AMENDMENT TO AGREEMENTS ON DIVERSION OF WATER FROM THE FEATHER RIVER AND SETTLEMENT OF ISSUES RELATED TO THE TEMPERATURE OF WATER DIVERSIONS

THIS AGREEMENT to settle all past, present and future claims related to water temperature and to amend the Agreement on Diversion of Water from the Feather River between the State of California, by and through the Department of Water Resources (DWR) and Western Canal Water District (WCWD), dated January 17, 1986 (1986 Diversion Agreement), and the Agreement on Diversion of Water from the Feather River between the State of California, by and through DWR and Richvale Irrigation District (RID), Biggs-West Gridley Water District (BWGWD), Butte Water District (BWD), and Sutter Extension Water District (SEWD), dated May 27, 1969 (1969 Diversion Agreement), is made and entered into this 23 day of April, 2008, by and among DWR, WCWD, RID, BWGWD, BWD, and SEWD (collectively, Parties).

Recitals

WHEREAS,

1. DWR constructed and operates the Oroville Facilities (Oroville). Oroville was developed as part of the California State Water Project, a water storage and delivery system of reservoirs, aqueducts, power plants, and pumping plants. DWR began construction of Oroville in 1961 and commenced operation in 1968;

2. Oroville includes Oroville Dam, which stores winter and spring runoff and releases it during other times of the year. The stored water is used for municipal and agricultural uses, flood protection, power generation, water quality in the Sacramento-San Joaquin Delta, recreation, and fish and wildlife enhancement;

3. Oroville operates under a license originally issued by the Federal Power Commission (FPC) on February 11, 1957, for a term of 50 years. Under the requirements of the Federal Power Act (FPA) and regulations of the Federal Energy Regulatory Commission (FERC), successor agency of the FPC, DWR filed a timely application for a new license for Oroville on January 26, 2005. The original license for Oroville expired January 31, 2007, and since that time Oroville has been operating under an annual license pursuant to Section 15 of the FPA. The Parties expect FERC to issue a new license for Oroville by 2009;

4. WCWD, RID, BWD, SEWD, and BWGWD divert water from the Feather River under water rights that are prior in time and superior in right to the rights of

DWR;

5. Pursuant to the 1969 Diversion Agreement and 1986 Diversion Agreement (collectively, Diversion Agreements), WCWD, RID, BWD, SEWD, and BWGWD (collectively, Districts) receive water from Thermalito Afterbay, a regulatory reservoir of Oroville, and/or the Feather River. Waters diverted under these Diversion Agreements are used for irrigation, water fowl, and related agricultural uses such as rice straw decomposition uses within the Districts' respective service areas;

6. Because Thermalito Afterbay replaced certain diversion facilities used by Pacific Gas & Electric Company (PG&E) and one or more of the Districts prior to the construction of Oroville, those diversions were replaced with three delivery points from Thermalito Afterbay. Two separate agreements were executed in 1969: (1) Agreement on Diversion of Water from the Feather River between DWR and PG&E, dated May 27, 1969; and (2) the 1969 Diversion Agreement. Subsequently, WCWD was formed by landowners to purchase the Western Canal Company from PG&E, and in connection therewith, on January 17, 1986, DWR, PG&E, and WCWD entered into the 1986 Diversion Agreement, which superseded and cancelled the former agreement with PG&E. The currently effective Diversion Agreements govern rights to water, substitution of deliveries from DWR in lieu of the Districts' reliance on their water rights, and delivery obligations and conditions. The Diversion Agreements also include conditions specifying the amounts and rate of deliveries from Thermalito Afterbay, season of diversion, annual amounts of deliveries, and other conditions pertaining to deliveries and other obligations of the parties thereto;

7. The Diversion Agreements settled water supply issues between the parties thereto, but left unresolved the issue of a reduction in temperature of water released by DWR to the Districts from the Thermalito Afterbay, as provided in Section 6, paragraph 4 of the 1969 Diversion Agreement, and in Section 4(c) of the 1986 Diversion Agreement;

8. The Districts intervened in the FERC relicensing proceeding for Oroville and filed comments on DWR's draft Environmental Impact Report (EIR), prepared pursuant to the California Environmental Quality Act (CEQA) in furtherance of DWR's application for a Clean Water Act Section 401 certification before the State Water Resources Control Board (SWRCB). In filings at FERC and comments on DWR's draft EIR, the Districts sought mitigation for deliveries of cold water from the Thermalito Afterbay during the irrigation season;

9. Although joining the Districts' FERC intervention and draft EIR comments, for business reasons BWD and SEWD chose not pursue negotiations at that time and, therefore, did not participate in a study undertaken in 2005 by WCWD, RID, and BWGWD, in cooperation with DWR, to assess impacts of cold water on rice production or in the process to develop the methodology contained in Exhibit A for the calculation of cold-water impacts. At the time of execution of this Agreement, BWD and SEWD have not evaluated potential effects of DWR's deliveries of cold water to Thermalito Afterbay and/or the Feather River within their respective service areas, and therefore are not participating in the annual process of determining, and compensating for, cold water-related Yield Loss (YL) within their respective service areas;

10. BWD and SEWD believe and acknowledge that the process detailed in Exhibit A is a reasonable and acceptable methodology, and that it should be the method used to calculate any cold-water impacts within their respective service areas should they choose to seek compensation;

11. The Parties recognize the need to settle the issue of water temperatures and its effect on rice yields within the Districts, as reserved by the Diversion Agreements;

12. The Parties recognize the need for a process to allow future participation by BWD and SEWD in the annual process to determine and compensate for cold-water related YL within their respective service areas, and that said process should be fair and equitable to all Parties; and

13. The Parties have negotiated this Agreement to establish an appropriate resolution of all water temperature issues associated with DWR's past, present, and future water deliveries to the Districts, including but not limited to any impacts on rice production, as well as to resolve all water temperature issues among the Parties in regulatory proceedings concerning the relicensing of Oroville, including but not limited to proceedings before FERC and SWRCB.

Terms of Agreement

NOW THEREFORE, in consideration of the mutual covenants set forth herein, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties agree as follows:

1 Definitions

When used in this Agreement, the following terms have the meanings hereinafter set forth. Capitalized terms in this Agreement that are not defined in this Section 1 have the same meaning as set forth in Exhibit A. Where the context so

requires, terms defined in the singular form of expression in this Section 1 will be construed to include the plural, and vice versa.

(a) "1969 Diversion Agreement" means the Agreement on Diversion of Water from the Feather River between DWR, RID, BWGWD, BWD, and SEWD, dated May 27, 1969.

(b) "1986 Diversion Agreement" means the Agreement on Diversion of Water from the Feather River between DWR, PG&E, and WCWD, dated January 17, 1986.

(c) "Agreement" means this Amendment to Agreements on Diversion of Water from the Feather River and Settlement of Issues Related to the Temperature of Water Diversions, including Exhibit A hereto.

(d) "BWD" means Butte Water District.

(e) "BWGWD" means Biggs-West Gridley Water District.

(f) "CEQA" means California Environmental Quality Act.

(g) "Disputing Party" means any Party that provides Notification pursuant to Section 9.1 of this Agreement.

(h) "Districts" means BWD, BWGWD, RID, SEWD, and WCWD.

(i) "Diversion Agreements" means the 1969 Diversion Agreement and the 1986 Diversion Agreement.

(j) "DWR" means California Department of Water Resources.

(k) "Effective Date" means the date set forth in Section 2 of this Agreement.

(l) "EIR" means Environmental Impact Report.

(m) "FERC" means Federal Energy Regulatory Commission.

(n) "Inconsistent with this Agreement" means any requirement in the new license or related regulatory approval for Oroville that: (a) materially modifies this Agreement or the Settlement Agreement for Licensing of the Oroville Facilities; or (b) imposes material additional burdens on DWR for mitigating impacts of cold water on rice grown within the Districts' service areas; or (c) materially impedes DWR from providing compensation to the Districts as provided under this Agreement; or (d) unreasonably restricts or prevents the Parties from implementing or performing under this

Agreement; or (e) requires material modification to the agreed-upon methodology set forth in Exhibit A; or (f) incorporates any provision of this Agreement into a license article, term, or condition.

(o) "Non-Participating Districts" means any District that is not a Participating District. As of the execution of this Agreement as indicated by the date first written above, the Non-Participating Districts are BWD and SEWD.

(p) "Notify" or "Notification" means a written communication sent in accordance with Section 14.9 of this Agreement.

(q) "Participating Districts" means WCWD, RID, BWGWD, and any other District that joins, as provided under Section 5 of this Agreement, the annual process under Exhibit A for monitoring water temperature, calculating YL, and determining compensation.

(r) "Parties" means BWD, BWGWD, DWR, RID, SEWD, and WCWD.

(s) "Responsible District" means the Affected District responsible for all fiscal and procurement matters, as set forth in Section 4.3.5 of this Agreement.

(t) "RID" means Richvale Irrigation District.

(u) "SEWD" means Sutter Extension Water District.

(v) "SWRCB" means State Water Resources Control Board.

(w) "WCWD" means Western Canal Water District.

(x) "YL" means the estimated yield loss of rice production attributable to DWR's cold-water deliveries to the Participating Districts from Oroville's Thermalito Afterbay, as set forth in Exhibit A.

2 Term of Settlement

This Agreement will be effective upon execution by all Parties as indicated by the date first written above and approval by the California Department of Finance, and will remain in force and effect unless terminated as set forth in Section 8 herein.

3 Purposes of Agreement

3.1 Amendment of Diversion Agreements and Mechanism for Addressing Any Cold-Water Impacts

The Parties have entered into this Agreement to amend the Diversion Agreements, as set forth in Section 13 herein, to remove certain provisions regarding DWR's potential liability to the Districts attributable to DWR's releases of cold water from the Thermalito Afterbay and to the Feather River, which water is diverted by the Districts for agricultural purposes within their respective service areas. The Parties also have entered into this Agreement to establish an approach and mechanism for addressing any and all impacts within the Districts' service areas associated with DWR's deliveries of cold water from Oroville's Thermalito Afterbay and releases to the Feather River. This Agreement fully resolves any and all liability related to water temperature DWR may have to the Districts, landowners within the Districts, or to individual growers served by the Districts resulting from DWR's water deliveries from Oroville's Thermalito Afterbay and/or from DWR's releases of water to the Feather River. Except as expressly set forth in this Agreement, the Parties acknowledge that, for the term of this Agreement, the execution of this Agreement constitutes a waiver, release and discharge of any past, current, or future claim the Parties may have against each other regarding the temperature of water released by DWR from Oroville's Thermalito Afterbay and/or the Feather River.

3.2 Full Resolution of Regulatory Proceedings

This Agreement fully resolves all issues among the Parties that have or could have been raised by the Parties in connection with FERC's order issuing a new license for Oroville, as well as all permits and approvals associated with the issuance of the new license, including but not limited to certification under Section 401 of the Clean Water Act and review under the National Environmental Policy Act and CEQA. The measures set forth in this Agreement minimize, to a level of insignificance, any impacts associated with the temperature of water deliveries by DWR from Oroville's Thermalito Afterbay and releases of cold water to the Feather River. The measures set forth herein adequately protect irrigation as a beneficial use within the Districts as set forth in the Central Valley Basin Plan issued by the California Central Valley Regional Water Quality Control Board.

3.3 No Admission of Liability

This Agreement is made with the understanding that it constitutes a negotiated resolution of issues relating to DWR's water deliveries to the Districts from Oroville's Thermalito Afterbay and from releases to the Feather River. This Agreement establishes a methodology for estimating any agricultural impacts of water temperature associated with deliveries of water to the Districts from Oroville, but nothing in this Agreement is

intended or will be construed as an admission by DWR that the construction and operation of Oroville is, in fact, the cause of any injury to crops or production of crops within the Districts attributable to cold water. Except as expressly provided in Section 9 herein, this Agreement cannot be offered against a Party as argument, admission, precedent, or otherwise in any mediation, arbitration, litigation, or other administrative or legal proceeding, and no Party will make any such offering of this Agreement. No Party will be deemed to have approved, admitted, accepted, or otherwise consented to any liability, responsibility, operation, management, valuation, or other principle underlying any of the matters covered by this Agreement, except as expressly provided herein. This Section 3.3 will survive any termination of this Agreement.

4 Implementation of Exhibit A

Commencing upon the Effective Date of this Agreement, DWR and the Participating Districts will implement the procedures and methodologies set forth in Exhibit A, including but not limited to the specific duties and responsibilities detailed in this Section 4. In the event of any conflict between Section 4 of this Agreement and Exhibit A, Exhibit A is controlling.

4.1 Technical Panel

Within thirty (30) days of the Effective Date of this Agreement, DWR and the Participating Districts will establish and organize a Technical Panel to implement the process and methodology for determining the annual economic value of Yield Loss (YL), as provided in Exhibit A of this Agreement. The Technical Panel will consist of six (6) members, with three (3) appointed by DWR and three (3) appointed by the Participating Districts. DWR and the Participating Districts may change their designated members of the Technical Panel at any time; *provided, however*, that all members of the Technical Panel will be officers or employees of DWR or the Participating Districts unless otherwise agreed to in writing by DWR and the Participating Districts. DWR and the Participating Districts will exercise reasonable efforts to ensure that their designated appointments to the Technical Panel are provided sufficient time and resources to fulfill their responsibilities under Exhibit A. DWR will appoint one (1) member of the Technical Panel to serve as the Coordinator for the Technical Panel. The Coordinator will work in consensus with all Parties in establishing methods and procedures for administering this Agreement, but will not have any unilateral authority to establish such methods and procedures. DWR will provide administrative support for the Technical Panel. DWR and the Participating Districts will bear their own costs associated with staffing for the Technical Panel.

4.2 Responsibilities of the Technical Panel

Following its establishment and organization, the Technical Panel will implement the process and methodology for determining, on an annual basis through the term of this Agreement, the economic value of YL, as set forth in detail in Exhibit A. Among other things, the Technical Panel will undertake the following actions:

(a) Within one-hundred twenty (120) days of the Effective Date of this Agreement, submit to DWR and the Participating Districts for their review and approval a document that clearly identifies the steps for implementing Exhibit A, including the cyclical nature of the three phases of YL model development (*i.e.*, Harvest-Monitoring Years, non-Harvest-Monitoring Years, and ten-year review) that will apply through the term of this Agreement, as set forth in Section 1.5 of Exhibit A;

(b) During Harvest-Monitored Years, select sixty (60) water temperature Monitored Fields (twenty (20) fields per Participating District), after reviewing recommended candidate fields submitted by the Participating Districts, as set forth in Section 3.2.1 of Exhibit A and Section 4.3.1 of this Agreement.

(c) During Harvest-Monitored Years, select thirty-six (36) Harvest-Monitored Fields (twelve (12) fields per Participating District) from the list of sixty (60) Candidate Monitoring Fields submitted by the Participating Districts, as set forth in Section 3.2.4 of Exhibit A;

(d) During Harvest-Monitored Years, identify Cold Water Affected and Unaffected Areas in all Harvest-Monitored Fields, as set forth in Section 2 of Exhibit A;

(e) During Harvest-Monitored Years, undertake monitoring and data-gathering activities and coordinate and work with growers of Monitored Fields, including the supervision of third-party consultants, DWR staff, and/or Participating District staff assigned as Monitoring Staff, as set forth in Section 3 of Exhibit A;

(f) During Harvest-Monitored Years and non-Harvest-Monitored Years, produce a Water Temperature Interpolation Map of the Participating Districts, as set forth in Section 3.2.3 of Exhibit A;

(g) During Harvest-Monitored Years and non-Harvest-Monitored Years, annually update the Points of First Use, as set forth in Section 3.2.12 of Exhibit A;

(h) During Harvest-Monitored Years, develop a YL regression model, as set forth in Section 3.2.14 of Exhibit A;

(i) Develop a Health and Safety Plan, as set forth in Section 3.2.6.2 of Exhibit A;

(j) During non-Harvest-Monitored Years, implement the Combined Model to estimate annual YL, as set forth in Section 4 of Exhibit A;

(k) Following each cycle of ten (10) Non-Harvest-Monitored Years, undertake a review of the YL model and implement any changes to the model, as set forth in Section 5 of Exhibit A;

(l) On an annual basis following the rice harvest, and within sixty (60) days of the receipt of final agronomic, temperature, marketing, and price data, calculate YL and associated recommended annual payment, as set forth in Section 6 of Exhibit A; and provide a written memorandum to DWR and the Participating Districts setting forth: (i) the recommended Annual Payment, itemized according to the individual components thereto, as specified in Section 6.6 of Exhibit A; and (ii) the value of all figures used to calculate the recommended Annual Payment and its individual components, including but not limited to the Loan Rate, Average Annual Price of Rice, Amount Over Loan, Adjusted Value of Rice, Increased Drying Costs, Avoided Costs, and Five-Year Rolling Average; and

(m) Consider and recommend to DWR and the Participating District changes to the methodologies set forth in Exhibit A that would improve the quality of analysis results, and simplify the logistics or reduce the costs of the monitoring and loss-estimation process, as set forth in Section 7 of Exhibit A.

In discharging all its responsibilities under Exhibit A, the Technical Panel will act on a consensus basis. Except as expressly provided in Exhibit A, in resolving any disputes among the members of the Technical Panel, two (2) members of the Technical Panel, one (1) appointed by DWR and one (1) appointed by the Participating Districts, will meet and consult in an attempt to resolve the dispute. If these two (2) members of the Technical Panel are unable to resolve the dispute, the Technical Panel will refer the dispute to DWR and the Participating Districts for resolution, as set forth in Section 9 of this Agreement.

In addition to convening monthly meetings during data collection months of Harvest-Monitored Years, as provided in Section 3.2.5.8 of Exhibit A,

the Technical Panel will meet as directed by DWR and the Participating Districts, but at least once per year.

4.3 Responsibilities of the Participating Districts

4.3.1 Identification of Candidate Fields for Monitoring

During Harvest-Monitored Years, each Participating District will identify twenty (20) Candidate Monitoring Fields for water-temperature monitoring and submit its list of recommended Candidate Monitoring Fields to the Technical Panel for its review and selection, pursuant to the selection criteria set forth in Sections 3.2.1.1 through 3.2.1.6 of Exhibit A.

4.3.2 Ensure Generally Accepted Agricultural Practices Plan During Harvest-Monitored Years

The Participating Districts will exercise reasonable efforts to ensure that all growers whose fields are selected by the Technical Panel as Monitored Fields will conform with generally accepted agricultural practices within all Checks in their Monitored Field(s) throughout the planting, growing, and harvesting seasons, and cooperate with the Technical Panel, the Participating Districts, and DWR in implementing Exhibit A. To carry out their responsibilities under this Section 4.3.2, the Participating Districts will enter into contracts with all growers within their respective service areas whose fields are selected by the Technical Panel as Monitored Fields. Except as provided herein, the form and content of the contracts will be within the Participating Districts' reasonably exercised discretion. Prior to execution of any such contract, the Participating Districts will submit to DWR for review and comment the form of contract to be used by each Participating District. Such review and comment will be completed and received by the Participating Districts within 30 days from submittal by each Participating District to DWR. All such contracts will be effective on or before the beginning of the planting season of each year in which the grower's field(s) will be used as a Monitored Field. All such contracts also will uniformly:

(a) Require the growers to adhere to generally accepted agricultural practices, to farm Cold Water Affected and Unaffected Areas of their Monitored Fields in a manner that does not bias YL results between the Cold Water Affected and Unaffected Areas, and to endeavor, to the extent reasonably practicable and consistent with all legal and

regulatory requirements imposed on the farmers, to maximize rice production in the Monitored Fields;

(b) Require the grower to cooperate with the Technical Panel, the Participating Districts, DWR, and their employees, officers, and consultants as reasonably necessary for them to carry out the requirements and responsibilities under Exhibit A;

(c) Acknowledge that representatives of DWR and the Participating Districts, with appropriate notice and permission, will be allowed access to the growers' fields for the purpose of carrying out requirements and responsibilities under Exhibit A;

(d) Provide opportunity to negotiate amendments to the contract, if reasonably required to ensure continued cooperation among the grower, the Participating Districts, and DWR in carrying out requirements and responsibilities under Exhibit A.

