps that YCWA and the Member Units will undertake to ensure total diversions do not exceed 250,000 af/yr. YCWA will submit this plan to the River Management Team as soon as practicable after the determination that Conference Year conditions are present or imminent. YCWA will provide the RMT with any updates that YCWA makes to this plan, and YCWA will provide the RMT with monthly reports on the implementation of this plan. YCWA will manage this plan. YCWA will ensure implementation and enforcement of the plan's requirements through its contracts with the Member Units.

5.1.6. Operations Assumptions and Parameters for Defining Future Significant Changes. YCWA's commitment to provide the instream flows in Exhibit 1 is based on the assumption that the Yuba Project will be operated consistent with Exhibit 10. The Parties acknowledge that a Significant Change in YCWA operations under this Agreement may be required because of a Force Majeure Event or a Regulatory Change Event. Absent such a Significant Change, YCWA will operate the Yuba River Project according to this Agreement and the terms of its water rights permits.

If YCWA must make any Significant Change in the assumed operations parameters described in Exhibit 10 because of a Force Majeure Event or a Regulatory Change Event,

then the River Management Team will work to try to develop an alternative consensus flow schedule. In such circumstances, Section 6.4 will apply.

("Significant Changes" in assumed operations parameters are defined in Exhibit 10.)

5.1.7. Surface Water Supplemental Transfers. If YCWA makes any Supplemental Surface Water Transfer, then YCWA will make the same amount of water available for supplemental instream flows in the Lower Yuba River, which will be on a schedule set by the River Management Team. For example, if YCWA makes a Supplemental Surface Water Transfer of 10,000 acre-feet, then YCWA will make an additional 10,000 acre-feet available for supplemental instream flows in the Lower Yuba River during the same calendar year. The flow schedule for the water involved in the Supplemental Surface Water Transfer will be set to achieve maximum fish benefit during the transfer period. The flow schedule for the additional water made available for supplemental instream flows will be set to achieve maximum fish benefit, even if some such supplemental instream flows do not occur during the transfer period.

If YCWA makes a Supplemental Surface Water Transfer, then, during the following year, the North Yuba Index will be calculated by adding the amounts of the Supplemental Surface Water Transfer and the associated supplemental instream flows to the New Bullards Bar Reservoir September 30 Active Storage (as defined in Exhibit 4). This provision will ensure that Supplemental Surface Water Transfers and associated supplemental instream flows will not result in the implementation of a higher number (i.e., lower flow) flow schedule during the following year.

If YCWA intends to make a Supplemental Surface Water Transfer in a given year, then on April 10 of the relevant year it will provide a preliminary indication of the supplemental transfer. On May 1 of the relevant year, YCWA will provide a refinement of the preliminary transfer indication. This May 1 refinement will include a draft implementation schedule, after consultation with the River Management Team, for the Supplemental Surface Water Transfer. Unless otherwise agreed to by the River Management Team, the implementation schedule for the transfer will become final no later than May 15 of the relevant year.

5.1.8. Supplemental Flows For Groundwater Substitution Programs: If YCWA operates any Groundwater Substitution Program, then the following criteria will apply to such program:

- Schedule 1 years: All supplemental transfer flows that occur as part of the Groundwater Substitution Program will be scheduled to occur on or after July 1. The total of such supplemental transfer flows plus the Exhibit 1 flows (700 cfs in July) will not exceed the June Exhibit 1 flows (1,500 cfs) or the actual flow at the Marysville Gage on June 30, whichever is greater.

- Schedule 2, 3, 4 and 5 years: Up to 10 percent of the Groundwater Substitution Program's total transfer volume may be scheduled by the River Management

Team to flow between the end of the higher spring flows (which end on May 31 in Schedule 2 and 3 years, and on May 15 in Schedule 4 and 5 years) and the latest day on which the transfer may be allowed to start (based on Delta and other conditions), even though such water may not be transferable under the Water Purchase Agreement. No more than 10 percent of the Groundwater Substitution Program's total transfer volume will be at risk of not being transferable. The remainder of the total transfer volume will be scheduled during the period when the water will be transferable.

- Schedule 6 years: The entire Groundwater Substitution Program transfer volume will be scheduled to flow during the transferable period under the Water Purchase Agreement. The schedule for such flows will be developed in consultation with the River Management Team. The flow schedule will be set to achieve maximum fish benefit during the transfer period.

YCWA also will make additional water available for supplemental flows during Schedule 4 and 5 years according to the following criteria:

- Schedule 4 years: 10 percent of the Groundwater Substitution Program total transfer volume (if any), or 9,000 acre-feet, whichever is less, will be provided for supplemental fisheries flows, to be scheduled for any time after May 1 by the River Management Team. Some or all of this water may not be transferable under the Water Purchase Agreement. At the discretion of the RMT, some or all of this water for supplemental fisheries flows may be scheduled to flow before May 1.

- Schedule 5 years: 10 percent of the Groundwater Substitution Program total transfer volume (if any), or 6,000 acre-feet, whichever is less, will be provided for supplemental fisheries flows, to be scheduled for any time after May 1 by the River Management Team. Some or all of this water may not be transferable under the Water Purchase Agreement. At the discretion of the RMT, some or all of this water for supplemental fisheries flows may be scheduled to flow before May 1.

If YCWA intends to implement a Groundwater Substitution Program during a given year, then on or before April 10 of the relevant year it will provide a preliminary indication of the amount of water that will be transferred as part of the program, and it will prepare a preliminary schedule of the supplemental Lower Yuba River flows that will be used to implement the program after consultation with the River Management Team. On May 1 of the relevant year, YCWA will provide a refinement of the preliminary transfer indication and prepare an update to the flow schedule. If the applicable flow schedule is Schedule 4 or Schedule 5, and if the River Management Team elects to allocate some or all of the 10 percent of the Groundwater Substitution Program total transfer volume described in the immediately preceding paragraph, then that water will be included in the updated flow schedule and will be provided by YCWA. If the final Groundwater Substitution Program amount is less than the amount planned for in the May 1 update and

the some or all of the additional water that is required by this section already has been released, then that additional water will not be counted for as part of the Groundwater Substitution Program amount.

Unless otherwise agreed to by the River Management Team, the implementation schedule for the Groundwater Substitution Program will become final no later than May 15 of the relevant year, unless the applicable flow schedule, as determined by Exhibits 2-5, changes after May 15 because of a change in the North Yuba Index.

For all flow schedule years, any Groundwater Substitution Program or surface-water transfer made by YCWA under the Short-Term Phase 8 Bay-Delta Settlement Agreement will be scheduled pursuant to the rules for transfers under that agreement, and any such transfers by Member Units will be subject to the rules for those transfers. Such transfers by YCWA or Member Units will not be subject to the above rules in this Agreement for Surface Water Supplemental Transfers or Groundwater Substitution Programs.

5.2 *River Management Team*

The River Management Team will consist of a Planning Group and an Operations Group. The Planning Group will include representatives of each Party to this Agreement and the Water Purchase Agreement, NOAA Fisheries, USFWS and PG&E. The Operations Group will include one representative each of: (a) YCWA; (b) PG&E; (c) CDFG, NOAA Fisheries and USFWS, where the one representative will rotate between these three agencies; (d) the NGO's; and (e) DWR and Reclamation, where one representative will rotate between these two agencies.

The Planning Group will hold regularly scheduled meetings with prior notification of agenda items, and it may hold special meetings as needed. The Planning Group's authority will be limited to the actions described in section 5.2.1.

The Operations Group will meet and hold conference calls as necessary to carry out the actions listed in section 5.2.2. The Operations Group's authority will be limited to the actions described in section 5.2.2.

If necessary to carry out its functions, the Planning Group may convene a Technical Working Group, which will include such members as the Planning Group may appoint. Each Planning Group principal representative may designate one or more secondary representative or representatives who may participate in the Planning Group discussion of a given issue. Each Operations Group member may designate at their discretion additional technical experts to participate in the Operations Group's discussions of issues.

5.2.1. Planning Group Actions

The Planning Group may take any of the following actions:

1. set the flow schedule for the 30,000 acre-feet of Groundwater Substitution Program water that will occur in Schedule 6 years;
2. decide to temporarily alter the applicable instream flow requirements in Schedules 1-6, subject to the conditions described in Section 5.1.4, if necessary or appropriate for the aquatic resources, Yuba Project operations or maintenance, or SWP or CVP operations or maintenance;
3. decide, in Schedule 5 years, to adjust the Marysville Gage instream-flow requirements to 400 cfs during all or part of the period from October 1 until the February Bulletin 120 forecasts are available, when it is authorized to do so under Exhibit 3.
4. schedule additional instream flows during Conference Years;
5. schedule any water made available for supplemental instream flows in connection with a Supplemental Surface Water Transfer (as specified in section 5.1.7);
6. schedule any water made available for supplemental instream flows in connection with a Groundwater Substitution Program (as specified in section 5.1.8);
7. determine the planned operations of the upper and lower outlets from New Bullards Bar Dam into the New Colgate Penstock and any temperature adjustment device that is constructed at Englebright Dam;
8. develop and implement studies of Lower Yuba River fish or fish habitat, monitoring of flows or water temperatures, or fry studies.
9. make decisions to spend money in the River Management Fund for any authorized purpose;
10. designate a fiscal agent for the RMF; and
11. comment on YCWA's plans for Narrows I and II Powerhouse maintenance outages.

Only the Parties to this Agreement, NOAA Fisheries and the USFWS will participate in making formal decisions on Planning Group actions 1 through 11 above. Decisions on these actions will be made by unanimous consent of the parties and entities named in the preceding sentence, and section 6.6 of this Agreement, which details a specific alternative dispute resolution process, will apply as necessary. Parties to this Agreement, NOAA Fisheries and the USFWS will consult with DWR, Reclamation and PG&E on these actions as necessary and appropriate through the RMT Planning Group process.

The RMT Participants In RMF Issues will select five mutually agreeable fisheries experts and five mutually agreeable mediators for the purposes of dispute resolution, as described in section 6.6. For both selection processes, the RMT Participants In RMF Issues will take into account candidates' cost, skill, and demonstrated record of success in resolving similar disputes. Either list of five experts may be modified as necessary, but only upon unanimous written consent of the RMT Participants In RMF Issues.

Any agreement on Planning Group action 2 or 3 (temporary flow alterations) will be presented to the Chief of the Division of Water Rights of the SWRCB. If the Chief of the Division of Water Rights does not object to the alterations within 10 calendar days, the alterations will remain in effect.

Subject to the preceding provisions, any Party may take any action that it is authorized to take that does not violate this Agreement or any applicable regulatory requirement.

5.2.2. Operations Group Actions

The Operations Group will provide specific guidance to YCWA for YCWA's implementation of:

1. the flow schedule set by the Planning Group for the 30,000 acre-feet of Groundwater Substitution Program water during Schedule 6 years;
2. any temporary alterations in the applicable instream flow requirements in Schedules 1-6 that have been agreed to by the Planning Group;
3. any additional instream flows during Conference Years that have been scheduled by the Planning Group;
4. any supplemental instream flows that have been scheduled by the Planning Group in connection with a Supplemental Surface Water Transfer or a Groundwater Substitution Program;
5. any Planning Group decisions regarding the operations of the upper and lower outlets from New Bullards Bar Dam into the New Colgate Penstock or any temperature adjustment device that is constructed at Englebright Dam; and
6. any other recommendations or directions from the Planning Group to the Operations Group.

The Operations Group will act only upon unanimous consent of all of its members and in the absence of such unanimous consent will act pursuant to section 6.7, which details a specific dispute resolution process. Any agreement on Operations Group action 2 (temporary flow alterations) will be presented to the Chief of the Division of Water Rights of the SWRCB. If the Chief of the Division of Water Rights does not object to the alterations within 10 calendar days, the alterations will remain in effect.

Subject to the preceding provisions, any Party may take any action that it is authorized to take that does not violate this Agreement or any applicable regulatory requirement.

Parties to this Agreement acknowledge that the Operations Group's actions and efforts are time sensitive and will often be made in real-time or close to real-time situations. To participate and add value to the Operations Group, the NGOs will receive $25,000 from the River Management Fund per year to contract with an independent consultant who will participate on their behalf and provide the required expertise in technical matters relevant to the tasks of the Operations Group. This assistance is intended to benefit all Parties to this Agreement and all Operation Group participants by improving the ability of the NGOs to meaningfully contribute to decisions through the term of this Agreement.

5.3 *River Management Fund*

5.3.1. YCWA Funding of Ongoing Studies and Data Collection. YCWA will continue to directly fund certain data collection activities and studies on the Lower Yuba River.

Specifically, YCWA will continue to fund the collection of flow and water temperature data required by paragraph 5 on page 179 of RD-1644. Additionally, YCWA will continue to fund and conduct the redd dewatering and fry stranding studies required by paragraph 7 on page 180 of RD-1644, through the completion of the study plan that has been submitted to the SWRCB.

5.3.2. YCWA Funding of RMF. YCWA also will provide annual funding to the River Management Fund (RMF). The RMF will consist of two separate accounts: (a) the "General Account;" and (b) the "Restoration Projects Account." Money from the General Account may be used for any of the purposes described in section 5.3.4. Money from the Restoration Projects Account may be used only for the purposes, and according to the rules, described in Exhibit 12.

YCWA will make a one-time contribution of $300,000 to the RMF, Restoration Projects Account.

YCWA will contribute $550,000 per year to the RMF, General Account. This annual contribution amount and the following in-kind contributions together make a total estimated budget of $628,500 per year for core monitoring and focused studies, reduced by: (a) in-kind contributions of $50,000 per year or more (average) from CDFG; (b) in-kind contributions of $15,000 per year or more (average) from YCWA; and (c) average savings of $15,000 per year over the term of this Agreement from discontinuing the Chinook salmon carcass surveys in the Lower Yuba River upstream of Daguerre Point Dam after 2010. If YCWA's documented in-kind contributions are less than an average of $15,000 per year, then YCWA will contribute additional funds to the RMF, General Account, equal to the difference between average contributions of $15,000 per year and the actual value of YCWA's documented in-kind contributions. If the RMT Participants In RMF Issues decide that the Chinook salmon carcass surveys in the Lower Yuba River upstream of Daguerre Point Dam should not be discontinued after 2010, then YCWA will contribute additional funds to the RMF, General Account, in a total amount equal to the total amount of the anticipated savings from discontinuing these surveys that did not occur because these surveys were not discontinued. CDFG will make documented in-kind contributions of $50,000 per year or more (average). In-kind contributions from YCWA and CDFG may be in the form of labor, materials, or equipment, and must be documented as costs that otherwise would be paid from the RMF, General Account.

If necessary to start core monitoring or focused studies, YCWA will make additional contributions to the RMF, General Account, during the first year that this Agreement is in effect. If YCWA makes any such additional contributions, then its contribution to the RMF, General Account, during the last year that this Agreement is in effect will be reduced by the amount of such additional contributions. YCWA will make all of these contributions to the RMF from its revenues under the Water Purchase Agreement. As long as this Agreement and the Water Purchase Agreement both are in effect, in the event of breach of the Water Purchaese Agreement by the Water Purchase Agreement transferees, YCWA will continue to make the agreed payments to the River Management

Fund, General Account, while it pursues its contractual remedies against the Water Purchase Agreement transferees.

5.3.3. Participants in RMF Decisions. Only the Parties to this Agreement, NOAA Fisheries and the USFWS will participate in making RMF decisions. Such decisions will be made by unanimous consent of all such parties and entities, or will be made pursuant to section 6.6, which details a specific alternative dispute resolution process.

5.3.4. Purpose of RMF. To ensure reasonable and prudent disbursement of funds, the RMT will adopt a structure for fund allocation based on specific prioritized goals for monitoring, studies, actions and activities. Money from the RMF may be spent for any of the following actions:

1. monitoring and evaluating the effectiveness of the implementation of the Lower Yuba River Accord, including flow schedules, Conference Year flows and the Water Purchase Agreement;
2. evaluating the condition of fish resources in the Lower Yuba River;
3. evaluating the viability of Lower Yuba River fall-run Chinook salmon and any subpopulations of the Central Valley steelhead and spring-run Chinook salmon Evolutionarily Significant Units (ESUs) that may exist in the Lower Yuba River;
4. implementing habitat improvement and non-flow enhancement actions and activities;
5. purchasing water for instream flows in the Lower Yuba River above the flows specified in Exhibit 1;
6. retaining expert advice for specific technical questions;
7. retaining an expert or experts for dispute resolution processes; and
8. paying local shares of grant-funded projects for fish or fish habitat in the Lower Yuba River, specifically to facilitate unique grant matching opportunities.

Some of these actions are described in more detail in Appendix A.

5.3.5. Geographic Scope of RMF. Funds from the RMF will only be used for projects in the Lower Yuba River (i.e., downstream of Englebright Dam), unless the RMT Participants In RMF Issues unanimously approve using funds from the RMF in another area.

