APPENDIX A

2004 Draft Form Contract

and

Summaries of the 2003 Draft Contract Provisions

(Table 1 General Summary and Comparison of Draft 2003 Contract Provisions and **Table 2** Elements Unique to Existing and Interim Contracts)

The Final Draft Contracts (June 2004) are available upon request at the Shasta Area Office of the U.S. Bureau of Reclamation 530/275-1554, or you may view the draft contracts at:
http://www.usbr.gov/mp/cvpia/3404c/1004FOC

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
Central Valley Project, California

LONG-TERM RENEWAL CONTRACT BETWEEN THE UNITED STATES
AND

_____

PROVIDING FOR PROJECT WATER SERVICE
FROM _____ DIVISION

THIS CONTRACT, made this _____ day of _____, 2004, in pursuance generally of the Act of June 17, 1902 (32 Stat. 388), and acts amendatory or supplementary thereto, including, but not limited to, the Acts of August 26, 1937 (50 Stat. 844), as amended and supplemented, August 4, 1939 (53 Stat. 1187), as amended and supplemented, July 2, 1956 (70 Stat. 483), June 21, 1963 (77 Stat. 68), October 12, 1982 (96 Stat. 1263), October 27, 1986 (100 Stat. 3050), as amended, and Title XXXIV of the Act of October 30, 1992 (106 Stat. 4706), all collectively hereinafter referred to as Federal Reclamation law, between THE UNITED STATES OF AMERICA, hereinafter referred to as the United States, and _____, hereinafter referred to as the Contractor, a public agency of the State of California, duly organized, existing, and acting pursuant to the laws thereof;

WITNESSETH, That:

EXPLANATORY RECITALS

[1st] WHEREAS, the United States has constructed and is operating the Central Valley Project (Project), California, for diversion, storage, carriage, distribution and beneficial use, for flood control, irrigation, municipal, domestic, industrial, fish and wildlife mitigation, protection and restoration, generation and distribution of electric energy, salinity control, navigation and other beneficial uses, of waters of the Sacramento River, the American River, the Trinity River, and the San Joaquin River and their tributaries; and

[2nd] WHEREAS, the United States constructed _____, hereinafter collectively referred to as the _____ [Division/Unit] facilities, which will be used in part for the furnishing of water to the Contractor pursuant to the terms of this Contract; and

[3rd] WHEREAS, the rights to Project Water were acquired by the United States pursuant to California law for operation of the Project; and

[4th] WHEREAS, the Contractor and the United States entered into Contract No. _____, as amended, which established terms for the delivery to the Contractor of Project Water from the _____ [Division/Unit] from _____ through _____ [For binding agreement contractors only: (hereinafter referred to as the "Existing Contract,"]; and [Contractor specific issue as to "as amended"]

[5th] [FOR IRC'S] WHEREAS, the Contractor and the United States have pursuant to subsection 3404(c)(1) of the Central Valley Project Improvement Act (CVPIA), subsequently entered into interim renewal contract(s) identified as Contract No(s)._____, the current of which is hereinafter referred to as the Existing Contract, which provided for the continued water service to the Contractor from _____ through _____; and

[5th] [For Binding Agreement Contractors] WHEREAS, the United States and the Contractor have, pursuant to Subsection 3404(c)(3) of the Central Valley Project Improvement Act (CVPIA)[1], subsequently entered into a binding agreement, identified as Binding Agreement No. _____, which sets out the terms pursuant to which the Contractor agreed to renew the Existing Contract before its expiration date after completion of a programmatic environmental impact statement and other appropriate environmental documentation and negotiation of a renewal contract, and which also sets out the consequences of a subsequent decision not to renew; and

[6th] WHEREAS, Section 3404(c) of the CVPIA[2] provides for long-term renewal of the Existing Contract following completion of appropriate environmental documentation, including a programmatic environmental impact statement PEIS pursuant to the National Environmental Policy Act (NEPA), analyzing the direct and indirect impacts and benefits of implementing the CVPIA and the potential renewal of all existing contracts for Project Water; and

[7th] WHEREAS, the United States has completed the PEIS and all other appropriate environmental review necessary to provide for long-term renewal of the Existing Contract; and

[8th] WHEREAS, the Contractor has requested the long-term renewal of the Existing Contract, pursuant to the terms of the Existing Contract, Federal Reclamation law, and the laws of the State of California, for water service from the Project; and

[9th] WHEREAS, the United States has determined that the Contractor has fulfilled all of its obligations under the Existing Contract; and

[1] Contractor Specific Issue: citation of Sec. 3404(c)(3) in M&I only contracts.
[2] Contractor Specific Issue: citation of Sec. 3404(c) in M&I only contracts.

[10th] [CONTRACTOR SPECIFIC] WHEREAS, the Contractor has demonstrated to the satisfaction of the Contracting Officer that the Contractor has utilized the Project Water supplies available to it for reasonable and beneficial use and/or has demonstrated projected future demand for water use such that the Contractor has the capability[3] and expects to utilize fully for reasonable and beneficial use the quantity of Project Water to be made available to it pursuant to this Contract; and

[11th] WHEREAS, water obtained from the Project has been relied upon by urban and agricultural areas within California for more than 50 years, and is considered by the Contractor as an essential portion of its water supply; and

[12th] WHEREAS, the economies of regions within the Project, including the Contractor's, depend upon the continued availability of water, including water service from the Project; and

[13th] WHEREAS, the Secretary intends through coordination, cooperation, and partnerships to pursue measures to improve water supply, water quality, and reliability of the Project for all Project purposes; and

[14th] WHEREAS, the mutual goals of the United States and the Contractor include: to provide for reliable Project Water supplies; to control costs of those supplies; to achieve repayment of the Project as required by law; to guard reasonably against Project Water shortages; to achieve a reasonable balance among competing demands for use of Project Water; and to comply with all applicable environmental statutes, all consistent with the legal obligations

[3] Contractor Specific issue - This recital may need to be modified for individual contractors who do not have the capability today to take Project Water but can demonstrate that they will have the capability to take Project Water prior to the delivery of water.

of the United States relative to the Project; and

[15th] WHEREAS, the parties intend by this Contract to develop a more cooperative relationship in order to achieve their mutual goals; and

[16th] WHEREAS, the United States and the Contractor are willing to enter into this Contract pursuant to Federal Reclamation law on the terms and conditions set forth below;

NOW, THEREFORE, in consideration of the mutual and dependent covenants herein contained, it is hereby mutually agreed by the parties hereto as follows:

DEFINITIONS

1. When used herein unless otherwise distinctly expressed, or manifestly incompatible with the intent of the parties as expressed in this Contract, the term:

(a) "Calendar Year" shall mean the period January 1 through December 31, both dates inclusive;

(b) "Charges" shall mean the payments required by Federal Reclamation law in addition to the Rates and Tiered Pricing Component specified in this Contract as determined annually by the Contracting Officer pursuant to this Contract;

(c) "Condition of Shortage" shall mean a condition respecting the Project during any Year such that the Contracting Officer is unable to deliver sufficient water to meet the Contract Total;[4]

(d) "Contracting Officer" shall mean the Secretary of the Interior's duly authorized representative acting pursuant to this Contract or applicable Federal Reclamation law or regulation;

(e) "Contract Total" shall mean the maximum amount of water to which the

[4] May need to be modified for some divisions, including a definition of interruption of supply.

Contractor is entitled under subdivision (a) of Article 3 of this Contract;

(f) "Contractor's Service Area" shall mean the area to which the Contractor is permitted to provide Project Water under this Contract as described in Exhibit "A" attached hereto, which may be modified from time to time in accordance with Article 35 of this Contract without amendment of this Contract;[5]

(g) "CVPIA" shall mean the Central Valley Project Improvement Act, Title XXXIV of the Act of October 30, 1992 (106 Stat. 4706);

(h) "Eligible Lands" shall mean all lands to which Irrigation Water may be delivered in accordance with Section 204 of the Reclamation Reform Act of October 12, 1982 (96 Stat. 1263), as amended, hereinafter referred to as RRA;

(i) "Excess Lands" shall mean all lands in excess of the limitations contained in Section 204 of the RRA, other than those lands exempt from acreage limitation under Federal Reclamation law;

(j) "Full Cost Rate" shall mean an annual rate as determined by the Contracting Officer that shall amortize the expenditures for construction properly allocable to the Project irrigation or M&I functions, as appropriate, of facilities in service including all O&M deficits funded, less payments, over such periods as may be required under Federal Reclamation law, or applicable contract provisions. Interest will accrue on both the construction expenditures and funded O&M deficits from October 12, 1982, on costs outstanding at that date, or from the date incurred in the case of costs arising subsequent to October 12, 1982, and shall be calculated in accordance with subsections 202(3)(B) and (3)(C) of the RRA. The Full Cost Rate includes

[5] Some Contractors may propose alternate language. Some Contractors may use a legal description, others may use a map.

actual operation, maintenance, and replacement costs consistent with Section 426.2 of the Rules and Regulations for the RRA;

(k) "Ineligible Lands" shall mean all lands to which Irrigation Water may not be delivered in accordance with Section 204 of the RRA;

(l) "Irrigation Full Cost Water Rate" shall mean the Full Cost Rate applicable to the delivery of Irrigation Water;

(m) "Irrigation Water" shall mean water made available from the Project that is used primarily in the production of agricultural crops or livestock, including domestic use incidental thereto, and watering of livestock;

(n) "Landholder" shall mean a party that directly or indirectly owns or leases nonexempt land, as provided in 43 CFR 426.2;

(o) "Municipal and Industrial (M&I) Water"[7] shall mean Project Water, other than Irrigation Water, made available to the Contractor. M&I Water shall include water used for human use and purposes such as the watering of landscaping or pasture for animals (e.g., horses) which are kept for personal enjoyment or water delivered to land holdings operated in units of less than five acres unless the Contractor establishes to the satisfaction of the Contracting Officer that the use of water delivered to any such landholding is a use described in subdivision (m) of this Article;

(p) "M&I Full Cost Water Rate" shall mean the Full Cost Rate applicable to the delivery of M&I Water;

[7] Some Contractors may want to include "other water" definition in lieu of this definition. Individual Contractors with unique circumstances may negotiate a lower threshold.