The contracts required under this Section 4.3.2 may have additional terms and conditions so long as any such term or condition is not in conflict with or inconsistent as the required provisions set forth in this Section 4.3.2, and is no more burdensome than is necessary to allow the application of the methodology of Exhibit A. Prior to executing any amendment or new contract required under this Section 4.3.2 that differs substantially from the form previously reviewed by DWR, a Participating District will provide DWR an opportunity to review the draft contract and provide any comments.

The Technical Panel will exclude all data collected from a Monitored Field where it determines that, due to negligence or inadvertent action, the contracted grower has violated his or her contract in a manner that biases cold water YL results or which precludes timely and accurate data gathering necessary to implement Exhibit A.

The Participating Districts will exclude from all future selection of Monitored Fields any fields farmed by a contracting grower who is determined by the Technical Panel to have willfully and deliberately violated his or her contract in a manner that biases YL within any of his or her fields or which precludes timely and accurate data gathering necessary to implement Exhibit A. The Technical Panel will exclude all data gathered from such field from the Exhibit A process.

4.3.3 Grower Cooperation

The Parties recognize that implementation of this Agreement, including but not limited to DWR's obligation to provide compensation to the Participating Districts, relies upon the ability of the Participating Districts to assure grower cooperation, participation, and utilization of generally accepted agricultural practices. The Participating Districts will make a good faith effort to secure the requisite number of growers representing the range of field size and water temperature at the Point of First Use, to participate on an annual basis as set forth in Exhibit A.

4.3.4 Minimize Effects of Cold Water on Rice Production

Through the term of this Agreement, the Participating Districts will exercise reasonable efforts to encourage growers within their respective service areas to implement agricultural practices identified as effective, feasible, and practical of implementation by the University of California or another generally recognized rice research organization, including any emerging or experimental methods, that could help minimize or mitigate effects of cold water upon rice production, provided such emerging or experimental practices are reasonable, practical, and feasible.

4.3.5 Appointment of Responsible District for Fiscal and Procurement Matters

Within sixty (60) days of the Effective Date of this Agreement, the Participating Districts will designate a Responsible District to be responsible for all fiscal and procurement matters associated with this Agreement, including but not limited to: (1) the receipt of all payments from DWR, as provided in Section 4.4.1 of this Agreement; and (2) the procurement of outside services and payments of the Participating Districts' costs for such services, as provided in Section 4.5.1(c) of this Agreement. Immediately upon making this designation, the Participating Districts will jointly Notify DWR of the designated Responsible District.

The appointment of a Responsible District under this Section 4.3.5 to take fiscal and procurement responsibility for all Participating Districts is only a matter of convenience among the Parties and does not affect the individual duties, responsibilities, or liabilities of each Participating District. The Participating Districts will Notify DWR of any change in appointment of the Responsible District

under this Section 4.3.5 thirty (30) days prior to the effective date of such change.

4.3.6 Distribution of Annual Payments Among Participating Districts and Growers

The Participating Districts are solely responsible for allocating payments from DWR among the Participating Districts, growers within their respective service areas, or other parties. Any disputes regarding such allocations are beyond the scope of this Agreement and will not be a basis for invoking the dispute resolution protocol set forth in Section 9 of this Agreement, seeking changes to the methodologies set forth in Exhibit A, as provided in Section 4.5.5 of this Agreement, or otherwise seeking additional compensation from DWR.

4.4 Responsibilities of DWR

4.4.1 Remittance of YL Annual Payment

Within ninety (90) days after DWR and the Participating Districts approve the Technical Panel's memorandum, as set forth in Section 4.5.3 herein, DWR will remit the annual payment to the Responsible District designated by the Participating Districts under Section 4.3.5 of this Agreement.

4.4.1.1 Satisfaction of Payment Obligations

DWR's obligation under this Agreement to remit any and all payments to the Participating Districts is fully satisfied by remitting payment to the Responsible District designated by the Participating Districts under Section 4.3.5 of this Agreement.

4.4.1.2 Commencement of YL Annual Payments

Except as expressly provided in this Agreement, including but not limited to Section 7.3 herein, DWR's obligations under this Agreement to remit any payment to the Participating Districts commence on the Effective Date.

4.5 Responsibilities of DWR and the Participating Districts

4.5.1 Monitoring and Collection of Data

All monitoring and data collection under Exhibit A is a joint responsibility of DWR and the Participating Districts, as follows:

(a) For the level of effort of monitoring and collecting data, DWR will exert fifty (50) percent of the effort, and the Participating Districts, collectively, will exert fifty (50) percent of the effort. To the extent that DWR and/or the Participating Districts designate their own employees or their own consultants to serve as Monitoring Staff, as set forth in Section 3.2.5 of Exhibit A, to monitor, collect data, analyze data, or otherwise assist in the implementation of Exhibit A, they will make reasonable efforts to ensure that such employees are qualified to perform the work and provided sufficient time, training, and resources to fulfill their assigned responsibilities. Notwithstanding any other provision of this Agreement, DWR and the Participating Districts will bear their own costs incurred by their own employees and their own consultants in implementing this Agreement.

(b) With regard to the costs of purchasing, renting, repairing, maintaining, or replacing equipment and tools needed for monitoring and collection of data, DWR will incur fifty (50) percent of the cost, and the Participating Districts, collectively, will incur fifty (50) percent of the cost.

(c) With regard to costs of contractors, technical experts, or other consultants retained on behalf of DWR and the Participating Districts to assist in monitoring and data collection, DWR will incur fifty (50) percent of the cost, and the Participating Districts, collectively, will incur fifty (50) percent of the cost. DWR and the Participating Districts will jointly select all such consultants and jointly determine the scope of services. Any such joint consultants will be retained by the Participating Districts; *provided, however*, that all such consultants will be retained in accordance with State contracting requirements, and DWR will reserve the right to terminate, for cause, any joint consultant retained under this Section 4.5.1(c). DWR will reimburse the Participating Districts for fifty (50) percent of all costs incurred by joint consultants retained under this Section 4.5.1(c).

Within thirty (30) days of receipt of any invoice from a consultant retained by the Participating Districts on behalf of DWR and the Participating Districts under this Section 4.5.1(c), the Participating Districts will Notify DWR, which

Notification will include a copy of the invoice and a request for DWR to remit fifty (50) percent of the invoice. Within ninety (90) days of such Notification, DWR will remit payment to the Responsible District designated by the Participating Districts under Section 4.3.5 of this Agreement.

Nothing in this Agreement is intended or will be construed as precluding any Party, in its sole discretion and at its sole expense, from hiring its own consultants, as it deems necessary to assist in the Party's performance of its obligations under this Agreement.

4.5.2 Non-Interference with Rice Growers

DWR and the Participating Districts acknowledge that the production of rice, including harvest, is an industrial activity subject to its own regulatory and production norms. Accordingly, except as provided in Section 4.3.2 of this Agreement, DWR and the Participating Districts will exercise reasonable efforts to ensure that their respective employees and consultants adhere to the Health and Safety Plan developed by the Technical Panel under Section 4.2(i) of this Agreement, and otherwise discharge their responsibilities under this Agreement in a manner that is coordinated with, and not in conflict with, the activities of the growers.

4.5.3 Approval of Technical Panel Memorandum

Within thirty (30) days of receipt of the Technical Panel's annual memorandum, as set forth in Section 4.2(l) of this Agreement, DWR and the Participating Districts will meet and confer to discuss and approve the recommended Annual Payment; *provided, however*, that if DWR and the Participating Districts all concur with the Technical Panel's memorandum, they may approve the memorandum through Notification and waive this meet and confer requirement. Following approval of the memorandum by DWR and the Participating Districts, DWR will remit the Annual Payment, as approved. If DWR or any of the Participating Districts do not concur with the recommendations set forth in the Technical Panel's memorandum, they will resolve any disputes regarding the Annual Payment in accordance with Section 9 of this Agreement.

DWR and the Participating Districts acknowledge that data necessary for the Technical Panel to calculate YL and the recommended Annual Payment may not be immediately available after harvest each year.

4.5.4 Selecting and Removing Anomalies from Annual YL Model

DWR and the Participating Districts acknowledge that, under Exhibit A, several anomalies could result in no accepted model for the harvest year. Notwithstanding any other provision of this Agreement, under such anomalous circumstances, YL calculation and all annual payments to the Participating Districts from DWR, if any, will be in accordance with this Section 4.5.4.

4.5.4.1 Insufficient Number of Harvest-Monitored Fields

During any Harvest-Monitored Year, in the event that fewer than twenty-four (24) Harvest-Monitored Fields meeting the criteria in Section 3.2.4 of Exhibit A are available for analysis, the analysis will cease, as set forth in Section 3.2.6.6 of Exhibit A. Where the analysis ceases as provided in this Section 4.5.4.1, DWR's compensation to the Participating Districts, if any, will be in accordance with Section 4.1.1 of Exhibit A.

4.5.4.2 No Accepted Model in Harvest-Monitored Years

As set forth in Section 3.2.14.1 of Exhibit A, during any Harvest-Monitored Year the Initial Model, Screened Model, Pooled Year Model, or Revised Pooled Year Model may all fail to produce a regression analysis that meets the three criteria set forth in Sections 3.2.14.3.1 through 3.2.14.3.3 of Exhibit A. Under such circumstances, DWR's compensation to the Participating Districts, if any, will be in accordance with Sections 3.2.14.6.2 and 3.2.14.7 of Exhibit A.

4.5.4.3 No Accepted Model for Non-Harvest-Monitored Years

During any non-Harvest-Monitoring Year, in the event that after a harvest-monitoring period has been completed and a Combined Model has not been accepted, as set forth in Section 4.2.3 of Exhibit A, DWR's compensation to the Participating Districts, if any, will be in accordance with Section 3.2.14.7.2 of Exhibit A.

4.5.5 Changes to Methodologies in Exhibit A

As set forth in Section 7 of Exhibit A, throughout the term of this Agreement, DWR and the Participating Districts will meet and confer as necessary and appropriate to discuss possible changes

to the methodologies established in Exhibit A that could improve the accuracy of analysis results, simplify the efforts for gathering and analyzing data, or reduce the costs of the monitoring and loss-estimation process; *provided, however*, that Exhibit A, including but not limited to its methodologies and processes, can only be amended upon written, mutual agreement among the Parties.

4.5.6 Data Usage

As set forth in Section 1.2 of Exhibit A, all data and information collected under Exhibit A are intended by the Parties to be used exclusively for the purposes of calculating YL, the economic value of YL, and the annual payment for YL. The Parties will maintain the confidentiality of all data and information collected under Exhibit A to the fullest extent of applicable law and exercise reasonable efforts to ensure that their employees and contractors refrain from using such data and information for any unintended propose. In the event of any attempt by a third party to acquire any data or information collected under Exhibit A, the Party that is the target of such attempt will Notify the other Parties within ten (10) days of such request. This Section 4.5.6 does not obligate any Party to maintain confidentiality of any document that it reasonably determines to be a public record under the California Public Records Act. This Section 4.5.6 will survive any termination of this Agreement.

5 Future Participation of Non-Participating Districts

5.1 Process for Becoming a Participating District

Any Non-Participating District may become a Participating District only through the process set forth in this Section 5.1.

5.1.1 Advance Notification

To commence the process of becoming a Participating District, a Non-Participating District will provide DWR and the Participating Districts Notification of its desire to become a Participating District. Any Notification under this Section 5.1.1 effective on or prior to November 30 will be considered and processed according to a schedule to allow the Non-Participating District to make the transition to a Participating District, and thus begin participating in the Exhibit A process, in the next harvest season if the Non-Participating District has provided all the necessary information and assurances as provided in Section 5.1.4. Any Notification under

this Section 5.1.1 effective after November 30 will not be considered until after the conclusion of the next harvest season.

5.1.2 Consultation with Technical Panel

Following the Non-Participating District's Notification under Section 5.1.1 of this Agreement, the Technical Panel will consult with the Non-Participating District in developing a plan to facilitate the Non-Participating District's transition to a Participating District. Such plan will include, but not be limited to, the following elements:

(a) Identification of any and all preliminary work, data requirements and other information, and technical matters required to integrate the Non-Participating District into the Exhibit A process, including but not limited to the determination of the source of required Drier data to support the YL calculation and YL valuation processes, locations of Points of First Use and their service area, water temperature monitoring sites, staff program support commitments of the Non-Participating District, and the ability and commitment of the Non-Participating District to ensure the participation of the requisite number of growers in its service area to cooperate in field monitoring, as set forth in Sections 4.3.1 through 4.3.4 of this Agreement; and

(b) Identification of any reasonable and appropriate changes to this Agreement, including Exhibit A, to establish the Non-Participating District's rights and duties once it becomes a Participating District. Recommended changes will be limited to those required to establish rights and duties of the Non-Participating District consistent with the rights and duties of Participating Districts, and differing from the rights and duties of the Participating Districts only as necessary to address differences in rice production in the service areas of Non-Participating District and the Participating Districts related to physical characteristics, operational practices, and production processes.

As part of the consultation process under this Section 5.1.2, the Non-Participating District will provide reasonable evidence to the Technical Panel of its ability to fulfill the required responsibilities of a Participating District and that it can provide all of the data required to fully participate in the Exhibit A process.

5.1.3 Technical Panel Findings and Recommendations

Following the consultation process, the Technical Panel will submit to DWR and the Participating Districts the plan developed under Section 5.1.2 of this Agreement, together with its written findings and recommendations regarding the inclusion of the Non-Participating District. Such findings and recommendations will be submitted as far in advance as practicable of the first agricultural season in which the Non-Participating District will be a Participating District, to allow reasonable time to prepare for the timely integration of the Non-Participating District as a Participating District, but no later than January 15 of the first year in which the Non-Participating District will be a Participating District.

5.1.4 Review by DWR and Participating Districts

Following submittal of the Technical Panel's findings and recommendations under Section 5.1.3 of this Agreement, DWR and the Participating Districts will meet and confer, as necessary, to discuss the inclusion of the Non-Participating District as a Participating District and determine whether the Non-Participating District has provided the required information and assurances necessary to allow its full participation and inclusion in the Exhibit A process.

Within thirty (30) days of submittal of the plan developed under Section 5.1.2 of this Agreement and Technical Panel's findings and recommendations under Section 5.1.3 of this Agreement, DWR and the Participating Districts will provide joint Notification to the Non-Participating District regarding the Non-Participating District's inclusion as a Participating District. If DWR and the Participating Districts unanimously determine that the Non-Participating District has provided the required information and assurances necessary to allow its full participation and inclusion in the Exhibit A process, the provisions of Section 5.2 of this Agreement will apply and the Notification under this Section 5.1.4 will inform the Non-Participating District that it will be included in the Exhibit A process commencing in the next growing season and approve the plan developed in Section 5.1.2, including any changes required by DWR and the Participating Districts.

If DWR and the Participating Districts do not unanimously determine that the Non-Participating District has provided the required information and assurances necessary to allow its full participation and inclusion in the Exhibit A process, the provisions of Section 5.2 of this Agreement will not apply and the Notification under this Section 5.1.4 will inform the Non-Participating District that it will not be included in the Exhibit A process in the next

growing season and will explain the basis for this decision. The Non-Participating District may seek dispute resolution regarding its non-inclusion as a Participating District, as provided in Section 9 of this Agreement. The Non-Participating District will provide Notification of any such dispute within thirty (30) days of the joint Notification provided by DWR and the Participating Districts under this Section 5.1.4. Any dispute not Noticed within said thirty (30) day period will be waived. Nothing herein will preclude a Non-Participating District from renewing its request for inclusion at a later time.

5.2 Effect of Inclusion as Participating District

5.2.1 Participating District

Upon Notification under Section 5.1.4 of this Agreement that the Non-Participating District has provided the required information and assurances necessary to allow its full participation and inclusion in the Exhibit A process, the Non-Participating District will become a Participating District and will be included in the annual YL calculation and compensation process, as provided in Exhibit A, and will thereafter have all rights and duties as the other Participating Districts as set forth in this Agreement. Any Non-Participating District that becomes a Participating District under this Section 5 will have a right to appoint a representative on the Technical Panel, as set forth in Section 4.1 of this Agreement; *provided, however,* that the Technical Panel will at all times consist of equal representation between the Participating Districts, collectively, and DWR, such that DWR will appoint one-half of all members of the Technical Panel.

5.2.2 Implementation of Plan

Upon Notification under Section 5.1.4 of this Agreement that the Non-Participating District has provided the required information and assurances necessary to allow its full participation and inclusion in the Exhibit A process, the Technical Panel and newly included Participating District will implement the plan developed under 5.1.2 of this Agreement, as may be modified as part of the approval process, as set forth in Section 5.1.4 of this Agreement.

5.2.3 Conforming Amendments to Agreement and Exhibit A

Upon Notification under Section 5.1.4 of this Agreement that the Non-Participating District has provided the required information and assurances necessary to allow its full participation and inclusion in

the Exhibit A process, the Parties will in good faith amend this Agreement, including Exhibit A, as necessary and appropriate to fully integrate the newly included Participating District into the Exhibit A process, to fairly and accurately account for the annual YL associated with all Participating Districts, and to establish the rights and duties of the newly included Participating District under this Agreement and Exhibit A.

5.2.4 Harvest Monitoring for Newly Included Participating District

Regardless of whether the other Participating Districts are in a Harvest-Monitored Year or non-Harvest Monitored Year at the time the newly included Participating District commences participation in the Exhibit A process, during the first two (2) years of a newly included Participating District's participation in the Exhibit A process, such Participating District and the Technical Panel will implement the Harvest Monitored Year protocols, as defined in Exhibit A, within the newly included Participating District's service area.

For each of these two (2) Harvest Monitored Years for the newly included Participating District, the results of harvest monitoring within the newly included Participating District's service area will be analyzed to determine compatibility with the model and/or data utilized in the Exhibit A process prior to the newly included Participating District's participation, as follows:

(a) If the other Participating Districts conducted a regular Harvest Monitored Year, the results of harvest monitoring within the newly included Participating District's service area will be compared to the results of harvest monitoring of the other Participating Districts.

(b) If the other Participating Districts conducted a non-Harvest Monitored Year, the results of harvest monitoring within the newly included Participating District's service area will be compared to the previously accepted Combined Model.

5.2.5 Compensation During Initial Harvest Monitoring Years

For each of these two (2) Harvest Monitored Years for the newly included Participating District, as required under Section 5.2.4 of this Agreement, if the results of harvest monitoring within the newly included Participating District's service area are compatible with either the harvest monitoring of the other Participating Districts or

Combined Model, as appropriate, compensation for the newly included Participating District will be as follows:

(a) If the other Participating Districts conducted a regular Harvest Monitored Year, compensation for the newly included Participating District will be calculated based on the combined results of the harvest monitoring of all Participating Districts for that year.

(b) If the other Participating Districts conducted a non-Harvest Monitored Year, compensation for the newly included Participating District will be calculated based only on the harvest monitoring data of the newly included Participating District for that year.