5.3.6. Activities Excluded from RMF. Funds from the RMF will not be used towards studies pertaining to groundwater basin dynamics, groundwater/surface water interactions or any other study related to the sustainability of groundwater transfers, unless the RMT Participants In RMF Issues unanimously approve using funds from the RMF for such studies. Funds from the RMF will not be used to comply with section 5.3.1.

5.3.7. Recording Responsibilities for RMF Supported Studies. The RMT Participants In RMF Issues will maintain a record that is updated at least yearly, which states: (1) each study conducted; (2) year or years conducted; (3) purpose of study; (4) the data collected, and (5) whether any dispute between members existed regarding study protocol or data.

Section 6.8 details a specific dispute resolution process for possible study protocol and data protocol disputes. These ongoing records will be submitted to FERC at appropriate times (e.g., concurrent with YCWA's Notice of Intent to file a new license application and at the expiration of this Agreement, and at other agreed upon times) in report format prepared collectively by the RMT Participants In RMF Issues. These reports will only contain data and the additional information described in this paragraph and not interpretations or conclusions. To the extent permitted by applicable law, RMT Participants In RMF Issues will support these submissions in the future FERC relicensing.

5.3.8. RMF Fiscal Agent and Reporting. The RMT Participants In RMF Issues will meet at least yearly to make RMF allocation decisions. The initial fiscal agent for the RMF will be YCWA. The RMT Participants In RMF Issues may designate a different fiscal agent at any time during the term of this Agreement. At the RMT Planning Group's yearly budget and allocation meeting, the fiscal agent will make an annual reporting of accounts, including actual expenditures, anticipated expenditures, and unspent allocations. This reporting will include accountings of YCWA's and CDFG's in-kind contributions under Section 5.3.2.

5.3.9. RMF Multi-year Studies. The RMT Participants In RMF Issues may approve, in one action, annual funding for several years for a multi-year project. If these participants cannot reach agreement on how to allocate funds during any year, and if timely dispute resolution cannot be achieved, then YCWA may spend money from this fund for ongoing studies regarding fish or fish habitat in the Lower Yuba River, provided that such ongoing studies are supported, or were supported in the past, by these participants. Otherwise the yearly budget sum (or the net after supported allocations are made) will roll over to the next year.

5.3.10. RMF Balance Cap. If the RMF balance reaches three times the annual contribution specified above, then the RMT Participants In RMF Issues will prepare a plan within six months to spend the excess balance. If the RMF Participants In RMF Issues cannot reach consensus on this issue, then a fisheries expert (selected at random from the list of fisheries experts described in section 5.2.1) will develop a plan to spend the excess balance, which will be consistent with this Agreement and the "Lower Yuba River Accord, River Management Fund, Monitoring and Evaluation Guidelines" document that has been prepared. YCWA will suspend making any contributions to this fund that would cause its balance to exceed three times the annual contribution specified above; provided that YCWA will deposit the suspended contribution or contributions in the RMF when the plan described in this section is completed.

5.3.11. RMF Remainder Balance. If a remainder balance exists in either account of the RMF at the termination or expiration of this Agreement and the RMT Participants In RMF Issues cannot determine an acceptable plan for using this remainder balance, then the independent panel of fisheries experts (described in section 5.2.1) existing at that time will determine an appropriate use of any remainder balance of the River Management Fund, which will be consistent with this Agreement and the "Monitoring and Evaluation

Guidelines" document. This section will survive the termination or expiration of this Agreement.

5.3.12. RMF Ongoing Studies at Termination or Expiration. At the termination or expiration of this Agreement, the RMT Participants In RMF Issues will seek to ensure that ongoing studies that are being funded by the RMF are completed.

5.3.13. Additional CEQA/NEPA Compliance. Any projects that are funded by the RMF and not analyzed in the EIR/EIS will be subject to all applicable requirements of CEQA and NEPA.

5.4 *Miscellaneous*

5.4.1. Duty to Cooperate. The Parties will cooperate in the implementation of this Agreement. The Parties and members of the River Management Team will cooperate in conducting studies, performing monitoring, and conducting all other activities within their control and statutory or regulatory authorities related to implementation of this Agreement and River Management Team tasks.

5.4.2. Duty to Support YCWA Petitions To SWRCB. All of the Parties to this Agreement will actively support before the SWRCB YCWA's petition to change its water-right permits and RD-1644 that is described in section 4.1.1. However, the Parties' support for these changes and their obligations under this Agreement are expressly conditioned on the SWRCB finding that the provisions of this Agreement and the proposed changes to YCWA's water-right permits together will provide a level of protection for fishery resources in the Lower Yuba River equivalent to or better than the level of protection that would be provided by RD-1644.

5.4.3. Ramping Rate Commitments. YCWA will comply with the flow ramping requirements that are specified in its existing FERC License for the Yuba Project, which include the flow ramping requirements that are described in FERC's November 22, 2005 Order Modifying and Approving Amendment of License for the Yuba Project, at page 11.

5.4.4. Grant Funding Commitments. In coordination with the RMT, YCWA will continue to diligently pursue grant funding for the Narrows II Powerhouse Intake Extension Project at Englebright Dam. The other Parties to this Agreement will make best reasonable efforts to support and assist YCWA in its pursuit of grant funding for this project, for example, with letters of support regarding submitted grant applications. YCWA will provide a progress report on these efforts in its annual report to the SWRCB.

5.4.5. Monitoring Commitments. YCWA will install and operate automated water temperature recorders in the Lower Yuba River and collect the water-temperature data required by paragraph 5 on page 179 of RD-1644. YCWA will include this data in the reports that it prepares and submits to the SWRCB, as required by paragraph 6 on page

180 of RD-1644. The costs to install and operate such recorders will not be paid from the River Management Fund.

5.4.6. Studies of Fish and Fish Habitat in Lower Yuba River. All Parties to this Agreement will disclose, and coordinate the development and scoping of, any studies regarding or related to fish or fish habitat in the Lower Yuba River with the River Management Team's Planning Group, and will provide the results of these studies (including all raw data) to all of the other Parties, NOAA Fisheries and USFWS. In the spirit of collaboration, as non-parties to this Agreement but participants in the River Management Team, NOAA Fisheries and USFWS agree to disclose and coordinate the development and scoping of any studies regarding or related to fish or fish habitat in the Lower Yuba River with the RMT's Planning Group, and to provide the results of these studies (including all raw data) to all of the Parties to this Agreement.

5.4.7. Redd Dewatering and Fry Stranding Study. YCWA will disclose and coordinate its present redd dewatering and fry stranding studies (which are required by paragraph 7 on page 180 of RD-1644) with the River Management Team's Planning Group, and will provide the results of these studies (including all raw data) to DFG, the NGO's, NOAA Fisheries and USFWS. After YCWA provides these results to these parties, a Technical Working Group of the RMT will develop any appropriate additional data collection procedures, work for additional studies, analysis, conclusions and recommendations.

5.4.8. Temperature Device Operations. The Planning Group of the River Management Team will determine the planned operations of the existing upper and lower outlets from New Bullards Bar Dam into the New Colgate Penstock, and of any new temperature adjustment device that is constructed at the Narrows II Powerhouse. The Operations Group of the River Management Team will provide specific guidance to YCWA for YCWA's implementation of the Planning Group's final decisions regarding the operations of the existing upper and lower outlets from New Bullards Bar Dam into the New Colgate Penstock and any new temperature adjustment device that is constructed at the Narrows II Powerhouse.

5.4.9. FERC Relicensing. All of the Parties to this Agreement will work together cooperatively and in good faith, using the flow schedules and associated rules in Exhibits 1-5 to this Agreement as a starting point, and using all of the data that will be collected on the Lower Yuba River over the next decade, to try to develop a consensus proposal for the Lower Yuba River instream-flow requirements for YCWA's FERC Long-Term License for the Yuba River Development Project. If such consensus is reached, then the parties will jointly submit the consensus proposal to the SWRCB and FERC and ask that it be included in the SWRCB's Clean Water Act section 401 certification and in the new FPA license. If such consensus is not reached, then any party to this Agreement may ask FERC, and the SWRCB in its Clean Water Act section 401 process, to order any Lower Yuba River instream-flow requirements that the party believes are appropriate, and any party may make any associated legal arguments that it believes are appropriate. Whether or not such consensus is reached, any Party may make any arguments during the FERC

relicensing that it believes are appropriate on any issues besides issues regarding Lower Yuba River instream-flow requirements and issues on which consensus was reached.

YCWA will not contend or bring any claim that this Agreement or the Water Purchase Agreement limits, restrains, or otherwise controls FERC's licensing authority, or that the continued supply and delivery of water made available under this Agreement or the Water Purchase Agreement is a law regarding the control, appropriation, use or distribution or water used in irrigation or for municipal or other uses, as such term is used in section 27 of the Federal Power Act.

5.4.10. Annual Report On Implementation Of YFA. YCWA will include reports on implementation of this Agreement in its annual reports to the SWRCB.

5.4.11. Plans For Narrows I and II Powerhouse Maintenance Outages. YCWA will advise the River Management Team regarding any planned maintenance outages of the Narrows I and II Powerhouses and consider any RMT comments regarding these planned outages.

5.4.12 Dismissal of Lawsuits Challenging RD-1644. YCWA, SYRCL, FOR, TU and TBI will file request for dismissals (without prejudice) of their lawsuits against the SWRCB regarding RD-1644 within 30 days after all of the following events have occurred: (a) the SWRCB has adopted all of the orders described in Section 4.1 and these orders have become final and no longer subject to legal challenges; (b) the SWRCB has expressly made a finding that implementing the Agreement will provide a level of protection for fishery resources in the Lower Yuba River that is equivalent to or better than that which RD-1644 would provide; (c) the EIR/EIS for the CEQA/NEPA review of the Accord has been certified and is no longer subject to legal challenges; (d) all of the other conditions precedent in Section 4 have occurred; and (e) all Member Units of YCWA and any other parties that filed lawsuits regarding RD-1644 will file requests for dismissals (without prejudice) of their lawsuits concurrently with the filing of requests for dismissals by YCWA, SYRCL, FOR, TU and TBI.

6. TERMINATION AND WITHDRAWAL, FORCE MAJEURE EVENTS AND REGULATORY CHANGES AND DISPUTE RESOLUTION

6.1 *Termination and Withdrawal*

6.1.1. Material Violation Of Agreement Flow Schedules. A "Material Violation of Agreement Flow Schedules" is defined as any failure of YCWA to meet any applicable instream-flow requirements described in sections 5.1.1, 5.1.3 and 5.1.5 for a period of 10 consecutive calendar days, except for any of the following:

a. a failure to meet these requirements because of a Force Majeure Event or a Regulatory Change Event;

b. a failure to meet these requirements because of an action taken by, or implemented at the request of, the RMT Planning Group or Operations Group;
c. a failure to meet these requirements because of a gauge re-rating or other action taken by the U.S. Geological Survey after the time at which the failure to meet these requirements occurred;
d. (this clause no longer applies, because the Narrows II Powerhouse Full Flow Bypass has been completed);
e. a failure to meet these requirements because of planned maintenance or construction activities, when the deviation from these requirements has been approved in advance in writing by the Chief of the Division of Water Rights of the SWRCB;
f. a failure to meet these requirements because of an action that was, or actions that were, beyond YCWA's control; and
g. a failure to meet these requirements on any day on which there is a Technical Variation of Agreement Flow Schedules.

(Paragraph f. above does not include actions taken by PG&E to operate the Yuba Project during times when YCWA has authorized PG&E to operate the Yuba Project.)

6.1.2. Notice Of Material Violation Of Agreement Flow Schedules. If any Party to this Agreement besides YCWA believes that there has been a Material Violation of Agreement Flow Schedules, then that Party will so notify all other Parties to this Agreement in writing. Such notice will include all of the Party's reasons for believing that there has been a Material Violation Of Agreement Flow Schedules. YCWA then will have 15 days to respond to the notice. If YCWA disagrees with the notifying Party, then YCWA's response will state all of the reasons for YCWA's disagreement. Within 20 days after such response, the disputing Parties and any other interested Parties will meet at least once to use their best efforts to try to resolve the dispute. If, after such notice and response and any subsequent meetings or discussions among the Parties to this Agreement, the dispute remains unresolved, then any Party to this Agreement may exercise any remedies that it has under section 6.1.3.

6.1.3. Determinations Of A Material Violation Of Agreement Flow Schedules. If the procedures described in section 6.1.2 have been followed for an alleged Material Violation of Agreement Flow Schedules and a dispute remains regarding whether or not such a Material Violation of Agreement Flow Schedules occurred, then any Party to this Agreement may notify the Chief of the Division of Water Rights of the SWRCB that such Party believes that a Material Violation of Agreement Flow Schedules has occurred and ask the Chief of the Division of Water Rights to determine whether a Material Violation of Agreement Flow Schedules actually has occurred. The Party or Parties submitting such a request will include with the request copies of all of the notices and responses that were prepared under section 6.1.2 and any other relevant material.

6.1.4. Remedy For Material Violation of Agreement Flow Schedules. If the Parties to this Agreement agree, or the Chief of the Division of Water Rights of the SWRCB determines, that a Material Violation of Agreement Flow Schedules has occurred, then

YCWA will make a one-time payment of $100,000 to the RMF, General Account, in addition to the payments to the RMF that YCWA is required to make under section 5.3.2, and in addition to the payments required by section 6.2.4. YCWA's obligation to make payments under this section will be reduced by the amount of any payment that YCWA must make under Water Code section 1052 for the same day. (If YCWA already has made a payment to the RMF under this section when it makes a payment under Water Code section 1052 for the same day, then YCWA's obligation to make future payments to the RMF will be reduced by the amount of such payment under section 1052.)

For any Material Violation of Agreement Flow Schedules that occurs any time during the May through October control period, in addition to making the payment described in this section, YCWA also will provide an amount of water for supplemental instream flows in the Lower Yuba River equal to the difference in volume between the amount of water required to flow in the Lower Yuba River under any applicable instream-flow requirements described in sections 5.1.1, 5.1.3 and 5.1.5 and the amount of water that actually flowed in the Lower Yuba River on the days on which the Material Violation of Agreement Flow Schedules occurred. The RMT Participants In RMF Issues will determine the schedule for such supplemental instream flows.

6.1.5. Withdrawal or Termination Because Of CDFG Obligations. When required to fulfill a statutory or regulatory responsibility, CDFG may suspend participation or, if necessary, withdraw from this Agreement, without first using the ADR procedures of this Agreement. However, before suspending participation or withdrawing, CDFG will provide timely notice to all Parties of the need for such suspension or withdrawal, and will make good-faith efforts to work with the other Parties to reach agreement on modifications to this Agreement that would allow the Agreement to remain in effect. If CDFG withdraws from this Agreement under this section, then YCWA may, but is not required to, terminate this Agreement among the remaining Parties. YCWA may make such termination by notifying the other Parties in writing that YCWA has taken such action. However, YCWA may take such action only after first providing the other Parties to this Agreement with notice of its intent to terminate this Agreement and allowing a 30-day period to meet and confer. If this Agreement terminates, then each Party to this Agreement will have full and adequate opportunity to challenge or defend in court any change that the SWRCB makes to YCWA's permits after or as a result of such termination, and no Party will assert that any such challenge or defense is barred or limited by any statute of limitation (including, but not limited to Water Code section 1126), laches, res judicata or collateral estoppel.

6.1.6. No Other Early Terminations. In no circumstance other than under section 6.1.5 or section 6.1.7 will this Agreement terminate early.

6.1.7 Option Of Withdrawal. Any Party to this Agreement may exercise an option to withdraw at its discretion from this Agreement: (a) before May 1, 2016, if a second Material Violation of Agreement Flow Schedules has occurred; or (b) for any reason on or after May 1, 2016. However, if such withdrawal occurs, then this Agreement will remain in effect among the remaining Parties. If all Parties to this Agreement besides

YCWA and CDFG withdraw under this section, and if CDFG withdraws under this section or section 6.1.5, then this Agreement will terminate. If such termination occurs, then the last sentence of section 6.1.5 will apply.

6.1.8. Option Of Withdrawal Relating To Resolution of South Screen Issue. Any signatory to this Agreement may exercise an option to withdraw from this Agreement because resolution of the South Screen issue has not occurred, has been substantially delayed, or is reasonably expected to not occur or be substantially delayed. However, if such withdrawal occurs, then this Agreement will remain in effect among the remaining Parties.