(q) "Operation and Maintenance" or "O&M" shall mean normal and reasonable care, control, operation, repair, replacement (other than capital replacement), and maintenance of Project facilities;

(r) "Operating Non-Federal Entity" shall mean the _____, its successors or assigns, a non-Federal entity which has the obligation to operate and maintain all or a portion of the _____ [Division/Unit] facilities pursuant to an agreement with the United States, and which may have funding obligations with respect thereto;

(s) "Project" shall mean the Central Valley Project owned by the United States and managed by the Department of the Interior, Bureau of Reclamation;

(t) "Project Contractors" shall mean all parties who have water service contracts for Project Water from the Project with the United States pursuant to Federal Reclamation law;

(u) "Project Water" shall mean all water that is developed, diverted, stored, or delivered by the Secretary in accordance with the statutes authorizing the Project and in accordance with the terms and conditions of water rights acquired pursuant to California law;

(v) "Rates" shall mean the payments determined annually by the Contracting Officer in accordance with the then-current applicable water ratesetting policies for the Project, as described in subdivision (a) of Article 7 of this Contract;

(w) "Recent Historic Average" shall mean the most recent five-year average of the final forecast of Water Made Available to the Contractor pursuant to this Contract or its preceding contract(s);

(x) "Secretary" shall mean the Secretary of the Interior, a duly appointed successor, or an authorized representative acting pursuant to any authority of the Secretary and

through any agency of the Department of the Interior;

(y) "Tiered Pricing Component" shall be the incremental amount to be paid for each acre-foot of Water Delivered as described in subdivision (j) of Article 7 of this Contract;

(z) "Water Delivered" or "Delivered Water" shall mean Project Water diverted for use by the Contractor at the point(s) of delivery approved by the Contracting Officer[8];

(aa) "Water Made Available" shall mean the estimated amount of Project Water that can be delivered to the Contractor for the upcoming Year as declared by the Contracting Officer, pursuant to subdivision (a) of Article 4 of this Contract;

(bb) "Water Scheduled" shall mean Project Water made available to the Contractor for which times and quantities for delivery have been established by the Contractor and Contracting Officer, pursuant to subdivision (b) of Article 4 of this Contract; and

(cc) "Year" shall mean the period from and including March 1 of each Calendar Year through the last day of February of the following Calendar Year.

TERM OF CONTRACT

2. (a) This Contract shall be effective March 1, 200_, through February 28, 20__, and supercedes the Existing Contract.[9] In the event the Contractor wishes to renew this Contract beyond February 28, 20__, the Contractor shall submit a request for renewal in writing to the Contracting Officer no later than two years prior to the date this Contract expires. The renewal of this Contract insofar as it pertains to the furnishing of Irrigation Water to the

[8] This language may be modified at the Contractor level.

[9] Contractor specific-may need to include language regarding this contract superceding Existing Contract, in whole or in part.

Contractor shall be governed by subdivision (b) of this Article, and the renewal of this Contract insofar as it pertains to the furnishing of M&I Water to the Contractor shall be governed by subdivision (c) of this Article.

(b) (1) Under terms and conditions of a renewal contract that are mutually agreeable to the parties hereto, and upon a determination by the Contracting Officer that at the time of contract renewal the conditions set forth in subdivision (b)(2) of this Article are met, and subject to Federal and State law, this Contract, insofar as it pertains to the furnishing of Irrigation Water to the Contractor, shall be renewed for a period of 25 years.

(2) The conditions which must be met for this Contract to be renewed are: (i) the Contractor has prepared a water conservation plan that has been determined by the Contracting Officer in accordance with Article 26 of this Contract to meet the conservation and efficiency criteria for evaluating such plans established under Federal law; (ii) the Contractor is implementing an effective water conservation and efficiency program based on the Contractor's water conservation plan as required by Article 26 of this Contract; (iii) the Contractor is maintaining all water measuring devices and implementing all water measurement methods as approved by the Contracting Officer pursuant to Article 6 of this Contract; (iv) the Contractor has reasonably and beneficially used the Project Water supplies made available to it and, based on projected demands, is reasonably anticipated and expects to fully utilize for reasonable and beneficial use the quantity of Project Water to be made available to it pursuant to such renewal; (v) the Contractor is complying with all terms and conditions of this Contract; and (vi) the Contractor has the physical and legal ability to deliver Project Water.

(3) The terms and conditions of the renewal contract described in subdivision (b)(1) of this Article and any subsequent renewal contracts shall be developed

consistent with the parties' respective legal rights and obligations, and in consideration of all relevant facts and circumstances, as those circumstances exist at the time of renewal, including, without limitation, the Contractor's need for continued delivery of Project Water; environmental conditions affected by implementation of the Contract to be renewed, and specifically changes in those conditions that occurred during the life of the Contract to be renewed; the Secretary's progress toward achieving the purposes of the CVPIA as set out in Section 3402 and in implementing the specific provisions of the CVPIA; and current and anticipated economic circumstances of the region served by the Contractor.

(c) This Contract, insofar as it pertains to the furnishing of M&I Water to the Contractor, shall be renewed for successive periods of up to 40 years each, which periods shall be consistent with then-existing Reclamation-wide policy, under terms and conditions mutually agreeable to the parties and consistent with Federal and State law. The Contractor shall be afforded the opportunity to comment to the Contracting Officer on the proposed adoption and application of any revised policy applicable to the delivery of M&I Water that would limit the term of any subsequent renewal contract with the Contractor for the furnishing of M&I Water to less than 40 years.

(d) The Contracting Officer shall make a determination ten years after the date of execution of this Contract, and every five years thereafter during the term of this Contract, of whether a conversion of the relevant portion of this Contract to a contract under subsection 9(d) of the Reclamation Project Act of 1939 can be accomplished pursuant to the Act of July 2, 1956 (70 Stat 483). The Contracting Officer shall also make a determination ten years after the date of execution of this Contract and every five years thereafter during the term of this Contract of whether a conversion of the relevant portion of this Contract to a contract under

subsection 9(c)(1) of the Reclamation Project Act of 1939 can be accomplished. Notwithstanding any provision of this Contract, the Contractor reserves and shall have all rights and benefits under the Act of July 2, 1956 (70 Stat. 483). The Contracting Officer anticipates that during the term of this Contract, all authorized Project construction expected to occur will have occurred, and on that basis the Contracting Officer agrees upon such completion to allocate all costs that are properly assignable to the Contractor, and agrees further that, at any time after such allocation is made, and subject to satisfaction of the condition set out in this subdivision, this Contract shall, at the request of the Contractor, be converted to a contract under subsection 9(d) or 9(c)(1), whichever is applicable, of the Reclamation Project Act of 1939, subject to applicable Federal law and under stated terms and conditions mutually agreeable to the Contractor and the Contracting Officer. A condition for such conversion to occur shall be a determination by the Contracting Officer that, account being taken of the amount credited to return by the Contractor as provided for under Federal Reclamation law, the remaining amount of construction costs assignable for ultimate return by the Contractor can probably be repaid to the United States within the term of a contract under subsection 9(d) or 9(c)(1), whichever is applicable. If the remaining amount of costs that are properly assignable to the Contractor cannot be determined during the term of this Contract, the Contracting Officer shall notify the Contractor, and provide the reason(s) why such a determination could not be made. Further, the Contracting Officer shall make such a determination as soon thereafter as possible so as to permit, upon request of the Contractor and satisfaction of the condition set out above, conversion to a contract under subsection 9(d) or 9(c)(1), whichever is applicable. In the event such determination of costs has not been made at a time which allows conversion of this Contract during the term of this Contract or the Contractor has not requested conversion of this Contract within such term, the

parties shall incorporate in any subsequent renewal contract as described in subdivision (b) of this Article a provision that carries forth in substantially identical terms the provisions of this subdivision.

WATER TO BE MADE AVAILABLE AND DELIVERED TO THE CONTRACTOR

3. (Divisional) (a) During each Year, consistent with all applicable State water rights, permits, and licenses, Federal law, and subject to the provisions set forth in Articles 11 and 12 of this Contract, the Contracting Officer shall make available for delivery to the Contractor _____ acre-feet of Project Water for irrigation and M&I purposes. Water Delivered to the Contractor in accordance with this subdivision shall be scheduled and paid for pursuant to the provisions of Articles 4 and 7 of this Contract.

(b) Because the capacity of the Project to deliver Project Water has been constrained in recent years and may be constrained in the future due to many factors including hydrologic conditions and implementation of Federal and State laws, the likelihood of the Contractor actually receiving the amount of Project Water set out in subdivision (a) of this Article in any given Year is uncertain. The Contracting Officer's modeling referenced in the PEIS projected that the Contract Total set forth in this Contract will not be available to the Contractor in many years. During the most recent five years, the Recent Historic Average of water made available to the Contractor was ____ acre-feet. Nothing in subdivision (b) of this Article shall affect the rights and obligations of the parties under any provision of this Contract.

(c) The Contractor shall utilize the Project Water in accordance with all applicable legal requirements.

(d) The Contractor shall make reasonable and beneficial use of all water

furnished pursuant to this Contract. Groundwater recharge programs (direct, indirect, or in lieu), groundwater banking programs, surface water storage programs, and other similar programs utilizing Project Water or other water furnished pursuant to this Contract conducted within the Contractor's Service Area which are consistent with applicable State law and result in use consistent with Federal Reclamation law will be allowed; Provided, That any direct recharge program(s) is (are) described in the Contractor's water conservation plan submitted pursuant to Article 26 of this Contract; Provided, further, That such water conservation plan demonstrates sufficient lawful uses exist in the Contractor's Service Area so that using a long-term average, the quantity of Delivered Water is demonstrated to be reasonable for such uses and in compliance with Federal Reclamation law. Groundwater recharge programs, groundwater banking programs, surface water storage programs, and other similar programs utilizing Project Water or other water furnished pursuant to this Contract conducted outside the Contractor's Service Area may be permitted upon written approval of the Contracting Officer, which approval will be based upon environmental documentation, Project Water rights, and Project operational concerns. The Contracting Officer will address such concerns in regulations, policies, or guidelines.

(e) The Contractor shall comply with requirements applicable to the Contractor in biological opinion(s) prepared as a result of a consultation regarding the execution of this Contract undertaken pursuant to Section 7 of the Endangered Species Act of 1973 (ESA), as amended, that are within the Contractor's legal authority to implement. The Existing Contract, which evidences in excess of ___years of diversions for irrigation and/or M&I purposes[11] of the quantities of water provided in subdivision (a) of Article 3 of this Contract, will be considered in

[11] **Specific Contract Issue**: The type of water diverted will be addressed on a contractor specific basis.

developing an appropriate baseline for biological assessment(s) prepared pursuant to the ESA, and any other needed environmental review. Nothing herein shall be construed to prevent the Contractor from challenging or seeking judicial relief in a court of competent jurisdiction with respect to any biological opinion or other environmental documentation referred to in this Article.[12]

(f) Following the declaration of Water Made Available under Article 4 of this Contract, the Contracting Officer will make a determination whether Project Water, or other water available to the Project, can be made available to the Contractor in addition to the Contract Total under Article 3 of this Contract during the Year without adversely impacting other Project Contractors. At the request of the Contractor, the Contracting Officer will consult with the Contractor prior to making such a determination. If the Contracting Officer determines that Project Water, or other water available to the Project, can be made available to the Contractor, the Contracting Officer will announce the availability of such water and shall so notify the Contractor as soon as practical. The Contracting Officer will thereafter meet with the Contractor and other Project Contractors capable of taking such water to determine the most equitable and efficient allocation of such water. If the Contractor requests the delivery of any quantity of such water, the Contracting Officer shall make such water available to the Contractor in accordance with applicable statutes, regulations, guidelines, and policies.

[DIVISIONAL ISSUE-SECTION 215 WATER]

(g) The Contractor may request permission to reschedule for use during the subsequent Year some or all of the Water Made Available to the Contractor during the current

[12] **Specific Contract Issue: As an example,**the concern over land use authority may be the subject of discussion with individual contractors.