For each of these two (2) Harvest Monitored Years for the newly included Participating District, as required under Section 5.2.4 of this Agreement, if the results of harvest monitoring within the newly included Participating District's service area are not compatible with either the harvest monitoring of the other Participating Districts or Combined Model, as appropriate, compensation for the newly included Participating District will be calculated based only on the harvest monitoring data of the newly included Participating District.

5.2.6 Participation in Exhibit A Following Initial Harvest Monitoring

If, in both of the two (2) initial Harvest Monitored Years for the newly included Participating District required under Section 5.2.4, the results of harvest monitoring within the newly included Participating District's service area are compatible with either the harvest monitoring of the other Participating Districts or Combined Model, as appropriate, the newly included Participating District will commence participation in the then-existing Exhibit A process with the other Participating Districts. Otherwise, the Technical Panel will develop and implement, with the approval of DWR and the newly included Participating District, a separate YL model to calculate the newly included Participating District's YL and determine compensation; *provided, however,* that upon recommendation of the Technical Panel and mutual agreement among DWR and all Participating Districts, the Technical Panel and newly included Participating District may conduct one (1) or more additional years of harvest monitoring and comparison to verify incompatibility with the other Participating Districts prior to developing and implementing the separate YL model; *provided, further*, that upon recommendation of the Technical Panel and mutual agreement among DWR and the Participating Districts, including the newly

included Participating District, the Harvest Monitored Period under Section 5.2.4 of this Agreement may be limited to one (1) year if the Technical Panel concludes that sufficient data was gathered to determine that the newly included Participating District's service area is compatible with either the harvest monitoring of the other Participating Districts or Combined Model.

5.2.7 Reimbursement to Original Participating Districts

The newly included Participating District will make a one-time payment to reimburse WCWD, BWGWD, and RID a proportionate amount of the out of pocket costs they incurred in developing Exhibit A and this Agreement. Such reimbursement will be the percentage of the out of pocket costs equal to the newly Participating Districts' percentage of YL for the initial year compared to the YL for all Participating Districts, and will be distributed to WCWD, BWGWD, and RID by the Responsible District out of the first annual payment to the newly Participating District.

6 Future Studies and Modifications

6.1 Studies and Modifications to Reduce Impacts

Nothing in this Agreement is intended or will be construed as restricting DWR from undertaking studies or seeking modifications at Oroville, at its expense, that would reduce any impacts to the Districts associated with DWR's cold water deliveries from Oroville's Thermalito Afterbay and/or releases to the Feather River, including but not limited to operational or structural changes that would raise the temperature of water delivered to the Districts, and thereby reduce DWR's annual payments to the District under the terms of this Agreement. The Districts will cooperate with DWR in any such studies or modifications, and will fully support any reasonable proposal contemplated under this Section 6.1 by DWR that would result in warmer water deliveries to the Districts from DWR; *provided, however*, that the Districts reserve any rights they may have to oppose or challenge informally and in any legal or administrative proceeding, in a manner consistent with this Agreement, any proposal by DWR to undertake studies or modify Oroville that would adversely affect interests of the Districts unrelated to the temperature of water deliveries from Oroville's Thermalito Afterbay and/or releases to the Feather River. Notwithstanding the foregoing, DWR's performance under this Agreement will not be suspended or conditioned as a result of its evaluation or implementation of any study or modification contemplated under this Section 6.1, and the Districts will not be obligated hereby to contribute to the costs thereof.

6.2 Studies and Modifications to Meet Regulatory Requirements

Nothing in this Agreement is intended or will be construed as restricting DWR from undertaking studies or seeking modifications at Oroville, at its expense, that would reduce temperature of water released from Oroville's Thermalito Afterbay and/or releases to the Feather River, if said releases are required, necessary, or appropriate to meet any federal or state regulatory obligation, downstream water quality requirement, water supply need, or additional flood control requirements.

7 Regulatory Proceedings

7.1 FERC Proceedings

7.1.1 Filing of Agreement with FERC

Within thirty (30) days of execution of this Agreement as indicated by the date first written above, DWR will file this Agreement with FERC, for informational purposes only. The Parties acknowledge that the provisions of this Agreement will not be subject to FERC's jurisdiction and should not be included within any license article, term, condition, or other provision of the new FERC license for Oroville, and the Parties will not seek inclusion of this Agreement or any term hereof.

7.1.2 Comment and Withdrawal of Protest

Within twenty (20) days after DWR files this Agreement with FERC, the Districts, either individually or collectively, will file with FERC: (a) a withdrawal of their opposition to DWR's Application for New License for Oroville; and (b) a comment in support of FERC's issuance of a new license for the continued operation and maintenance of Oroville as proposed by DWR. In its supporting comments, the Districts will:

(a) Confirm that this Agreement between DWR and the Districts is a non-jurisdictional Agreement, which should not be included in the new license or otherwise approved or adopted by FERC;

(b) Advocate for FERC's issuance of a new license for Oroville as proposed by DWR and not object to FERC's adoption of the proposed protection, mitigation, and enhancement measures set forth in the Settlement Agreement for Licensing of the Oroville Facilities;

(c) Urge FERC to issue a new 50-year license for Oroville; and

(d) Acknowledge that the research on impacts of cold water that were described and analyzed in the report entitled "Spatial Distribution of Water Temperature Affects on Rice Productivity" was an important first step to understanding the impacts of cold water on rice production within the Districts by characterizing the yield response of rice to cold water effects at a specific point within a given field, but that, in the absence of methodology to relate it to whole fields throughout the Districts, it did not provide a model for calculating and quantifying the degree of any impact of cold water on YL in fields within the Districts.

7.1.3 All Filings and Submittals Consistent with Agreements

Throughout the term of this Agreement, any and all of the Parties' filings with FERC, or any other federal or state agency, will be consistent with this Agreement, and the Parties will not support, propose, or advocate FERC's adoption of any license provision that is in any way contrary to, or inconsistent with, this Agreement. From the Effective Date of this Agreement through the new license term for Oroville, the Parties' filings with FERC, or any other federal or state regulatory agency, will be consistent with the Settlement Agreement for Licensing of the Oroville Facilities and will not support, propose, or advocate FERC's adoption of any license article, term, or condition that is in any way contrary to, or inconsistent with, the Settlement Agreement for Licensing of the Oroville Facilities. Nothing in the foregoing sentence precludes or restricts the Parties from taking all necessary action to protect and enforce their rights and duties under the Diversion Agreements.

7.2 SWRCB Proceedings

7.2.1 Comments in Support of Agreement

Within thirty (30) days of execution of this Agreement as indicated by the date first written above, the Districts will file comments in support of DWR's application before the SWRCB for water quality certification under Section 401 of the Clean Water Act. Such comments will confirm that the measures set forth in this Agreement, together with those in the Settlement Agreement for Licensing of the Oroville Facilities, adequately protect beneficial uses of irrigation water within the Districts consistent with the Central Valley Basin Plan and will contain the acknowledgement

set forth in Section 7.1.2(d) of this Agreement. Upon the request of any Party, the Parties also will file a joint statement describing the mutual benefits the Parties have derived from the Diversion Agreements and this Agreement.

As part of its application for water quality certification from the SWRCB associated with FERC's relicensing of Oroville, DWR may reference and/or submit this Agreement to the SWRCB to show that measures in this Agreement adequately protect agricultural beneficial uses within the Districts consistent with the Central Valley Basin Plan and, consistent with the paragraph above, the Districts will not oppose such reference and or submittal by DWR.

7.2.2 Communications with Butte County Regarding Impacts

Within thirty (30) days of the Effective Date of this Agreement, the Districts, collectively or individually, will send a comment letter to Butte County regarding the County's comments on the Draft EIR for Oroville. The Districts' comment letter to the County will advise that the measures set forth in this Agreement, together with those in the Settlement Agreement for Licensing of the Oroville Facilities, adequately protect the Districts' interests including the beneficial use of irrigation water by the Districts as set forth in the Central Valley Basin Plan, and that this Agreement constitutes full compensation for any and all impacts within the Districts' service areas associated with DWR's deliveries of cold water from Thermalito Afterbay and releases to the Feather River. The Districts' comment letter also will request the County to rescind those sections of its comments on the Draft EIR which seek mitigation for the effects on YL caused by cold water deliveries from the Thermalito Afterbay and releases to the Feather River.

In addition to the comment letter, the Districts will make a good faith effort to meet with officials from Butte County to further discuss how the measures in this Agreement, together with those in the Settlement Agreement for Licensing of the Oroville Facilities, adequately protect the Districts' interests including the beneficial use of irrigation water as set forth in the Central Valley Basin Plan, in the event the County does not concur that this Agreement fully compensates the Districts for any and all impacts of cold water associated with DWR's deliveries of water from Oroville's Thermalito Afterbay and releases to the Feather River.

7.3 Inconsistent Regulatory Action

The Parties have entered into this Agreement with the express expectation and condition that FERC will issue a new license for Oroville substantially in the form requested by DWR and in a manner that is not Inconsistent with this Agreement. If the new FERC license or any related regulatory approval, including but not limited to the SWRCB's water quality certification, is Inconsistent with this Agreement, any Party aggrieved by such regulatory action may withdraw from this Agreement if the aggrievement caused by regulatory action that is Inconsistent with this Agreement is not cured, but only after: (1) meeting and conferring with the other Parties to agree to a new methodology, as provided in Section 7.3.1 herein; and (2) exhausting administrative remedies, as provided in Section 7.3.2 herein.

7.3.1 Meet and Confer

Within thirty (30) days of the issuance of the new FERC license for Oroville or issuance of the related regulatory approval that is Inconsistent with this Agreement, an aggrieved Party may provide Notification of its intent to withdraw from this Agreement. Within thirty (30) days of such Notification, the Parties will meet and confer to discuss the new license requirement or related regulatory approval that is Inconsistent with this Agreement and make good faith efforts to cure the aggrievement by agreeing upon a new methodology that would:

(a) allow the Parties to reasonably and effectively ascertain impacts to the Participating Districts associated with DWR's deliveries of cold water from the Thermalito Afterbay or releases to the Feather River;

(b) compensate the Participating Districts for any such impacts;

(c) comply with all terms of the new FERC license and all associated regulatory approvals; and

(d) be, to the extent reasonably practicable, consistent with the structure, language, and intent of this Agreement.

7.3.2 Administrative and Judicial Relief

The Parties also will seek to alleviate the aggrievement caused by regulatory action that is Inconsistent with this Agreement by filing for administrative rehearing, clarification, or reconsideration, or by filing an appeal for judicial review, as appropriate. In all such proceedings, the Parties will act consistent with the intent of this

Agreement and will not oppose or otherwise undermine this Agreement, either directly or indirectly. If a Party has filed for administrative or judicial relief and the Parties subsequently agree to modify this Agreement to conform with the new license or other regulatory approval for Oroville, the Party seeking administrative or judicial relief will withdraw or seek dismissal of that portion of the petition or judicial action regarding the regulatory action that is Inconsistent with this Agreement, or recommend such withdrawal or dismissal, as appropriate.

7.3.3 Withdrawal

If the aggrievement caused by regulatory action that is Inconsistent with this Agreement is not resolved through good faith negotiations among the Parties, as set forth in Section 7.3.1 herein, or through administrative and judicial proceedings, as set forth in Section 7.3.2 herein, the aggrieved Party may withdraw from this Agreement as provided in Section 8 herein, upon exhaustion of administrative remedies.

7.3.4 Performance During Pendency of Aggrieving Regulatory Action

Notwithstanding any other provision of this Agreement, the Parties will be under no obligation to perform under this Agreement during the pendency of any regulatory or judicial proceeding related to regulatory action that aggrieves a Party to this Agreement, as provided in this Section 7.3.

8 Withdrawal and Termination

8.1 Withdrawal of Party from Settlement

Any Party may withdraw from this Agreement as provided in Section 7.3. In addition, DWR may withdraw from this Agreement as provided in Section 8.2.2 herein. A Party that withdraws will provide Notification of its withdrawal to all other Parties, which Notification will include the Party's basis for withdrawal.

8.2 Effect of Withdrawal

8.2.1 Withdrawal by DWR

Withdrawal by DWR will terminate this Agreement, rendering it null and void, as provided in Section 8.3 of this Agreement.

8.2.2 Withdrawal by the Districts

Withdrawal by any Party other than DWR will not terminate this Agreement and will not affect the enforceability of this Agreement as to the non-withdrawing Parties. Withdrawal by any Party other than DWR, however, will amend this Agreement to omit the terms applicable to said withdrawing Party, and the withdrawing Party will have no rights or benefits under this Agreement. Withdrawal by any Party other than DWR also will cancel, as between DWR and the withdrawing Party, the amendment herein of the Diversion Agreement to which the withdrawing Party is a party; *provided, however,* that such cancellation will not in any manner disturb or otherwise affect the continued effect of this Agreement, including the amendment herein of the Diversion Agreement, as between DWR and any other Parties to this Agreement, including but not limited to any Party that is also a party to the Diversion Agreement to which the withdrawing Party is a party. Upon withdrawal, the withdrawing Party will continue to be bound by Sections 3.3, 4.5.6, and 14.7 of this Agreement.

If a Party other than DWR withdraws from this Agreement, DWR at its sole option may elect to let this Agreement stand, thereby obligating DWR and the non-withdrawing Parties to continue to be bound by the terms of this Agreement, or to itself withdraw from this Agreement by providing Notification of its withdrawal within thirty (30) days of the other Party's withdrawal. If DWR invokes its option to withdraw in response to a withdrawal of another Party, the provisions of Section 8.2.1 of this Agreement will apply.

If DWR does not invoke its option under this Section 8.2.2 to withdraw from this Agreement, the remaining Parties will amend this Agreement, including Exhibit A, to make any appropriate changes to accommodate for the withdrawal of a Party.

8.3 Termination of Agreement

In the event this Agreement is terminated, the Parties will not have any rights or obligations under this Agreement, nor will any Party receive any benefits under this Agreement, except as expressly provided in this Section 8.3. In the event of termination, moreover, the Parties acknowledge that FERC and SWRCB cannot consider this Agreement or any data produced under this Agreement a part of the record of their proceedings related to the relicensing of Oroville.

Notwithstanding the termination of this Agreement as provided in this Section 8.3, the Parties will continue to be bound by Sections 3.3, 4.5.6, and 14.7 of this Agreement, which Sections will survive termination.

9 Dispute Resolution

Except as expressly provided in Exhibit A, the Parties will adhere to the dispute resolution mechanism set forth in this Section 9 to resolve all disputes related to the compliance with, or the performance of, obligations set forth in this Agreement. For any and all disputes under this Agreement concerning DWR's annual payments to the Participating Districts, DWR will defer any and all such payments to the Participating Districts until the conclusion of the dispute resolution mechanism set forth in this Section 9; *provided, however*, that no such deferment will relieve DWR from any obligation to compensate the Participating Districts.

9.1 Notice

A Party claiming a dispute will provide Notification of the dispute to the other Parties within thirty (30) days of the Party's actual knowledge of the act, event, or omission that gives rise to the dispute, unless this Agreement expressly provides otherwise. Such Notification will describe: (a) the matter(s) in dispute; (b) the identity of any other Party who is responsible for causing the dispute; and (c) the specific relief sought. Within fifteen (15) days of such Notification, each Party that has an interest materially affected by the dispute may provide Notification to the other Parties of its intention to participate in the resolution of the dispute.

9.2 Informal Meetings

In any dispute subject to this Section 9, the Disputing Parties will hold at least two informal meetings within forty-five (45) days after the Notification, to attempt to resolve the disputed issues(s). The Disputing Parties, at their sole discretion, may jointly elect to seek the views of the Technical Panel in these informal meetings.

9.3 Arbitration and Mediation

If the informal meetings fail to resolve the dispute, the Disputing Parties will resolve the dispute through binding arbitration or meditation, as set forth in this Section 9.3.

9.3.1 Binding Arbitration

All disputes and controversies of every kind and nature among the Disputing Parties regarding all technical matters related to the implementation of Exhibit A, including but not limited to selection of Monitoring Fields, protocols of monitoring, field investigations, determinations of generally accepted agricultural practices within

the Districts' service areas, and determination of YL will be settled by binding arbitration administered by the American Arbitration Association in accordance with its applicable procedures for Large, Complex Commercial Disputes, or other arbitration firm or procedures mutually agreed to in writing by the Disputing Parties; *provided, however,* that any and all disputes concerning the calculation of price or the calculation or amount of any payments made by DWR to the Participating Districts under this Agreement will be resolved exclusively in accordance with Section 9.3.2 of this Agreement; *provided, further*, that the arbitrators will have no power to determine the existence or validity of this Agreement.

The arbitration panel will consist of three (3) neutral, impartial members possessing academic credentials, knowledge, and experience in the fields of statistics, agronomy, and/or agricultural economics. Within thirty (30) days after the commencement of arbitration, the Disputing Parties will each select one (1) person to act as arbitrator, and the two selected arbitrators will select a third arbitrator within sixty (60) days of their appointment; *provided, however,* that where DWR participates in any arbitration under this Section 9.3.1, it will select one (1) arbitrator, and all other Disputing Parties will collectively select one (1) arbitrator. If the two (2) arbitrators selected by the Disputing Parties are unable or fail to agree on the third arbitrator, the third arbitrator will be selected by the American Arbitration Association or other arbitration firm selected by the Disputing Parties. The third selected arbitrator will act as the Chairperson of the panel. The American Arbitration Association, or other selected arbitration firm, will agree to this arbitrator selection process prior to initiating arbitration.

The arbitration panel will render its final ruling within ninety (90) days after appointment of the final arbitrator, and the arbitrators will agree to comply with this schedule before accepting appointment; *provided, however,* that this time limit may be extended by written agreement of the Disputing Parties. The arbitration panel will hold all hearings in Sacramento, California, unless otherwise agreed in writing by the Disputing Parties, and will agree to this requirement before accepting appointment.

The arbitration panel's ruling will be limited to the resolution of factual and technical disputes among the Disputing Parties, and will be accompanied by a reasoned opinion supporting its factual and technical findings. The arbitration panel will have no authority to award any monetary payments, damages, awards, or fees, or to issue any injunction or direction to the Disputing Parties. The

arbitration panel's ruling will be final and binding, and judgment may be entered by a court having jurisdiction thereof.

Each Disputing Party will bear its own costs and expenses in participating in the arbitration proceeding, and all costs and fees of the arbitration process will be allocated equally among all Disputing Parties.

9.3.2 Mediation

For any and all disputes and controversies of every kind and nature among the Disputing Parties that are not subject to binding arbitration as set forth in Section 9.3.1 of this Agreement, the Disputing Parties, following the informal meeting process set forth in Section 9.2 of this Agreement, will decide whether to attempt to resolve the dispute using a neutral mediator. The decision whether to pursue mediation will be made within twenty (20) days after conclusion of the informal meetings. Mediation will not occur unless the Disputing Parties agree on the selection of the mediator and an allocation of meditation costs. The Disputing Parties will select a mediator within thirty (30) days of the decision to pursue mediation. The mediation process will be completed within ninety (90) days after selection of the mediator.

9.4 Enforcement of Agreement After Dispute Resolution

A Disputing Party may seek administrative or judicial relief regarding any disputes related to the implementation of this Agreement only after exhaustion of the dispute resolution procedures set forth in this Section 9; *provided, however*, that all rulings of the arbitration panel are final and binding upon the Disputing Parties and not subject to judicial review. Venue for any such action will lie only in a court with jurisdiction located in Sacramento, California. In such action, a Disputing Party may only seek specific performance of the contractual obligation or other equitable relief. By executing this Agreement, no Party waives any equitable or legal defenses that may be available.