6.2 *Remedies For Material and Non-Material Violations Of Agreement Flow Schedules*

6.2.1. Non-Material Violation Of Agreement Flow Schedules. A "Non-Material Violation of Agreement Flow Schedules" is defined as any failure of YCWA to meet any applicable instream-flow requirements described in sections 5.1.1, 5.1.3 and 5.1.5 for any period less than 10 consecutive calendar days, except for any of the following:

a. a failure to meet these requirements because of a Force Majeure Event or a Regulatory Change Event;
b. a failure to meet these requirements because of an action taken by the RMT Planning Group or Operations Group;
c. a failure to meet these requirements because of a gauge re-rating or other action taken by the U.S. Geological Survey after the time at which the failure to meet these requirements occurred;
d. (this clause no longer applies, because the Narrows II Powerhouse Full Flow Bypass has been completed);
e. a failure to meet these requirements because of planned maintenance or construction activities, when the deviation from these requirements has been approved in advance in writing by the Chief of the Division of Water Rights of the SWRCB;
f. a failure to meet these requirements because of an action that was, or actions that were, beyond YCWA's control; and
g. a failure to meet these requirements on any day on which there is a Technical Variation of Agreement Flow Schedules.

(Paragraph f. above does not include actions taken by PG&E to operate the Yuba Project during times when YCWA has authorized PG&E to operate the Yuba Project.)

6.2.2. Remedies For Material and Non-Material Violations Of Agreement Flow Schedules. In the event of a Material or Non-Material Violation of Agreement Flow Schedules, YCWA will make a monetary payment to the River Management Fund, General Account (in addition to all payments required by section 5.3.2), in an amount agreed to by the Parties to this Agreement or determined using the process described in section 6.2.3. If YCWA does not make any payment into the River Management Fund

that is required by this section 6.2.2 and the following section 6.2.3 within 30 days after the amount of such payment is agreed to or determined, then interest on that amount will begin to accrue at the rate of interest that YCWA receives on funds in the Local Agency Investment Fund plus the rate of 2 percent per annum (but no higher than any maximum interest rate that YCWA by law may pay) until the payment is made.

6.2.3. Determination Of Non-Material Violation of Agreement Flow Schedules. If any Party believes that there has been a Non-Material_Violation of Agreement Flow Schedules, then that Party will notify all of the other Parties to this Agreement in writing. Such notice will include all of the Party's reasons for believing that a violation has occurred. YCWA will have 15 calendar days to respond to the notice. If YCWA disagrees with the notifying Party, then YCWA's response will state all of the reasons for YCWA's disagreement. If, after such notice and response and any subsequent discussions and meetings among the Parties to this Agreement, a dispute remains as to whether or not there has been a Non-Material Violation of Agreement Flow Schedules, then the Parties will randomly select one individual from a previously and mutually agreed upon list of five mediators (described in section 5.2.1). The selected mediator will hold at least one meeting with the disputing Parties (any other interested Party to this Agreement may attend) and attempt to resolve the dispute. If the dispute is not resolved by the end of the meeting or meetings, then the selected mediator will issue a binding opinion resolving the dispute within 15 days after the last meeting.

6.2.4. Payments For Material or Non-Material Violation of Agreement Flow Schedules. For any Material or Non-Material_Violation of Agreement Flow Schedules of Agreement Flow Schedules, YCWA will make a payment into the River Management Fund, General Account, in addition to the payments described in section 5.3.2. For each day during which such a violation occurs, the amount of the payment will be $100 times the number of percentage points by which the actual flow was less than the required flow, up to a maximum of $1,000. For example, if the applicable five-day running average requirement on a particular day was 1,000 cfs and the actual five-day running average on that particular day was 970 cfs, then the payment for that day would be $300. (970 cfs is 30 cfs, or 3 percentage points of 1,000, less than 1,000.) As a second example, if the applicable requirement on a particular day was 400 cfs and the actual lowest instantaneous flow on that day was 336 cfs, then the payment for that day would be $600. (90% of 400 = 360; 336 is 24 cfs, or 6 percentage points of 400, less than 360.) In no case will the payment for any one day exceed $1,000. For any Material Violation of Agreement Flow Schedules, YCWA will make both the payment required by this section and the payment required by section 6.1.4. YCWA's obligation to make payments under this section will be reduced by the amount of any payment that YCWA must make under Water Code section 1052 for the same day. (If YCWA already has made a payment to the RMF under this section when it makes a payment under Water Code section 1052 for the same day, then YCWA's obligation to make future payments to the RMF will be reduced by the amount of such payment under section 1052.)

6.2.5. Technical Variations of Agreement Flow Schedules. (In earlier drafts, this section concerned "Technical Variations of Agreement Flow Schedules," which could occur only

before the Narrows II Powerhouse Full Flow Bypass was in operation. Because this bypass now is in operation, this section has been deleted from this Agreement.)

6.2.6. Remedies For Technical Variations Of Agreement Flow Schedules. (For the reasons discussed in section 6.2.5, this section has been deleted from this Agreement.)

6.2.7. Determination Of Technical Variation of Agreement Flow Schedules. (For the reasons discussed in section 6.2.5, this section has been deleted from this Agreement.)

6.2.8. Payments For Technical Variation of Agreement Flow Schedules. (For the reasons discussed in section 6.2.5, this section has been deleted from this Agreement.)

6.2.9 Provision Of Make-up Water For Non-Material Violation of Agreement Flow Schedules. For any Non-Material Violation of Agreement Flow Schedules that occurs any time during the May through October control period, in addition to making the payments described in section 6.2.4, YCWA also will provide an amount of water for supplemental instream flows in the Lower Yuba River equal to the difference in volume between the amount of water required to flow in the Lower Yuba River under any applicable instream-flow requirements described in sections 5.1.1, 5.1.3 and 5.1.5 and the amount of water that actually flowed in the Lower Yuba River on the days on which Non-Material Violations of Agreement Flow Schedules occurred. The RMT Participants In RMF Issues will determine the schedule for such supplemental instream flows.

6.2.10. No Effect On CDFG's Remedies Under California Endangered Species Act. Nothing in this Agreement will affect CDFG's remedies under the California Endangered Species Act (California Fish and Game Code §§ 2050-2115.5).

6.3 *Non-payment by Water Purchase Agreement Transferees*

In the event of non-payment by the Water Purchase Agreement transferees to YCWA of any amount of money due to YCWA under the Water Purchase Agreement, the Parties to this Agreement may use the process described in section 6.5 to consider modifications to YFA flow schedules. However, the SWRCB must approve any proposed modifications to YFA flow schedules before they will go into effect and YCWA may not unilaterally request relief from, amend or terminate this Agreement because of such non-payment.

6.4 *Force Majeure or Regulatory Change Events*

6.4.1. Force Majeure Event. A Force Majeure Event is defined as an event, including but not limited to, a natural event, a labor or civil disruption, or a breakdown or failure of a Yuba Project, PG&E, Corps of Engineers or U.S. Geological Survey component or facility, where the event: (a) is in the Yuba River watershed or directly affects a component of PG&E's electricity transmission system, (b) is reasonably beyond YCWA's control, and (c) significantly affects YCWA's ability to comply with any provision of this Agreement. No party will be liable to any other Party for breach of this Agreement due to such a Force Majeure Event. For the purposes of this Agreement,

Force Majeure Events do not include events that just affect the operations of SWP or CVP facilities and do not also directly affect Yuba Project operations.

6.4.2. Regulatory Change Event. A Regulatory Change Event is defined as a new court order or regulatory action (including, but not limited to, a regulatory action under the federal Endangered Species Act or the California Endangered Species Act) that requires YCWA to make a Significant Change in YCWA's operations of the Yuba Project. A regulatory change in or regarding the Delta that is not specifically directed to YCWA, or that does not specifically require YCWA to make any Significant Change in YCWA's operations of the Yuba Project, is not a Regulatory Change Event for the purposes of this Agreement.

6.4.3. Force Majeure Event or Regulatory Change Event That Is 365 Days or Less. In the event of a Force Majeure Event or a Regulatory Change Event that affects YCWA's operations of the Yuba Project or YCWA's ability to comply with section 5.1.1, 5.1.3 or 5.1.5 for 365 days or less, the RMT will work to try to reach consensus, as needed, on an alternative flow schedule for the relevant time period. If the RMT cannot reach a consensus solution, then it will adhere to the ADR procedure in Section 6.4.5 to attempt to resolve the dispute and find a consensus solution.

If the underlying event is expected to exist 365 days or less, and the Parties still have not reached consensus after using the ADR procedures in section 6.4.5, then any Party to this Agreement may ask a court of competent jurisdiction (subject to the rules in the second paragraph of section 5.1.2) to determine whether the underlying event is a Force Majeure Event or Regulatory Change Event that triggers the need for an alternative flow schedule. If the court determines the underlying event is not such a triggering event, then the relevant instream-flow requirements specified in section 5.1.1, 5.1.3 or 5.1.5 will continue to be implemented. If the court determines that the underlying event is such a triggering event, then it will determine the appropriate relief. In this case, this Agreement will remain in effect, but subject to the court's order.

6.4.4. Force Majeure Event or Regulatory Change Event That Is More Than 365 days. If a Force Majeure Event or a Regulatory Change Event is expected to continue more than 365 days, or if the underlying event was expected to occur for 365 days or less but actually then continues for more than 365 days, then the Parties will attempt to reach consensus on an alternative flow schedule for the relevant time period, and, if necessary follow the ADR procedure described in section 6.4.5. In addition, any proposed relief on which the Parties have reached consensus will be submitted to the SWRCB for its review and approval.

If the Parties still have not reached consensus after using the ADR procedures described in section 6.4.5, then any Party to this Agreement may ask a court of competent jurisdiction (subject to the rules in the second paragraph of section 5.1.2) to determine whether the underlying event is a Force Majeure Event or Regulatory Change Event that triggers the need for an alternative flow schedule. If the court determines the underlying event is not such a triggering event, then the relevant instream-flow requirements

specified in section 5.1.1, 5.1.3 or 5.1.5 will continue to be implemented. If the court determines that the underlying event is such a triggering event, then it will determine the appropriate relief. In this case, this Agreement will remain in effect, but subject to the court's order and the court's order will be submitted to the SWRCB for its review.

Any request of a Party under this section 6.4.4 for relief from the instream-flow requirements specified in section 5.1.1, 5.1.3 or 5.1.5 will be limited to a request for interim relief, with the relief to terminate when the SWRCB issues an order regarding the new instream-flow requirements that should apply in light of the Force Majeure Event or Regulatory Change Event.

The Parties intend that when the SWRCB issues a subsequent order regarding the applicable instream-flow requirements that should apply in light of the Force Majeure Event or Regulatory Change Event it will supersede any court order for interim relief.

If the SWRCB issues such an order, then any Party to this Agreement may challenge the SWRCB order in court (subject to the rules in the second paragraph of section 5.1.2), however, no Party may withdraw from this Agreement and it will not terminate. In any court proceeding involving a challenge to such an SWRCB order, no Party will assert that any such challenge is barred or limited by any statute of limitation (including, but not limited to Water Code section 1126), laches, res judicata or collateral estoppel.

6.4.5. Dispute Resolution—ADR For Sections 6.4.3 and 6.4.4. If YCWA's performance under this Agreement is affected by a Force Majeure Event or Regulatory Change Event, then YCWA will notify the other Parties to this Agreement in writing within 5 days after becoming aware of any such event. Such notice will: (a) identify the event; (b) estimate the anticipated period that the event will affect YCWA's performance under this Agreement; (c) state the measures that YCWA has taken or proposes to take to address the event; and (d) state the estimated timetable for implementation of such measures. The Parties to this Agreement then will meet and confer within 5 days of receipt of such notice. If any Party makes a request for mediation under this section 6.4.5 to assist in resolving the problem presented because of the change in condition, parameter, assumption, knowledge, or circumstance, then the Parties will use their best efforts to negotiate a temporary or permanent change to this Agreement as needed, undertake these ADR provisions, and try to resolve the problem presented without electing to invoke sections 6.4.3 or 6.4.4.

The costs to engage a mediator or fishery expert under these disputes, who will be randomly selected from the previously mutually agreed upon list or lists, will be divided on a pro rata sharing of costs. Each Party will bear their own costs to participate in this ADR procedure for these disputes. If mediation is not successful and the Parties cannot agree on how to resolve the problem within 10 days of the notice, then the relevant provisions of section 6.4.3 or 6.4.4 will apply.

6.5 *Dispute Resolution—General ADR for River Management Team*

For all disputes involving the RMT, regardless of category, Parties and members of the River Management Team (Planning and Operations Groups) will adhere to the following process. Each Party or member with authority to participate in making the applicable decision will make reasonable efforts to reach consensus on every matter relevant to the decision. Consensus is defined as unanimous consent of all such Parties and members. If such a Party or member does not agree with a decision proposed by another such Party or member, then the disagreeing Party or member will propose an alternative to resolve the matter. If such Parties or members still are unable to agree on one or more matters, then any non-agreeing Party or member will provide notice to the entire group (Planning Group and/or Operations Group, as relevant) as soon as possible, and not later than 5 days after attempting to resolve the matter, that a dispute exists and specifying in reasonable detail the nature of such dispute and steps taken to date to resolve the dispute.

Within 20 days after the notice of a dispute, the disputing Parties and members (and any other interested Parties) will meet at least once to use their best efforts to try to resolve the dispute. At the end of the meeting or meetings, if the dispute remains unresolved, the Parties and members will submit the dispute to non-binding mediation. However, this provision does not apply to Operations Group disputes (see section 6.7) and River Management Team disputes solely regarding study protocol or data collection (see section 6.8), as discussed below. All Parties and members will make all reasonable good faith and best efforts to promptly schedule and attend such meetings and devote the needed time and resources to resolve any dispute in lieu of mediation.

6.6 *Dispute Resolution—Planning Group*

6.6.1. Disputes Regarding Planning Group Actions 5 and 6. For disputes regarding Planning Group actions 5 and 6, if the RMT Participants In RMF Issues cannot resolve the dispute, then they will ask the SWRCB to resolve the dispute.

6.6.2. Disputes Regarding Planning Group Actions 7-10. If after 20 days to meet and confer, the RMT Participants In RMF Issues have not reached consensus on a disputed matter related to a decision on any action described in Planning Group actions 7-10, then the parties will submit the dispute to non-binding mediation, within 25 days after the initial notice of dispute.

Within 30 days after the initial notice of dispute, the RMT Participants In RMF Issues will randomly select one individual from the previously and mutually agreed upon list of five fishery biology experts. The selected expert will hold at least one meeting with the disputing parties (other interested parties may attend) and attempt to resolve the dispute. If the dispute is not resolved at the end of the meeting or meetings, then the selected expert will issue a non-binding opinion to try to resolve the dispute, within 60 days of the initial notice of dispute, unless additional time is requested by the expert and the RMT Participants In RMF Issues unanimously agree to the additional time. Unless otherwise agreed, the RMT Participants In RMF Issues will implement promptly any final

agreement reached after consideration of the opinion issued, subject to applicable law. If 90 days after the initial dispute is noticed (plus any additional time requested and approved) the RMT Participants In RMF Issues have not resolved the dispute, then the dispute will be resolved as follows.

(1) For disputes regarding Planning Group actions 7 and 8, the expert opinion that sought to resolve the dispute and any minority opinion that captures the disagreement with the expert opinion and a narrative explaining the two opinions and the process used to reach them will be submitted to the SWRCB along with a request that the Chief of the Division of Water Rights resolve the matter by selecting between the expert and minority opinion.

(2) For disputes involving Planning Group action 9, the expert opinion will be implemented.

In no circumstance will a dispute under this section result in termination of, or any Party's withdrawal from, this Agreement. Fees and costs of such fishery expert or mediator under this section will be paid from the River Management Fund. Each RMT Participant In RMF Issues will bear its own costs for participation in these ADR procedures.

The issue of allocating any remainder River Management Fund balance will be determined under section 5.3.11, and not under this section 6.6.2.

6.6.3. Disputes Regarding Planning Group Actions 1-4. If after 20 days to meet and confer the RMT Participants In RMF Issues have not reached consensus on a disputed matter related to a decision on any action described in Planning Group actions 1-4, then the RMT Participants In RMF Issues will submit the dispute to non-binding mediation, within 25 days after the initial notice of dispute.

Within 30 days after the initial notice of dispute, the RMT Participants In RMF Issues will randomly select one individual from the previously and mutually agreed upon list of five mediators. The selected mediator will hold at least one meeting with the disputing parties (other interested parties may attend) and attempt to resolve the dispute. If the dispute is not resolved at the end of the meeting or meetings, then the selected mediator will issue a non-binding opinion to try to resolve the dispute, within 60 days of the initial notice of dispute. For such disputes, no extensions for the opinion will be allowed. Unless otherwise agreed, the RMT Participants In RMF Issues will implement promptly any final agreement reached after consideration of the opinion issued, subject to applicable law.

If 65 days after the initial dispute is noticed the RMT Participants In RMF Issues have failed to resolve the dispute, then the matter will be resolved as follows.