Year, referred to as "carryover."[13] The Contractor may request permission to use during the current Year a quantity of Project Water which may be made available by the United States to the Contractor during the subsequent Year, referred to as "preuse." The Contracting Officer's written approval may permit such uses in accordance with applicable statutes, regulations, guidelines, and policies.

(h) The Contractor's right pursuant to Federal Reclamation law and applicable State law to the reasonable and beneficial use of Water Delivered pursuant to this Contract during the term thereof and any subsequent renewal contracts, as described in Article 2 of this Contract, during the terms thereof shall not be disturbed so long as the Contractor shall fulfill all of its obligations under this Contract and any renewals thereof. Nothing in the preceding sentence shall affect the Contracting Officer's ability to impose shortages under Article 11 or subdivision (b) of Article 12 of this Contract or applicable provisions of any subsequent renewal contracts.

(i) Project Water furnished to the Contractor pursuant to this Contract may be delivered for purposes other than those described in subdivisions (m) and (o) of Article 1 of this Contract upon written approval by the Contracting Officer in accordance with the terms and conditions of such approval.

(j) The Contracting Officer shall make reasonable efforts to protect the water rights necessary for the Project and to provide the water available under this Contract. The Contracting Officer shall not object to participation by the Contractor, in the capacity and to the extent permitted by law, in administrative proceedings related to the Project Water rights; Provided, That the Contracting Officer retains the right to object to the substance of the

[13] "Rescheduled" in some divisions.

Contractor's position in such a proceeding; Provided further, That in such proceedings the Contracting Officer shall recognize the Contractor has a legal right under the terms of this Contract to use Project Water.

TIME FOR DELIVERY OF WATER

4. (a) On or about February 20 of each Calendar Year, the Contracting Officer shall announce the Contracting Officer's expected declaration of the Water Made Available. Such declaration will be expressed in terms of both Water Made Available and the Recent Historic Average and will be updated monthly, and more frequently if necessary, based on then-current operational and hydrologic conditions and a new declaration with changes, if any, to the Water Made Available will be made. The Contracting Officer shall provide forecasts of Project operations and the basis of the estimate, with relevant supporting information, upon the written request of the Contractor. Concurrently with the declaration of the Water Made Available, the Contracting Officer shall provide the Contractor with the updated Recent Historic Average.

(b) On or before each March 1 and at such other times as necessary, the Contractor shall submit to the Contracting Officer a written schedule, satisfactory to the Contracting Officer, showing the monthly quantities of Project Water to be delivered by the United States to the Contractor pursuant to this Contract for the Year commencing on such March 1. The Contracting Officer shall use all reasonable means to deliver Project Water according to the approved schedule for the Year commencing on such March 1.

(c) The Contractor shall not schedule Project Water in excess of the quantity of Project Water the Contractor intends to put to reasonable and beneficial use within the Contractor's Service Area or to sell, transfer, or exchange pursuant to Article 9 of this Contract during any Year.

(d) Subject to the conditions set forth in subdivision (a) of Article 3 of this Contract, the United States shall deliver Project Water to the Contractor in accordance with the initial schedule submitted by the Contractor pursuant to subdivision (b) of this Article, or any written revision(s), satisfactory to the Contracting Officer, thereto submitted within a reasonable time prior to the date(s) on which the requested change(s) is/are to be implemented.

POINT OF DIVERSION AND RESPONSIBILITY FOR DISTRIBUTION OF WATER

5. (a) Project Water scheduled pursuant to subdivision (b) of Article 4 of this Contract shall be delivered to the Contractor at _____and any additional point or points of delivery either on Project facilities or another location or locations mutually agreed to in writing by the Contracting Officer and the Contractor.

(b) The Contracting Officer, either directly or through its written agreement(s) with the Operating Non-Federal Entity/Entities [Contractor specific issue-reference to Entities] shall make all reasonable efforts to maintain sufficient flows and levels of water in Project facilities to deliver Project Water to the Contractor at specific turnouts established pursuant to subdivision (a) of this Article.

(c) The Contractor shall deliver Irrigation Water in accordance with any applicable land classification provisions of Federal Reclamation law and the associated regulations. The Contractor shall not deliver Project Water to land outside the Contractor's Service Area unless approved in advance by the Contracting Officer.

(d) All Water Delivered to the Contractor pursuant to this Contract shall be measured and recorded with equipment furnished, installed, operated, and maintained by the United States, or the Operating Non-Federal Entity/Entities [14]at the point or points of delivery

established pursuant to subdivision (a) of this Article. Upon the request of either party to this Contract, the Contracting Officer shall investigate, or cause to be investigated by the appropriate Operating Non-Federal Entity/Entities, the accuracy of such measurements and shall take any necessary steps to adjust any errors appearing therein. For any period of time when accurate measurements have not been made, the Contracting Officer shall consult with the Contractor and the appropriate Operating Non-Federal Entity/Entities prior to making a final determination of the quantity delivered for that period of time.

(e) Neither the Contracting Officer nor any Operating Non-Federal Entity/Entities shall be responsible for the control, carriage, handling, use, disposal, or distribution of Water Delivered to the Contractor pursuant to this Contract beyond the delivery points specified in subdivision (a) of this Article. The Contractor shall indemnify the United States, its officers, employees, agents, and assigns on account of damage or claim of damage of any nature whatsoever for which there is legal responsibility, including property damage, personal injury, or death arising out of or connected with the control, carriage, handling, use, disposal, or distribution of such Water Delivered beyond such delivery points, except for any damage or claim arising out of (i) acts or omissions of the Contracting Officer or any of its officers, employees, agents, or assigns, including the Operating Non-Federal Entity/Entities, with the intent of creating the situation resulting in any damage or claim, (ii) willful misconduct of the Contracting Officer or any of its officers, employees, agents, or assigns, including theOperating Non-Federal Entity/Entities, (iii) negligence of the Contracting Officer or any of its officers, employees, agents, or assigns including the Operating Non-Federal Entity/Entities, or (iv) damage or claims resulting from a malfunction of facilities owned and/or operated by the United States or the Operating Non-Federal Entity/Entities

MEASUREMENT OF WATER WITHIN THE CONTRACTOR'S SERVICE AREA[15]

6. (Contractor Specific)(a) The Contractor has established a measuring program satisfactory to the Contracting Officer.The Contractor shall ensure that all surface water delivered for irrigation purposes within the Contractor's Service Area is measured at each agricultural turnout and such water delivered for M&I purposes is measured at each M&I service connection. The water measuring devices or water measuring methods of comparable effectiveness must be acceptable to the Contracting Officer. The Contractor shall be responsible for installing, operating, and maintaining and repairing all such measuring devices and implementing all such water measuring methods at no cost to the United States. The Contractor shall use the information obtained from such water measuring devices or water measuring methods to ensure its proper management of the water, to bill water users for water delivered by the Contractor; and, if applicable, to record water delivered for M&I purposes by customer class as defined in the Contractor's water conservation plan provided for in Article 26 of this Contract. Nothing herein contained, however, shall preclude the Contractor from establishing and collecting any charges, assessments, or other revenues authorized by California law. The Contractor shall include a summary of all its annual surface water deliveries in the annual report described in subdivision (c) of Article 26.

(b) (Contractor Specific) To the extent the information has not otherwise been provided, upon execution of this Contract, the Contractor shall provide to the Contracting Officer a written report describing the measurement devices or water measuring methods being used or to be used to implement subdivision (a) of this Article and identifying the agricultural turnouts and the M&I service connections or alternative measurement programs approved by the

[15] Recognize unique circumstances at Contractor level may require negotiation of different language.

Contracting Officer, at which such measurement devices or water measuring methods are being used, and, if applicable, identifying the locations at which such devices and/or methods are not yet being used including a time schedule for implementation at such locations. The Contracting Officer shall advise the Contractor in writing within 60 days as to the adequacy and necessary modifications, if any, of the measuring devices or water measuring methods identified in the Contractor's report and if the Contracting Officer does not respond in such time, they shall be deemed adequate. If the Contracting Officer notifies the Contractor that the measuring devices or methods are inadequate, the parties shall within 60 days following the Contracting Officer's response, negotiate in good faith the earliest practicable date by which the Contractor shall modify said measuring devices and/or measuring methods as required by the Contracting Officer to ensure compliance with subdivision (a) of this Article.

(c) All new surface water delivery systems installed within the Contractor's Service Area after the effective date of this Contract shall also[16] comply with the measurement provisions described in subdivision (a) of this Article.

(d) (Contractor Specific) The Contractor shall inform the Contracting Officer and the State of California in writing by April 30 of each Year of the monthly volume of surface water delivered within the Contractor's Service Area during the previous Year.

(e) (Contractor Specific) The Contractor shall inform the Contracting Officer and the Operating Non-Federal Entity on or before the 20th calendar day of each month of the quantity of Irrigation and M&I Water taken during the preceding month.

RATES AND METHOD OF PAYMENT FOR WATER

7. (a) The Contractor shall pay the United States as provided in this Article for

[16] Some Contractors may propose alternate date.

all Delivered Water at Rates, Charges, and the Tiered Pricing Component established in accordance with (i) the Secretary's ratesetting policy for Irrigation Water adopted in 1988 and the Secretary's then-existing ratesetting policy for M&I Water. Such ratesetting policies shall be amended, modified, or superceded only through a public notice and comment procedure; (ii) applicable Federal Reclamation law and associated rules and regulations, or policies; and (iii) other applicable provisions of this Contract. Payments shall be made by cash transaction, electronic funds transfer, or any other mechanism as may be agreed to in writing by the Contractor and the Contracting Officer. The Rates, Charges, and Tiered Pricing Component applicable to the Contractor upon execution of this Contract are set forth in Exhibit "B," as may be revised annually.

(b) The Contracting Officer shall notify the Contractor of the Rates, Charges, and Tiered Pricing Component as follows:

(1) Prior to July 1 of each Calendar Year, the Contracting Officer shall provide the Contractor an estimate of the Charges for Project Water that will be applied to the period October 1, of the current Calendar Year, through September 30, of the following Calendar Year, and the basis for such estimate. The Contractor shall be allowed not less than two months to review and comment on such estimates. On or before September 15 of each Calendar Year, the Contracting Officer shall notify the Contractor in writing of the Charges to be in effect during the period October 1 of the current Calendar Year, through September 30, of the following Calendar Year, and such notification shall revise Exhibit "B."

(2) Prior to October 1 of each Calendar Year, the Contracting Officer shall make available to the Contractor an estimate of the Rates and Tiered Pricing Component for Project Water for the following Year and the computations and cost allocations upon which

those Rates are based. The Contractor shall be allowed not less than two months to review and comment on such computations and cost allocations. By December 31 of each Calendar Year, the Contracting Officer shall provide the Contractor with the final Rates and Tiered Pricing Component to be in effect for the upcoming Year, and such notification shall revise Exhibit "B."