10 *Force Majeure*

An event of *Force Majeure* as used herein means any event beyond the reasonable control of and which occurs without the fault or negligence of a Party or any entity controlled by a Party, including its contractors and subcontractors (to the extent said contractor was acting under the control or direction of the Party), which events may include but are not limited to: any delay or failure to grant a permit or other regulatory authorization required by law to be granted by any federal, state, or local government authority unless such delay or failure is a

result of the inaction or dilatory action of the Party claiming *Force Majeure*; any unforeseen regulation, law, or prohibitory or mandatory action of any federal or state governmental authority other than one that is brought about by the inaction or dilatory action of the Party claiming *Force Majeure*; acts of God or sudden actions of the elements, including fire; infestation of disease, insects, vermin, rodents, or any other pests, or any noxious weeds or invasive species; drought or critically high or low flows and levels in the Feather River watershed; strikes, lockouts or other similar industrial or personnel disturbances; acts of the public enemy, including terrorist acts, wars, civil disturbances, blockades, military actions, insurrections, or riots; landslides, floods, washouts, lightning, earthquakes, tornadoes, hurricanes, blizzards or other storm or storm warnings; explosions, fires, sabotage, or vandalism; breakage, defects, malfunctioning, tampering, theft, or accident to machinery, equipment, materials, or lines of pipe or wires; freezing of machinery, equipment, materials or lines of pipe or wires; inability or delay in the obtaining of materials or equipment; or inability to obtain or utilize any permit, approval, easement, license or right-of-way. The settlement of strikes, lockouts, or other such industrial or personnel disturbances will be entirely within the discretion of the Party. The requirement herein that an event of *Force Majeure* will be remedied with all reasonable dispatch will not require the settlement of strikes, lockouts or other similar such industrial or personnel disturbances when such course is, in the sole opinion of the Party, inadvisable.

If an event of *Force Majeure* directly renders a Party unable, wholly or in part, to perform any obligations under this Agreement, the Party, upon providing Notification and full particulars of such event of *Force Majeure* to the other Parties, as soon thereafter as practicable, is authorized to suspend performance under such obligations during the continuance of any inability or incapacity so caused, but for no longer period; *provided, however*, the Party will not be relieved from: (a) any obligations of this Agreement not directly affected by the event of *Force Majeure*; or (b) any obligation to make payment to another Party of pre-existing obligations. The Party will use best efforts to remedy the cause of such inability or incapacity with all reasonable dispatch, including but not limited to the prompt commencement and prosecution of litigation. When the Party is able to resume performance of its obligations, it will provide Notification to the other Parties to that effect. Notwithstanding the foregoing, an event of *Force Majeure* will temporarily relieve, but will not excuse, a Party's performance under this Agreement until such time as the *Force Majeure* event is cured. The occurrence of an event of *Force Majeure* that results in impossibility of performance of an obligation, however, will excuse the Party's performance.

11 Defense and Indemnification

The Districts will at all times fully defend, protect, indemnify, hold harmless, waive, release, and discharge DWR and its officers, agents, employees, and contractors, against any and all losses, claims, demands, liabilities, injuries, causes of action, penalties, damages, costs, attorneys fees, charges, and

expenses of whatever kind or nature arising out of any past, present or future claims, demands, actions, liabilities, and/or any other assertions of rights associated with the temperature of water deliveries to the Districts from Oroville's Thermalito Afterbay and/or releases to the Feather River.

12 Liability

The Districts, their agents, employees and contractors, in carrying out this Agreement, will act in an independent capacity and not as officers, employees, or agents of DWR. DWR assumes no liability for the Districts' collective or individual actions in carrying out of any activity related to this Agreement. The Districts will be solely responsible for any and all liability, including but not limited to personal injury or property damage that may arise from the Districts' collective or individual actions in carrying out any and all activities related to this Agreement, excepting for such injury, damage, or loss caused by the negligence or willful misconduct of DWR or its officers, agents, or employees.

DWR, its agents, employees and contractors, in carrying out this Agreement, will act in an independent capacity and not as officers, employees, or agents of any of the Districts. The Districts assume no liability for DWR's actions in carrying out of any activity related to this Agreement. DWR will be responsible for any and all liability, including but not limited to personal injury or property damage that may arise from DWR's actions in carrying out any activity related to the Agreement, excepting for such injury, damage, or loss caused by the negligence or willful misconduct of any of the Districts or their officers, agents, or employees.

13 Prior Agreements

Section 4(c) of the 1986 Diversion Agreement is hereby amended to read as follows, in its entirety:

> "Except as expressly provided herein, nothing contained herein shall relieve State from, or impose on Western, any liability for the quality of water released by State from the Oroville-Thermalito Project or delivered to Western here-under. All past, present or future claims of liability or damages resulting from the delivery or diversion of cold water from the Oroville Project, and which could be brought by Western or the growers or landowners within its boundaries, are satisfied and resolved by the Amendment to Agreements on Diversion of Water from the Feather River and Settlement of Issues Related to the Temperature of Water Diversions, executed on March 15, 2008."

Section 6, paragraph 4 of the 1969 Diversion Agreement is hereby amended to read as follows, in its entirety:

"This Agreement does not relieve State or its officers, agents or employees from liability to or damages to Districts or third parties arising out of failure of State at any time to comply with this Agreement or the diversion schedules or notices given by Joint Manager pursuant hereto. All past, present or future claims of liability or damages resulting from the delivery or diversion of cold water from the Oroville Project, and which could be brought by Districts or the growers or landowners within their boundaries, are satisfied and resolved by the Amendment to Agreements on Diversion of Water from the Feather River and Settlement of Issues Related to the Temperature of Water Diversions, executed on March 15, 2008."

In the event the 1986 Diversion Agreement is terminated, WCWD will be deemed to have withdrawn from this Agreement, and the provisions of Section 8.2.2 of this Agreement will apply. In the event the 1969 Diversion Agreement is terminated, RID, BWGWD, BWD, and SEWD will be deemed to have withdrawn from this Agreement, and the provisions of Section 8.2.2 of this Agreement will apply.

No definition or use of any term used in this Agreement that is also used in a Diversion Agreement will for the purposes of the Diversion Agreements be changed by its use herein. Neither Diversion Agreement is amended by this Agreement, except as expressly provided in this Section 13.

14 Miscellaneous

14.1 No Third-Party Beneficiaries

This Agreement does not create any right or interest in the public or any other third party, and does not authorize any third party to maintain a suit at law or equity pursuant to this Agreement. The duties, obligations, and responsibilities of the Parties with respect to third parties will remain as imposed under applicable law.

14.2 Entire Agreement

This Agreement, including Exhibit A, constitutes the complete and exclusive agreement of the Parties with respect to the subject matter thereof, and supersedes all discussions, negotiations, representations, warranties, commitments, offers, contracts, and writings prior to the Effective Date of this Agreement, with respect to its subject matter.

14.3 Non-Severable Terms of Agreement

The terms of this Agreement are not severable one from another. 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 Agreement. If a court of competent jurisdiction rules that any provision of this Agreement is invalid, this Agreement is deemed modified to conform to such ruling, unless a Party provides Notification of its objection with forty-five (45) days of the ruling. If a Party objects, the other Parties will meet and confer regarding the continued viability of this Agreement.

14.4 Costs

Except as expressly provided in this Agreement, all Parties will bear their own costs of participating in this Agreement and discharging their duties and responsibilities hereunder.

14.5 Waiver

The failure of any Party to insist, on any occasion, upon strict performance of any provision of this Agreement will not be considered a waiver of any obligation, right or duty of, or imposed upon, such Party.

14.6 Successors and Assigns

This Agreement will be binding upon and inure to the benefit of the Parties and their successors and approved assigns, unless otherwise specified in this Agreement.

14.6.1 Assignment by the Districts

Any voluntary assignment by any of the Districts will not be effective unless approved by DWR, which approval will not be unreasonably withheld. A partial assignment is not permitted. After DWR's approval of the assignment, the assignee will sign this Agreement and become a Party.

14.6.2 Assignment by DWR

Nothing in this Agreement is intended or will be construed as limiting or constraining in any manner DWR's unilateral right to seek a transfer of its FERC license for Oroville or otherwise change ownership of Oroville; *provided, however*, that unless prohibited by applicable law, DWR will require in any transaction for a change in ownership or transfer of its FERC license for Oroville that such new owner and/or licensee will be bound by, and will assume all of the rights and obligations of DWR under this Agreement upon

completion of the change of ownership and/or approval by FERC of the license transfer.

No change in ownership of Oroville or transfer of the FERC license for Oroville will modify or otherwise affect any other Party's rights or obligations under this Agreement.

14.6.3 Succession

In the event of succession of any Party to this Agreement, whether by statute, executive order, or operation of law, the successor agency will become a Party to and be bound by the terms of this Agreement, to the extent permitted by law.

14.6.4 Continuation of Certain Obligations

Upon completion of a succession or assignment, the initial Party will no longer be a Party to this Agreement; *provided, however*, the initial Party will continue to be bound by Sections 3.3, 4.5.6, and 14.7 of this Agreement and will not take any action adverse to this Agreement.

14.7 Settlement Negotiations Privileged and Confidential

The Parties have entered into the negotiations and discussions leading to this Agreement with the understanding that all discussions, communications, drafts, work papers, and notes relating to this Agreement are privileged and confidential. This material will not prejudice the position of any Party or participant taking part in such discussions and negotiations, and will not be used by any Party or third party in any manner, including admission into evidence, in connection with these or any other proceedings related to the subject matter of this Agreement. In the event this Agreement is terminated, this Agreement, and all drafts, work papers, and notes related to its development, to the fullest extent allowed by law, will be deemed settlement materials and will not constitute a part of the record in any proceeding, nor be admissible into evidence in any proceeding related to the subject matter of this Agreement. This Agreement will not obligate any Party to maintain confidentiality of any document that it reasonably determines to be a public record under the California Public Records Act. This Section 14.7 will survive any termination of this Agreement.

14.8 Relationship of the Parties

Except as otherwise expressly set forth herein, nothing in this Agreement is intended or will be construed to create an association, trust, partnership

or joint venture, or impose any trust or partnership duty, obligation or liability on any Party, or create an agency relationship between or among the Parties or between any Party and any employee of another Party.

14.9 Notification

Except as otherwise provided in this Section 14.9, any Notification required by this Agreement will be written. To the extent practicable, Notice will be sent to all Parties by first class U.S. mail, guaranteed overnight delivery, facsimile, electronic mail, or by other means. For the purpose of this Agreement and unless otherwise specified, a Notification will be effective upon receipt, but if provided by U.S. mail, seven (7) days after the date on which it is mailed. Any Notification will also meet any additional requirements specified in any section of this Agreement. For purpose of Notification, the list of authorized representatives of the Parties as of the Effective Date is attached as Exhibit B. The Parties will provide Notification of any change in the authorized representatives designated in Exhibit B. The Parties acknowledge that it is their responsibility to keep the other Parties informed of current address, telephone, facsimile, and electronic mail information, and that failure to provide the other Parties with current contact information will result in a waiver of that Party's right to Notification under this Agreement.

14.10 Amendment of Agreement

This Agreement may be amended only by a written instrument duly executed by all Parties.

14.11 Amendment of Oroville FERC License

DWR reserves all of its rights, consistent with the terms and intent of this Agreement, to unilaterally petition FERC to, among other things, amend or otherwise modify its license for Oroville, and to fully comply with all FERC orders, regulations, directives, and policies without any liability or obligation to the Districts.

14.12 Governing Law

This Agreement, as a binding contract between the Parties, will be governed by and construed under the laws of the State of California.

14.13 Compliance with Laws, Regulations, Permit Requirements

The Parties will at all times comply with, and require their contractors and subcontractors to comply with, all applicable federal and State laws, rules and regulations, permits and all applicable local ordinances.

14.14 Availability of Funds

Payments to the Districts under this Agreement are subject to the availability of funds through the State's normal budget process. DWR represents that all funds to be provided by it under this Agreement are not subject to the availability of annually appropriated funds from the State of California. However, the availability of funds may be delayed due to the failure of the State legislature to pass an annual budget by the State constitutional deadline. If there is such a delay in the State's annual budget, DWR will take prompt action to make the delayed funds available upon passage of the State annual budget. The Parties acknowledge that there is no remedy for breach of contract for failure of the State legislature to pass an annual budget.

14.15 Audit Clause

The Parties will be subject to the examination and audit of the State Auditor for a period of three years after the final payment under this Agreement (Government Code Section 8546.7).

14.16 Titles for Convenience Only

The titles for the sections of this Agreement are used only for convenience of reference and organization and will not be used to modify, explain, or interpret any of the provisions of this Agreement or the intentions of the Parties. This Agreement has been jointly drafted by the Parties and therefore will be construed according to its plain meaning and not for or against any Party.

15 Execution

15.1 Signatory Authority

Each signatory to this Agreement certifies that he or she is authorized to execute this Agreement and to legally bind the Party he or she represents, and that such Party will be fully bound by the terms hereof upon such signature without any further act, approval or authorization of such Party.

15.2 Signing in Counterparts

This Agreement may be executed in any number of counterparts, and each executed counterpart will have the same force and effect as an original instrument as if all the Parties to all of the counterparts had signed the same instrument. Any signature page of this Agreement may be detached from any counterparts of this Agreement without impairing the

legal effect of any signatures thereon, and may be attached to another counterpart of this Agreement identical in from hereto but having attached to it one or more signature pages.

IN WITNESS THEREOF, the Parties, intending to be legally bound, have caused this Agreement to be executed through their duly authorized representatives.

CALIFORNIA DEPARTMENT OF WATER RESOURCES

By: _____ Date: 4/23/08
Lester A. Snow
Director

BIGGS-WEST GRIDLEY WATER DISTRICT

By: _____ Date: _____
RR (Dick) Cassady
President of the Board

BUTTE WATER DISTRICT

By: _____ Date: _____
Robert Waller
President of the Board

RICHVALE IRRIGATION DISTRICT

By: _____ Date: _____
Gene C. Harris
President of the Board

SUTTER EXTENSION WATER DISTRICT

By: _____ Date: _____
Carl Yank
President of the Board

Approved as to legal form and sufficiency:

Chief Counsel, Department of Water Resources

IN WITNESS THEREOF, the Parties, intending to be legally bound, have caused this Agreement to be executed through their duly authorized representatives.

CALIFORNIA DEPARTMENT OF WATER RESOURCES

By: _____ Date: _____
Lester A. Snow
Director

BIGGS-WEST GRIDLEY WATER DISTRICT

By: _____ Date: 3-31-08
Thomas D. Coleman
President of the Board

BUTTE WATER DISTRICT

By: _____ Date: _____
Robert Waller
President of the Board

RICHVALE IRRIGATION DISTRICT

By: _____ Date: _____
Gene C. Harris
President of the Board

SUTTER EXTENSION WATER DISTRICT

By: _____ Date: _____
Carl Yank
President of the Board

IN WITNESS THEREOF, the Parties, intending to be legally bound, have caused this Agreement to be executed through their duly authorized representatives.

CALIFORNIA DEPARTMENT OF WATER RESOURCES

By: _____ Date: _____
Lester A. Snow
Director

BIGGS-WEST GRIDLEY WATER DISTRICT

By: _____ Date: _____
RR (Dick) Cassady
President of the Board

BUTTE WATER DISTRICT

By: Robert C Waller Date: 3-27-08
Robert Waller
President of the Board

RICHVALE IRRIGATION DISTRICT

By: _____ Date: _____
Gene C. Harris
President of the Board

SUTTER EXTENSION WATER DISTRICT

By: _____ Date: _____
Carl Yank
President of the Board

IN WITNESS THEREOF, the Parties, intending to be legally bound, have caused this Agreement to be executed through their duly authorized representatives.

CALIFORNIA DEPARTMENT OF WATER RESOURCES

By: _____ Date: _____
Lester A. Snow
Director

BIGGS-WEST GRIDLEY WATER DISTRICT

By: _____ Date: _____
RR (Dick) Cassady
President of the Board

BUTTE WATER DISTRICT

By: _____ Date: _____
Robert Waller
President of the Board

RICHVALE IRRIGATION DISTRICT

By: _____ Date: 3-20-2008
Gene C. Harris
President of the Board

SUTTER EXTENSION WATER DISTRICT

By: _____ Date: _____
Carl Yank
President of the Board

IN WITNESS THEREOF, the Parties, intending to be legally bound, have caused this Agreement to be executed through their duly authorized representatives.

CALIFORNIA DEPARTMENT OF WATER RESOURCES

By: _____ Date: _____
Lester A. Snow
Director

BIGGS-WEST GRIDLEY WATER DISTRICT

By: _____ Date: _____
RR (Dick) Cassady
President of the Board

BUTTE WATER DISTRICT

By: _____ Date: _____
Robert Waller
President of the Board

RICHVALE IRRIGATION DISTRICT

By: _____ Date: _____
Gene C. Harris
President of the Board

SUTTER EXTENSION WATER DISTRICT

By: Carl Yank Date: 3/18/08
Carl Yank
President of the Board

WESTERN CANAL WATER DISTRICT

By: _____ Date: 3/18/08

Eric Larrabee
President of the Board

EXHIBIT A

1. Introduction

1.1. Overview: This exhibit contains a description of the process and methodology for determining appropriate reimbursement by DWR to Participating Districts (Western Canal Water District, Richvale Irrigation District, and Biggs-West Gridley Water District) for the economic value of rice yield loss (YL). The methodology is presented in the following eight sections:

- Section 2: Identification of Cold Water Affected and Unaffected Checks
- Section 3: Harvest-Monitored Year Yield Loss Measurement and Model Development
- Section 4: Non-Harvest-Monitored Year Yield Loss Measurement and Model Development
- Section 5: 10-Year Review of Yield Loss Model
- Section 6: Calculation of Yield Loss and Associated Annual Payment
- Section 7: Future Improvements to Methodology
- Section 8: Definition of Terms
- Section 9: References

1.2. Use of Data: Data collected under this agreement will be used by the Parties exclusively for purposes of calculating YL, the economic value of YL, and the annual payment for YL. These data are not intended to be used for any other purpose.

1.3. Use of Statistics to Estimate Yield Loss: The Parties accept that statistical estimates of YL will be used as the basis for final determination of payments as defined by this exhibit.

1.4. Changes to Methodologies: Mutually agreed upon changes to the methodology may be developed and implemented at any practicable time. No changes to the methodology defined in Sections 2 through 6 will be implemented unless agreed to in writing by the Parties. The requirement for agreement by the Parties when altering in any portion of the methodology applies to all aspects of the YL and economic loss estimation described in this exhibit, whether specifically identified or not.

1.5. Timely Documentation: The steps of implementing the methodologies described in Sections 2 through 6 will be documented in writing in a timely manner, as they are implemented, by the Technical Panel.

2. Identification of Cold Water Affected and Unaffected Areas

Introduction: The extent of cold water-affected areas in individual fields varies due to several factors. These factors include the amount, duration, and temperature of water delivered throughout the growing season as well as in-field water management configurations.

2.1. Cold Water Area Harvest: In all harvest-monitored fields, at least the first check will be harvested as a Cold Water Affected Check (CWC). In those fields where the cold-water impact on yields is expected to extend beyond the first check, the division between Cold Water Affected Checks (CWCs) and Unaffected Checks (UACs) in each harvest-monitored field will be determined as follows:

2.1.1. If DWR and the Participating Districts agree on the location of the division between Cold Water Affected Area (CWA) and Unaffected Area (UAA), based on check-by-check water temperature monitoring results, historic yield patterns, grower or district knowledge, remote sensing data, and/or other information, then the division will be at the agreed location.

2.1.2. If the DWR and the Participating Districts do not agree or cannot determine the location of the division between CWA and UAA, the downstream 50 percent of checks (or less, if the number of checks is uneven) will be harvested as Lot A, and each upstream check will be harvested in a separate lot.