(1) For Planning Group action 1: the 30,000 acre-feet of Groundwater Substitution Program water will be allocated to flow during the portions of June through August in which such water is transferable, with the allocation

of the 30,000 acre-feet being made in proportion to the applicable Schedule 6 flows;

(2) For Planning Group action 2, 3 or 4: the action will not occur.

In no circumstance will a dispute under this section 6.6.3 result in termination of, or any Party's withdrawal from, this Agreement. Fees and costs of such mediation in this category will be paid from the River Management Fund. Each Party will bear its own costs for participation in the ADR procedures. For any matter in Section 6.6 for which the parties are to randomly select a fisheries expert, the relevant parties instead may unanimously agree to randomly select a mediator, and for any matter for which the parties are to randomly select a mediator, they instead may unanimously agree to randomly select a fisheries expert.

6.7 *Dispute Resolution—Operations Group*

The Operations Group will not have the authority to refuse to recommend implementation of Planning Group directions, unless implementation will occur during the "delivery season" from June 1 to November 1. The Operations Group will strive for consensus during the winter season. During the "delivery season," the Operations Groups will determine how to recommend implementation of Planning Group directions based on consensus.

However, Parties to this Agreement and other River Management Team members acknowledge that the Operations Group has discretion to determine how to recommend implementation of Planning Group directions. Parties and RMT members further acknowledge that the Operations Group will be exercising this discretion often on a real-time or close to real-time basis. Moreover, because of YCWA's ultimate responsibility for Yuba Project operations, the ultimate decision for implementation of Operation Group actions rests with YCWA's discretion. In the absence of consensus among participants, YCWA will take the appropriate actions to implement the applicable Planning Group decision to the fullest extent possible. Whenever possible (and the Parties expect that it will be possible most of the time), YCWA will provide notice of the proposed appropriate action and allow a 24-hour window for other members to reply or object before it acts. In the event that consensus does not exist on a given matter and YCWA unilaterally takes action as a last resort, the Operations Group will subsequently prepare an annual report for the Planning Group summarizing: (a) the dispute, (b) the final action taken, (c) any minority opinions, and (d) proposals for avoiding the dispute in the next planning and operations decision-making cycle. Best efforts will be made to implement a proposal to avoid future disputes.

In no circumstance will a dispute under this section result in termination of, or any Party's withdrawal from, this Agreement, unless section 6.1.5 or section 6.1.7 applies.

6.8 *Dispute Resolution—River Management Team Study Protocols or Data Protocols*

The Parties to this Agreement intend that their monitoring and data-collection actions will produce a useful database for the FERC relicensing and to evaluate the biological provisions of this Agreement. If the dispute-resolution provisions in sections 6.5 and 6.6.2 do not resolve disputes regarding study protocols or data-collection protocols or data collection, then any RMT participant may request that its disagreement with, or dispute regarding, a study or data-collection protocol or data collection for a study or data collection that is being funded or is going to be funded by the RMT be recorded.

During the future FERC relicensing, a RMT participant's disagreement with or dispute regarding the study protocol or data-collection protocol or a particular study or monitoring effort conducted under the RMT's responsibility during the term of this Agreement will be limited to the disagreements or disputes that the member previously raised, unless a participant makes a reasonable showing that the accepted scientific approach regarding the relevant protocol has materially changed in the time between when the original disagreement or dispute was raised and the FERC relicensing. This paragraph applies only to study protocols and data collection protocols, and not to issues regarding the interpretation or significance of data collected under those protocols, or to data collection, or to any other issue a RMT participant may wish to comment on in the FERC relicensing.

7. GENERAL PROVISIONS

7.1. Representation By Counsel. This Agreement is entered into freely and voluntarily. The Parties acknowledge that they have been represented by counsel of their own choice, or that they have had the opportunity to consult with counsel of their own choosing, in the negotiations that preceded the execution of this Agreement and in connection with its preparation and execution. Each of the Parties executes this Agreement with full knowledge of its significance and with the express intent of effecting its legal consequences.

7.2. Entire Agreement. This Agreement constitutes the entire agreement between the Parties pertaining to the settlement of disputes and obligations between them. This Agreement supersedes all prior and contemporaneous agreements, representations and/or obligations concerning those obligations, which are merged into this Agreement. This Agreement is made on the understanding that each term is in consideration and support of every other term, and each term is a necessary part of the entire agreement.

7.3. Applicable Law. This Agreement will be construed under and will be deemed to be governed by the laws of the State of California and of the United States, without giving effect to any principles of conflicts of law if such principles would operate to construe this Agreement under the laws of any other jurisdiction.

7.4. Construction of Agreement. This Agreement is the product of negotiation and preparation by and among the Parties and their attorneys. Therefore, the Parties acknowledge and agree that this Agreement will not be deemed to have been prepared or drafted by any one Party or another. Accordingly, the normal rule of construction to the effect that any ambiguities are to be resolved against the drafting party will not be employed in the interpretation of this Agreement.

7.5. Modification of Agreement. No supplement, modification, waiver, or amendment of this Agreement will be binding unless executed in writing by the Party against whom enforcement of such supplement, modification, waiver or amendment is sought.

7.6. Counterparts of Agreement. This Agreement may be signed in any number of counterparts by the Parties hereto, each of which will be deemed to be an original, and all of which together will be deemed one and the same instrument. This Agreement, if executed in counterparts, will be valid and binding on a party as if fully executed all on one copy. Counterpart executions may be made by facsimile.

7.7. Signatories' Authority. The signatories to this Agreement on behalf of all of the Parties hereto warrant and represent that they have authority to execute this Agreement and to bind the Parties on whose behalf they execute this Agreement.

7.8. Effective Date and Location of Execution of Agreement. The Parties hereto deem this Agreement to be signed and of binding legal effect as of the date on which the conditions precedent requirements in Section 4 have been satisfied and last signatory hereto has signed this Agreement. CDFG and the NGOs will execute and enter into this Agreement by signing it in Sacramento County, and this Agreement will be deemed to have been executed in Sacramento County.

7.9. Notices to Parties. Except as otherwise provided, all notices required under or regarding this Agreement will be made in writing addressed as provided in the Party address list attached hereto as Exhibit 11. Such notices will be sent to all Parties still in existence by first-class mail or comparable method of distribution. For purposes of this Agreement, a notice will be effective 7 days after the date on which it is mailed or otherwise distributed. When this Agreement requires notice in less than 7 days, notice will be provided by personal service, telephone, facsimile or electronic mail and will be effective when provided. The Parties will provide notice of any change in the authorized representatives designated in Exhibit 11, and YCWA will maintain the current distribution list of such representations, including addresses, telephone numbers, facsimile numbers and email addresses.

7.10. Federal and State Agency Obligations. Nothing in this Agreement is intended to limit the authority of the federal participants in any provision of this Agreement or the California Resource Agency Parties to fulfill their responsibilities under federal or state law. Moreover, nothing in this Agreement is intended to limit or diminish the legal obligations and responsibilities of the federal participants or the California Resource Agency Parties in any provision of this Agreement. Nothing in this Agreement is

intended or will be construed to require the obligation, appropriation or expenditure of any money from the Treasury of the State of California. The Parties acknowledge that CDFG is a state agency and will not be required under this Agreement to expend any appropriated funds unless and until an authorized officer of CDFG affirmatively acts to commit such expenditures as evidenced in writing.

7.11. Successors and Assigns. This Agreement will apply to, and be binding on, the Parties and their successors and assigns. Upon completion of a succession or assignment, the initial Party no longer will be a party to this Agreement. A transferring or assigning Party will provide notice to the other Parties at least 30 days prior to completing such transfer or assignment.

7.12. No Partnership. Except as otherwise expressly set forth herein, this Agreement does not and will not be deemed to make any Party the agent for or partner of any other Party.

7.13. No Precedent. This Agreement is made upon the express understanding that it constitutes a negotiated resolution of the resolved issues stated in Section 1.2. Nothing in this Agreement is intended or will be construed as a precedent with regard to any other proceeding.

7.14. No Effect on YCWA's Water Rights. The only rights granted to the Parties to this Agreement by this Agreement are those expressly set forth in this Agreement. YCWA's maintenance of the instream flows under this Agreement will not confer any appropriative, public trust or other right on any person or entity. Nothing in this Agreement is intended or will be construed to act as a forfeiture, diminution or impairment of any water right of YCWA. The use of water to maintain instream flows under this Agreement will not be evidence of, or be used to try to demonstrate, either the existence of surplus water or the lack of beneficial use of water during the term of this Agreement.

7.15. No Admission. No Party will be deemed to have approved, admitted, accepted, or other otherwise consented to any operation, management, valuation, or other principle underlying or supposed to underlie any of this Agreement's resolved issues, except as expressly provided herein. Nothing in this Agreement will be construed as an admission by any Party that such Party has obligations relative to the protection of fishery or other resources or the maintenance of water quality standards. Similarly, nothing in this Agreement will be construed to, or used in an effort to attempt to, demonstrate that any of the Parties has surplus water or water which is not being beneficially used by such Party.

7.16. No Waiver. Except as to the matters addressed in this Agreement, no Party will be deemed to have waived or compromised any of its rights that may be available under state or federal law, and no Party will be deemed to have waived or compromised any legal arguments regarding the SWRCB's authority over YCWA's water rights permits. The waiver at any time by any Party of any of its rights under this Agreement with

respect to any default or breach will not be deemed to be a waiver with respect to any other default or breach.

Date: 10/24/07 YUBA COUNTY WATER AGENCY

By _____

Date: _____ CALIFORNIA DEPARTMENT OF FISH AND GAME

By _____

Date: _____ SOUTH YUBA RIVER CITIZENS LEAGUE

By _____

Date: _____ FRIENDS OF THE RIVER

By _____

Date: _____ TROUT UNLIMITED

By _____

Date: _____ THE BAY INSTITUTE

By _____

respect to any default or breach will not be deemed to be a waiver with respect to any other default or breach.

Date: 10/24/07 YUBA COUNTY WATER AGENCY

By _____

Date: 10/31/07 CALIFORNIA DEPARTMENT OF FISH AND GAME

By _____

Date: _____ SOUTH YUBA RIVER CITIZENS LEAGUE

By _____

Date: _____ FRIENDS OF THE RIVER

By _____

Date: _____ TROUT UNLIMITED

By _____

Date: _____ THE BAY INSTITUTE

By _____

respect to any default or breach will not be deemed to be a waiver with respect to any other default or breach.

Date: 10/24/07 YUBA COUNTY WATER AGENCY

By _____

Date: _____ CALIFORNIA DEPARTMENT OF FISH AND GAME

By _____

Date: 11/2/2007 SOUTH YUBA RIVER CITIZENS LEAGUE

By _____

Date: _____ FRIENDS OF THE RIVER

By _____

Date: _____ TROUT UNLIMITED

By _____

Date: _____ THE BAY INSTITUTE

By _____

respect to any default or breach will not be deemed to be a waiver with respect to any other default or breach.

Date: 10/24/07 YUBA COUNTY WATER AGENCY

By _____

Date: _____ CALIFORNIA DEPARTMENT OF FISH AND GAME

By _____

Date: _____ SOUTH YUBA RIVER CITIZENS LEAGUE

By _____

Date: Nov. 5, 2007 FRIENDS OF THE RIVER

By _____

Date: _____ TROUT UNLIMITED

By _____

Date: _____ THE BAY INSTITUTE

By _____

respect to any default or breach will not be deemed to be a waiver with respect to any other default or breach.

Date: 10/24/07 YUBA COUNTY WATER AGENCY

By _____

Date: 10/31/07 CALIFORNIA DEPARTMENT OF FISH AND GAME

By _____

Date: _____ SOUTH YUBA RIVER CITIZENS LEAGUE

By _____

Date: _____ FRIENDS OF THE RIVER

By _____

Date: 11/05/07 TROUT UNLIMITED

By _____

Date: _____ THE BAY INSTITUTE

By _____

respect to any default or breach will not be deemed to be a waiver with respect to any other default or breach.

Date: _____ YUBA COUNTY WATER AGENCY

By _____

Date: _____ CALIFORNIA DEPARTMENT OF FISH AND GAME

By _____

Date: _____ SOUTH YUBA RIVER CITIZENS LEAGUE

By _____

Date: _____ FRIENDS OF THE RIVER

By _____

Date: _____ TROUT UNLIMITED

By _____

Date: _____ THE BAY INSTITUTE

By _____

Appendix A

Actions That May Be Funded From River Management Fund

Exhibits

1. Instream Flow Requirements

2. Flow Schedule Year Types

3. Dry Year Storage Adjustment To Instream-Flow Requirements

4. Definition of the North Yuba Index

5. Procedure for Calculating the Forecasted Total Annual Inflow Into New Bullards Bar Reservoir To Calculate North Yuba Index

6. Predicted Occurrences of Flow Schedules

7. Proposed Changes To RD-1644, Pages 173-176, Paragraph 1 of Order to YCWA (Track Changes)

8. Proposed Changes To RD-1644, Pages 173-176, Paragraph 1 of Order to YCWA ("Clean" Draft)

9. Changes To Appendix 1 Of RD-1644

10. Yuba River Development Project, Operating Assumptions for Yuba River Fisheries Agreement

11. Addresses of Representatives of Lower Yuba River Fisheries Agreement Parties

12. River Management Fund Restoration Account

Appendix A

ACTIONS THAT MAY BE FUNDED FROM RIVER MANAGEMENT FUND

The RMF will be used to fund actions in two broad categories: (1) monitoring and evaluation actions; and (2) habitat improvement actions and activities. Monitoring and evaluation may be categorized as either core monitoring or focused studies. The Technical Working Group of the RMT has developed a document titled "*Lower Yuba River Accords, River Management Fund, Monitoring and Evaluation Guidelines*" that outlines the framework for the Yuba Accord monitoring and evaluation program. Habitat improvement may be further segregated into non-flow and flow augmentation actions or activities. The River Management Fund also may be used to: (1) retain expert advice for specific technical questions; and (2) retain an expert or experts for dispute resolution process.

MONITORING AND EVALUATION ACTIONS

Core Monitoring

Core monitoring should achieve at least one of the following objectives: (1) evaluate the effectiveness of implementation of the Yuba Accord, including the Fisheries Agreement flow schedules and the Water Purchase Agreement; (2) obtain data required to evaluate the condition of lower Yuba River fish resources; and (3) evaluate the viability of Lower Yuba River fall-run Chinook salmon and any subpopulations of the Central Valley steelhead and spring-run Chinook salmon ESUs that may exist in the Lower Yuba River.

Core monitoring activities could include, but are not necessarily limited to, estimation of: anadromous salmonid annual escapement (e.g., VAKI, carcass surveys); spawning distribution (redd surveys); abundance and timing of juvenile downstream movement (rotary screw trapping); or juvenile salmonid growth (individual tagging).

The core monitoring program will be developed to assess the condition of individual fish, fish populations and the fish community and the viability of anadromous salmonid populations, and to evaluate the effectiveness of implementation of the Yuba Accord in benefiting the fish resources of the Lower Yuba River. The Technical Team is currently developing draft guidelines to provide a framework for identifying and prioritizing monitoring and evaluation actions to be funded by the RMF. The guidelines being developed are intended to encompass the suite of potential attributes identified for assessing the condition and viability of Lower Yuba River fish resources, and evaluating the effectiveness of implementation of the Yuba Accord in benefiting these resources. The monitoring and evaluation program is anticipated to assess and evaluate a subset of the attributes under development, reflecting a selection process that eliminates those components that are not appropriate or cannot be readily measured through monitoring and evaluation. The attributes presented in the monitoring and evaluation program are intended to provide an initial framework and guidelines for developing the Yuba Accord monitoring and evaluation program.

Core monitoring studies and evaluation activities also will be designed to be relevant to future regulatory processes, including FERC relicensing. The specific core monitoring objectives and studies initially will be identified and developed by the Technical Working Group of the RMT.

Focused Studies

Focused studies may be conducted to provide additional insights into specific issues or areas of concern, to provide guidance or feedback for specific habitat improvement actions, or to provide guidance or feedback for specific adaptive management actions.

Examples of focused studies include, but are not necessarily limited to, juvenile salmonid habitat use, age-specific survival rates, in-river harvest or salmonid genetic analyses.

Focused studies also may be designed to provide baseline information or additional insights for future regulatory processes, including FERC relicensing. Specific objectives for focused studies initially will be identified and developed by the Technical Working Group, and ultimately by the RMT Planning Group.

HABITAT IMPROVEMENT ACTIONS

Habitat improvement actions potentially include a multitude of activities that address ecosystem functions needed to support healthy habitats which, in turn, support Lower Yuba River fish resources. Water quality, water quantity, channel/instream complexity, presence of off-channel habitat and riparian vegetation all contribute to fish resource health. Specific habitat improvement actions will be directed towards improving one, or several, of these or other features in the Lower Yuba River.