(c) At the time the Contractor submits the initial schedule for the delivery of Project Water for each Year pursuant to subdivision (b) of Article 4 of this Contract, the Contractor shall make an advance payment to the United States equal to the total amount payable pursuant to the applicable Rate(s) set under subdivision (a) of this Article, for the Project Water scheduled to be delivered pursuant to this Contract during the first two calendar months of the Year. Before the end of the first month and before the end of each calendar month thereafter, the Contractor shall make an advance payment to the United States, at the Rate(s) set under subdivision (a) of this Article, for the Water Scheduled to be delivered pursuant to this Contract during the second month immediately following. Adjustments between advance payments for Water Scheduled and payments at Rates due for Water Delivered shall be made before the end of the following month; Provided, That any revised schedule submitted by the Contractor pursuant to Article 4 of this Contract which increases the amount of Water Delivered pursuant to this Contract during any month shall be accompanied with appropriate advance payment, at the Rates then in effect, to assure that Project Water is not delivered to the Contractor in advance of such payment. In any month in which the quantity of Water Delivered to the Contractor pursuant to this Contract equals the quantity of Water Scheduled and paid for by the Contractor, no additional Project Water shall be delivered to the Contractor unless and until an advance payment at the Rates then in effect for such additional Project Water is made. Final adjustment between the advance payments for the Water Scheduled and payments for the quantities of Water

Delivered during each Year pursuant to this Contract shall be made as soon as practicable, but no later than April 30th of the following Year, or 60 days after the delivery of Project Water carried over under subdivision (g) of Article 3 of this Contract if such water is not delivered by the last day of February.

(d) The Contractor shall also make a payment in addition to the Rate(s) in subdivision (c) of this Article to the United States for Water Delivered, at the Charges and the appropriate Tiered Pricing Component then in effect, before the end of the month following the month of delivery; Provided, That the Contractor may be granted an exception from the Tiered Pricing Component pursuant to subdivision (j)(2) of this Article. The payments shall be consistent with the quantities of Irrigation Water and M&I Water Delivered as shown in the water delivery report for the subject month prepared by the Operating Non-Federal Entity/Entities or, if there is no Operating Non-Federal Entity/Entities, by the Contracting Officer. The water delivery report shall be deemed a bill for the payment of Charges and the applicable Tiered Pricing Component for Water Delivered. Adjustment for overpayment or underpayment of Charges shall be made through the adjustment of payments due to the United States for Charges for the next month. Any amount to be paid for past due payment of Charges and the Tiered Pricing Component shall be computed pursuant to Article 20 of this Contract.

(e) The Contractor shall pay for any Water Delivered under subdivision (a), (f), or (g) of Article 3 of this Contract as determined by the Contracting Officer pursuant to applicable statutes, associated regulations, any applicable provisions of guidelines or ratesetting policies; Provided, That the Rate for Water Delivered under subdivision (f) of Article 3 of this Contract shall be no more than the otherwise applicable Rate for Irrigation Water or M&I Water under subdivision (a) of this Article.

(f) Payments to be made by the Contractor to the United States under this Contract may be paid from any revenues available to the Contractor.

(g) All revenues received by the United States from the Contractor relating to the delivery of Project Water or the delivery of non-Project water through Project facilities shall be allocated and applied in accordance with Federal Reclamation law and the associated rules or regulations, and the then-current Project ratesetting policies for M&I Water or Irrigation Water.

(h) The Contracting Officer shall keep its accounts pertaining to the administration of the financial terms and conditions of its long-term contracts, in accordance with applicable Federal standards, so as to reflect the application of Project costs and revenues. The Contracting Officer shall, each Year upon request of the Contractor, provide to the Contractor a detailed accounting of all Project and Contractor expense allocations, the disposition of all Project and Contractor revenues, and a summary of all water delivery information. The Contracting Officer and the Contractor shall enter into good faith negotiations to resolve any discrepancies or disputes relating to accountings, reports, or information.

(i) The parties acknowledge and agree that the efficient administration of this Contract is their mutual goal. Recognizing that experience has demonstrated that mechanisms, policies, and procedures used for establishing Rates, Charges, and Tiered Pricing Components, and/or for making and allocating payments, other than those set forth in this Article may be in the mutual best interest of the parties, it is expressly agreed that the parties may enter into agreements to modify the mechanisms, policies, and procedures for any of those purposes while this Contract is in effect without amending this Contract.

(j) (1) Beginning at such time as deliveries of Project Water in a Year exceed 80 percent of the Contract Total, then before the end of the month following the month of

delivery the Contractor shall make an additional payment to the United States equal to the applicable Tiered Pricing Component. The Tiered Pricing Component for the amount of Water Delivered in excess of 80 percent of the Contract Total, but less than or equal to 90 percent of the Contract Total, shall equal one-half of the difference between the Rate established under subdivision (a) of this Article and the Irrigation Full Cost Water Rate or M&I Full Cost Water Rate, whichever is applicable. The Tiered Pricing Component for the amount of Water Delivered which exceeds 90 percent of the Contract Total shall equal the difference between (i) the Rate established under subdivision (a) of this Article and (ii) the Irrigation Full Cost Water Rate or M&I Full Cost Water Rate, whichever is applicable. For all Water Delivered pursuant to subdivision (a) of Article 3 of this Contract which is in excess of 80 percent of the Contract Total, this increment shall be deemed to be divided between Irrigation Water and M&I Water in the same proportion as actual deliveries of each bear to the cumulative total Water Delivered.[17]

(2) Subject to the Contracting Officer's written approval, the Contractor may request and receive an exemption from such Tiered Pricing Components for Project Water delivered to produce a crop which the Contracting Officer determines will provide significant and quantifiable habitat values for waterfowl in fields where the water is used and the crops are produced; Provided, That the exemption from the Tiered Pricing Component for Irrigation Water shall apply only if such habitat values can be assured consistent with the purposes of the CVPIA through binding agreements executed with or approved by the Contracting Officer prior to use of such water.

(3) For purposes of determining the applicability of the Tiered Pricing Component pursuant to this Article, Water Delivered shall include Project Water that the

[17] Deletion of the last sentence or alternate language may be negotiated by individual districts.

Contractor transfers to others but shall not include Project Water transferred to the Contractor, nor shall it include the additional water provided to the Contractor under the provisions of subdivision (f) of Article 3 of this Contract.[18]

(k) For the term of this Contract, Rates under the respective ratesetting policies will be established to recover only reimbursable O&M (including any deficits) and capital costs of the Project, as those terms are used in the then-current Project ratesetting policies, and interest, where appropriate, except in instances where a minimum Rate is applicable in accordance with the relevant Project ratesetting policy. Changes of significance in practices which implement the Contracting Officer's ratesetting policies will not be implemented until the Contracting Officer has provided the Contractor an opportunity to discuss the nature, need, and impact of the proposed change.

(l) Except as provided in subsections 3405(a)(1)(B) and 3405(f) of the CVPIA, the Rates for Project Water transferred by the Contractor shall be the Contractor's Rates adjusted upward or downward to reflect the changed costs, if any, incurred by the Contracting Officer in the delivery of the transferred Project Water to the transferee's point of delivery in accordance with the then applicable Project ratesetting policy. If the Contractor is receiving lower Rates and Charges because of inability to pay and is transferring Project Water to another entity whose Rates and Charges are not adjusted due to inability to pay, the Rates and Charges for transferred Project Water shall be the Contractor's Rates and Charges and will not be adjusted to reflect the Contractor's inability to pay.

(m) Pursuant to the Act of October 27, 1986 (100 Stat. 3050), the Contracting Officer is authorized to adjust determinations of ability to pay every five years.

[18] **Divisions/Districts may propose alternative language.**

(n) [For contractors with M&I water]: With respect to the Rates for M&I Water the Contractor asserts that it is not legally obligated to pay any Project deficits claimed by the United States to have accrued as of the date of this Contract or deficit-related interest charges thereon. By entering into this Contract, the Contractor does not waive any legal rights or remedies that it may have with respect to such disputed issues. Notwithstanding the execution of this Contract and payments made hereunder, the Contractor may challenge in the appropriate administrative or judicial forums: (1) the existence, computation, or imposition of any deficit charges accruing during the term of the Existing Contract and any preceding interim renewal contracts, if applicable; (2) interest accruing on any such deficits; (3) the inclusion of any such deficit charges or interest in the Rates; (4) the application by the United States of payments made by the Contractor under its Existing Contract and any preceding interim renewal contracts, if applicable; and (5) the application of such payments in the Rates. The Contracting Officer agrees that the Contractor shall be entitled to the benefit of any administrative or judicial ruling in favor of any Project M&I contractor on any of these issues, and credits for payments heretofore made, Provided, That the basis for such ruling is applicable to the Contractor.[19]

NON-INTEREST BEARING OPERATION AND MAINTENANCE DEFICITS[20]

8. The Contractor and the Contracting Officer concur that, as of the effective date of this Contract, the Contractor has no non-interest-bearing O&M deficits and shall have no further liability therefor.

[Or,]

The Contractor and the Contracting Officer have entered into a written agreement

[19] Contractors may opt-out of including this subarticle in the contract.
[20] Contractor Specific

specifying a mutually acceptable mechanism through which the Contractor will retire its outstanding non-interest-bearing OO&M deficits.

SALES, TRANSFERS, OR EXCHANGES OF WATER

9. (a) The right to receive Project Water provided for in this Contract may be sold, transferred, or exchanged to others for reasonable and beneficial uses within the State of California if such sale, transfer, or exchange is authorized by applicable Federal and State laws, and applicable guidelines or regulations then in effect. No sale, transfer, or exchange of Project Water under this Contract may take place without the prior written approval of the Contracting Officer, except as provided for in subdivision (b) of this Article, and no such sales, transfers, or exchanges shall be approved absent all appropriate environmental documentation, including but not limited to documents prepared pursuant to NEPA and ESA. Such environmental documentation should include, as appropriate, an analysis of groundwater impacts and economic and social effects, including environmental justice, of the proposed water transfers on both the transferor and transferee.

(b) In order to facilitate efficient water management by means of water transfers of the type historically carried out among Project Contractors located within the same geographical area and to allow the Contractor to participate in an accelerated water transfer program during the term of this Contract, the Contracting Officer shall prepare, as appropriate, all necessary environmental documentation including, but not limited to, documents prepared pursuant to NEPA and ESA, analyzing annual transfers within such geographical areas, and the Contracting Officer shall determine whether such transfers comply with applicable law. Following the completion of the environmental documentation, such transfers addressed in such documentation shall be conducted with advance notice to the Contracting Officer, but shall not

require prior written approval by the Contracting Officer. Such environmental documentation and the Contracting Officer's compliance determination shall be reviewed every five years and updated, as necessary, prior to the expiration of the then-existing five-year period. All subsequent environmental documentation shall include an alternative to evaluate not less than the quantity of Project Water historically transferred within the same geographical area.

(c) For a water transfer to qualify under subdivision (b) of this Article, such water transfer must: (i) be for irrigation purposes for lands irrigated within the previous three years, for M&I use, groundwater recharge, water banking, or fish and wildlife resources; not lead to land conversion; and be delivered to established cropland, wildlife refuges, groundwater basins or M&I use; (ii) occur within a single Year; (iii) occur between a willing seller and a willing buyer; (iv) convey water through existing facilities with no new construction or modifications to facilities and be between existing Project Contractors and/or the Contractor and the United States, Department of the Interior; and (v) comply with all applicable Federal, State, and local or tribal laws and requirements imposed for protection of the environment and Indian Trust Assets, as defined under Federal law.