An example of the process for identifying the harvest lots is shown as Step 1 in **Figure 1**.

2.1.2.1. The first check in a downstream direction from the field maintenance inlet with a yield (cwt/acre) greater than 95 percent of the combined (area-weighted average) yield of Lot A will be the first Unaffected Check (UAC). An example of the process for measuring the separate harvest lots and evaluating the harvest results is shown as Step 2 in **Figure 1**.

2.1.2.2. All checks downstream of the first UAC receiving all of their water from the first UAC will also be considered UACs for analytical purposes. Taken together these UACs would comprise the UAA. Checks upstream of the UAC will be considered CWCs and taken together would comprise the CWA. An example of the process for determining the CWCs, UACs, CWA, and UAA from the harvest results is shown as Step 3 in **Figure 1**.

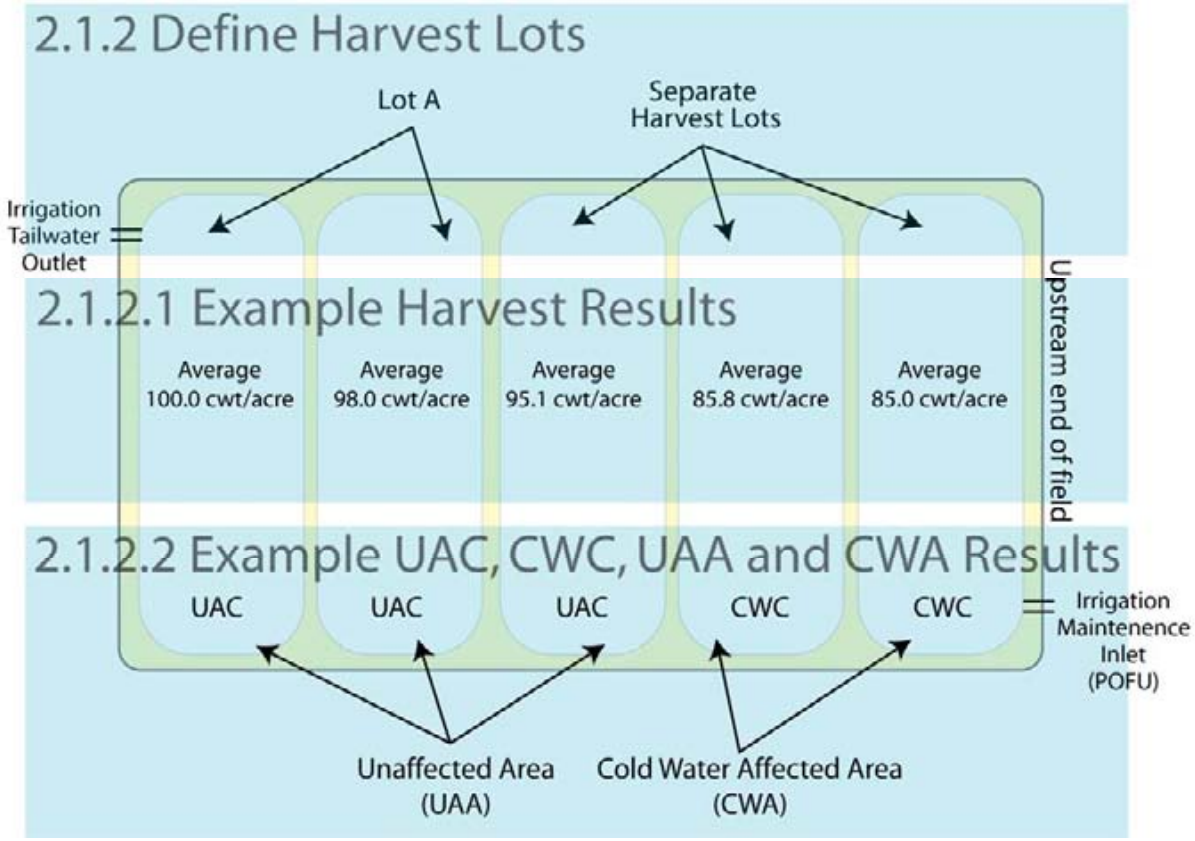


Figure 1. UAA and CWA Determination Process.

3. Harvest-Monitored Year Yield Loss Measurement and Model Development

Introduction: This section defines the methodology to be employed to measure and estimate annual rice YL for Harvest-Monitored Years. There are three different YL model development scenarios described in the following sections, 3.2, 4.1 and 5.2. Section 3.2 describes the Harvest-Monitored Year YL estimation methodology and the YL model development process (see **Figure 4)**. The processes described in this section are to be used for each individual year in which harvest-monitored YL data are collected. Section 4.1 describes the non-Harvest-Monitored Year YL estimation methodology and the development and use of the YL model during non-Harvest-Monitored Years (see **Figure 5)**. The processes described in this section are to be used for each year in which harvest-monitored YL data are not collected. Section 5.2 describes the development, testing and acceptance process for a 10-year harvest-monitoring Review and update of YL models (see **Figure 6)**. The accepted YL model described in section 5.2 will be used in subsequent non-Harvest-Monitored Year YL estimates until the next harvest monitoring period.

3.1. Harvest Monitoring Period: Harvest monitoring will occur for a period of 2 to 5 years. Monitoring for a period of fewer than 5 years will require agreement of the DWR and the Participating Districts. If monitoring ceases due to less than the minimum number of 24 harvest-monitoring fields as specified in section 3.2.6.6, the maximum

number of monitoring years will be increased by one year. In the event that a year's harvest-monitoring is halted for this reason, the Initial Payment for the halted monitoring year YL will be calculated according to the method defined in section 3.2.14.7.1 (see Section 6.4 for definition of Initial Payment)..

Except as described in Section 5, DWR and the Participating Districts may agree to continue or resume harvest monitoring after the initial five years. Procedures for annual harvest monitoring (section 3.2) and YL estimation (See Section 6) may be modified by agreement of the Parties (see Section 7).

3.2. Yield Loss Estimate: The method for estimating YL includes the following steps:

3.2.1. Water-Temperature-Monitored Field Identification: The Participating Districts will identify 60 water-temperature-monitored fields (20 fields in each Participating District). The Technical Panel will review selection of the fields and candidate monitoring fields will be selected no later than April 1st of a Harvest-Monitored Year using the following criteria.

3.2.1.1. The Participating Districts will select 20 candidate fields from each District so that cooperation with growers will be successful over the long term.

3.2.1.2. Fields across the range of cold water exposure and field size will be included among the selected monitoring fields with the objective of creating an even distribution, subject to availability of suitable fields.

3.2.1.3. Only fields that are conventionally farmed (e.g., to exclude fields in which experiments are being carried out, fields farmed with minimum tillage, and organic rice fields), are served by one point of first use, and are planted with medium grain rice will be included. Drill seeded rice fields are admissible.

3.2.1.4. Fields having maintenance inlets downstream of the first check would be excluded from yield monitoring.

3.2.1.5. This field selection method provides for the sampling across a range of cold water exposure. The Technical Panel will identify water temperature exposure isotherms with 100-hour increments for total number of hours below 65°F between average planting and average panicle initiation dates ($TNBH_{65}$). Isotherms will extend from approximately 200 hours to 1,300 $TNBH_{65}$. The Technical Panel will use a water temperature interpolation map (TIM) from the preceding year to distribute the selection of fields. During the initial year, the TIM developed in 2005 will be used (see **Figure 2)**. The TIM will be developed based on procedures described in Section 3.2.3.

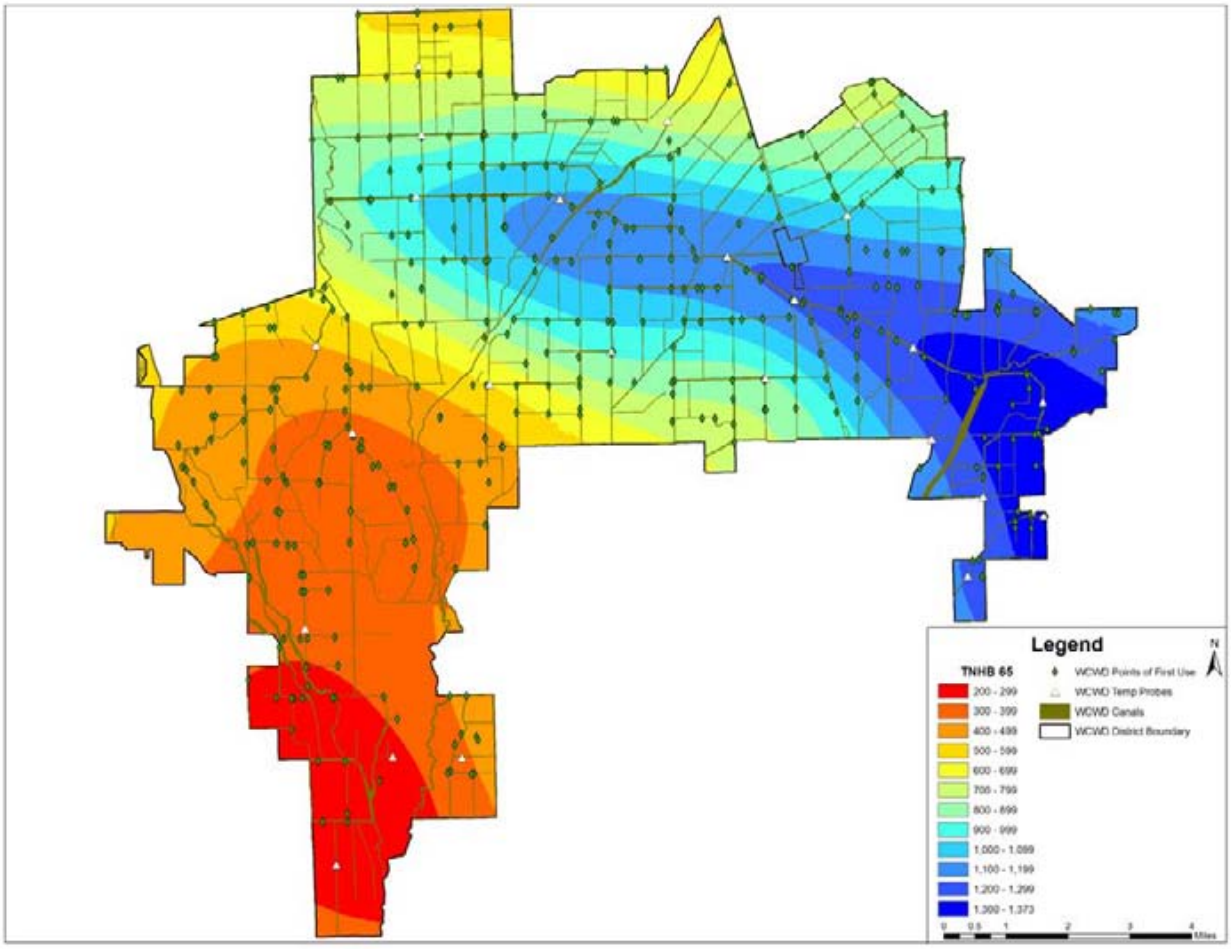


Figure 2. Example Western Canal Water District Water Temperature Interpolation Map (TIM) – Example Only, not for use.

3.2.1.6. Selected fields will also represent a range of sizes with respect to the area served by the points of first use (POFU) (see section 3.2.12), e.g. “small” 10 to 60 acres, “medium” 60 to 160 acres, and “large” more than 160 acres.

3.2.2. Water Temperature Data Acquisition: The Technical Panel will determine the number and distribution of water temperature sensors throughout the water conveyance system and on-farm systems. Water temperature sensors with data loggers will be installed, tested, and maintained as follows:

3.2.2.1. In the irrigation water delivery canal outside the field, nearby to the field maintenance inlet (POFU, see section 3.2.12) for each of the 60 water-temperature-monitored fields;

3.2.2.2. At dispersed, selected locations in the Participating Districts’ facilities and in on-farm water distribution systems. Where drain water is introduced to water distribution canals, water temperatures upstream and downstream of the drain water introduction will be monitored.

3.2.3. Development of Water Temperature Interpolation Map: Use the water temperature monitoring data to produce a TIM of the Participating Districts (see **Figure 2** example TIM).

3.2.3.1. The total hours of cold water exposure below 65^{o}F between average planting to average PI date defines $TNHB_{65}$. $TNHB_{65}$ of the water temperature monitoring locations will be used to create the TIM.

3.2.3.2. In addition to $TNHB_{65}$ values for actual monitoring stations, estimated "ghost points" may be added by the Technical Panel to improve characterization of water temperature distribution in the water delivery facilities.

3.2.4. Harvest-Monitored Field Selection: Fields to be included for harvest monitoring will be selected by the Technical Panel. The Technical Panel will select 36 fields (12 fields per Participating District) from the 60 water-temperature-monitored fields for harvest monitoring. Harvest-Monitored Fields will be selected in each Harvest-Monitored Year as early as practicable after stand establishment.

3.2.4.1. The Harvest-Monitored Fields will be selected where growers indicate a willingness to continue to be cooperators throughout the term of monitoring.

3.2.4.2 As a general selection principle for Harvest-Monitored Fields, the fields should have a minimum of production anomalies not related to cold water exposure that could potentially reduce the correlation of yield to cold water exposure (e.g. spray drift damage).

3.2.4.3 Harvest-Monitored Fields will be selected across the range of cold water exposure and field size with the objective of creating an even distribution geographically as well as with respect to degree of $TNHB_{65}$ and range of size of area served (subject to availability of suitable fields).

3.2.4.4. A distribution of fields with planting dates representative of conditions in the Participating Districts will also be sought.

3.2.4.5. If there is unresolved disagreement regarding field selection during a Harvest-Monitored Year, each party may select up to two fields to be excluded without agreement of the other party. If there is lack of agreement on the selection of 12 fields per district, the remaining Harvest-Monitored Fields will be selected at random from remaining strata such that the resultant 36 Harvest-Monitored Fields represent the broadest practicable range of cold exposure, size of area served, and planting dates.

3.2.4.6. If harvest data are not available from a field selected for harvest monitoring, a replacement field (i.e., one of the 60 fields described in section 3.2.4) may be selected by the Technical Panel if available.

3.2.5. Monitoring Staff Selection and Responsibilities: DWR and the Participating Districts may procure the services of a third-party or arrange internally to provide Monitoring Staff during the water temperature and harvest monitoring periods. The Monitoring Staff will be under technical supervision of the Technical Panel. The Monitoring Staff will submit to the Technical Panel all water temperature data collected monthly and all harvest monitored data weekly. The main duties of Monitoring Staff will include, but not be limited to the following:

3.2.5.1. Performing water temperature monitoring equipment installation, maintenance, and data downloads at all of the water-temperature monitoring locations, as well as subsequent quality control and organization of water temperature monitoring data.

3.2.5.2. Documenting field conditions and identifying potential anomalies in water-temperature-monitored fields throughout the growing season to be reported timely to the Technical Panel for evaluation.

3.2.5.3. Determining PI in the UAA, of Harvest-Monitored Fields. Collect random field samples in UAA to determine the PI date of each harvest-monitored field as specified in protocols to be provided by the Technical Panel (see Appendix 1 for PI protocols).

3.2.5.4. Coordinating field harvest schedules with grower cooperators.

3.2.5.5. Monitoring separation of harvest lots as directed by the Technical Panel, and accordingly monitoring of loading for transport to drying and storage facilities.

3.2.5.6. Collecting truck weight tag copies from driers handling rice from the Harvest-Monitored Fields. Track and catalog weight tags by harvest lot and Harvest-Monitored Field.

3.2.5.7. Monitoring Staff will be responsible for adhering to the Health and Safety Plan (to be developed by the Technical Panel).

3.2.5.8. The Technical Panel will hold at least monthly monitoring status review meetings during data collection months of Harvest-Monitored Years. The Monitoring Staff will participate in these meetings (as needed or as requested by the Technical Panel) and submit incremental collected raw data to Technical Panel for review and backup. The Technical Panel will provide guidance to Monitoring Staff managers, and inform DWR and the Participating Districts regarding this guidance.

3.2.6. Harvesting Procedures: Harvesting will be performed by commercial equipment. In each field, CWA will be harvested and weighed in a separate lot from the UAA. The methodology to identify CWA and UAA is presented in section 2. In the event that the CWA and UAA are not agreed upon prior to harvest (see section 2.1.2.), then Lot A and each upstream check will be harvested as a separate harvest lot.

3.2.6.1. The Participating Districts will contact the growers and secure access to the fields for water temperature monitoring and harvesting. Growers' cooperation in harvest-monitoring operations will also be secured by the Participating Districts.

3.2.6.2. Each grower must provide a list of their representatives to the Technical Panel in advance of harvest. DWR and the Participating Districts will be individually responsible for adhering to a Health and Safety Plan (to be developed by the Technical Panel).

3.2.6.3. Copies of truck weight tags (including truck weight, tare weight and moisture content) for each field will be collected from the Driers by the Monitoring Staff and provided to the Technical Panel.

3.2.6.4. Harvest weights will be converted to 14 percent moisture content (MC), and corrected for dockage (material in the harvested rice for which growers are not compensated) using the standard methods employed by each individual drier. The resulting weights (i.e., harvest weights minus dockage adjusted to 14% MC) will be used in all subsequent analyses.

3.2.6.5, Yield information collected outside of these procedures would be excluded from analysis unless considered valid for inclusion by agreement of the Technical Panel.

3.2.6.6. The analysis will continue if 24 or more fields in the Participating Districts, occupying at least every third water temperature exposure stratum (irrespective of district or field size) are available. If fewer than 24 Harvest-Monitored Fields meeting the above criterion are available, the analysis for that year will cease unless the Technical Panel agrees to continue.

3.2.7. Harvest-Monitored Field Acreage Measurements: Planted areas of Harvest-Monitored Fields (GPS acres) will be determined as follows:

3.2.7.1. Delineate each Harvest-Monitored Field by continuously tracing (logging with a survey-grade GPS) the exterior perimeter of the flooded, planted area, exclusive of field interior levees (see **Figure 3)**.

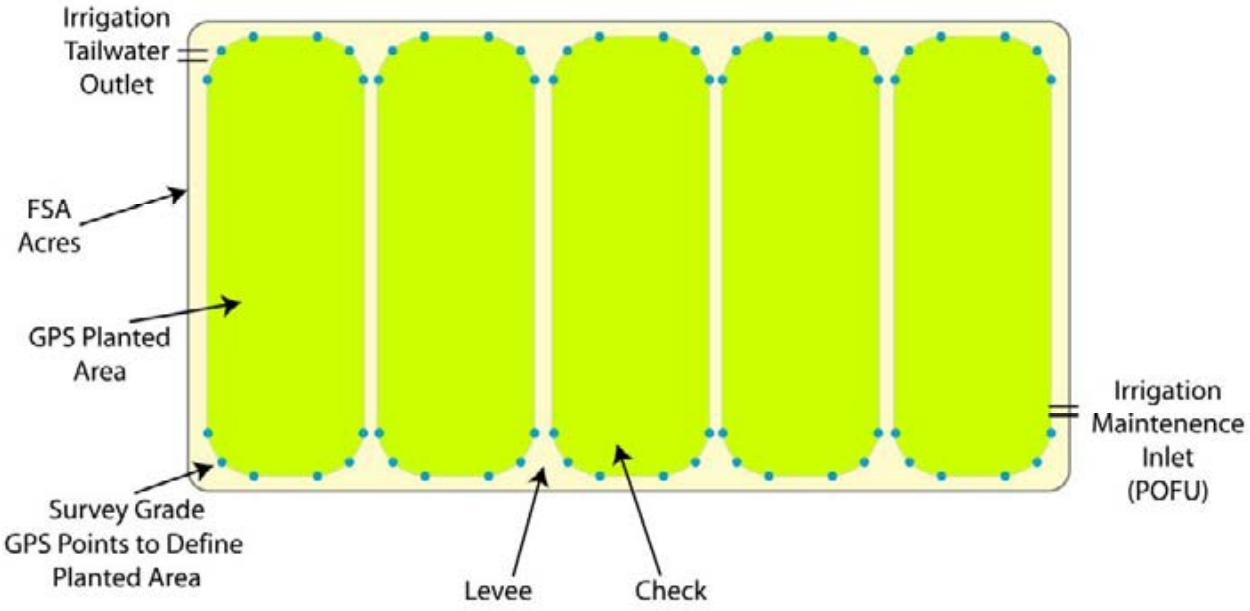


Figure 3. GPS Delineation of Planted Areas in Harvest-Monitored Fields.