Habitat improvement actions will be prioritized based on factors such as their anticipated benefits to instream fisheries production (i.e., their effect on ameliorating previously identified and prioritized anadromous salmonid stressors) and permanence of the improvement action. Each habitat improvement action will have well-defined goals and objectives and will incorporate a monitoring and evaluation plan, as appropriate, developed to determine the effectiveness of the habitat improvement action in attaining specified goals and objectives. Specific habitat improvement actions, and their goals and objectives, initially will be identified and developed by the Technical Working Group, and ultimately by the RMT Planning Group. Habitat improvement actions will be categorized in two areas: (1) non-flow actions; and (2) flow augmentation.

Non-Flow Actions

The non-flow actions category is intended to encompass habitat improvement activities that physically alter Lower Yuba River in-channel or riparian habitats without augmenting streamflows. Non-flow actions may include, but are not necessarily limited

to, instream habitat improvements (e.g., spawning gravel augmentation, large woody debris placement), riparian vegetation restoration, and off-channel (e.g., floodplain and side-channel) habitat creation.

Flow Augmentation

Flow augmentation includes purchases of water for flow augmentation in the Lower Yuba River. The total volume of any water that is purchased and the allocation of such water will be specified by the RMT, and will have pre-specified goals and objectives (e.g., increase juvenile transport flows, increase spring-run Chinook salmon spawning flows).

Exhibit 1. Instream Flow Requirements.

Marysville Gage (cfs)

Schedule	OCT		NOV	DEC	JAN	FEB	MAR	APR		MAY		JUN		JUL	AUG	SEP	Total Annual Volume (AF)
	1-15	16-31	1-30	1-31	1-31	1-29	1-31	1-15	16-30	1-15	16-31	1-15	16-30	1-31	1-31	1-30	
1	500	500	500	500	500	500	700	1000	1000	2000	2000	1500	1500	700	600	500	574200
2	500	500	500	500	500	500	700	700	800	1000	1000	800	500	500	500	500	429066
3	500	500	500	500	500	500	500	700	700	900	900	500	500	500	500	500	398722
4	400	400	500	500	500	500	500	600	900	900	600	400	400	400	400	400	361944
5	400	400	500	500	500	500	500	500	600	600	400	400	400	400	400	400	334818
6	350	350	350	350	350	350	350	350	500	500	400	300	150	150	150	350	232155

* Indicated flows represent average volumes for the specified time period. Actual flows may vary from the indicated flows according to established criteria.

* Indicated Schedule 6 flows do not include an additional 30 TAF available from groundwater substitution to be allocated according to established criteria.

Smartville Gage (cfs)

Schedule	OCT		NOV	DEC	JAN	FEB	MAR	APR		MAY		JUN		JUL	AUG	SEP	Total Annual Volume (AF)
	1-15	16-31	1-30	1-31	1-31	1-29	1-31	1-15	16-30	1-15	16-31	1-15	16-30	1-31	1-31	1-30	
A	700	700	700	700	700	700	700	700	-	-	-	-	-	-	-	700	-
B	600	600	600	550	550	550	550	600	-	-	-	-	-	-	-	500	-

* Schedule A used with Schedules 1, 2, 3 and 4 at Marysville.

* Schedule B used with Schedules 5 and 6 at Marysville.

Exhibit 2

FLOW SCHEDULE YEAR TYPES
BASED ON THE NORTH YUBA INDEX
FOR ESTABLISHING REQUIRED FLOWS IN THE LOWER YUBA RIVER FISHERIES AGREEMENT

The water year hydrologic classification for the Yuba River to determine the flow requirements of Yuba County Water Agency's water right permits shall be based on the North Yuba Index. Determinations of a year's flow schedule year type shall be made in February, March, April, and May and for any subsequent updates.

Flow Schedule Year Type	North Yuba Index Thousand Acre-Feet (TAF)
Schedule 1	Equal to or greater than 1400
Schedule 2	Equal to or greater than 1040 and less than 1400
Schedule 3	Equal to or greater than 920 and less than 1040
Schedule 4	Equal to or greater than 820 and less than 920
Schedule 5	Equal to or greater than 693 and less than 820
Schedule 6	Equal to or greater than 500 and less than 693
Conference Year	Less than 500

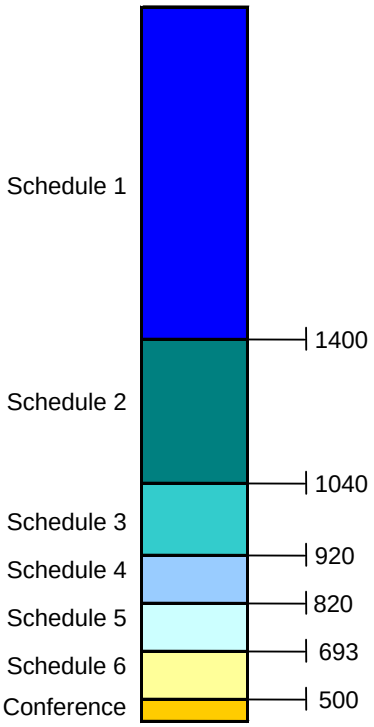

Exhibit 3. Dry Year Storage Adjustments To Instream-Flow Requirements

- In some dry years with Schedule 5 instream-flow requirements, the September 30 New Bullards Bar Reservoir storage may be very low.

- To ensure sufficient carryover storage in the event of a subsequent very dry year, a dry-year storage adjustment will be made.

- The dry-year storage adjustment will be made as follows:

  - If the September 30 New Bullards Bar Reservoir storage is less than 400,000 acre-feet, then the Marysville Gage instream-flow requirement will be 400 cfs from October 1 until the next February Bulletin 120 forecasts are available.

  - If the September 30 New Bullards Bar Reservoir storage is less than 450,000 acre-feet but greater than or equal to 400,000 acre-feet, then, the River Management Team may decide to adjust the Marysville Gage instream-flow requirement to 400 cfs from October 1 until the next February Bulletin 120 forecasts are available.

  - When the next February Bulletin 120 forecasts are available, the instream-flow requirements will be based on those forecasts.

EXHIBIT 4

DEFINITION OF THE
NORTH YUBA INDEX

The North Yuba Index is an indicator of the amount of water available in the North Yuba River at New Bullards Bar Reservoir that can be utilized to achieve flows on the Lower Yuba River through operations of New Bullards Bar Reservoir. The index is comprised of two components: (1) active storage in New Bullards Bar Reservoir at the commencement of the current water year and; (2) total inflow to New Bullards Bar Reservoir for the current water year, including diversions from the Middle Yuba River and Oregon Creek to New Bullards Bar Reservoir. The following is the definition of the index and the procedure for determining the index for each water year.

$$\textbf{North Yuba Index} = Sa^{NBB} + I^{NBB}$$

Where:

Sa^{NBB} = New Bullards Bar Reservoir Active Storage

The New Bullards Bar Reservoir Active Storage for determining the current year North Yuba Index equals the actual recorded amount of water in storage in New Bullards Bar Reservoir on September 30th of the previous water year minus the Federal Energy Regulatory Commission Project License minimum pool amount of 234,000 acre-ft.

and:

I^{NBB} = Forecasted Total Annual Inflow To New Bullards Bar Reservoir

The Forecasted Total Annual Inflow To New Bullards Bar Reservoir shall be based on actual inflow to date to New Bullards Bar Reservoir, including the diversions from the Middle Yuba River and Oregon Creek plus forecasted inflow for the remainder of the water year, where such forecast is based on the Department of Water Resources 50%-exceedance forecast of unimpaired flow contained in Bulletin-120 at the beginning of each month from February until May or June, with periodic updates. The procedure for determining the Forecasted Total Annual Inflow To New Bullards Bar Reservoir is described in Exhibit 5, which is entitled "*Procedure for Calculating the Forecasted Total Annual Inflow Into New Bullards Bar Reservoir*".

Determination of the North Yuba Index for a water year shall be made based on 50%-exceedance estimates of unimpaired runoff as published in California Department of Water Resources Bulletin 120 beginning in February and updated in March, April and May, and any subsequent updates. The year type for the preceding water year shall remain in effect until the initial forecast of unimpaired runoff for the current year is available.

Exhibit 5
Procedure for Calculating the Forecasted Total Annual Inflow Into New Bullards Bar Reservoir To Calculate North Yuba Index

The forecasted total inflow into New Bullards Bar Reservoir shall be calculated starting in February and updated periodically, but no less than monthly, until May. If a June updated Bulletin 120 forecast or any post May 1 update is published by the Department of Water Resources, then an updated forecast of total inflow to New Bullards Bar Reservoir shall be calculated as described below.

The forecasted total inflow into New Bullards Bar Reservoir is based on two main components: (1) the actual measured inflow into New Bullards Bar Reservoir to date; plus (2) the Bulletin 120 based calculation of forecasted inflow for the remainder of the water year. The following formula shall be used to calculate the forecasted total inflow to New Bullards Bar Reservoir (NBBR):

I^{NBB} (TAF) = Total Actual Inflow to NBBR from October 1 to the end of $Month^{i-1}$ + Forecasted Inflow from the beginning of $Month^{i}$ to September 30

($Month^{i-1}$ is the previous month and $Month^{i}$ is the current month)

Where:

Total actual inflow to NBBR is the calculated inflow based on a daily summation of inflow for the month as follows:

Total Actual Inflow to NBBR (TAF) = Monthly change in stored water (TAF) + Monthly outflow (TAF)

and where:

The forecasted inflow from the beginning of $Month^{i}$ to September 30 is calculated using statistically derived linear coefficients applied to the measured inflow into New Bullards Bar reservoir and the Bulletin 120 published 50%-exceedance forecasts of unimpaired flow of the Yuba River at Goodyears Bar and at Smartville, and for the time periods identified in the following table:

Table 1. Coefficients For the Calculation of Forecasted New Bullards Bar Inflow (AF)

Forecast Month	Forecasted For:	Constant (C)	Total Actual Inflow to NBBR (C1)	Bulletin 120 Forecasted Smartville (C2)	Bulletin 120 Forecasted Goodyear's Bar (C3)
February	February	-2,146	0.01424	0.52533	
	March	-3,221	0.02458	0.54787	
	April-July	-30,416	0.01413	0.62473	-0.24081
	August-September	-	0.01593	0.64037	
March	March	-23,495	0.00596	0.55386	
	April-July	-31,134	0.01237	0.62162	-0.23266
	August-September	-	0.01473	0.59396	
April	April-July	-30,665	0.00547	0.61332	-0.19623
	August-September	-	0.01409	0.53241	
May	April-July	-31,652	0.01033	0.61645	-0.22353
	August-September	-	0.01298	0.50071	

For all subsequent forecast updates the May coefficients shall be used, with the forecasted Goodyears Bar runoff equaling 0.273 times the current forecasted Yuba River unimpaired flow at Smartville.

The following procedure shall be used to calculate the Forecasted New Bullards Bar Inflow:

The general formula for Forecasted New Bullards Bar Inflow is:

Forecasted NBB Inflow[i] = February NBB Inflow + March Inflow + April-July Inflow + August-September Inflow

Formula terms are only applicable as shown in Table 1. As an example, the March forecast does not include a term for forecasted February NBB Inflow. The following formulas shall be used to calculate the terms of the formula above using the corresponding coefficients from Table 1 *(Note terms are calculated in AF and the result is converted to TAF for use in the calculation of the Forecasted Total Inflow to New Bullards Bar (I^{NBB} (TAF))*:

February NBB Inflow = C + C1 x Total Actual Inflow to NBB + C2 x Forecasted Smartville$^{(February)}$

March NBB Inflow = C + C1 x Total Actual Inflow to NBB + C2 x Forecasted Smartville$^{(March)}$

April – July Inflow = C + C1 x Total Actual Inflow to NBB + C2 x Forecasted Smartville$^{(April - July)}$ + C3 x Forecasted Goodyears Bar$^{(April - July)}$

August - September Inflow = C1 x Total Actual Inflow to NBB + C2 x Forecasted Smartville$^{(August - September)}$

("Forecasted Smartville" is the DWR forecast for "Yuba River at Smartville Plus Deer Creek")

The May calculation of Forecasted NBB Inflow and subsequent updated calculations shall be reduced by the actual NBB inflow between April 1 and the calculation date.

<u>Example calculation of the North Yuba Index for February 1, 2003:</u>

Excerpt from February 2003 DWR Bulletin -120:

FEBRUARY 1, 2003 FORECASTS
APRIL-JULY UNIMPAIRED RUNOFF

HYDROLOGIC REGION and Watershed	Unimpaired Runoff in 1,000 Acre-Feet					
	HISTORICAL			FORECAST		
	50 Yr Avg	Max of Record	Min of Record	Apr-Jul Forecasts	Pct of Avg	80 % Probability Range
Yuba River						
North Yuba below Goodyears Bar	286	647	51	240	84%	
Yuba River at Smartville Plus Deer Creek	1,044	2,424	200	900	86%	510-1,560

FEBRUARY 1, 2003 FORECASTS (CONT'D)
WATER YEAR UNIMPAIRED RUNOFF

Unimpaired Runoff in 1,000 Acre-Feet													
HISTORICAL			DISTRIBUTION								FORECAST		
50 Yr Avg	Max of Record	Min of Record	Oct Thru Jan*	Feb	Mar	Apr	May	Jun	Jul	Aug & Sep	Water Year Forecasts	Pct of Avg	80% Probability Range
564	1,056	102											
2,459	4,926	369	675	255	300	360	380	130	30	30	2,160	88%	1,510-3260

*Unimpaired runoff in prior months based on measured flows

From the published Bulletin-120 information, and from historical gaged date for New Bullards Bar Reservoir, the North Yuba Index can be calculated as follows:

1) The end-of-September 2002 New Bullards Bar Reservoir Storage (from USGS gage number 11413515) is 532,088 acre-feet.

2) From end-of-October, November, December, and January New Bullards Bar storage figures and monthly reservoir releases (from USGS gages 11413510 and 11413520), the total inflow to New Bullards Bar between October 1, 2002 and January 31, 2003 is 387,302 acre-feet.

3) Using the B-120 information and the inflow to date, the forecasted February inflow is calculated as follows:

   Inflow = C + C1*(Oct-Jan Inflow) + C2*(B120 Forecasted Flow at Smartville for February)

   Forecasted February Inflow = -2,146 + 0.01424 (387,302) + 0.52533 (255,000) = 137,328 acre-feet

4) The forecasted March inflow is calculated as follows:

   Inflow = C + C1*(Oct-Jan inflow) + C2*(B120 Forecasted Flow at Smartville for March)

   Forecasted March Inflow = -3,221 + 0.02458 * (387,302) + 0.54787 * 300,000 = 170,660 acre-feet

5) The forecasted April-July inflow is calculated as follows:

   Inflow = C + C1*(Oct-Jan Inflow) + C2*(B120 Forecasted Flow at Smartville for April-July) + C3*(Forecasted Flow at Goodyear's Bar for April-July)

   Forecasted April-July Inflow = -30,416 + 0.01413 * (387,302) + 0.62473 * (900,000) + -0.24081 * (240,000) = 479,519 acre-feet

6) The August and September inflows are calculated as follows:

   Inflow = C1*(Oct-Jan Inflow) + C2*(Forecasted flow at Smartville for August and September)

   Forecasted August and September Inflow = 0.01593 * (387,302) + 0.64037 * (30,000) = 25,381 acre-feet

7) The North Yuba Index for 2003, as calculated for February 1, 2003, is:

Active NBB Storage + Actual Inflow (Oct – Jan) +forecasted Feb Inflow + forecasted Mar Inflow + forecasted Apr-Jul Inflow + forecasted Aug-Sept Inflow =

(532,088-234,000) + 387,302 + 137,328 + 170,660 + 479,519 + 25,381 = 1,498,278 acre-feet = **Index Number of 1498 which is a Schedule 1 year**

<u>Example calculation of the North Yuba Index for May 1, 1999:</u>

Excerpt from May 1999 DWR Bulletin -120:

May 1, 1999 FORECASTS
APRIL-JULY UNIMPAIRED RUNOFF

HYDROLOGIC REGION and Watershed	Unimpaired Runoff in 1,000 Acre-Feet					
	HISTORICAL			FORECAST		
	50 Yr Avg	Max of Record	Min of Record	Apr-Jul Forecasts	Pct of Avg	80 % Probability Range
Yuba River						
North Yuba below Goodyears Bar	286	647	51	330	115%	
Yuba River at Smartville Plus Deer Creek	1,029	2,424	200	1,200	117%	1,090-1,360

May 1, 1999 FORECASTS (CONT'D)
WATER YEAR UNIMPAIRED RUNOFF

Unimpaired Runoff in 1,000 Acre-Feet													
HISTORICAL			DISTRIBUTION								FORECAST		
50 Yr Avg	Max of Record	Min of Record	Oct Thru Jan*	Feb *	Mar *	Apr *	May	Jun	Jul	Aug & Sep	Water Year Forecasts	Pct of Avg	80% Probability Range
564	1,056	102											
2,337	4,926	369	720	520	350	305	510	310	75	55	2,845	122%	2,720-3,030

*Unimpaired runoff in prior months based on measured flows

From this information and historic information, the North Yuba Index can be calculated as follows:

1) The end-of-September 1998 New Bullards Bar Reservoir Storage (from USGS gage number 11413515) is 708,904 acre-feet.