APPLICATION OF PAYMENTS AND ADJUSTMENTS

10. (a) The amount of any overpayment by the Contractor of the Contractor's O&M, capital, and deficit (if any) obligations for the Year shall be applied first to any current liabilities of the Contractor arising out of this Contract then due and payable. Overpayments of more than $1,000 shall be refunded at the Contractor's request. In lieu of a refund, any amount of such overpayment, at the option of the Contractor, may be credited against amounts to become due to the United States by the Contractor. With respect to overpayment, such refund or adjustment shall constitute the sole remedy of the Contractor or anyone having or claiming to

have the right to the use of any of the Project Water supply provided for herein. All credits and refunds of overpayments shall be made within 30 days of the Contracting Officer obtaining direction as to how to credit or refund such overpayment in response to the notice to the Contractor that it has finalized the accounts for the Year in which the overpayment was made.

(b) All advances for miscellaneous costs incurred for work requested by the Contractor pursuant to Article 25 of this Contract shall be adjusted to reflect the actual costs when the work has been completed. If the advances exceed the actual costs incurred, the difference will be refunded to the Contractor. If the actual costs exceed the Contractor's advances, the Contractor will be billed for the additional costs pursuant to Article 25.

TEMPORARY REDUCTIONS-RETURN FLOWS

11. (a) Subject to: (i) the authorized purposes and priorities of the Project and the requirements of Federal law; and (ii) the obligations of the United States under existing contracts, or renewals thereof, providing for water deliveries from the Project, the Contracting Officer shall make all reasonable efforts to optimize Project Water deliveries to the Contractor as provided in this Contract.

(b) The Contracting Officer or Operating Non-Federal Entity/Entitiesmay temporarily discontinue or reduce the quantity of Water Delivered to the Contractor as herein provided for the purposes of investigation, inspection, maintenance, repair, or replacement of any of the Project facilities or any part thereof necessary for the delivery of Project Water to the Contractor, but so far as feasible the Contracting Officer or Operating Non-Federal Entity will give the Contractor due notice in advance of such temporary discontinuance or reduction, except in case of emergency, in which case no notice need be given; Provided, That the United States shall use its best efforts to avoid any discontinuance or reduction in such service. Upon

resumption of service after such reduction or discontinuance, and if requested by the Contractor, the United States will, if possible, deliver the quantity of Project Water which would have been delivered hereunder in the absence of such discontinuance or reduction.

(c) The United States reserves the right to all seepage and return flow water derived from Water Delivered to the Contractor hereunder which escapes or is discharged beyond the Contractor's Service Area; Provided, That this shall not be construed as claiming for the United States any right to seepage or return flow being put to reasonable and beneficial use pursuant to this Contract within the Contractor's Service Area[21] by the Contractor or those claiming by, through, or under the Contractor.

CONSTRAINTS ON THE AVAILABILITY OF WATER

12. (a) In its operation of the Project, the Contracting Officer will use all reasonable means to guard against a Condition of Shortage in the quantity of water to be made available to the Contractor pursuant to this Contract. In the event the Contracting Officer determines that a Condition of Shortage appears probable, the Contracting Officer will notify the Contractor of said determination as soon as practicable.

(b) If there is a Condition of Shortage because of errors in physical operations of the Project, drought, other physical causes beyond the control of the Contracting Officer or actions taken by the Contracting Officer to meet legal obligations then, except as provided in subdivision (a) of Article 18 of this Contract, no liability shall accrue against the United States or any of its officers, agents, or employees for any damage, direct or indirect, arising therefrom.

(c) DIVISIONAL ISSUE - APPORTIONMENT AMONG CONTRACTORS.

(d) DIVISIONAL ISSUE - M&I Water Service Contracts

[21] Divisions may propose alternate language

(e) DIVISIONAL ISSUE – Reservation of Rights re M&I Shortage Policy

UNAVOIDABLE GROUNDWATER PERCOLATION

13. To the extent applicable, the Contractor shall not be deemed to have delivered Irrigation Water to Excess Lands or Ineligible Lands within the meaning of this Contract if such lands are irrigated with groundwater that reaches the underground strata as an unavoidable result of the delivery of Irrigation Water by the Contractor to Eligible Lands.

RULES AND REGULATIONS[22]

14. The parties agree that the delivery of Irrigation Water or use of Federal facilities pursuant to this Contract is subject to Federal Reclamation law, including but not limited to the Reclamation Reform Act of 1982 (43 U.S.C.390aa et seq.), as amended and supplemented, and the rules and regulations promulgated by the Secretary of the Interior under Federal Reclamation law.

WATER AND AIR POLLUTION CONTROL

15. The Contractor, in carrying out this Contract, shall comply with all applicable water and air pollution laws and regulations of the United States and the State of California, and shall obtain all required permits or licenses from the appropriate Federal, State, or local authorities.

QUALITY OF WATER[23]

16. (a) Project facilities used to deliver Project Water to the Contractor pursuant to this Contract shall be operated and maintained to enable the United States to deliver Project Water to the Contractor in accordance with the water quality standards specified in subsection 2(b) of the Act of August 26, 1937 (50 Stat. 865), as added by Section 101 of the Act of October 27, 1986 (100 Stat. 3050) or other existing Federal laws. The United States is under no

[22] Contractor Specific Issue - This may need to be modified on an individual contractor basis. Some contractors may be precluded by law to agreeing to all or part of this Article.

obligation to construct or furnish water treatment facilities to maintain or to improve the quality of Water Delivered to the Contractor pursuant to this Contract. The United States does not warrant the quality of Water Delivered to the Contractor pursuant to this Contract.

(b) The O&M of Project facilities shall be performed in such manner as is practicable to maintain the quality of raw water made available through such facilities at the highest level reasonably attainable as determined by the Contracting Officer. The Contractor shall be responsible for compliance with all State and Federal water quality standards applicable to surface and subsurface agricultural drainage discharges generated through the use of Federal or Contractor facilities or Project Water provided by the Contractor within the Contractor's Service Area.

(c) [DIVISIONAL ISSUE – DRAINAGE, WHERE APPLICABLE]

WATER ACQUIRED BY THE CONTRACTOR
OTHER THAN FROM THE UNITED STATES

17. (a) Water or water rights now owned or hereafter acquired by the Contractor other than from the United States and Irrigation Water furnished pursuant to the terms of this Contract may be simultaneously transported through the same distribution facilities of the Contractor subject to the following: (i) if the facilities utilized for commingling Irrigation Water and non-Project water were constructed without funds made available pursuant to Federal Reclamation law, the provisions of Federal Reclamation law will be applicable only to the Landholders of lands which receive Irrigation Water; (ii) the eligibility of land to receive

[23] **Some Contractors may request tailored language regarding water quality.**

Irrigation Water must be established through the certification requirements as specified in the Acreage Limitation Rules and Regulations (43 CFR Part 426); (iii) the water requirements of Eligible Lands within the Contractor's Service Area can be established and the quantity of Irrigation Water to be utilized is less than or equal to the quantity necessary to irrigate such Eligible Lands; and (iv) if the facilities utilized for commingling Irrigation Water and non-Project water are/were constructed with funds made available pursuant to Federal Reclamation law, the non-Project water will be subject to the acreage limitation provisions of Federal Reclamation law, unless the Contractor pays to the United States the incremental fee described in 43 CFR 426.15. In determining the incremental fee, the Contracting Officer will calculate annually the cost to the Federal Government, including interest, of storing or delivering non-Project water, which for purposes of this Contract shall be determined as follows: The quotient shall be the unpaid distribution system costs divided by the total irrigable acreage within the Contractor's Service Area. The incremental fee per acre is the mathematical result of such quotient times the interest rate determined using Section 202 (3) of the Act of October 12, 1982 (96 Stat. 1263). Such incremental fee will be charged to each acre of excess or full cost land within the Contractor’s Service Area that receives non-Project water through Federally financed or constructed facilities. The incremental fee calculation methodology will continue during the term of this Contract absent the promulgation of a contrary Reclamation-wide rule, regulation, or policy adopted after the Contractor has been afforded the opportunity to review and comment on the proposed rule, regulation, or policy. If such rule, regulation, or policy is adopted it shall supercede this provision.

(b) Water or water rights now owned or hereafter acquired by the Contractor, other than from the United States, may be stored, conveyed, and/or diverted through Project

facilities, subject to the completion of appropriate environmental documentation, with the approval of the Contracting Officer and the execution of any contract determined by the Contracting Officer to be necessary, consistent with the following provisions:

(1) The Contractor may introduce non-Project water into Project facilities and deliver said water to lands within the Contractor's Service Area, including Ineligible Lands, subject to payment to the United States and/or to any applicable Operating Non-Federal Entity of an appropriate rate as determined by the applicable Project ratesetting policy, the R R A, and the Project use power policy, if such Project use power policy is applicable,each as amended, modified, or superceded from time to time. (2) Delivery of suc

or quality of water available to other Project Contractors; (iii) interfere with the delivery of contractual waterentitlements to any other Project Contractors; or (iv) interfere with the physical maintenance of the Project facilities.

(3) Neither the United States nor the Operating Non-Federal Entity shall be responsible for control, care, or distribution of the non-Project water before it is introduced into or after it is delivered from the Project facilities. The Contractor hereby releases and agrees to defend and indemnify the United States and the Operating Non-Federal Entity, and their respective officers, agents, and employees, from any claim for damage to persons or property, direct or indirect, resulting from the acts of the Contractor, its officers', employees', agents' or assigns', act(s) in (i) extracting or diverting non-Project water from any source, or (ii) diverting such non-Project water into Project facilities.

(4) Diversion of such non-Project water into Project facilities shall be consistent with all applicable laws, and if involving groundwater, consistent with any applicable groundwater management plan for the area from which it was extracted.

(5) After Project purposes are met, as determined by the Contracting Officer, the United States and the Contractor shall share priority to utilize the remaining capacity of the facilities declared to be available by the Contracting Officer for conveyance and transportation of non-Project water prior to any such remaining capacity being made available to non-Project contractors. [DIVISIONAL ISSUE – DIVISIONS MAY SEEK LANGUAGE PROVIDING FOR WHEELING AND NON-PROJECT WATER PURSUANT TO CVPIA SECTION 3408(c), ETC.]

OPINIONS AND DETERMINATIONS

18. (a) Where the terms of this Contract provide for actions to be based upon the opinion or determination of either party to this Contract, said terms shall not be construed as permitting such action to be predicated upon arbitrary, capricious, or unreasonable opinions or determinations. Both parties, notwithstanding any other provisions of this Contract, expressly reserve the right to seek relief from and appropriate adjustment for any such arbitrary, capricious, or unreasonable opinion or determination. Each opinion or determination by either party shall be provided in a timely manner. Nothing in subdivision (a) of Article 18 of this Contract is intended to or shall affect or alter the standard of judicial review applicable under Federal law to any opinion or determination implementing a specific provision of Federal law embodied in statute or regulation.