3.2.7.2. Delineate unplanted levee areas (between individual checks within fields) and any other areas within fields that are clearly not prepared for planting and harvesting to produce a series of individual check delineations that comprise the field (GPS acres for each check). The sum of all checks within a field is the Whole-field GPS acres. The sum of all CWCs within a field is the CWA GPS acres. The sum of all UACs within a field is the UAA GPS acres (see **Figure 1)**.

3.2.8. Area Served: Area Served for each POFU will include lands irrigated through POFU and will be equivalent to Farm Service Agency (FSA) acreage (FSA acres) for the same fields. Areas Served FSA acres will be reviewed and revised as needed annually by the Technical Panel.

3.2.9. Yield Determination: In the formula for determining YL, UAA and CWA yields will be determined as follows:

3.2.9.1. For each Harvest-Monitored Field, CWA harvest weight (cwt) will be divided by the planted area of CWA in the field to determine the average CWA yield

(cwt/GPS acres). UAA harvested weight (cwt) will be divided by planted area of UAA in that field to determine the average UAA yield (cwt/GPS acres).

3.2.9.2. No other measurements or adjustments of yield weights or planted areas will be employed for purposes of calculating CWA or UAA yields or YL. If a YL calculated for a monitored field shows a negative YL, (i.e., higher yield [cwt/GPS acre] in CWA than UAA), the YL value will remain negative (rather than being reset to a YL of "0") for the development of the YL model (section 3.2.14).

3.2.9.3. The Technical Panel will acquire the average yield per acre from each participating Drier (BUCRA and Red Top at this time).

3.2.10. YL Calculation

YL for each harvest-monitored field will be determined as follows:

$$\left[\frac{(Y1 - Y2)}{Y1}\right] \times \left[\frac{(B + R + ND)}{n}\right] \times A = YL$$

Where:

Y1 = Yield of UAA in Harvest-Monitored Field (cwt/UAA GPS acres)

Y2 = Yield of CWA in Harvest-Monitored Field (cwt/CWA GPS acres)

B = Average yield reported by BUCRA in the year of measurements (cwt/Whole-field FSA acres)

R = Average yield reported by Red Top Driers in the year of measurements (cwt/ Whole-field FSA acres)

ND = Average yield reported by New Drier if necessary or a replacement Drier for existing Drier (cwt/ Whole-field FSA acres) (see Section 6)

n = Number of Driers in the numerator

A = CWA GPS acres x (Whole-field FSA acres) / (Whole-field GPS acres)

YL = Yield Loss (cwt)

3.2.11. Average Planting and Panicle Initiation Dates ($TNHB_{65}$ Time Period):

Average UAA planting and PI dates in each Harvest-Monitored Field will define the beginning and end of the period during which the total number of hours below 65°F ($TNHB_{65}$) will be calculated for use in regression analysis (section 3.2.14). The sum of the hours below 65°F that occur at the POFU serving an UAA between the average planting date and average PI date of all harvest-monitored fields will be the $TNHB_{65}$ for that field.

3.2.11.1 Average plating date will be calculated as the simple average of the planting dates of the fields selected for harvest-monitoring. Planting dates for all water-temperature-monitored fields will be acquired from the participating Driers by the Technical Panel

3.2.11.2 Average PI date will be calculated as the simple average of the PI dates for each of the harvest-monitored fields as defined in section 3.2.5.3 (see Appendix 1 for PI protocols).

3.2.12. Points of First Use: POFU are defined as irrigation maintenance inlets that supply water to the fields throughout the period from the average planting to average PI dates.

3.2.12.1. Inlets to fields not planted in rice (either due to crop rotation or fallowing), or that are used just for flood-up operations, are not POFU.

3.2.12.2. POFU will be updated annually (by the end of September) by the Technical Panel based on their understanding of the irrigation water delivery systems and the fields growing rice that year.

3.2.12.3. Maintenance inlets served exclusively by tailwater for all or part of the period from average planting to average PI dates in a given year are not POFU for that year.

3.2.13. Use of Water Temperature Data to Determine $TNHB_{65}$ at POFU :

3.2.13.1. The $TNHB_{65}$ for a given non-monitored and monitored POFU will be the $TNHB_{65}$ on the TIM at that POFU location.

3.2.13.2. $TNHB_{65}$ at POFU will be one of the two independent variables utilized in regression analysis to estimate YL at POFU. Area Served (section 3.2.8) is the other independent variable utilized in the YL estimate.

3.2.14. YL Regression Development: A YL model utilizing data collected in the Participating Districts will be developed annually during Harvest-Monitored Years to estimate YL at POFU throughout the Participating Districts. Although the development of the YL model is technical in nature, the objective of the specified process is to achieve the best quality and most representative regression model possible with the available data to ensure fair and adequate compensation. The basic principles that follow are a description of the process and sequence to reliably achieve an adequate quality result.

3.2.14.1. The process and sequence of the regression development is illustrated in **Figure 4**. The initial YL model development is based on a best-fit model of the subject year's harvest-monitored data (Initial Model; section 3.2.14.4). If the Initial Model fails to produce an accepted regression, then a second step to improve the model will be taken by omitting data outliers in the subject year's harvest-monitored data (Screened Model; section 3.2.14.5). If the Screened Model result does not produce an accepted regression, then a third step to improve the model will be taken by combining other available years of harvest-monitored data (Pooled Year Model; section 3.2.14.6). If the Pooled Year Model fails to produce an accepted regression, then a fourth step to improve the model will be taken by omitting data outliers in the combined data set (Revised Pooled Year Model; section 3.2.14.6.2). If the fourth step to improve the model result does not produce an accepted regression, then other contingencies apply (see section 3.2.14.7).

3.2.14.2. For each Harvest-Monitored Year considered in an analysis, data from all Harvest-Monitored Fields will be combined across Participating Districts to develop the YL model.

3.2.14.3. A YL model must conform to the following three criteria, defined herein, to be accepted for use.

3.2.14.3.1. The YL model successfully explains one half (50 percent) or more of the yield variability in YL that occurred with exposure to $TNHB_{65,}$ (with or without Area Served included in the model) (i.e., $R^2 \geq 0.50$).

3.2.14.3.2. Models developed will not be extrapolated below the lowest $TNHB_{65}$ data value used in the YL model development (i.e., in the accepted YL model, YL = 0 below lowest observed $TNHB_{65}$).

3.2.14.3.3. It is acceptable and expected that the YL model developed will be extrapolated above the highest observed $TNHB_{65}$ data value and that compensation for POFU above the highest observed $TNHB_{65}$ data value will be provided.

3.2.14.4. Select Best-Fit Model for Subject Monitored Year: During each Harvest-Monitored Year, a best fit model (Initial Model) will be developed using Akaike's Information Criterion (Burnham and Anderson, 2002) and based on only the subject year's harvest-monitoring results. The model will estimate YL (dependent variable) at POFU from $TNHB_{65}$, and Area Served (independent variables). The model that provides best performance while avoiding unacceptable anomalies will be selected.

3.2.14.4.1. In general, a monotonically increasing relationship avoids Anomaly A (prediction of constant non-zero YL or increasing YL with decreasing $TNHB_{65}$ less than 400 hours), and Anomaly B (prediction of decreasing YL with increasing $TNHB_{65}$ greater than 400 hours).

3.2.14.4.1.1. If an Initial Model exhibits Anomaly A, the model will be adjusted such that no additional increase in YL occurs with incremental reduction in $TNHB_{65}$. This will be achieved by setting the slope equal to zero for all points below the $TNHB_{65}$ at which Anomaly A occurs, to the lowest observed $TNHB_{65.}$ Note that this interval may vary continuously across the range of Area Served, based on YL response to this variable.

3.2.14.4.1.2. An Initial Model exhibiting Anomaly B will not be adopted and the next best fit model will be evaluated for acceptance.

3.2.14.4.2. If $R^2 \geq 0.50$, the Initial Model will be retained and the analyses continued as described in Section 6.3. If $R^2 < 0.50$, then the regression development will continue as described in Section 3.2.14.5.

3.2.14.5. Omit Data Outliers: If the Initial Model does not exhibit Anomaly B but $R^2 < 0.50$, then a data reduction exercise will be conducted and the regression analysis re-conducted using only the subject year's data set to develop a Screened Model.

3.2.14.5.1. Data reduction will consist of identifying and excluding any data points that lie outside of 2 standard deviations from the mean fit of the model.

3.2.14.5.2. The reduced data set would be reanalyzed as described in Section 3.2.14.4. If $R^2 \geq 0.50$, the Screened Model will be retained and the analyses continued as described in Section 6.3. If $R^2 < 0.50$, then the analysis will continue as described in Section 3.2.14.6.

3.2.14.6. Pool Available Data: If the Screened Model does not exhibit Anomaly B but $R^2 < 0.50$, then regression analysis and model selection will be conducted according to item 3.2.14.4 on the YL, TNHB, and Area Served data sets utilizing all previous available monitoring program data from the current harvest-monitoring period (and excluding 2005 data) to develop a Pooled Year Model.

3.2.14.6.1. If $R^2 \geq 0.50$, the Pooled Year Model will be retained and analyses continue as described in Section 6.3.

3.2.14.6.2. If $R^2 < 0.50$, then reanalyze as described in 3.2.14.5. If $R^2 \geq 0.50$, the Revised Pooled Year Model will be retained and the analyses will continue as described in Section 6.3. If $R^2 < 0.50$ and there is no accepted Combined Model (section 4.1.2.), then the analysis will continue as described in Section 3.2.14.7.2. In this case, compensation for that year will be deferred until subsequent year's monitoring data are available to add to the analysis data set. If $R^2 < 0.50$ and there is an accepted Combined Model, then the analysis will continue as described in Section 3.2.14.7.1.

3.2.14.7. No Accepted Model:

3.2.14.7.1. In the event that no model has been accepted for a Harvest-Monitored Year, the most recent accepted Combined Model (section 5.3.) will be used to calculate the YL for that Harvest-Monitored Year as the basis for Initial Payment. In the event that no accepted Combined Model is available, then the most recent accepted annual model (YL model accepted for a Harvest-Monitored Year) will be used as the basis for the Initial Payment. When the combined year model for that harvest-monitored period is developed and accepted, then the Adjusted Payment for Prior Years will be determined and will be included in the Annual Payment of the year the determination was made (see Section 6.4). For the purposes of the calculating Adjusted Payment for Prior Crop Years, only accepted Combined Models will be employed.

3.2.14.7.2. After each subsequent year's data set becomes available and is added to the data set described in Section 3.2.14.6., the combined analysis (described in Section, 3.2.14.6) would be re-conducted to estimate YL at POFU for the deferred year utilizing all available data. If $R^2 \geq 0.50$, then the Revised Pooled Year Model will be retained and the analyses continued as described in Section 6.3. If $R^2 < 0.50$ for this Revised Pooled Year Model by the end of a harvest-monitored period, then no model is accepted for that Harvest-Monitored Year or that harvest-monitored period and DWR and the Participating Districts will confer to determine appropriate compensation.

3.2.14.8. The Combined Model is produced at the end of the Harvest-Monitoring period (see Section 4.2)

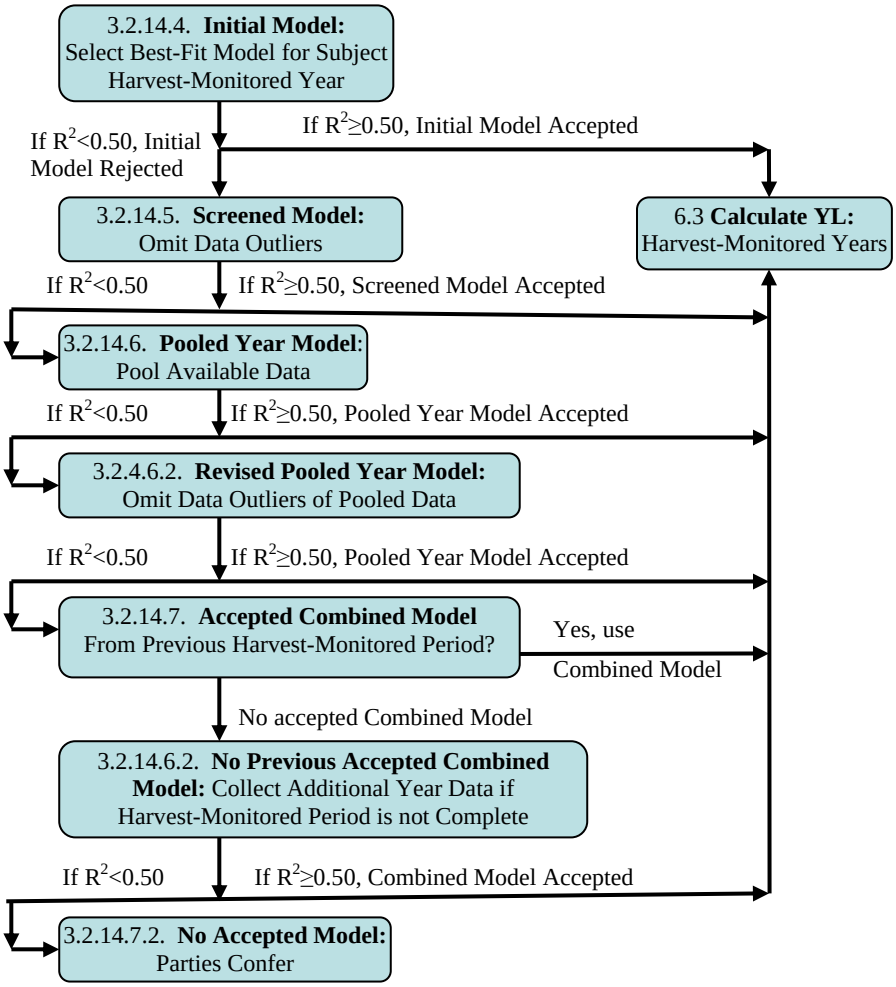


Figure 4. Harvest-Monitored Year YL Regression Development Process.

4. Non-Harvest-Monitored Year Yield Loss Measurement and Model Development

Introduction: This section defines the methodology to estimate annual YL for Non-Harvest-Monitored Years. Non-Harvest-Monitored Year YL estimation requires a Combined Model as well as some field data collection (see section 4.3.and **Figure 5)**.

4.1. Combined Model Use:

A combined model will be produced at the end of each harvest-monitored period (section 4.2) and will be used for all YL estimates for subsequent Non-Harvest-Monitored Years until a subsequent 10-Year Review Period (section 5). The same general principles and process for YL model development described in Section 3.2.14 (for Harvest-Monitored Years) also apply to the development of the Combined Model for use in Non-Harvest-Monitored Years.

However, the process, as modified to reflect the development of the Combined Model for use in all Non-Harvest-Monitored Years, is described below:

4.1.1. If the Combined Model is accepted, the model will be employed for estimating YL in subsequent Non-Harvest-Monitored Years without further harvest-monitoring until the next harvest-monitoring review period.

4.1.2. If a Combined Model has not been accepted by the end of the maximum duration of the harvest-monitoring period, the Technical Panel will prepare a memorandum recommending measures that could be taken to improve the model and DWR and the Participating Districts will confer. Measures to be considered will include but not necessarily be limited to: omission of one year's data set due to interannual variation, use a more exclusive data outlier screening criterion, and/or extension of the harvest-monitoring period.

4.2 Development of Combined Model for Non-Harvest-Monitoring Year YL Estimate:

For development of the Combined Model for use in non-Harvest-Monitored Years, use all of the harvest monitored data available from the most recent harvest-monitoring period only.

4.2.1. Initial Combined Model: Select Best-Fit Model: A best fit model (Initial Combined Model) will be developed using Akaike's Information Criterion (Burnham and Anderson, 2002). The model will estimate YL (dependent variable) at POFU from $TNHB_{65}$, and Area Served (independent variables). The model that provides best performance while avoiding unacceptable anomalies will be selected.

4.2.1.1. In general, a monotonically increasing relationship avoids Anomaly A (prediction of constant non-zero YL or increasing YL with decreasing $TNHB_{65}$ less than 400 hours), and Anomaly B (prediction of decreasing YL with increasing $TNHB_{65}$ greater than 400 hours).

4.2.1.2. If an Initial Combined Model exhibits Anomaly A, the model will be adjusted such that no additional decrease in YL occurs with incremental reduction in $TNHB_{65}$. This will be achieved by setting the slope equal to zero for all points below the $TNHB_{65}$ at which Anomaly A occurs to the lowest observed $TNHB_{65.}$ Note that this interval may vary continuously across the range of area served, based on YL response to this variable.

4.2.1.3. An Initial Combined Model exhibiting Anomaly B will not be adopted and the next best fit model will be evaluated for acceptance.

4.2.1.4. If $R^2 \geq 0.50$, the Initial Combined Model will be retained and utilized for all YL estimations until the next 10-Year Review Period. If $R^2 < 0.50$, then the regression development will continue as described in Section 4.2.2.

4.2.2. Screened Combined Model: If the Initial Combined Model does not exhibit Anomaly B but $R^2 < 0.50$, then a data reduction exercise will be conducted and the regression analysis re-conducted using all of the most recent harvest-monitored period's data set to develop a Screened Combined Model.

4.2.2.1. Data reduction will consist of identifying and excluding any data points that lie outside of 2 standard deviations from the mean fit of the model.

4.2.2.2. The reduced data set would be reanalyzed as described in Section 4.2.1.

4.2.2.3. If $R^2 \geq 0.50$, the Screened Combined Model will be retained and utilized for all YL estimations until the next 10-Year Review Period. If $R^2 < 0.50$, then the Technical Panel will submit a summary memorandum and recommendations to DWR and the Participating Districts and DWR and the Participating Districts will confer (section 4.2.3).

4.2.3. **No Accepted Model:** In the event that after a harvest-monitoring period has been completed and a Combined Model has not been accepted, DWR and the Participating Districts will confer to determine appropriate compensation and modifications to the monitoring and estimation processes.

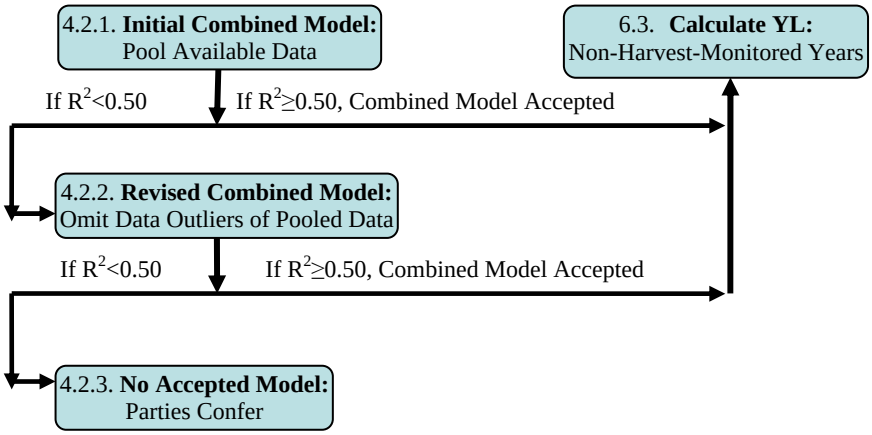


Figure 5. Non-Harvest-Monitored Year Combined Model Development Process.