2) From end-of-October, November, December, January, February, March and April New Bullards Bar storage and monthly reservoir releases (from USGS gages 11413510 and 11413520), the total inflow to New Bullards Bar between October 1, 1998 and April 30 1999 is 1,098,591 acre-feet.

3) Using the B-120 information and the inflow to date the forecasted April - July inflow is calculated as follows:

Inflow = C + C1*(Oct-April Inflow) + C2*(B120 Forecasted Flow at Smartville for April-July) + C3*(Forecasted Flow at Goodyear's Bar for April-July)

Forecasted April-July Inflow = -31,652 + 0.01033 * (1,098,591) + 0.61645 * (1,200,000) + -0.22353 * (55,000) = 707,142 acre-feet.

4) The August and September inflows are calculated as follows:

Inflow = C1*(Oct-April Inflow) + C2*(Forecasted flow at Smartville for August and September)

Forecasted August and September Inflow = 0.01298 * (1,098,591) + 0.50071 * (55,000) = 41,799 acre-feet

5) The North Yuba Index for May 1, 1999, is calculated as follows:

Active NBB Storage + Actual Inflow (Oct – April) + forecasted Apr-Jul Inflow + forecasted Aug-Sept Inflow – Actual April Inflow =

(708,904-234,000) + 1,098,591 + 707,142 + 41,799 – 182,647 = 2,139,789 acre-feet = **Index Number of 2140 which is a Schedule 1 year**

Exhibit 6. Predicted Occurrences of Flow Schedules

Schedule	North Yuba Index (TAF)	Percent Occurrence	Cumulative
1	≧1,400	56%	56%
2	1,040 to 1,400	22%	78%
3	920 to 1,040	7%	85%
4	820 to 920	5%	90%
5	693 to 820	5%	95%
6	500 to 693	4%	99%
Conference	<500	1%	100%

Exhibit 7. Proposed Changes To RD-1644, Pages 173-176, Paragraph 1 of Order to YCWA (Track Changes)

Yuba County Water Agency

Permits 15026, 15027, and 15030 of Yuba County Water Agency are amended to include the following terms:

1. For the protection of fish and other public trust resources in the lower Yuba River, permittee shall release or bypass sufficient water to maintain the following instream flows in the lower Yuba River. The minimum flow requirements shall be maintained as measured by a 5-day running average of average daily streamflows with instantaneous flows never less than 90 percent of the specified flow requirements.

    a. Effective immediately upon adoption of this order, ~~Beginning April 21 of 2006,~~ streamflow shall be maintained at or above the flows specified in the following table as measured at the USGS gaging installations at Marysville and Smartville:

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[Replace with table on page 4]

~~Long-Term Instream Flow Requirements~~

~~Periods~~	~~Wet, Above Normal & Below Normal Years (cfs)~~		~~Dry Years (cfs)~~		~~Critical Years (cfs)~~		~~Extreme Critical Years* (cfs)~~	
	~~Smartville Gage~~	~~Marysville Gage~~	~~Smartville Gage~~	~~Marysville Gage~~	~~Smartville Gage~~	~~Marysville Gage~~	~~Smartville Gage~~	~~Marysville Gage~~
~~Sept. 15 – Oct 14~~	~~700~~	~~250~~	~~500~~	~~250~~	~~400~~	~~250~~	~~400~~	~~250~~
~~Oct 15 – Apr 20~~	~~700~~	~~500~~	~~600~~	~~400~~	~~600~~	~~400~~	~~600~~	~~400~~
~~Apr 21 – Apr 30~~	~~–~~	~~1,000~~	~~–~~	~~1,000~~	~~–~~	~~1,000~~	~~–~~	~~500~~
~~May 1 – May 31~~	~~–~~	~~1,500~~	~~–~~	~~1,500~~	~~–~~	~~1,100~~	~~–~~	~~500~~
~~Jun 1~~	~~–~~	~~1,050~~	~~–~~	~~1,050~~	~~–~~	~~800~~	~~–~~	~~500~~
~~Jun 2~~	~~–~~	~~800~~	~~–~~	~~800~~	~~–~~	~~800~~	~~–~~	~~500~~
~~Jun 3 – Jun 30~~	~~–~~	~~800~~	~~–~~	~~800~~	~~–~~	~~800~~	~~–~~	~~500~~
~~Jul 1~~	~~–~~	~~560~~	~~–~~	~~560~~	~~–~~	~~560~~	~~–~~	~~500~~
~~Jul 2~~	~~–~~	~~390~~	~~–~~	~~390~~	~~–~~	~~390~~	~~–~~	~~390~~
~~Jul 3~~	~~–~~	~~280~~	~~–~~	~~280~~	~~–~~	~~280~~	~~–~~	~~280~~
~~Jul 4 – Sept. 14~~	~~–~~	~~250~~	~~–~~	~~250~~	~~–~~	~~250~~	~~–~~	~~250~~

~~*"Extreme Critical" year classifications is defined as: Equal to or less than 540 TAF on the Yuba River Index scale.~~

b. For purposes of this order, wet, above normal, below normal, dry, ~~and~~ critical and conference water year types in the table above are as defined in the North Yuba ~~River~~ Index. (See Appendix 1.) ~~Extreme critical water years are defined as years when the Yuba River Index is predicted to be less than 540 thousand acre-feet.~~ Determinations of water year classifications shall be made each year within 5 days for the release of the February 1, March 1, April 1, and May 1 forecasts of unimpaired flow of the Yuba River at Smartville published in California Department of Water Resources Bulletin 120 and any subsequent forecast published by the Department of Water Resources. The final year type for the preceding water year shall remain in effect until the February 1 forecast for the current year is available. If the water year type classification would change based on information available from any Department of Water Resources forecast, then the flow requirements in effect from the time the forecast is available shall remain in effect until the following forecast becomes available. Any changes in flows due to a change in water year classification shall be made in accordance with the criteria specified in permittee's Federal Power Act license. ~~condition 3 on pages 177 and 178 of Decision 1644.~~

c. ~~In order to avoid potential aggravation of the electrical energy crisis in California present in early 2001, the flows specified above in part "a". of this term shall come into effect on April 21, 2006. In the interim period, streamflow shall be maintained at or above the flows specified in the following table as measured at the USGS gaging installations at Marysville and Smartville.~~

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~~Interim~~ Instream Flow Requirements

Period	Wet & Above Normal Years (cfs)		Below Normal Years (cfs)		Dry Years (cfs)	
	Smartville Gage	Marysville Gage	Smartville Gage	Marysville Gage	Smartville Gage	Marysville Gage
Sep15-Oct 14	700	250	550	250	500	250
Oct 15-Apr 20	700	500	700	500	600	400
Apr21-Apr 30	--	1,000	--	~~900~~800	--	400
May1-May 31	--	1,500	--	~~1,500~~1,000	--	500
Jun 1	--	1,050	--	~~1,050~~800	--	400
Jun 2-Jun 30	--	800	--	~~800~~800/500[1]	--	400
Jul 1	--	560	--	560	--	280
Jul 2	--	390	--	390	--	250
Jul 3	--	280	--	280	--	250
Jul 4-Sep 14	--	250	--	250	--	250
Period	Critical Years (cfs)		Conference Years			
	Smartville Gage	Marysville Gage	(See Note 3)			
Sep 15-Oct 1	400	150				
Oct 1-Oct 14	400	250				
Oct 15-Apr 20	600	~~400~~350				
Apr 21	--	280				
Apr22-Apr30	--	270				
May 1-May 31	--	270				
Jun 1-July 2	--	(See Note 2)				
July 3-Sep 14	--	100				

Table Notes:

1. June 2 - June 15/June 16 - June 30.
2. The interim instream flow requirements for June 1-30 of critical years shall be 245 cfs pursuant to the provisions of the agreement between Yuba County Water Agency and the Department of Fish and Game dated September 2, 1965, except if a lower flow is allowed pursuant to the provisions of the 1965 agreement. The minimum flow on July 2 shall be 70 percent of the flow on July 1.
3. The instream flow requirements for conference years shall be the applicable requirements specified in the agreement between Yuba County Water Agency and the Department of Fish and Game dated September 2, 1965, without the reductions authorized by section 1.6 of that agreement.

c. If, at any time during the term of the Lower Yuba River Fisheries Agreement among the Yuba County Water Agency, the California Department of Fish and Game, the South Yuba Citizens League, Friends of the River, Trout Unlimited and the Bay Institute, that agreement is terminated early (before the Federal Energy Regulatory Commission issues a new long-term license for the Yuba Development Project), then the following instream-flow requirements shall go into effect:

Marysville Gage (cfs)

Schedule	OCT		NOV	DEC	JAN	FEB	MAR	APR		MAY		JUN		JUL	AUG	SEP
	1-15	16-31	1-30	1-31	1-31	1-29	1-31	1-15	16-30	1-15	16-31	1-15	16-30	1-31	1-31	1-30
1	500	500	500	500	500	500	700	1000	1000	2000	2000	1500	1500	700	600	500
2	500	500	500	500	500	500	700	700	800	1000	1000	800	500	500	500	500
3	500	500	500	500	500	500	500	700	700	900	900	500	500	500	500	500
4	400	400	500	500	500	500	500	600	900	900	600	400	400	400	400	400
5	400	400	500	500	500	500	500	500	600	600	400	400	400	400	400	400
6	350	350	350	350	350	350	350	350	500	500	400	300	150	150	150	350

Smartville Gage (cfs)

Schedule	OCT		NOV	DEC	JAN	FEB	MAR	APR		MAY		JUN		JUL	AUG	SEP
	1-15	16-31	1-30	1-31	1-31	1-29	1-31	1-15	16-30	1-15	16-31	1-15	16-30	1-31	1-31	1-30
A	700	700	700	700	700	700	700	700	-	-	-	-	-	-	-	700
B	600	600	600	550	550	550	550	600	-	-	-	-	-	-	-	500

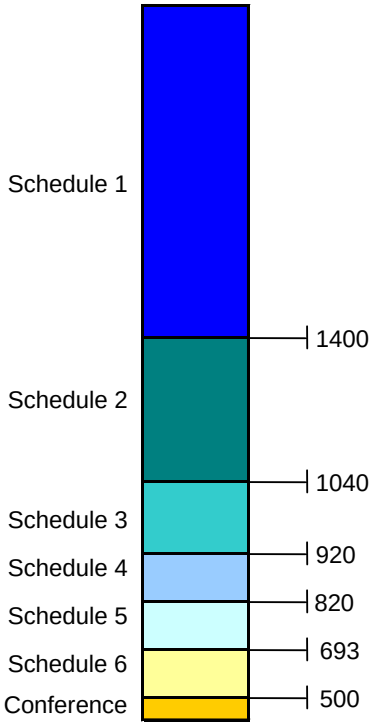
* Schedule A used with Schedules 1, 2, 3 and 4 at Marysville.

* Schedule B used with Schedules 5 and 6 at Marysville.

Conference Year: applicable schedules specified in agreement between Yuba County Water Agency and the Department of Fish and Game dated September 2, 1965, without the reductions authorized by section 1.6 of that agreement.

The applicable schedules in these instream-flow requirements shall be determined by the following values of the North Yuba Index, subject to the following dry year storage adjustment:

Flow Schedule Year Type	North Yuba Index Thousand Acre-Feet (TAF)
Schedule 1	Equal to or greater than 1400
Schedule 2	Equal to or greater than 1040 and less than 1400
Schedule 3	Equal to or greater than 920 and less than 1040
Schedule 4	Equal to or greater than 820 and less than 920
Schedule 5	Equal to or greater than 693 and less than 820
Schedule 6	Equal to or greater than 500 and less than 693
Conference Year	Less than 500



Dry Year Storage Adjustment

- In some dry years with Schedule 5 instream-flow requirements, the September 30 New Bullards Bar Reservoir storage may be very low.

- To ensure sufficient carryover storage in the event of a subsequent very dry year, a dry-year storage adjustment will be made.

- The dry-year storage adjustment will be made as follows:

  - If the September 30 New Bullards Bar Reservoir storage is less than 400,000 acre-feet, then the Marysville Gage instream-flow requirement will be 400 cfs from October 1 until the next February Bulletin 120 forecasts are available.

  - If the September 30 New Bullards Bar Reservoir storage is less than 450,000 acre-feet but greater than or equal to 400,000 acre-feet, then, the Chief of the Division of Water Rights may, after receiving a request from permittee and giving other interested parties an opportunity to comment, adjust the Marysville Gage instream-flow requirement to 400 cfs from October 1 until the next February Bulletin 120 forecasts are available.

    - When the next February Bulletin 120 forecasts are available, the instream-flow requirements will be based on those forecasts.

d. All of the preceding instream-flow requirements will be superseded and replaced by the instream-flow requirements in the new long-term Federal Power Act license that the Federal Energy Regulatory Commission issues for the Yuba River Development Project, when that new license goes into effect.

Exhibit 8. Proposed Changes To RD-1644, Pages 173-176, Paragraph 1 of Order to YCWA ("Clean" Draft)

Yuba County Water Agency

Permits 15026, 15027, and 15030 of Yuba County Water Agency are amended to include the following terms:

1. For the protection of fish and other public trust resources in the lower Yuba River, permittee shall release or bypass sufficient water to maintain the following instream flows in the lower Yuba River. The minimum flow requirements shall be maintained as measured by a 5-day running average of average daily streamflows with instantaneous flows never less than 90 percent of the specified flow requirements.

    a. Effective immediately upon adoption of this order, streamflow shall be maintained at or above the flows specified in the following table as measured at the USGS gaging installations at Marysville and Smartville:

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Instream Flow Requirements

Period	Wet & Above Normal Years (cfs)		Below Normal Years (cfs)		Dry Years (cfs)	
	Smartville Gage	Marysville Gage	Smartville Gage	Marysville Gage	Smartville Gage	Marysville Gage
Sep15-Oct 14	700	250	550	250	500	250
Oct 15-Apr 20	700	500	700	500	600	400
Apr21-Apr 30	--	1,000	--	800	--	400
May1-May 31	--	1,500	--	1,000	--	500
Jun 1	--	1,050	--	800	--	400
Jun 2-Jun 30	--	800	--	800/500'	--	400
Jul 1	--	560	--	560	--	280
Jul 2	--	390	--	390	--	250
Jul 3	--	280	--	280	--	250
Jul 4-Sep 14	--	250	--	250	--	250
Period	Critical Years (cfs)		Conference Years			
	Smartville Gage	Marysville Gage				
Sep 15-Oct 1	400	150	(See Note 3)			
Oct 1-Oct 14	400	250				
Oct 15-Apr 20	600	350				
Apr 21	--	280				
Apr22-Apr30	--	270				
May 1-May 31	--	270				
Jun 1-July 2	--	(See Note 2)				
July 3-Sep 14	--	100				

Table Notes:

1. June 2 - June 15/June 16 - June 30.
2. The interim instream flow requirements for June 1-30 of critical years shall be 245 cfs pursuant to the provisions of the agreement between Yuba County Water Agency and the Department of Fish and Game dated September 2, 1965, except if a lower flow is allowed pursuant to the provisions of the 1965 agreement. The minimum flow on July 2 shall be 70 percent of the flow on July 1.
3. The instream flow requirements for conference years shall be the applicable requirements specified in the agreement between Yuba County Water Agency and the Department of Fish and Game dated September 2, 1965, without the reductions authorized by section 1.6 of that agreement.

b. For purposes of this order, wet, above normal, below normal, dry, critical and conference water year types in the table above are as defined in the North Yuba Index. (See Appendix 1.) Determinations of water year classifications shall be made each year within 5 days for the release of the February 1, March 1, April 1, and May 1 forecasts of unimpaired flow of the Yuba River at Smartville published in California Department of Water Resources Bulletin 120 and any subsequent forecast published by the Department of Water Resources. The final year type for the preceding water year shall remain in effect until the February 1 forecast for the current year is available. If the water year type classification would

change based on information available from any Department of Water Resources forecast, then the flow requirements in effect from the time the forecast is available shall remain in effect until the following forecast becomes available. Any changes in flows due to a change in water year classification shall be made in accordance with the criteria specified in permittee's Federal Power Act license.

c. If, at any time during the term of the Lower Yuba River Fisheries Agreement among the Yuba County Water Agency, the California Department of Fish and Game, the South Yuba Citizens League, Friends of the River, Trout Unlimited and the Bay Institute, that agreement is terminated early (before the Federal Energy Regulatory Commission issues a new long-term Federal Power license for the Yuba River Development Project), then the following instream-flow requirements shall go into effect:

Marysville Gage (cfs)

Schedule	OCT		NOV	DEC	JAN	FEB	MAR	APR		MAY		JUN		JUL	AUG	SEP
	1-15	16-31	1-30	1-31	1-31	1-29	1-31	1-15	16-30	1-15	16-31	1-15	16-30	1-31	1-31	1-30
1	500	500	500	500	500	500	700	1000	1000	2000	2000	1500	1500	700	600	500
2	500	500	500	500	500	500	700	700	800	1000	1000	800	500	500	500	500
3	500	500	500	500	500	500	500	700	700	900	900	500	500	500	500	500
4	400	400	500	500	500	500	500	600	900	900	600	400	400	400	400	400
5	400	400	500	500	500	500	500	500	600	600	400	400	400	400	400	400
6	350	350	350	350	350	350	350	350	500	500	400	300	150	150	150	350

Smartville Gage (cfs)

Schedule	OCT		NOV	DEC	JAN	FEB	MAR	APR		MAY		JUN		JUL	AUG	SEP
	1-15	16-31	1-30	1-31	1-31	1-29	1-31	1-15	16-30	1-15	16-31	1-15	16-30	1-31	1-31	1-30
A	700	700	700	700	700	700	700	700	-	-	-	-	-	-	-	700
B	600	600	600	550	550	550	550	600	-	-	-	-	-	-	-	500

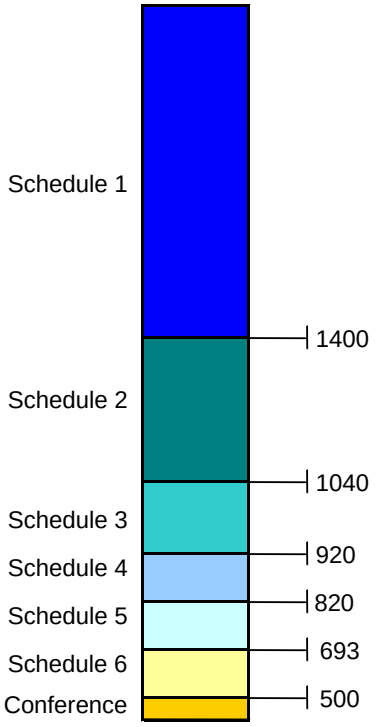
* Schedule A used with Schedules 1, 2, 3 and 4 at Marysville.