(b) The Contracting Officer shall have the right to make determinations necessary to administer this Contract that are consistent with the provisions of this Contract, the laws of the United States and of the State of California, and the rules and regulations promulgated by the Secretary of the Interior. Such determinations shall be made in consultation with the Contractor to the extent reasonably practicable.

COORDINATION AND COOPERATION

19. (a) In order to further their mutual goals and objectives, the Contracting Officer and the Contractor shall communicate, coordinate, and cooperate with each other, and with other affected Project Contractors, in order to improve the operation and management of the Project. The communication, coordination, and cooperation regarding operations and management shall include, but not be limited to, any action which will or may materially affect the quantity or quality of Project Water supply, the allocation of Project Water supply, and Project financial matters including, but not limited to, budget issues. The communication, coordination, and cooperation provided for hereunder shall extend to all provisions of this Contract. Each party shall retain exclusive decision making authority for all actions, opinions, and determinations to be made by the respective party.

(b) Within 120 days following the effective date of this Contract, the Contractor, other affected Project Contractors, and the Contracting Officer shall arrange to meet with interested Project Contractors to develop a mutually agreeable, written Project-wide process, which may be amended as necessary separate and apart from this Contract. The goal of this process shall be to provide, to the extent practicable, the means of mutual communication and interaction regarding significant decisions concerning Project operation and management on a real-time basis.

(c) In light of the factors referred to in subdivision (b) of Article 3 of this Contract, it is the intent of the Secretary to improve water supply reliability. To carry out this intent:

(1) The Contracting Officer will, at the request of the Contractor, assist in the development of integrated resource management plans for the Contractor. Further,

the Contracting Officer will, as appropriate, seek authorizations for implementation of partnerships to improve water supply, water quality, and reliability.

(2) The Secretary will, as appropriate, pursue program and project implementation and authorization in coordination with Project Contractors to improve the water supply, water quality, and reliability of the Project for all Project purposes.

(3) The Secretary will coordinate with Project Contractors and the State of California to seek improved water resource management.

(4) The Secretary will coordinate actions of agencies within the Department of the Interior that may impact the availability of water for Project purposes.

(5) The Contracting Officer shall periodically, but not less than annually, hold division level meetings to discuss Project operations, division level water management activities, and other issues as appropriate.

(d) Without limiting the contractual obligations of the Contracting Officer under the other Articles of this Contract, nothing in this Article shall be construed to limit or constrain the Contracting Officer's ability to communicate, coordinate, and cooperate with the Contractor or other interested stakeholders or to make decisions in a timely fashion as needed to protect health, safety, or the physical integrity of structures or facilities.

CHARGES FOR DELINQUENT PAYMENTS

20. (a) The Contractor shall be subject to interest, administrative and penalty charges on delinquent installments or payments. When a payment is not received by the due date, the Contractor shall pay an interest charge for each day the payment is delinquent beyond the due date. When a payment becomes sixty (60) days delinquent, the Contractor shall pay an administrative charge to cover additional costs of billing and processing the delinquent payment. When a payment is delinquent ninety (90) days or more, the Contractor shall pay an additional penalty charge of six (6%) percent per year for each day the payment is delinquent beyond the due date. Further, the Contractor shall pay any fees incurred for debt collection services

associated with a delinquent payment.

(b) The interest charge rate shall be the greater of the rate prescribed quarterly in the Federal Register by the Department of the Treasury for application to overdue payments, or the interest rate of one-half of one (0.5%) percent per month prescribed by Section 6 of the Reclamation Project Act of 1939 (Public Law 76-260). The interest charge rate shall be determined as of the due date and remain fixed for the duration of the delinquent period.

(c) When a partial payment on a delinquent account is received, the amount received shall be applied, first to the penalty, second to the administrative charges, third to the accrued interest, and finally to the overdue payment.

EQUAL OPPORTUNITY

21. During the performance of this Contract, the Contractor agrees as follows:

(a) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to, the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination, rates of payment or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Contracting Officer setting forth the provisions of this nondiscrimination clause.

(b) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without discrimination because of race, color, religion, sex, or national origin.

(c) The Contractor will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the Contracting Officer, advising the said labor union or workers' representative of the Contractor's commitments under Section 202 of Executive Order 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(d) The Contractor will comply with all provisions of Executive Order

No. 11246 of September 24, 1965, as amended, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(e) The Contractor will furnish all information and reports required by said amended Executive Order and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to its books, records, and accounts by the Contracting Officer and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(f) In the event of the Contractor's noncompliance with the nondiscrimination clauses of this Contract or with any of the said rules, regulations, or orders, this Contract may be canceled, terminated, or suspended, in whole or in part, and the Contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in said amended Executive Order, and such other sanctions may be imposed and remedies invoked as provided in said Executive Order, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(g) The Contractor will include the provisions of paragraphs (a) through (g) in every subcontract or purchase order unless exempted by the rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of said amended Executive Order, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as may be directed by the Secretary of Labor as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, That in the event the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

GENERAL OBLIGATION--BENEFITS CONDITIONED UPON PAYMENT

22. (a) The obligation of the Contractor to pay the United States as provided in this Contract is a general obligation of the Contractor notwithstanding the manner in which the obligation may be distributed among the Contractor's water users and notwithstanding the default of individual water users in their obligations to the Contractor.

(b) The payment of charges becoming due hereunder is a condition precedent to receiving benefits under this Contract. The United States shall not make water available to the Contractor through Project facilities during any period in which the Contractor may be in arrears in the advance payment of water rates due the United States. The Contractor shall not furnish water made available pursuant to this Contract for lands or parties which are in arrears in the advance payment of water rates levied or established by the Contractor.

(c) With respect to subdivision (b) of this Article, the Contractor shall have no obligation to require advance payment for water rates which it levies.

COMPLIANCE WITH CIVIL RIGHTS LAWS AND REGULATIONS

23. (a) The Contractor shall comply with Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d), Section 504 of the Rehabilitation Act of 1975 (P.L. 93-112, as amended), the Age Discrimination Act of 1975 (42 U.S.C. 6101, et seq.) and any other applicable civil rights laws, as well as with their respective implementing regulations and guidelines imposed by the U.S. Department of the Interior and/or Bureau of Reclamation.

(b) These statutes require that no person in the United States shall, on the grounds of race, color, national origin, handicap, or age, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity receiving financial assistance from the Bureau of Reclamation. By executing this Contract, the Contractor agrees to immediately take any measures necessary to implement this obligation, including permitting officials of the United States to inspect premises, programs, and documents.

(c) The Contractor makes this agreement in consideration of and for the purpose of obtaining any and all Federal grants, loans, contracts, property discounts, or other Federal financial assistance extended after the date hereof to the Contractor by the Bureau of Reclamation, including installment payments after such date on account of arrangements for Federal financial assistance which were approved before such date. The Contractor recognizes and agrees that such Federal assistance will be extended in reliance on the representations and agreements made in this Article, and that the United States reserves the right to seek judicial enforcement thereof.

PRIVACY ACT COMPLIANCE

24. (a) The Contractor shall comply with the Privacy Act of 1974 (5 U.S.C. 552a) (the Act) and the Department of the Interior rules and regulations under the Act (43 CFR 2.45 et seq.) in maintaining Landholder acreage certification and reporting records, required to be submitted to the Contractor for compliance with Sections 206 and 228 of the Reclamation Reform Act of 1982 (96 Stat. 1266), and pursuant to 43 CFR 426.18.

(b) With respect to the application and administration of the criminal penalty provisions of the Act (5 U.S.C. 552a(i)), the Contractor and the Contractor's employees responsible for maintaining the certification and reporting records referenced in (a) above are

considered to be employees of the Department of the Interior. See 5 U.S.C. 552a(m).

(c) The Contracting Officer or a designated representative shall provide the Contractor with current copies of the Interior Department Privacy Act regulations and the Bureau of Reclamation Federal Register Privacy Act System of Records Notice (Acreage Limitation--Interior, Reclamation-31) which govern the maintenance, safeguarding, and disclosure of information contained in the Landholder's certification and reporting records.

(d) The Contracting Officer shall designate a full-time employee of the Bureau of Reclamation to be the System Manager who shall be responsible for making decisions on denials pursuant to 43 CFR 2.61 and 2.64 amendment requests pursuant to 43 CFR 2.72. The Contractor is authorized to grant requests by individuals for access to their own records.

(e) The Contractor shall forward promptly to the System Manager each proposed denial of access under 43 CFR 2.64; and each request for amendment of records filed under 43 CFR 2.71; notify the requester accordingly of such referral; and provide the System Manager with information and records necessary to prepare an appropriate response to the requester. These requirements do not apply to individuals seeking access to their own certification and reporting forms filed with the Contractor pursuant to 43 CFR 426.18, unless the requester elects to cite the Privacy Act as a basis for the request.

CONTRACTOR TO PAY CERTAIN MISCELLANEOUS COSTS

25. In addition to all other payments to be made by the Contractor pursuant to this Contract, the Contractor shall pay to the United States, within 60 days after receipt of a bill and detailed statement submitted by the Contracting Officer to the Contractor for such specific items of direct cost incurred by the United States for work requested by the Contractor associated with this Contract plus indirect costs in accordance with applicable Bureau of Reclamation policies and procedures. All such amounts referred to in this Article shall not exceed the amount agreed to in writing in advance by the Contractor. This Article shall not apply to costs for routine contract administration.

WATER CONSERVATION

26. (a) Prior to the delivery of water provided from or conveyed through

Federally constructed or Federally financed facilities pursuant to this Contract, the Contractor shall be implementing an effective water conservation and efficiency program based on the Contractor's water conservation plan that has been determined by the Contracting Officer to meet the conservation and efficiency criteria for evaluating water conservation plans established under Federal law. The water conservation and efficiency program shall contain definite water conservation objectives, appropriate economically feasible water conservation measures, and time schedules for meeting those objectives. Continued Project Water delivery pursuant to this Contract shall be contingent upon the Contractor's continued implementation of such water conservation program. In the event the Contractor's water conservation plan or any revised water conservation plan completed pursuant to subdivision (d) of Article 26 of this Contract have not yet been determined by the Contracting Officer to meet such criteria, due to circumstances which the Contracting Officer determines are beyond the control of the Contractor, water deliveries shall be made under this Contract so long as the Contractor diligently works with the Contracting Officer to obtain such determination at the earliest practicable date, and thereafter the Contractor immediately begins implementing its water conservation and efficiency program in accordance with the time schedules therein.

(b) Should the amount of M&I Water delivered pursuant to subdivision (a) of Article 3 of this Contract equal or exceed 2,000 acre-feet per Year, the Contractor shall implement the Best Management Practices identified by the time frames issued by the California Urban Water Conservation Council for such M&I Water unless any such practice is determined by the Contracting Officer to be inappropriate for the Contractor.

(c) The Contractor shall submit to the Contracting Officer a report on the status of its implementation of the water conservation plan on the reporting dates specified in the

then existing conservation and efficiency criteria established under Federal law.

(d) At five-year intervals, the Contractor shall revise its water conservation plan to reflect the then-current conservation and efficiency criteria for evaluating water conservation plans established under Federal law and submit such revised water management plan to the Contracting Officer for review and evaluation. The Contracting Officer will then determine if the water conservation plan meets Reclamation's then-current conservation and efficiency criteria for evaluating water conservation plans established under Federal law.