4.3. Non-Harvest-Monitored Year Data Collection and Analysis:

The following data will be collected annually to support the YL calculation and determination of Annual Payment by DWR to the Participating Districts:

4.3.1. Determine Participating Districts' average annual yield (section 3.2.9.3.);

4.3.2. Determine average planting date for previously harvest-monitored fields (section 3.2.11.1);

4.3.3. Determine average PI date for previously harvest-monitored fields, (section 3.2.5.3. and 3.2.11.2.);

4.3.4. Revise POFU and Area Served (accounting for distribution system changes and for interannual differences in fields growing rice; section 3.2.13 and 3.2.9.);

4.3.5. Monitor water temperatures within the Participating Districts' irrigation water distribution systems (section 3.2.2.);

4.3.6. Develop TIM (section 3.2.3.)

4.3.7. Determine Average Annual Price of Rice ($/cwt; section 6.1.);

4.3.8. Determine Adjusted Value of Rice (section 6.2.);

4.3.9. Calculate POFU YL (section 6.3.1.); and

4.3.10. Calculate total YL (section 6.3.3).

4.4. Modification of Procedures: Procedures conducted to support YL calculations in Non-Harvest-Monitored Years may be modified by written agreement of the Parties (section 1.4) and as described in Section 7.

5. 10-Year Review of YL Model

Introduction: It is acknowledged and agreed that changes in conditions in the future may necessitate an update of the water temperature exposure to YL relationship to ensure on-going fair and adequate compensation for cold water effects on rice yield losses. Changes in conditions could include but are not necessarily limited to: rice varieties grown; changes in cultural practices such as water management; and/or changes in climatic conditions or weather patterns. Since it is not possible to determine at this time what types and combinations or degree of change in conditions is appropriate to trigger a change in the cold water exposure to YL relationship, accepted models will be reviewed 10 years after the last monitoring year.

5.1. Application of Methods and Protocols: Methods and protocols defined in this exhibit, along with modifications agreed to subsequently by DWR and the Participating Districts, will apply during the review period. 10-year reviews will utilize Harvest-Monitored Year protocols as defined in section 3 of this exhibit, except as modified below.

5.2. New YL Model with Each 10-Year Review: A new YL model will always be developed and implemented with the 10-Year Review.

5.3. Determination of Completion of Review Period: The following subsections define the process to determine when the review period is completed and a new Combined Model is accepted (see **Figure 6).**

5.3.1. In the case that after the first year of monitoring, DWR and the Participating Districts agree that the YL response to $TNHB_{65}$ has not changed, no further monitoring will occur until the next 10-Year Review. The new data collected will be added to the previously collected data to generate the new YL model.

5.3.2. If DWR and the Participating Districts do not agree that the relationship of $TNHB_{65}$ to YL remains the same as the previous relationship (i.e., one party believes that changes have occurred), or if DWR and the Participating Districts do agree that changes to the relationship of $TNHB_{65}$ to YL have occurred, monitoring will continue for another year, up to 5 years total.

5.3.3. A new YL model will be developed following the methods described in Section 4.2, based on the new 10-Year Review data only unless DWR and the Participating Districts agree to combine the new data with previous harvest-monitored period data. This new YL model supersedes all previous models and will be used in subsequent Non-Harvest-Monitored Years until the next 10-Year Review.

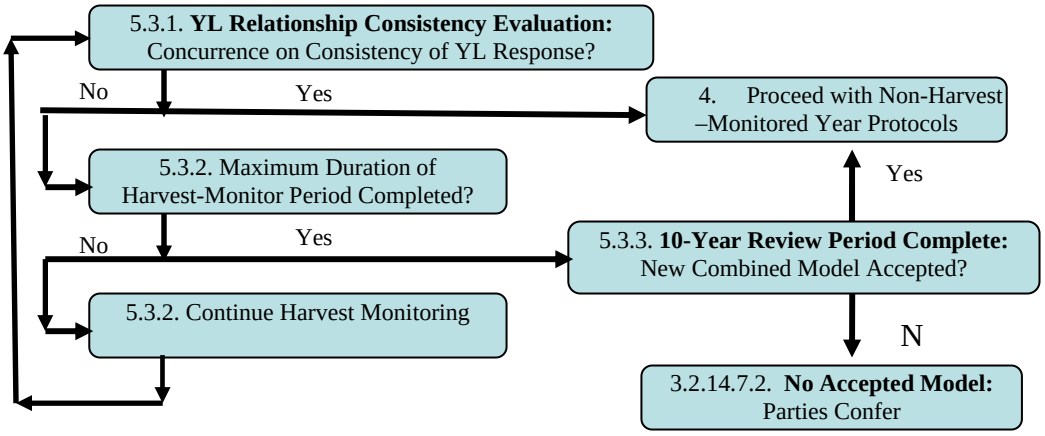


Figure 6. 10-Year Review New Combined Model Acceptance Process.

6. Calculation of Yield Loss and Associated Annual Payment

Introduction: The economic loss from reduced rice yields will be calculated by determining the market value of YL, less the costs avoided as a result of the reduced yields. The value of the reduced rice yields will be calculated by multiplying the total estimated YL by the Adjusted Value of (medium-grain) Rice (see section 6.2). This section describes calculation of total annual YL, as well as the methodology and data for calculating the annual value of the YL and the Annual Payment (see **Figure 7)**.

6.1. Average Annual Price of Rice: The Average Annual Price of Rice is the sum of the Loan Rate and the Amount Over Loan (for medium grain rice). The term Amount Over Loan, as it is used in this document, is the average of the Amount Over Loan as defined in Section 6.1.2.

6.1.1. The Loan Rate is determined by the average head and total grade of rice and the unit loan rates for head and broken grain as employed by FSA. The Loan Rate to be used from the Commodity Credit Corporation is commonly referred to as the "Warehouse Loan Rate".

6.1.1.1. Acquire average head and total from the Driers for the subject year. Calculate a simple average % head (% Head) and average % total (% Total) from the Driers.

6.1.1.2. The Loan Rate depends on the % Head and % Total grade, and is calculated by the following formula.

(% Head x $Price_H$) + ([% Total - % Head] x $Price_B$)

Where:

- % Head is the milled polished whole-grain percentage
- $Price_H$ is the unit Loan Rate for head rice
- % Total is the total % of grain, including both whole and broken grain
- $Price_B$ is the unit Loan Rate for broken rice

6.1.2. The Amount Over Loan will be based on data collected from six marketing pools for medium grain rice. DWR and the Participating Districts will each select three marketing pools to sample. The Amount Over Loan is the simple average of the six selected marketing pools.

6.1.3. In the event that annual medium grain rice prices are not available as specified in Section 6.1., the Technical Panel will select an alternative source and method for determining the Average Annual Price of Rice.

6.2. Adjusted Value of Rice: Some post-harvest production costs are avoided in proportion to the reduction of yields. These cost savings from the yield reductions will be subtracted from the calculated Average Annual Price of Rice to determine the Adjusted Value of Rice for the yield loss compensation calculation. These avoided post-harvest production costs include (but are not necessarily limited to): Hauling Costs, Drying Costs, Storage Costs, and Commodity Assessments.

6.2.1. Hauling Costs: Since the Hauling Costs vary for each field based on distance from the field to the drier, it is appropriate to use an average Hauling Cost. The University of California Cooperative Extension (UCCE) conducts focus groups to determine costs of production for agricultural operations in California, including Hauling Costs. These focus groups also include growers in Butte County. If the Hauling Costs are not available from this source, the Technical Panel will determine an alternative source for these data.

6.2.2. Drying Costs: Obtain the total drying revenue and total quantity of dry rice (cwt) for each crop year from the Driers (BUCRA and Red Top at this time). The Drying Cost is the total drying revenue for each Drier divided by the quantity of dry rice. Calculate a simple average of the Drying Cost for the Driers. Any patronage dividend (rebate) that is returned by the Driers to the growers based on the amount of rice they dry, will be deducted from the Drying Costs before calculating the simple average.

6.2.3. Storage Costs: The Storage Cost will be a simple average of the annual storage cost for one year's storage reported by the Driers (BUCRA and Red Top at this time).

6.2.4. Commodity Assessments: At present, there are two fees that comprise the Commodity Assessments; (1) a state marketing order for a mandatory assessment fee is collected and administered by the California Rice Research Board (CRRB), and (2) the California Rice Commission (CRC) assesses each rice grower for its operations. The amount of each assessment will be obtained from CRRB and CRC each year by the Technical Panel.

6.2.5. Adjusted Value of Rice calculation:

Adjusted Value of Rice = [Average Annual Price of Rice] – ([Hauling Cost] + [(Drying Cost] + [Storage Cost] + [Commodity Assessments]).

Note, units of all terms in the preceding equation are in $/cwt.

6.3. Determine Annual YL and Associated Value:

6.3.1. YL at POFU in each Participating District will be estimated by applying the selected YL model based on $TNHB_{65}$ and area served at POFU, see section 3.2.14 for Harvest-Monitored Years, and section 4.2 for Non-Harvest-Monitored Years;.

6.3.2. For $POFU_i$ with $i = \{1, 2 \ldots N\}$, $YL_i = f(TNHB65, \textit{Area Served})_{POFU_i}$, where YL_i is the rice yield loss for $POFU_i$, measured in cwt and expressed as a function of $TNHB_{65}$ (i.e., the hours below 65°F) and *Area Served* (in FSA acres) determined for the corresponding $POFU_i$.

6.3.3. The total YL is calculated as follows: $TOTAL\ YL = \sum_{i=1}^{N} YL_i$.

6.3.4. The total value is: Annual Value of YL ($) = Total YL (cwt) x Adjusted Value of Rice ($/cwt).

6.4. Annual Payment: DWR will pay an Annual Payment to Participating Districts that will normally equal to the value of the 5-Year Rolling Average (see Section 6.4.2). Appendix 2 illustrates the computation of the 5-Year Rolling Average. The purpose of 5-Year Rolling Average is to reduce the magnitude of variation of Annual Payment from year to year.

6.4.1 Technical Panel Memorandum: The Technical Panel will prepare a memorandum annually and submit it to DWR and the Participating Districts. This memorandum will show in detail the computation of Annual Payment, the information used in the computation, and the recommended amount of Annual Payment. The Technical Panel will submit the memorandum to DWR and Participating Districts within 60 days from receipt of all information required for the computation which includes but it is not limited to YL, Loan Rate, Average Annual Price of Rice, Adjusted Value of Rice, and Increased Drying Costs.

6.4.2 Payment Total and 5-Year Rolling Average: The 5-Year Rolling Average is defined as the arithmetic average of Qualifying Payment Totals for a crop year and for the previous four Qualifying Payment Totals. Conditions for a Qualifying Payment Total and use of the 5-year Rolling Average are as follows:

6.4.2.1. Condition 1: During years for which a Qualifying Payment Total (see Section 6.4.2.2) is unavailable, the Payment Total will be the Annual Payment.

6.4.2.2. Condition 2: For any given year, the sum of newly available Initial Payment, Adjusted Payment for Prior Crop Year, and Increased Drying Cost will be the Payment Total.. Note that more than one of any type of payment may be included in a Payment Total when, for example, a YL model is accepted and applied to monitoring data from prior year(s). Only in years in which one and only one of each of these three elements is available and included in the Payment Total, and only when the Adjusted Payment for Prior Crop Year includes the full difference between loan rate and market value of a rice crop, will the Payment Total be a Qualifying Payment Total.

6.4.2.3. Condition 3: When fewer than four previous years' Qualifying Payment Totals are available, the average of all available Qualifying Payment Totals will be the Annual Payment.

6.4.5. Increased Drying Costs: The Technical Panel will include in the Annual Payment a flat payment of $7,000 each year as long as YL has occurred. The flat payment is included to compensate the Participating Districts for the increased grain drying costs associated with cold water impacts.

6.4.6. Initial Payment: The Technical Panel will calculate the Initial Payment as the product of estimated YL for the crop year times the Loan Rate as established by the Commodity Credit Corporation for the same crop year and adjusted for the average Head and Total Grade discussed in Section 6.1.1.

6.4.7. Adjusted Payment for Prior Crop Years: Upon determination of the Amount Over Loan (see Sections 6.1.1 and 6.1.2), the Technical Panel will determine the Adjusted Value of Rice for the previous crop year (see Section 6.2). The Adjusted Payment for Prior Crop Year is the product of estimated YL times the Adjusted Value of Rice (see Section 6.2) for the same crop year. There is a delay of about a year or more from end of a crop year to computing the Adjusted Payment For Prior Years. This delay is due to timing of determination of Amount Over Loan, which is based on the actual price of rice sold on the open market. The sale of rice from a certain crop year may take a year or more to be realized after harvest. The adjustment described herein is not limited to the prior crop year only (see Sections 3.2.14.6.2. and 3.2.14.7.2.).

6.5. Disbursement of Annual Payment: Upon receipt and approval of the Technical Panel memorandum and recommendations, DWR will disburse the Annual Payment to Participating Districts in accordance with Agreement Section 4.5.3. One disbursement of Annual Payment will be made per year.

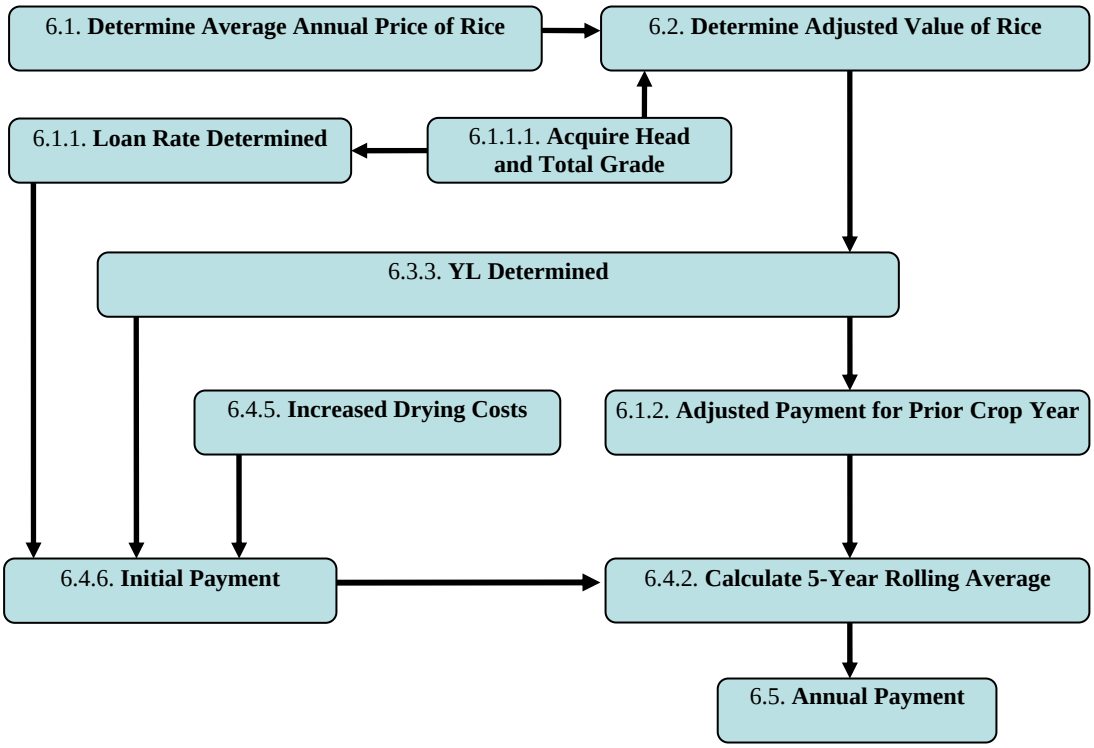


Figure 7. Calculation of Yield Loss and Associated Annual Payment Process.

7. Future Improvements to Methodology

Introduction: In addition to the YL estimate method described above, the Technical Panel will consider, and DWR and the Participating Districts may agree to adopt modified methodology to achieve the stated objectives.

It is the intent and goal of DWR and the Participating Districts to strive to improve the quality of analysis results and to simplify and reduce the costs of the monitoring and loss estimation processes.

7.1. Potential Future Improvements:

Examples of technical tools and approaches that may be considered include, but would not be limited to, the following:

7.1.1. Using water temperature and field size data to derive a predictive yield-loss model for future (long term) use in district-wide YL estimation.

7.1.2. Improving water temperature estimates for POFU through more extensive monitoring, and/or through more sophisticated modeling of water temperatures in the conveyance system.

7.1.3. Developing a method for estimating average planting and PI dates, such as a protocol for compiling planting dates from drier records for Non-Harvest-Monitored Years.

7.1.4. Evaluating alternate methods to define CWA and UAA, including partial checks. CWC and UAC are defined in terms of whole checks in the default Exhibit A methodology. Protocols to define and include partial checks in CWA or UAA may help to control random or non-cold water caused variation in measured yields. For this reason, protocols to include partial checks in CWA and UAA may be developed and adopted by DWR and the Participating Districts to refine the monitoring program.

7.1.5 Evaluating alternative methods to distinguish between CWC and UAC.

7.1.6. Using remote sensing data to characterize monitoring or production fields at various growth stages. Remote sensing could potentially assist in selection of harvest-monitored fields or identification of UAA and CWA.

7.1.7. Collecting and employing data collected by harvesters equipped with yield monitors for correlating these data with YL measurements made on whole checks.

7.1.8. Employing resulting calibrated yield maps to calibrate remote sensing data to better characterize YL in monitoring and/or production fields.

7.1.9. Combining remote sensing and yield monitoring harvester data to provide annual estimates of YL with minimal ground observations to estimate YL and lower long-term monitoring costs.

7.1.10. Determining potential YL due to non-cold-water causes. If a systematic change in YL calculations due to a non-cold-water factor is identified, such losses will be incorporated into the YL calculations using methodologies with a level of confidence commensurate with the other technical studies outlined in this exhibit,

7.1.11. Evaluating alternative of utilizing the California Rice Commission as a clearinghouse to determine the Average Annual Price of Rice (medium-grain). This

alternative, more efficient method for collecting these data, utilizes a more neutral third party.

7.1.12. Determining YL model validation during model 10-Year Review cycles. During model review, it will be necessary to determine whether YL observations are or are not consistent with the YL prediction model currently in use. This process of model validation is anticipated to employ recognized, appropriate, and reasonable model validation tools and statistics. Examples of these tools include checking the coefficient of determination of the regression of actual YL observations against model predictions, and evaluation other indicators of error and bias magnitude, such as the fractional bias and mean normalized bias. The focus will be on revision of models that appear to be biased relative to what is being observed in the field during the review period.