* Schedule B used with Schedules 5 and 6 at Marysville.

Conference Year: applicable schedules specified in agreement between Yuba County Water Agency and the Department of Fish and Game dated September 2, 1965, without the reductions authorized by section 1.6 of that agreement.

The applicable schedules in these instream-flow requirements shall be determined by the following values of the North Yuba Index, subject to the following dry year storage adjustment:

Flow Schedule Year Type	North Yuba Index Thousand Acre-Feet (TAF)
Schedule 1	Equal to or greater than 1400
Schedule 2	Equal to or greater than 1040 and less than 1400
Schedule 3	Equal to or greater than 920 and less than 1040
Schedule 4	Equal to or greater than 820 and less than 920
Schedule 5	Equal to or greater than 693 and less than 820
Schedule 6	Equal to or greater than 500 and less than 693
Conference Year	Less than 500



Dry Year Storage Adjustment

- In some dry years with Schedule 5 instream-flow requirements, the September 30 New Bullards Bar Reservoir storage may be very low.
- To ensure sufficient carryover storage in the event of a subsequent very dry year, a dry-year storage adjustment will be made.
- The dry-year storage adjustment will be made as follows:

- If the September 30 New Bullards Bar Reservoir storage is less than 400,000 acre-feet, then the Marysville Gage instream-flow requirement will be 400 cfs from October 1 until the next February Bulletin 120 forecasts are available.

- If the September 30 New Bullards Bar Reservoir storage is less than 450,000 acre-feet but greater than or equal to 400,000 acre-feet, then, the Chief of the Division of Water Rights may, after receiving a request from

permittee and giving other interested parties an opportunity to comment, adjust the Marysville Gage instream-flow requirement to 400 cfs from October 1 until the next February Bulletin 120 forecasts are available.

- When the next February Bulletin 120 forecasts are available, the instream-flow requirements will be based on those forecasts.

d. All of the preceding instream-flow requirements will be superseded and replaced by the instream-flow requirements in the new long-term Federal Power Act license that the Federal Energy Regulatory Commission issues for the Yuba River Development Project, when that new license goes into effect.

Exhibit 9. Changes To Appendix 1 Of RD-1644

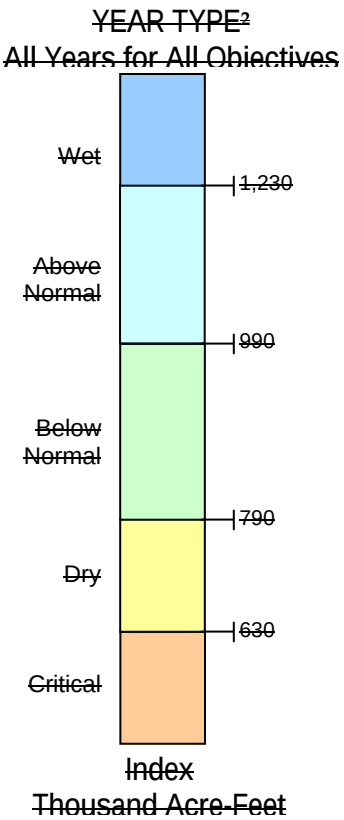
APPENDIX 1
~~DEFINITION OF YUBA RIVER INDEX~~

~~The water year hydrologic classification for the Yuba River shall be determined by the following equation:~~

~~**INDEX = 0.5·X + 0.3·Y + 0.2·Z**~~

~~Where~~ ~~**X**~~ = ~~Current year's April-July Yuba River unimpaired runoff~~
~~**Y**~~ = ~~Current year's October-March Yuba River unimpaired runoff~~
~~**Z**~~ = ~~Previous year's index.~~[2]

~~The Yuba River unimpaired runoff for the current water year (October 1 of the preceding calendar year through September 30 of the current calendar year), as published in California Department of Water Resources Bulletin 120, is a forecast of the unimpaired flow of the Yuba River at Smartville. Preliminary determinations of a year's classification shall be made in February, March, and April, with the final determination in May. These preliminary determinations shall be based on hydrologic conditions to date plus forecasts of future runoff, assuming normal precipitation for the remainder of the water year.~~



~~**Classification**~~	~~**Index Thousand Acre-Feet (TAF)**~~
~~**Wet**~~.....	~~Equal to or greater than 1,230~~
~~**Above Normal**~~...	~~Greater than 990 and less than 1,230~~
~~**Below Normal**~~ ...	~~Equal to or less than 990 and greater than 790~~
~~**Dry**~~.....	~~Equal to or less than 790 and greater than 630~~
~~**Critical**~~	~~Equal to or less than 630~~

~~[2] A cap of 1,400 TAF is imposed on the previous year's index to account for required flood control reservoir releases during wet years.~~

~~[3] The year type for the preceding water year will remain in effect until the initial forecast of unimpaired runoff for the current year is available.~~

DEFINITION OF THE
NORTH YUBA INDEX

The North Yuba Index is an indicator of the amount of water available in the North Yuba River at New Bullards Bar Reservoir that can be utilized to achieve flows on the Lower Yuba River through operations of New Bullards Bar Reservoir. The index is comprised of two components: (1) active storage in New Bullards Bar Reservoir at the commencement of the current water year: and (2) total inflow to New Bullards Bar Reservoir for the current water year, including diversions from the Middle Yuba River and Oregon Creek to New Bullards Bar Reservoir. The following is the definition of the index and the procedure for determining the index for each water year.

$$\textbf{North Yuba Index} = Sa^{NBB} + I^{NBB}$$

Where:

Sa^{NBB} = New Bullards Bar Reservoir Active Storage

The New Bullards Bar Reservoir Active Storage for determining the current year North Yuba Index equals the actual recorded amount of water in storage in New Bullards Bar Reservoir on September 30th of the previous water year minus the Federal Energy Regulatory Commission Project License minimum pool amount of 234,000 acre-ft.

and:

I^{NBB} = Forecasted Total Annual Inflow To New Bullards Bar Reservoir

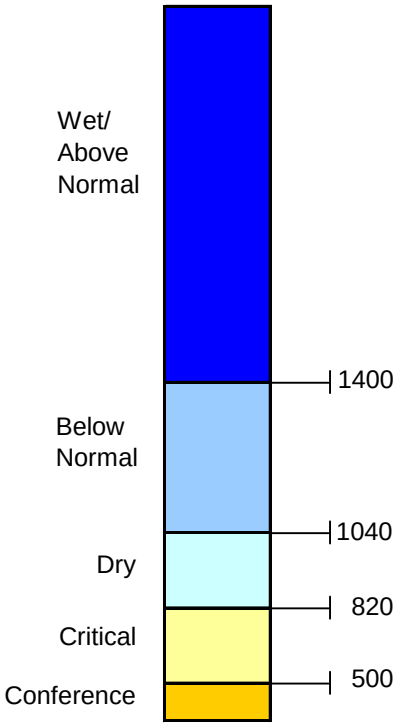
The Forecasted Total Annual Inflow To New Bullards Bar Reservoir shall be based on actual inflow to date to New Bullards Bar Reservoir, including the diversions from the Middle Yuba River and Oregon Creek plus forecasted inflow for the remainder of the water year, where such forecast is based on the Department of Water Resources 50%-exceedance forecast of unimpaired flow contained in Bulletin-120 at the beginning of each month from February until May or June, with periodic updates. The procedure for determining the Forecasted Total Annual Inflow To New Bullards Bar Reservoir is described in the section of this document entitled "*Procedure for Calculating the Forecasted Total Annual Inflow Into New Bullards Bar Reservoir*".

Determination of the North Yuba Index for a water year shall be made based on 50%-exceedance estimates of unimpaired runoff as published in California Department of Water Resources Bulletin 120 beginning in February and updated in March, April and May, and any subsequent updates. The year type for the preceding water year shall remain in effect until the initial forecast of unimpaired runoff for the current year is available.

YUBA RIVER WATER YEAR CLASSIFICATIONS
BASED ON THE NORTH YUBA INDEX
FOR ESTABLISHING REQUIRED FLOWS

The water year hydrologic classification for the Yuba River to determine the minimum instream flow requirements of Yuba County Water Agency's water right permits shall be based on the North Yuba Index. Determinations of a year's classification shall be made in February, March, April, and May and for any subsequent updates.

Year Type Classification	North Yuba Index Thousand Acre-Feet (TAF)
Wet and Above Normal	Equal to or greater than 1400
Below Normal	Equal to or greater than 1040 and less than 1400
Dry	Equal to or greater than 820 and less than 1040
Critical	Equal to or greater than 500 and less than 820
Conference Year	Less than 500



Procedure for Calculating the Forecasted Total Annual Inflow Into New Bullards Bar Reservoir

The forecasted total inflow into New Bullards Bar Reservoir shall be calculated starting in February and updated periodically, but no less than monthly, until May. If a June updated Bulletin 120 forecast or any post May 1 update is published by the Department of Water Resources, then an updated forecast of total inflow to New Bullards Bar Reservoir shall be calculated as described below.

The forecasted total inflow into New Bullards Bar Reservoir is based on two main components: (1) the actual measured inflow into New Bullards Bar Reservoir to date; plus (2) the Bulletin 120 based calculation of forecasted inflow for the remainder of the water year. The following formula shall be used to calculate the forecasted total inflow to New Bullards Bar Reservoir (NBBR):

I^{NBB} (TAF) = Total Actual Inflow to NBBR from October 1 to the end of $Month^{i-1}$
+ Forecasted Inflow from the beginning of $Month^{i}$ to September 30
($Month^{i-1}$ is the previous month and $Month^{i}$ is the current month)

Where:

Total actual inflow to NBBR is the calculated inflow based on a daily summation of inflow for the month as follows:

Total Actual Inflow to NBBR (TAF) = Monthly change in stored water (TAF) + Monthly outflow (TAF)

and where:

The forecasted inflow from the beginning of $Month^{i}$ to September 30 is calculated using statistically derived linear coefficients applied to the measured inflow into New Bullards Bar reservoir and the Bulletin 120 published 50%-exceedance forecasts of unimpaired flow of the Yuba River at Goodyears Bar and at Smartville, and for the time periods identified in the following table:

Table 1. Coefficients For the Calculation of Forecasted New Bullards Bar Inflow (AF)

Forecast Month	Forecasted For:	Constant (C)	Total Actual Inflow to NBBR (C1)	Bulletin 120 Forecasted Smartville (C2)	Bulletin 120 Forecasted Goodyear's Bar (C3)
February	February	-2,146	0.01424	0.52533	
	March	-3,221	0.02458	0.54787	
	April-July	-30,416	0.01413	0.62473	-0.24081
	August-September	-	0.01593	0.64037	
March	March	-23,495	0.00596	0.55386	
	April-July	-31,134	0.01237	0.62162	-0.23266
	August-September	-	0.01473	0.59396	
April	April-July	-30,665	0.00547	0.61332	-0.19623
	August-September	-	0.01409	0.53241	
May	April-July	-31,652	0.01033	0.61645	-0.22353

	August-September	-	0.01298	0.50071	

For all subsequent forecast updates the May coefficients shall be used, with the forecasted Goodyears Bar runoff equaling 0.273 times the current forecasted Yuba River unimpaired flow at Smartville.

The following procedure shall be used to calculate the Forecasted New Bullards Bar Inflow:

The general formula for Forecasted New Bullards Bar Inflow is:

Forecasted NBB Inflow[i] = February NBB Inflow + March Inflow + April-July Inflow + August-September Inflow

Formula terms are only applicable as shown in Table 1. As an example, the March forecast does not include a term for forecasted February NBB Inflow. The following formulas shall be used to calculate the terms of the formula above using the corresponding coefficients from Table 1 *(Note terms are calculated in AF and the result is converted to TAF for use in the calculation of the Forecasted Total Inflow to New Bullards Bar (I^{NBB} (TAF))*:

February NBB Inflow = C + C1 x Total Actual Inflow to NBB + C2 x Forecasted Smartville$^{(February)}$

March NBB Inflow = C + C1 x Total Actual Inflow to NBB + C2 x Forecasted Smartville$^{(March)}$

April – July Inflow = C + C1 x Total Actual Inflow to NBB + C2 x Forecasted Smartville$^{(April - July)}$ + C3 x Forecasted Goodyears Bar$^{(April - July)}$

August - September Inflow = C1 x Total Actual Inflow to NBB + C2 x Forecasted Smartville$^{(August - September)}$

("Forecasted Smartville" is the DWR forecast for "Yuba River at Smartville Plus Deer Creek")

The May calculation of Forecasted NBB Inflow and subsequent updated calculations shall be reduced by the actual NBB inflow between April 1 and the calculation date.

<u>Example calculation of the North Yuba Index for February 1, 2003:</u>

Excerpt from February 2003 DWR Bulletin -120:

FEBRUARY 1, 2003 FORECASTS
APRIL-JULY UNIMPAIRED RUNOFF

HYDROLOGIC REGION and Watershed	Unimpaired Runoff in 1,000 Acre-Feet					
	HISTORICAL			FORECAST		
	50 Yr Avg	Max of Record	Min of Record	Apr-Jul Forecasts	Pct of Avg	80 % Probability Range
Yuba River						
North Yuba below Goodyears Bar	286	647	51	240	84%	
Yuba River at Smartville Plus Deer Creek	1,044	2,424	200	900	86%	510-1,560

FEBRUARY 1, 2003 FORECASTS (CONT'D)
WATER YEAR UNIMPAIRED RUNOFF

Unimpaired Runoff in 1,000 Acre-Feet													
HISTORICAL			DISTRIBUTION								FORECAST		
50 Yr Avg	Max of Record	Min of Record	Oct Thru Jan*	Feb	Mar	Apr	May	Jun	Jul	Aug & Sep	Water Year Forecasts	Pct of Avg	80% Probability Range
564	1,056	102											
2,459	4,926	369	675	255	300	360	380	130	30	30	2,160	88%	1,510-3260

*Unimpaired runoff in prior months based on measured flows

From the published Bulletin-120 information, and from historical gaged date for New Bullards Bar Reservoir, the North Yuba Index can be calculated as follows:

1) The end-of-September 2002 New Bullards Bar Reservoir Storage (from USGS gage number 11413515) is 532,088 acre-feet.

2) From end-of-October, November, December, and January New Bullards Bar storage figures and monthly reservoir releases (from USGS gages 11413510 and 11413520), the total inflow to New Bullards Bar between October 1, 2002 and January 31, 2003 is 387,302 acre-feet.