(e) If the Contractor is engaged in direct groundwater recharge, such activity shall be described in the Contractor's water conservation plan.

EXISTING OR ACQUIRED WATER OR WATER RIGHTS

27. Except as specifically provided in Article 17 of this Contract, the provisions of this Contract shall not be applicable to or affect non-Project water or water rights now owned or hereafter acquired by the Contractor or any user of such water within the Contractor's Service Area. Any such water shall not be considered Project Water under this Contract. In addition, this Contract shall not be construed as limiting or curtailing any rights which the Contractor or any water user within the Contractor's Service Area acquires or has available under any other contract pursuant to Federal Reclamation law.

OPERATION AND MAINTENANCE BY OPERATING NON-FEDERAL ENTITY[24]

28. (a) The O&M of a portion of the Project facilities which serve the Contractor, and responsibility for funding a portion of the costs of such O&M, have been transferred to the Operating Non-Federal Entity by separate agreement between the United States and the

[24] Include where applicable.

Operating Non-Federal Entity. That separate agreement shall not interfere with or affect the rights or obligations of the Contractor or the United States hereunder.

(b) The Contracting Officer has previously notified the Contractor in writing that the O&M of a portion of the Project facilities which serve the Contractor has been transferred to the Operating Non-Federal Entity, and therefore, the Contractor shall pay directly to the Operating Non-Federal Entity, or to any successor approved by the Contracting Officer under the terms and conditions of the separate agreement between the United States and the Operating Non-Federal Entity described in subdivision (a) of this Article, all rates, charges, or assessments of any kind, including any assessment for reserve funds, which the Operating Non-Federal Entity or such successor determines, sets, or establishes for the O&M of the portion of the Project facilities operated and maintained by the Operating Non-Federal Entity or such successor. Such direct payments to the Operating Non-Federal Entity or such successor shall not relieve the Contractor of its obligation to pay directly to the United States the Contractor's share of the Project Rates, Charges, and Tiered Pricing Component(s) except to the extent the Operating Non-Federal Entity collects payments on behalf of the United States in accordance with the separate agreement identified in subdivision (a) of this Article.

(c) For so long as the O&M of any portion of the Project facilities serving the Contractor is performed by the Operating Non-Federal Entity, or any successor thereto, the Contracting Officer shall adjust those components of the Rates for Water Delivered under this Contract representing the cost associated with the activity being performed by the Operating Non-Federal Entity or its successor.

(d) In the event the O&M of the Project facilities operated and maintained by the Operating Non-Federal Entity is re-assumed by the United States during the term of this

Contract, the Contracting Officer shall so notify the Contractor, in writing, and present to the Contractor a revised Exhibit "B" which shall include the portion of the Rates to be paid by the Contractor for Project Water under this Contract representing the O&M costs of the portion of such Project facilities which have been re-assumed. The Contractor shall, thereafter, in the absence of written notification from the Contracting Officer to the contrary, pay the Rates, Charges, and Tiered Pricing Component(s) specified in the revised Exhibit "B" directly to the United States in compliance with Article 7 of this Contract.

[Divisional Issue – inclusion of new Article 28.1 for contracts involving additional Operating

CONTINGENT ON APPROPRIATION OR ALLOTMENT OF FUNDS

29. The expenditure or advance of any money or the performance of any obligation of the United States under this Contract shall be contingent upon appropriation or allotment of funds. Absence of appropriation or allotment of funds shall not relieve the Contractor from any obligations under this Contract. No liability shall accrue to the United States in case funds are not appropriated or allotted.

BOOKS, RECORDS, AND REPORTS

30. (a) The Contractor shall establish and maintain accounts and other books and records pertaining to administration of the terms and conditions of this Contract, including: the Contractor's financial transactions, water supply data, and Project land and right-of-way agreements; the water users' land-use (crop census), land ownership, land-leasing and water use data; and other matters that the Contracting Officer may require. Reports thereon shall be furnished to the Contracting Officer in such form and on such date or dates as the Contracting Officer may require. Subject to applicable Federal laws and regulations, each party to this Contract shall have the right during office hours to examine and make copies of the other party's books and records relating to matters covered by this Contract.

(b) Notwithstanding the provisions of subdivision (a) of this Article, no books, records, or other information shall be requested from the Contractor by the Contracting Officer unless such books, records, or information are reasonably related to the administration or performance of this Contract. Any such request shall allow the Contractor a reasonable period of

time within which to provide the requested books, records, or information.

(c) At such time as the Contractor provides information to the Contracting Officer pursuant to subdivision (a) of this Article, a copy of such information shall be provided to the Operating Non-Federal Entity.

ASSIGNMENT LIMITED--SUCCESSORS AND ASSIGNS OBLIGATED

31. (a) The provisions of this Contract shall apply to and bind the successors and assigns of the parties hereto, but no assignment or transfer of this Contract or any right or interest therein shall be valid until approved in writing by the Contracting Officer.

(b) The assignment of any right or interest in this Contract by either party shall not interfere with the rights or obligations of the other party to this Contract absent the written concurrence of said other party.

(c) The Contracting Officer shall not unreasonably condition or withhold his approval of any proposed assignment.

SEVERABILITY

32. In the event that a person or entity who is neither (i) a party to a Project contract, nor (ii) a person or entity that receives Project Water from a party to a Project contract, nor (iii) an association or other form of organization whose primary function is to represent parties to Project contracts, brings an action in a court of competent jurisdiction challenging the legality or enforceability of a provision included in this Contract and said person, entity, association, or organization obtains a final court decision holding that such provision is legally invalid or unenforceable and the Contractor has not intervened in that lawsuit in support of the plaintiff(s), the parties to this Contract shall use their best efforts to (i) within 30 days of the date of such final court decision identify by mutual agreement the provisions in this Contract which must be

revised, and (ii) within three months thereafter promptly agree on the appropriate revision(s). The time periods specified above may be extended by mutual agreement of the parties. Pending the completion of the actions designated above, to the extent it can do so without violating any applicable provisions of law, the United States shall continue to make the quantities of Project Water specified in this Contract available to the Contractor pursuant to the provisions of this Contract which were not found to be legally invalid or unenforceable in the final court decision.

RESOLUTION OF DISPUTES

33. Should any dispute arise concerning any provisions of this Contract, or the parties' rights and obligations thereunder, the parties shall meet and confer in an attempt to resolve the dispute. Prior to the Contractor commencing any legal action, or the Contracting Officer referring any matter to Department of Justice, the party shall provide to the other party 30 days' written notice of the intent to take such action; Provided, That such notice shall not be required where a delay in commencing an action would prejudice the interests of the party that intends to file suit. During the 30-day notice period, the Contractor and the Contracting Officer shall meet and confer in an attempt to resolve the dispute. Except as specifically provided, nothing herein is intended to waive or abridge any right or remedy that the Contractor or the United States may have.

OFFICIALS NOT TO BENEFIT

34. No Member of or Delegate to Congress, Resident Commissioner, or official of the Contractor shall benefit from this Contract other than as a water user or landowner in the same manner as other water users or landowners.

CHANGES IN CONTRACTOR'S SERVICE AREA

35. (a) While this Contract is in effect, no change may be made in the Contractor's Service Area, by inclusion or exclusion of lands, dissolution, consolidation, merger, or otherwise, except upon the Contracting Officer's written consent.

(b) Within 30 days of receipt of a request for such a change, the Contracting Officer will notify the Contractor of any additional information required by the Contracting Officer for processing said request, and both parties will meet to establish a mutually agreeable schedule for timely completion of the process. Such process will analyze whether the proposed change is likely to: (i) result in the use of Project Water contrary to the terms of this Contract; (ii) impair the ability of the Contractor to pay for Project Water furnished under this Contract or to pay for any Federally-constructed facilities for which the Contractor is responsible; and (iii) have an impact on any Project Water rights applications, permits, or licenses. In addition, the Contracting Officer shall comply with the NEPA and the ESA. The Contractor will be responsible for all costs incurred by the Contracting Officer in this process, and such costs will be paid in accordance with Article 25 of this Contract.

FEDERAL LAWS

36. By entering into this Contract, the Contractor does not waive its rights to contest the validity or application in connection with the performance of the terms and conditions of this Contract of any Federal law or regulation; Provided, That the Contractor agrees to comply with the terms and conditions of this Contract unless and until relief from application of such Federal law or regulation to the implementing provision of the Contract is granted by a court of competent jurisdiction.

NOTICES

37. Any notice, demand, or request authorized or required by this Contract shall be deemed to have been given, on behalf of the Contractor, when mailed, postage prepaid, or delivered to the Area Manager _____ , and on behalf of the United States, when mailed, postage prepaid, or delivered to the Board of Directors/City Council of the _____. The designation of the addressee or the address may be changed by notice given in the same manner as provided in this Article for other notices.

CONFIRMATION OF CONTRACT[25]

38. The Contractor, after the execution of this Contract, shall promptly seek to secure a decree of a court of competent jurisdiction of the State of California, confirming the execution of this Contract. The Contractor shall furnish the United States a certified copy of the final decree, the validation proceedings, and all pertinent supporting records of the court approving and confirming this Contract, and decreeing and adjudging it to be lawful, valid, and binding on the Contractor.

[25] Permission is pending to use alternate provision for M&I only contractors.

IN WITNESS WHEREOF, the parties hereto have executed this Contract as of the day and year first above written.

THE UNITED STATES OF AMERICA

By: _____
Regional Director, Mid-Pacific Region
Bureau of Reclamation

[NAME OF CONTRACTOR]

By: _____
President of the Board of Directors

Attest:

By: _____
Secretary of the Board of Directors

EXHIBIT A

[Map or Description of Service Area]

R. O. Draft 5/09-2003
R.O. Draft 11/01-
2000

CVP-Wide Form 11-05
Contract No._____ - LTR1

EXHIBIT B
[Initial Rates and Charges]

APPENDIX A: TABLE A-1 GENERAL SUMMARY AND COMPARISON OF ~~SELECTED DRAFT~~ DRAFT 2003 CONTRACT PROVISIONS			
Contract Provisions	**Draft General Summary of Existing Contract Provisions** (Refer to Table A-2 for unique elements by Contractor)	**General Summary of Proposed ~~Preferred Action~~ Contract Provisions[1]**	
	Generally based on ~~2003~~ personal communications (B. Holt, Reclamation, 2003)~~information;~~ ~~(pers. comm., B. Holt 2003)~~	**Common to ~~All Ten~~[1] 2003 Draft ~~RAFT Final~~ Long Term Contracts[2]**	**Elements Unique to Contracts that Include Irrigation Water[3]**
Explanatory Recitals	No similar recital.	Assumes water rights held by CVP.	
	No similar recital.	Assumes CVP water has been relied upon by urban and agricultural areas in California for more than 50 years and is considered an essential part of its water supply by the contractor.	
	No similar recital.	Assumes regional economies depend on CVP water.	
	No similar recital.	Assumes the Secretary of the Interior intends, through coordination, cooperation, and partnerships, to pursue measures to improve the water supply, water quality, and reliability of the CVP.	
	Assumes the need for the 3408(j) study.	Assumes CVP will facilitate cooperative efforts among local water service agencies to develop the Redding Groundwater Basin for conjunctive management and use with CVP water supplies.	
Definitions	Assumes payments in addition to the Rates determined by the contracting officer each year.	Defines “Charges” as “payments required by Federal contracting officer law in addition to the Rates and Tiered Pricing Components specified in the contract."	
	No similar definition.	Defines “Contract Total” as “the maximum amount of water to which the contractor is entitled” under the contract.	