8. Definitions of Terms:

Term	First Use in Document, see:	Definition
5-Year Rolling Average	6.4	The arithmetic average of the sum of: Initial Payment for a crop year plus the Adjusted Payment For Prior Years plus Increase Drying Costs for a crop year and the sums of previous four years (as available).
10-Year Review	5 Introduction	The review of Combined Model 10 years after completion of the last Harvest-Monitoring Period
10-Year Review Period	5.3	The number of years during which Harvest-Monitoring will be conducted
(cwt/FSA acres)	Figure 3, 3.2.8	Harvest weight in hundred weight (lbs.) per acre as determined by whole field acres from the Farm Service Administration (FSA). FSA acres definition are "gross farmed acres", that is they are the farmed field acres, but they do not exclude non-farmed areas such as check levees that are integral to the fields. The FSA acres are the default acreages that are used for a number of different reporting requirements, such as farm subsidy programs, financial loans, etc.
Adjusted Payment For Prior Crop Year	6.4.2.2	(Yield Loss for crop year) x (Adjusted Value of Rice for crop year) = YL x (Amount Over Loan – adjustments for avoided costs)
Annual Model	3.2.14	The accepted model after each monitoring year
Annual Payment	6.5	The same as 5-Year Rolling Average
Adjusted Value of Rice	6.2	Annual market value of rice less cost savings from reduced yields, including reduced costs for hauling, drying, storage, and commodity assessments
Akaike's Information Criterion	3.2.14.4	Statistical tool that evaluates the best fit of a number of different potential models
Amount Over Loan	6.1.2	Determined by the average final return (average market value less the loan amount)

area served	3.2.1.6	Crop area irrigated through POFU which may be an individual or multiple fields and will be equivalent to the sum of the Farm Service Agency (FSA) acreage for those fields.
Average Annual Price of Rice	6.1	Average Annual Price of Rice as determined by a survey of marketers for the amount over loan + loan rate as determined by the Commodity Credit Corporation
average head and total rice count (i.e., rice grade)	6.1.1.1	Total amount of rice vs. the proportion that is not broken as determined by rice grade.
Average Planting and Panicle Initiation Dates ($TNHB_{65}$ Time Period):	3.2.11	Period between average date of planting and average Panicle Initiation (PI) date of the 60 water temperature monitored fields
Average Planting Date	3.2.11	Average date of planting of the 60 water temperature monitored fields as reported by the Driers
best fit model	3.2.14.4	The YL model which has the highest ranking of correlation and other model performance metrics
BUCRA	3.2.9.3	Butte County Rice Association, a rice drier and storage cooperative
California Rice Commission (CRC)	6.2.4	Administrates marketing order commodity assessment fees
California Rice Research Board (CRRB)	6.2.4	Conducts rice research on behalf of the California rice growers industry.
candidate monitoring fields	3.2.1	Fields initially selected for potential inclusion for water temperature monitoring fields
checks	Figure 1, 2	A sub-area of a field that is separated by a levee.
Cold Water Area (CWA)	Figure 1, 2.1.1	A Cold Water Area (CWA) is the aggregation of all Cold Water Checks (CWA) and is used as a unit of area (in acres) to determine yield loss.
Coldwater Affected Check (CWCs)	Figure 1, 2.1	A Coldwater Affected Check (CWC) is an individual check which is included in the cold water affected area (CWA)

Combined Model	4.2	A Combined Model is the YL estimation model that is created at the end of each harvest-monitored period and used to estimate yield loss in Non-Harvest-Monitored Years.
commercial equipment	3.2.6	Commonly used harvest combines.
commodity assessments	6.2.4	Is a mandatory assessment fee from marketing orders that are based on net yields in cwt
Commodity Credit Corporation (CCC)	6.1.1	
crop rotation	3.2.12.1	Crop rotation is the practice of planting different types of crops in a field to reduce disease and other production problems.
CWT	3.2.9.1	A unit of rice yields in hundred weights or a sack of rice that weighs 100 pounds
cwt/GPS acres	3.2.10	hundred weight of yield per net farmed acre as defined by an on the ground GPS delineation
data logger	3.2.2	Device to record water temperatures
dependent variable	3.2.14.4, 4.2.1	For the purposes of use in this document it is the YL estimated from the YL model.
dockage	3.2.6.4	Material in the harvested rice for which growers are not compensated, e.g. rice hull and dust.
drain water	3.2.2.2	Irrigation water that has been already been utilized in a field and have been collected as tail water or "drain water".
Drier	3.2.5.6	Facility that takes harvested grain, weighs it, dries it and stores it as a for fee service for the growers.
Drying Costs	6.2.2	The cost charged by the Drier to the grower to reduce the moisture content of the harvested rice to 14%.
exposure stratum	3.2.6.6	Refers to a 100 hour interval of water temperature exposure duration (in hours) below 65^{o}F.

fallowing	3.2.12.1	A field that is not in production with any crop for a crop season.
Farm Service Agency (FSA)	3.2.8	The USDA Farm Service Agency (FSA) is partly responsible for administrating the farm subsidy and land set-aside program which requires the agency to annually inventory crop production acres by field. These field acre measurements are utilized for almost all crop reporting purposes by the growers as well as the government.
flood–up	3.2.12.1	The initial flooding of the rice field.
FSA acres	3.2.8.	FSA acres refers to the number of acres per field as defined by the FSA. This term is used in Exhibit A for calculation purposes as a gross farmed acres area definition.
ghost points	3.2.3.2	Locations in which TNHB65 has been assigned where no observed water temperature data is available, but is required in order to get an appropriate result from the TIM.
GPS	3.2.7.1	Geopositional satellite sensor that determines location on the earth by triangulating its position between satellites in orbit around the earth.
GPS acres	3.2.7	Acreage of an area as defined by delineation by a GPS unit. GPS acres represent the net farmed acres in the yield loss calculation.
harvest lot	3.2.5.5	A separate segment of the field (typically a single check) is harvested, trucked and weighed separately from the rest of the harvested area of the same field.
Harvest-Monitored Field(s)	3.2.4	A field in which harvest weight data will be collected for the purposes of calculating yield loss.
Harvest-Monitored Year(s)	3. Introduction	A Harvest-Monitored Year is any year in which harvest-monitored data is collected for the purpose of calculating yield loss in that year and in developing a Combined Model for yield loss estimation in Non-Harvest-Monitored Years.
Harvest-monitoring period	3.1	A Harvest-monitoring period is the years in which harvest-monitoring occurs until the harvest-monitoring is completed.
Harvest-monitoring review period	5.1	The period in which a preceding Combined Model is tested to determine if it is still valid after a non-harvest-monitored period.

Hauling Costs	6.2.1	The cost to transport harvested rice from the field to the Drier.
Head and total grade	6.1.1.2	The proportion of rice that mills out, which is used to determine the loan rate from the Commodity Credit Corporation
Health and Safety Plan	3.2.5.7	The protocols for safe operational practices in the field.
independent variables	3.2.14.4, 4.2.1	Independent variables are the factors that are used in a model to estimate, by relationship to the independent variables, an unknown value which is the dependent variable.
Initial Payment	3.2.14.7.1, 6.6.1	Payment based on average head and total grade of rice against CCC loan rate to provide an initial payment to the Participating Districts before the final market price for the crop is determined. It is computed as: YL x Loan Rate as established by CCC
irrigation maintenance inlets	3.2.12	See "maintenance inlet".
isotherms	3.2.1.5	An isotherm is a line on a map that separates classes of water temperature exposure, such as the line that divides areas that have been exposed to 200 hours of time below 65oF from areas that have been exposed to 300+ hours. The isotherm is a useful tool to segment the water temperature exposures into similar groups for sample plan design purposes.
levee	Figure 3, 3.2.7.1	A levee within a rice field is a earthen berm which surrounds and separates checks.
Loan Rate	6.1.1	The Loan Rate is the amount the federal government commits to buy rice at as a method to ensure a minimum price for rice. The Loan Rate is established by CCC
Lot A	Figure 1, 2.1.2	Lot A is the downstream 50 percent of checks that are harvested as a separate harvest lot to be used as the basis for comparison of the other separate check harvest lots to determine the UAA and CWA.

maintenance inlet	3.2.1.4	Location where irrigation water is introduced into the field and is utilized for maintaining flows and water levels in the field throughout the majority of the production season.
marketer	6.1.2	An individual or company that sells rice for a number of different growers.
Marketing pool	6.1.2	A group of marketers
moisture content (MC)	3.2.6.3	The amount (%) of moisture of the harvested rice by weight. The standardized industry moisture content for dried rice is 14% moisture.
Monitoring field(s)		A field or fields in which monitoring of water temperature and yields occur.
Monitoring Staff	3.2.5	Staff of the Parties conducting temperature and harvest monitoring and data collection or a contractor and his staff contracted by DWR and the Participating Districts to perform monitoring and data collection activities.
monotonically increasing relationship	3.2.14.4.1	A monotonically increasing relationship is the positive relationship of the model predictive value compared to the independent variable, i.e. the independent variable value is reduced and the model predicts reduced values and with increased values of independent variables that the model predicts increased values.
Non-Harvest-Monitored Year Harvest-Monitored Year	4	A year in which YL compensation is calculated based on the Combined Model and a reduced set of field monitoring data (no harvest-monitoring conducted). A field in which yield data has not been collected regardless to whether temperature data may or may have not been collected
on-farm conveyance systems	3.2.2	A water delivery ditch that is on grower owned property.
Panicle Initiation (PI)	3.2.5.3	A growth stage of rice which the Exhibit A process utilizes to define the end of the period in which cold water exposure causes incremental loss of rice yields. PI is defined physiologically as the stage when the panicle is first differentiated at the growth point of the tiller.

Participating Districts	1.1	At this time are Western Canal Water District, Richvale Irrigation District and Biggs-West Gridley Water District. Participating Districts are those districts which are active in the monitoring and YL compensation program.
Parties	Agreement introduction	Signatories to the Settlement Agreement
partial checks	7.1.4.	A partial check refers to a portion of the area of a check being defined as CWC or UAC.
patronage dividend (rebate)	6.2.2	The amount that growers are refunded by the Driers on the rice drying costs.
points of first use (POFU)	3.2.12.	Points of first use (POFU) are locations where irrigation water is first used and introduced into the field. A single POFU can service single or multiple fields.
Red Top	6.2.2.	Red Top is a rice drier and storage cooperative.
remote sensing	7.1.9	Remote sensing is the act of collecting information from a distance, usually aerial or satellite imagery.
standard deviation	3.2.14.5.1	A standard deviation is a statistical term for the square root of the variance of the data in relationship to the model.
Storage Costs	6.2.3	The cost charged by the Drier to the grower for one-year's worth storage for the harvested rice.
standard deviation	3.2.14.5.1.	A standard deviation is a statistical term for the square root of the variance of the data in relationship to the model.
systematic change		A systematic change is a difference in yields that is attributable to the location of the cold water checks at the head end of the irrigation system within the field rather than from cold water exposure specifically.
survey-grade GPS	3.2.7.1	A GPS (see GPS above) that is higher locational precision and accuracy, often referred to as Real Time Kinematics (RTK; see Figure 3).

tail water	Figures 1 and 3, 3.2.12.3	See "drain water"
Technical Panel	3.2.5	A panel of technical experts selected by DWR and the Participating Districts to oversee the monitoring program
Temperature Interpolation Maps (TIM)	Figures 2, 3.2.1.5	A water Temperature Interpolation Map (TIM) is a spatial interpolation of observed and assigned locations of duration of water temperature exposure below 65^{o}F. This map is used to estimate water temperature conditions in areas where there is no observed data available.
total number of hours below 65°F ($TNHB_{65}$)	3.2.1.5	The number of hours of water temperatures that accumulated at a location between average planting to average PI date.
truck weight tag total	3.2.5	Documentation of truck weight and grain moisture content from Drier scales
Unaffected Area (UAA)	Figure 1, 2.1.1	A Unaffected Area (UAA) is the aggregation of all Unaffected Checks (UAC) and is used as a unit of area (in acres) for the basis of comparison to the Cold Water Area (CWA) to determine yield loss.
Unaffected Check (UAC)	Figure 1, 2.1,	A Unaffected Check (UAC) is an individual check which is included in the unaffected area (UAA)
University of California Cooperative Extension (UCCE)	6.2.1	The university conducts research and provides support services and information to the rice growers.
Warehouse rate	6.1.1	Loan rate from Commodity Credit Corporation that includes head and total grade.
water conveyance system	3.2.2.	A water conveyance system is a network of canals, laterals and ditches that move water throughout the Participating Districts as well as on grower owned property. This system moves water from the source to the point of use.
water temperature interpolation map (TIM)	3.2.1.5	see "temperature interpolation map"

water temperature sensor	3.2.2, 3.2.1.5	A water temperature sensor is a device which measures and records water temperatures.
water-temperature-monitored fields	3.2.1	Fields selected for water temperature monitoring for harvest-monitored year.
yield maps	7.1.7	Yield monitor data can be processed into a Yield Map for analysis or correlation with other data sets.
yield monitors	7.1.7	A yield monitor is a sensor installed on a commercial harvest combine that measures rice yields while recording the harvester geographic location within the field. Yield monitor data can be processed into a Yield Map for analysis or correlation with other data sets.
YL	7.1.7	Yield loss (YL) refers to the estimated amount of rice yield loss attributed to cold water exposure.
yield monitors	7.1.7.	A yield monitor is a sensor installed on a commercial harvest combine that measures rice yields while recording the harvester geographic location within the field.
YL	1.1.	Yield loss (YL) refers to the estimated amount of rice yield loss attributed to cold water exposure.

9. References:

Burnham, K.P. and D.R. Anderson. 2002. Model Selection and Multimodel Inference. A Practical Information-Theoretic Approach. Second edition. Springer, New York.

Appendix 1

Panicle Initiation Monitoring Protocol:

The purpose of this protocol is to set forth the basic principles of determining Panicle Initiation (PI) in the monitoring fields. The Technical Panel will develop more detailed protocols for use by the Monitoring Staff at the start of the monitoring period.

In general, the Monitoring Staff will monitor PI in all temperature monitored fields of the Participating Districts (60 monitoring fields at the present time). They will harvest for PI determination the main stem of individual plants, cut it lengthwise, and observe the growth of the basal nodes. PI will have occurred when the basal nodes have begun to elongate.

Weekly samples will be taken from 4 separate locations randomly selected (avoiding areas with edge effects and disease) in UAC checks for each monitored field. Eight main stems will be taken at each location for a total of 32 samples per field. The plants in the sampling location should be representative of the rest of the UAC portion of the field.

A monitored field will be determined to have reached average PI when 50% of the stems sampled show panicle initiation. If a sample indicates that greater than 50% of sampled stems have initiated PI, then the average PI date will be based on a straight line interpolation of the percent PI observed with the previous sample date and percent PI.

PI sample records and PI determination date for each monitored field will be submitted to the Technical Panel for review and concurrence. PI sampling will be continued for a monitoring field until concurrence from the Technical Panel has been received.

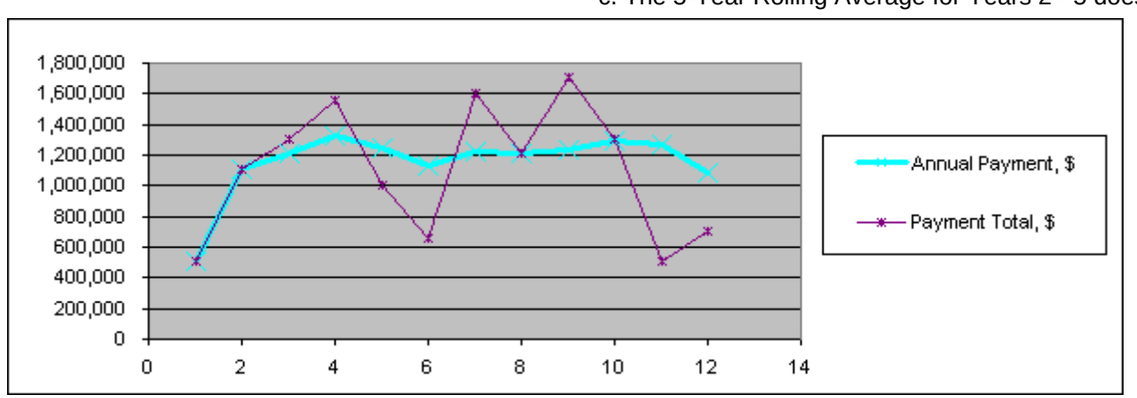
Appendix 2

Illustration of 5-Year Rolling Average Calculation (all values are fictitious)

Year	1	2	3	4	5	6	7	8	9	10	11	12
Annual Value, $	1,000,000	1,200,000	1,500,000	1,000,000	900,000	1,800,000	1,000,000	1,200,000	1,500,000	700,000	800,000	1,000,000
Initial Payment, $	500,000	600,000	700,000	750,000	750,000	500,000	300,000	500,000	1,000,000	800,000	600,000	500,000
Adjusted Payment For Prior Crop Years, $	0	500,000	600,000	800,000	250,000	150,000	1,300,000	700,000	700,000	500,000	(100,000)	200,000
Increased Drying Costs, $	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000
Payment Total, $	507,000	1,107,000	1,307,000	1,557,000	1,007,000	657,000	1,607,000	1,207,000	1,707,000	1,307,000	507,000	707,000
5-Year Rolling Average, $	0	1,107,000	1,207,000	1,323,667	1,244,500	1,127,000	1,227,000	1,207,000	1,237,000	1,297,000	1,267,000	1,087,000
Annual Payment, $	507,000	1,107,000	1,207,000	1,323,667	1,244,500	1,127,000	1,227,000	1,207,000	1,237,000	1,297,000	1,267,000	1,087,000
Difference, $	0	0	(100,000)	(233,333)	237,500	470,000	(380,000)	0	(470,000)	(10,000)	760,000	380,000
Cumulative Difference, $	0	0	(100,000)	(333,333)	(95,833)	374,167	(5,833)	(5,833)	(475,833)	(485,833)	274,167	654,167

1. Annual Value = (YL, crop year) x (Average Annual Price of Rice, crop year - price adjustments, crop year), (see Section 6.2.5)
2. Initial Payment = (YL, crop year) x (Loan Rate, crop year), (see Section 6.1)
3. Adjusted Payment for Prior Years = (YL, previous crop year) x (Adjusted Value of Rice, previous crop year) = (YL) x (Average Annual Price of Rice, previous crop year - adjustments, previous crop year), (see Sections 6.1, 6.2 and 6.3)
4. Increased Drying Costs = $ 7,000.0, for YL>0, (see Section 6.4.2.3)
5. Payment Total = (Initial Payment, crop year) + (Adjusted Payment For Prior Years, prior crop years) + (Increased Drying Costs, crop year)
6. 5-Year Rolling Average = Arithmetic average of five consecutive years of "Payment Total". The five years include the crop year and previous four crop years.
7. Annual Payment = 5-Year Rolling Average

Note: a. The Difference and Cumulative Difference are included for illustration purposes only
b. In Year 1, the Annual Payment = Initial Payment + Increased Drying Costs
c. The 5-Year Rolling Average for Years 2 - 5 does not include the Payment Total for Year 1



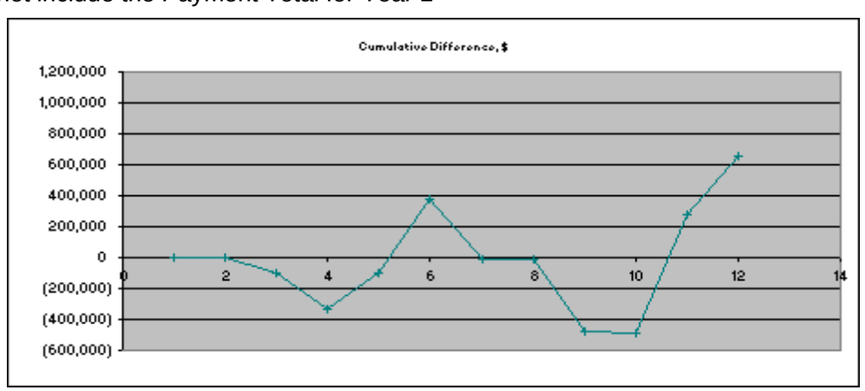


EXHIBIT B

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