3) Using the B-120 information and the inflow to date, the forecasted February inflow is calculated as follows:

   Inflow = C + C1*(Oct-Jan Inflow) + C2*(B120 Forecasted Flow at Smartville for February)

   Forecasted February Inflow = -2,146 + 0.01424 (387,302) + 0.52533 (255,000) = 137,328 acre-feet

4) The forecasted March inflow is calculated as follows:

   Inflow = C + C1*(Oct-Jan inflow) + C2*(B120 Forecasted Flow at Smartville for March)

   Forecasted March Inflow = -3,221 + 0.02458 * (387,302) + 0.54787 * 300,000 = 170,660 acre-feet

5) The forecasted April-July inflow is calculated as follows:

   Inflow = C + C1*(Oct-Jan Inflow) + C2*(B120 Forecasted Flow at Smartville for April-July) + C3*(Forecasted Flow at Goodyear's Bar for April-July)

   Forecasted April-July Inflow = -30,416 + 0.01413 * (387,302) + 0.62473 * (900,000) + -0.24081 * (240,000) = 479,519 acre-feet

6) The August and September inflows are calculated as follows:

   Inflow = C1*(Oct-Jan Inflow) + C2*(Forecasted flow at Smartville for August and September)

   Forecasted August and September Inflow = 0.01593 * (387,302) + 0.64037 * (30,000) = 25,381 acre-feet

7) The North Yuba Index for 2003, as calculated for February 1, 2003, is:

Active NBB Storage + Actual Inflow (Oct – Jan) +forecasted Feb Inflow + forecasted Mar Inflow + forecasted Apr-Jul Inflow + forecasted Aug-Sept Inflow =

(532,088-234,000) + 387,302 + 137,328 + 170,660 + 479,519 + 25,381 = 1,498,278 acre-feet = **Index Number of 1498 which is a Wet/Above Normal year**

<u>Example calculation of the North Yuba Index for May 1, 1999:</u>

Excerpt from May 1999 DWR Bulletin -120:

May 1, 1999 FORECASTS
APRIL-JULY UNIMPAIRED RUNOFF

HYDROLOGIC REGION and Watershed	Unimpaired Runoff in 1,000 Acre-Feet					
	HISTORICAL			FORECAST		
	50 Yr Avg	Max of Record	Min of Record	Apr-Jul Forecasts	Pct of Avg	80 % Probability Range
Yuba River						
North Yuba below Goodyears Bar	286	647	51	330	115%	
Yuba River at Smartville Plus Deer Creek	1,029	2,424	200	1,200	117%	1,090-1,360

May 1, 1999 FORECASTS (CONT'D)
WATER YEAR UNIMPAIRED RUNOFF

Unimpaired Runoff in 1,000 Acre-Feet													
HISTORICAL			DISTRIBUTION								FORECAST		
50 Yr Avg	Max of Record	Min of Record	Oct Thru Jan*	Feb *	Mar *	Apr *	May	Jun	Jul	Aug & Sep	Water Year Forecasts	Pct of Avg	80% Probability Range
564	1,056	102											
2,337	4,926	369	720	520	350	305	510	310	75	55	2,845	122%	2,720-3,030

*Unimpaired runoff in prior months based on measured flows

From this information and historic information, the North Yuba Index can be calculated as follows:

1) The end-of-September 1998 New Bullards Bar Reservoir Storage (from USGS gage number 11413515) is 708,904 acre-feet.

2) From end-of-October, November, December, January, February, March and April New Bullards Bar storage and monthly reservoir releases (from USGS gages 11413510 and 11413520), the total inflow to New Bullards Bar between October 1, 1998 and April 30 1999 is 1,098,591 acre-feet.

3) Using the B-120 information and the inflow to date the forecasted April - July inflow is calculated as follows:
Inflow = C + C1*(Oct-April Inflow) + C2*(B120 Forecasted Flow at Smartville for April-July) + C3*(Forecasted Flow at Goodyear's Bar for April-July)

Forecasted April-July Inflow = -31,652 + 0.01033 * (1,098,591) + 0.61645 * (1,200,000) + -0.22353 * (55,000) = 707,142 acre-feet.

4) The August and September inflows are calculated as follows:

Inflow = C1*(Oct-April Inflow) + C2*(Forecasted flow at Smartville for August and September)

Forecasted August and September Inflow = 0.01298 * (1,098,591) + 0.50071 * (55,000) = 41,799 acre-feet

5) The North Yuba Index for May 1, 1999, is calculated as follows:

Active NBB Storage + Actual Inflow (Oct – April) + forecasted Apr-Jul Inflow + forecasted Aug-Sept Inflow – Actual April Inflow =

(708,904-234,000) + 1,098,591 + 707,142 + 41,799 – 182,647 = 2,139,789 acre-feet = **Index Number of 2140 which is a Wet/Above Normal year**

Exhibit 10
Yuba River Development Project
Operating Assumptions for Yuba River Fisheries Agreement

Introduction

The flow schedules and operations parameters described in Exhibits 1-5 of the Yuba River Fisheries Agreement (YFA) are based on a set of assumed Operating Assumptions for the Yuba River Development Project (YRDP) during: (a) water-management or base-flow operations; (b) storm-runoff operations; and (c) flood-control operations.

These Operating Assumptions, and Significant Changes to these Operating Assumptions, are described in this Exhibit 10.

Definitions

- Base Flow/Water Management Operations
- Storm Runoff Operations
- Flood Control Operations
- Operations for PG&E Power Purchase Contract (PPC) Obligations
- Significant Changes to Operating Assumptions

Definitions of Base Flow/Water Management Operations, Storm Runoff Operations and Flood Control Operations utilize the language in YCWA's pending application for FERC license amendment. The pertinent language states:

> **"With the exception of emergencies, releases required by U.S. Army Corps of Engineers flood control criteria, releases required to maintain a flood control buffer or for other flood control purposes, bypasses of uncontrolled flows into Englebright Reservoir, uncontrolled spilling, or uncontrolled flows of tributary streams downstream of Englebright Dam, Licensee shall make reasonable efforts to operate New Bullards Bar Reservoir and Englebright Reservoir to avoid fluctuations in the flow of the lower Yuba River downstream of Englebright Dam, and daily changes in project operations affecting releases or bypasses of flow from Englebright Dam shall be continuously measured at the USGS gage at Smartville, and shall be made in accordance with the following conditions: [list of conditions follow]"**

<u>Base Flow/Water Management Operations:</u>

Base Flow/Water Management Operations include all operations except operations: (a) during emergencies, (b) when releases are required by U.S. Army Corps of Engineers flood control criteria or to maintain a flood control buffer in New Bullards Bar Reservoir or for other flood control purposes, or (c) when bypasses of uncontrolled flows into Englebright Reservoir, uncontrolled spilling, or uncontrolled flows of tributary streams downstream of Englebright Dam are occurring.

Storm Runoff Operations:

Storm Runoff Operations include all operations while bypasses of uncontrolled flows into Englebright Reservoir, uncontrolled spilling, uncontrolled flows of tributary streams downstream of Englebright Dam are occurring.

Flood Control Operations:

Flood Control Operations include all operations when: (a) releases are required by U.S. Army Corps of Engineers flood control criteria; (b) releases or other actions are required or requested by the U.S. Army Corps of Engineers under its flood-control authority or by the the Department of Water Resources (DWR)/ U.S. Army Corps of Engineers Flood Control Joint Operations Center; (c) releases are required to maintain a flood-control buffer, or for other flood-control purposes, between September 15 and June 1; and (d) emergencies requiring substantial changes in project operations are occurring.

Operations Guidelines

Base Flow/Water Management Operations

Base Flow Operations shall be conducted under the following guidelines:

1. Starting approximately September 1, releases will be set at the rates necessary to meet the controlling instream-flow requirement, which is at either the Marysville Gage or the Smartville Gage, plus any additional amount that is required for diversions.
    a. These diversions include fall base irrigation diversions and diversions for fall rice decomposition/duck water field flooding. Fall rice decomposition/duck field flooding typically starts in late September to early October and goes through mid November, and includes a ramp up to a maximum diversion rate of between 450 to 550 cfs. Diversions then ramp down during November and December as field flooding requirements decrease. When Wheatland Water District comes on line, this maximum diversion rate is not expected to exceed the historic range of 450 cfs to 550 cfs.
    b. After the completion of fall field flooding, releases under Base Flow/Water Management Operations drop down to the amounts necessary to meet the controlling minimum instream flow requirement or the requirements in the PPC as amended and pursuant to recent historical practice.

2. During approximately January through March, there normally are minimal diversions at Daguerre Point Dam, and Base Flow/Water Management Operations are set to maintain the releases necessary to meet the controlling instream flow requirement or the requirements in the PPC as amended and pursuant to recent historical practice.

3. Starting about April 1, Base Flow/Water Management Operations are conducted to:
    a. Meet the controlling minimum instream flow requirements.
    b. Supply sufficient water for the diversions necessary to meet water-supply contract requirements.
    c. Meet the requirements of the PPC as amended and pursuant to recent historical practice.
    d. Meet a September 30 New Bullards Bar Reservoir storage target of 650,000 acre-feet.

4. Base Flow/Water Management Operations will be subject to the flow-fluctuation and ramping criteria in YCWA's pending application for FERC license amendment.

<u>Storm Runoff Operations</u>

Storm Runoff Operations shall be conducted under the following guidelines:

1. Storm Runoff Operations occur during the storm season, which typically occurs between October and May, but can extend into other periods during the year if there are any unusual storm events. Storm Runoff Operations target Englebright Reservoir operations, because Englebright Reservoir is the control point for releasing water into the lower Yuba River.

2. Specific Storm Runoff Operations decisions are highly dependent on the following factors:
    a. Amount and elevations of snowpack.
    b. Storm forecasted precipitation and snow level.
    c. Future storm forecasts.
    d. PG&E generation schedule.
    e. Time of year, amount of water in New Bullards Bar Reservoir and relation of New Bullards Bar Reservoir water storage to flood-control requirements.

3. Storm Runoff Operations guidelines for Englebright Reservoir are:
    a. Maintain an Englebright target base reservoir elevation of about 517 feet (above sea level).
    b. Maintain Englebright Reservoir storage elevation above 514 feet.
    c. Maintain Englebright outflow at a generally constant rate until Englebright Reservoir water-surface elevation reaches 523 feet, unless a large storm is forecasted.
    d. If Englebright Reservoir water-surface elevation reaches 523 feet and still is increasing, or if a major storm is forecasted, then increase Englebright outflow, through Narrows 1 Powerhouse or Narrows 2 Powerhouse or a combination of

both powerhouses, at a ramping rate target of 200 cfs per hour, until Englebright elevation stops increasing.

e. When a storm event ends, and runoff starts to subside, decrease Englebright outflow at a target rate of 100 cfs per hour when the reservoir level drops to elevation 520 feet, with a target of returning to base releases when elevation reaches 517 feet.

f. If Englebright reservoir elevation increases at a rate greater than 0.5 foot per hour, then higher ramp-up and ramp-down rates, up to the maximum allowable rate of 500 cfs per hour, and up to the maximum capacities of the Narrows 1 and Narrows 2 Powerhouses, may be utilized to attempt to stabilize the reservoir and prevent or reduce spills.

4. Storm Runoff Operations will not be subject to the flow-fluctuation and ramping criteria in YCWA's pending application for FERC license amendment.

<u>Flood Control Operations</u>

Flood Control Operations shall be conducted under the following guidelines:

Flood Control Operations are generally dictated by the Corps flood operations criteria or the Flood Control Joint Operations Center operated by DWR and the Corps. Flood operations are designed to protect life, property and the dams from actual and anticipated major flood events. Flood flow releases from Englebright and New Bullards Bar Reservoirs are controlled by the following requirements and criteria:

1. Corps flood control operations requirements as defined by the flood operations manual or direction from the Corps and include:
    a. encroachment into the New Bullards Bar Reservoir flood pool or anticipated encroachment into the flood pool from a forecasted storm; and
    b. ramping rates and spill gate operations criteria from the Corps flood operations manual or direction from the Corps.

2. Department of Water Resources (DWR), Department of Flood Management or Joint Flood Control Center directives.

3. Prereleases from New Bullards Bar Reservoir in advance of a forecasted major flood storm to reduce peak flood flows or to avoid or reduce encroachment into the flood pool during the storm.

4. Creating a flood pool buffer in New Bullards Bar Reservoir to avoid unnecessary flood-control releases operations during a typical storm for that time of the year.

5. At the end of Flood Control Operations, flows shall be returned to Storm Runoff Operations or Base Flow/Water Management Operations as soon as practicable.

6. Flood Control Operations will not be subject to the flow-fluctuation and ramping criteria in YCWA's pending application for FERC license amendment.

Operations for PPC Obligations

Current practice of releases to meet requirements in the 1966 YCWA/PG&E Power Purchase Contract as amended for the Accord include the following:

- Reservoir elevation target maximum of 705 TAF in January, providing that sufficient water is available;
- Reservoir elevation target of maximum 720 TAF in February, providing that sufficient water is available;
- Reservoir elevation target of maximum 790 TAF in March, providing that sufficient water is available;
- Reservoir elevation target of maximum 890 TAF in April, providing that sufficient water is available;
- No minimum monthly generation targets.

Significant Changes to Operating Assumptions

A Significant Change in the assumed Operating Assumptions is defined as one of the following occurrences:

1. Any releases from storage in the New Bullards Bar reservoir required by a regulatory mandate that was not in place on October 1, 2004, that would result in a reduction in the North Yuba Index of 10,000 AF or more in any water year, in comparison to the index value that would occur in the absence of those required releases.
2. Changes in the flow reduction and fluctuation criteria that are included in YCWA's pending license amendment application to FERC that would require the release of additional water from storage in excess of 10,000 AF in any water year.
3. A requirement to release water from storage solely to meet the terms of the Power Purchase Contract between YCWA and PG&E that would prevent YCWA from operating to achieve the following target levels:
    a. 705 TAF in January;
    b. 720 TAF in February;
    c. 790 TAF in March, or
    d. 890 TAF in April.
4. An increase of 5,000 AF or more in YCWA's total obligation to contribute to the implementation of Bay/Delta water quality objectives, if such increase is caused by a judicial or regulatory action.

5. An ESA, CESA, or other regulatory action that would result in a change in flow Schedules 1 – 6 and that would result in either: a) decrease in total Transfer Agreement payment amounts for Components 2-4 water of 5% per year or more in any water year, or b) decrease in the amount of flow that can be delivered to YCWA's consumptive users of 5% or more in any water year.

The following are not considered Significant Changes in Operating Assumptions:

1. Any decrease in YCWA's Phase 8 Bay/Delta obligations.
2. Any supplemental surface water transfer or supplemental groundwater transfer.
3. An ESA, CESA, or other regulatory action that would result in a change in flow Schedules 1 – 6 and that would result in: a) an increase in Transfer Agreement payment amounts, and b) an increase in the amount of flow that can be delivered to YCWA's consumptive users.

Exhibit 11
Addresses of Representatives of Lower Yuba River Fisheries Agreement Parties

General Manager
Yuba County Water Agency
1402 D Street
Marysville, CA 95901
Telephone: 530-741-6278
Fax: 530-741-6541

Regional Manager
California Department of Fish and Game, Region 2
1701 Nimbus Road
Rancho Cordova, CA 95670
Telephone: 916-358-2898
Fax: 916-358-2912

Executive Director
South Yuba River Citizens League
216 Main Street
Nevada City, CA 95959
Telephone: 530-265-5961
Fax: 530-265-6232

Conservation Director
Friends of the River
915 20th Street
Sacramento, CA 95814
Telephone: 916-442-3155
Fax: 916-442-3396

California Hydro Power Coordinator
Trout Unlimited
828 San Pablo Ave., Suite 208
Albany, CA 94706
Telephone: 510-528-4164
Fax: 510-528-7880

Program Director
The Bay Institute
500 Palm Drive, Suite 200
Novato, CA 94949
Telephone: 415-506-0150
Fax: 415-506-0155

Exhibit 12
River Management Fund, Restoration Account

Money from the RMF, Restoration Account, may be used to provide parts of the costs of pilot projects for: (a) side channel restoration; (b) riparian habitat; and (c) woody debris. Any such projects must be simple, robust and self-sustaining and demonstrate, verify or test some specific benefit.

No projects will be funded from the RMF, Restoration Account until sufficient core monitoring or focused studies have been completed and justify the feasibility of the proposed project, efficacy of the proposed location and scope and extent of the proposed actions.

No project will be funded from the RMF, Restoration Account unless matching funds are available for at least 70% of the project's total cost.

The RMT Participants in RMF Issues will make all decisions regarding: (a) the designs of projects to be funded from the RMF, Restoration Account, and (b) expenditures from the RMF, Restoration Account.