[1] Contract provisions were based on draft form contracts dated as follows: June 16, 2003 for BVWD, CCSD, City of Redding-Buckeye, City of Shasta Lake, CCCSD, and SCWA; June 26, 2003 for SCSD; and June 27, 2003 for KCSA and MGCSD. ~~The 10th contract, although informal, is a Memorandum of Agreement between two federal agencies and is not covered in this table.~~

[2] Ten contractors comprise the Shasta and Trinity River Division. The tenth “contract” is actually a Memorandum of Understanding between two federal agencies: USFS (at Centimudi Boat Ramp) and Reclamation, and is not included in this table.

[3] BVWD and CCWD[1] ~~Excludes the USFS Centimudi Memorandum of Understanding.~~

APPENDIX A: TABLE A-1 GENERAL SUMMARY AND COMPARISON OF ~~SELECTED DRAFT~~ DRAFT 2003 CONTRACT PROVISIONS			
Contract Provisions	**Draft General Summary of Existing Contract Provisions** (Refer to Table A-2 for unique elements by Contractor)	**General Summary of Proposed ~~Preferred Action~~ Contract Provisions[1]**	
	Generally based on ~~2003~~ personal communications (B. Holt, Reclamation, 2003)~~information;~~ ~~(pers. comm., B. Holt 2003)~~	**Common to ~~All Ten~~[1] 2003 Draft ~~RAFT Final~~ Long Term Contracts[2]**	**Elements Unique to Contracts that Include Irrigation Water[3]**
	Existing long-term contract: No similar definition. Interim renewal contract: Assumes to be individual or entity owning or leasing lands served with irrigation water.		Defines "Landholder" as "a party that directly or indirectly owns or leases nonexempt land."
	Existing long-term contract: Assumes use of water delivered to land in units less than or equal to 2 acres to be M&I use unless contracting officer is satisfied that use is irrigation. Interim renewal contract: Assumes same as existing long-term contracts except applied to units less than 5 acres.	Defines "M&I Water" as CVP "water made available to the contractor for purposes other than the commercial production of agricultural crops or livestock "	Defines "M&I Water" as "CVP water, other than irrigation water, made available to the contractor. M&I Water shall include water used for human use and purposes such as the watering of landscaping or pasture for animals (e.g., horses) which are kept for personal enjoyment or water delivered to land holdings operated in units of less than 5 acres unless the contractor establishes to the satisfaction of the contracting officer that the use of water delivered to any such landholding is a use described in [the definition for "irrigation water"].
	No similar definition.	Defines "Recent Historic Average" as "the most recent 5-year average of the final forecast of water made available to the contractor" under the LTCR or its preceding contract(s).	
	No similar definition.	Defines "Tiered Pricing Component" as "the incremental amount to be paid for each acre-foot of water delivered."	

[1] Contract provisions were based on draft form contracts dated as follows: June 16, 2003 for BVWD, CCSD, City of Redding-Buckeye, City of Shasta Lake, CCCSD, and SCWA; June 26, 2003 for SCSD; and June 27, 2003 for KCSA and MGCSD.

[2] Ten contractors comprise the Shasta and Trinity River Division. The tenth "contract" is actually a Memorandum of Understanding between two federal agencies: USFS (at Centimudi Boat Ramp) and Reclamation, and is not included in this table.

[3] BVWD and CCWD

[1] ~~The 10th contract, although informal, is a Memorandum of Agreement between two federal agencies and is not covered in this table.~~

[1] ~~Excludes the USFS Centimudi Memorandum of Understanding.~~

APPENDIX A: TABLE A-1
GENERAL SUMMARY AND COMPARISON OF ~~SELECTED DRAFT~~ DRAFT 2003 CONTRACT PROVISIONS

Contract Provisions	Draft General Summary of Existing Contract Provisions (Refer to Table A-2 for unique elements by Contractor)	General Summary of Proposed ~~Preferred Action~~ Contract Provisions[1]	
	Generally based on ~~2003~~ personal communications (B. Holt, Reclamation, 2003)~~information;~~ ~~(pers. comm., B. Holt 2003)~~	Common to ~~All Ten~~[1] 2003 Draft ~~RAFT Final~~ Long Term Contracts[2]	Elements Unique to Contracts that Include Irrigation Water[3]
	No similar definition.		Defines "Excess Lands" as all lands in excess of the limitations contained in Section 204 of the RRA.
	No similar definition.		Defines "Landholder" as "a party that directly or indirectly owns or leases nonexempt land."
Term of Contract and Renewal Terms	Existing long-term contract: Assumes shall remain in effect through December 31, 2004; right to renew for additional terms not to exceed 40 years on mutually agreeable terms. Also assumes conversion to repayment contract authorized upon mutually agreeable terms once project costs allocated. Interim renewal contract: Assumes shall remain in effect through February 28, 2002; assumes renewal will be 25-year long-term renewal or further interim renewal under specified conditions.	States that contract will be effective from March 1, 2004, through February 28, 2029. States that contract "shall be renewed for a period of 25 years." The term for subsequent renewal of M&I water "shall be . . . for a period of 25 years and thereafter shall be renewed for successive periods of up to 40 years each, . . . consistent with then-existing contracting officer-wide policy . . . and consistent with Federal and state law."	States that "contract, insofar as it pertains to the furnishing of irrigation water to the contractor, shall be renewed for a period of 25 years." Makes renewal contingent on several provisions, including the following: "(1) the contractor has prepared a water conservation plan that meets the Federal conservation and efficiency criteria for evaluating such plans; (2) the contractor is implementing an effective water conservation and efficiency program; [and] (3) the contractor is maintaining all water measuring devices and implementing water measurement methods."
Water to Be Made Available and Delivered	Existing long-term contract: Assumes water will be made available according	Specifies the amount of water available for delivery to the contractor.	

[1] Contract provisions were based on draft form contracts dated as follows: June 16, 2003 for BVWD, CCSD, City of Redding-Buckeye, City of Shasta Lake, CCCSD, and SCWA; June 26, 2003 for SCSD; and June 27, 2003 for KCSA and MGCSD. ~~The 10th contract, although informal, is a Memorandum of Agreement between two federal agencies and is not covered in this table.~~

[2] Ten contractors comprise the Shasta and Trinity River Division. The tenth "contract" is actually a Memorandum of Understanding between two federal agencies: USFS (at Centimudi Boat Ramp) and Reclamation, and is not included in this table.

[3] BVWD and CCWD[1] ~~Excludes the USFS Centimudi Memorandum of Understanding.~~

APPENDIX A: TABLE A-1
GENERAL SUMMARY AND COMPARISON OF ~~SELECTED DRAFT~~ DRAFT 2003 CONTRACT PROVISIONS

Contract Provisions to the Contractor	Draft General Summary of Existing Contract Provisions (Refer to Table A-2 for unique elements by Contractor)	General Summary of Proposed ~~Preferred Action~~ Contract Provisions[1]	
	Generally based on ~~2003~~ personal communications (B. Holt, Reclamation, 2003)~~information; (pers. comm., B. Holt 2003)~~	**Common to ~~All Ten~~[1] 2003 Draft ~~RAFT Final~~ Long Term Contracts[2]**	**Elements Unique to Contracts that Include Irrigation Water[3]**
	to schedule; application of laws and provision re facility outages and shortage provision implicit. Interim renewal contract: Assumes water will be made available according to schedule, existing rules; provision re facility outages and shortage provision explicit.	States that because of constraints on CVP water, "the likelihood of [a] contractor actually receiving the amount of water" specified as available for delivery "in any given year is uncertain." Further states that "modeling referenced in the PEIS projected that the contract total…will not be available…in many years." Cites recent historic average of water made available to contractor.	
	No similar explicit requirement.	Assumes compliance with applicable laws	
	Existing long-term contract: No similar explicit terms; reasonable and beneficial use required by Federal and state law. Interim renewal contract: Assumes contractor required to make reasonable and beneficial use of water; contractor permitted to use CVP water in groundwater recharge program in accordance with state law and water management plan.	Allows CVP or other water furnished pursuant to the contract to be used for groundwater recharge, groundwater banking, surface water storage, and similar programs. Requires that any direct recharge program be described in the contractor's Water Conservation Plan. Allows use of CVP water or other water furnished pursuant to the contract be used for such programs with approval of contracting officer, which would be based on environmental documentation and CVP water rights and operational concerns.	

[1] Contract provisions were based on draft form contracts dated as follows: June 16, 2003 for BVWD, CCSD, City of Redding-Buckeye, City of Shasta Lake, CCCSD, and SCWA; June 26, 2003 for SCSD; and June 27, 2003 for KCSA and MGCSD.
[2] Ten contractors comprise the Shasta and Trinity River Division. The tenth "contract" is actually a Memorandum of Understanding between two federal agencies: USFS (at Centimudi Boat Ramp) and Reclamation, and is not included in this table.
[3] BVWD and CCWD
[1] ~~The 10th contract, although informal, is a Memorandum of Agreement between two federal agencies and is not covered in this table.~~

[1] ~~Excludes the USFS Centimudi Memorandum of Understanding.~~

APPENDIX A: TABLE A-1 GENERAL SUMMARY AND COMPARISON OF ~~SELECTED DRAFT~~ DRAFT 2003 CONTRACT PROVISIONS			
Contract Provisions	**Draft General Summary of Existing Contract Provisions** (Refer to Table A-2 for unique elements by Contractor)	**General Summary of Proposed ~~Preferred Action~~ Contract Provisions**[1]	
	Generally based on ~~2003~~ personal communications (B. Holt, Reclamation, 2003)~~information;~~ ~~(pers. comm., B. Holt 2003)~~	**Common to ~~All Ten~~**[1] **2003 Draft ~~RAFT Final~~ Long Term Contracts**[2]	**Elements Unique to Contracts that Include Irrigation Water**[3]
	Existing long-term contract: Assumes compliance with laws; implicit obligation to meet applicable requirements under environmental documents. Interim renewal contract: Assumes explicit obligation on compliance with applicable requirements of biological opinions and other environmental documents for contracting.	Requires that contractor comply with applicable requirements in Biological Opinions prepared concerning the contract to comply with the Endangered Species Act that are within the contractor's legal authority to implement. States that contractor can challenge or seek judicial relief with respect to Biological Opinions or other environmental documentation.	
	Existing long-term contract: Assumes contracting officer will strive to develop additional firm supplies. Interim renewal contract: Assumes contracting officer will determine if additional water can be made available; if so, will be made available in accordance with statutes, regulations, policies, and guidelines.	States that contracting officer will determine whether CVP water or other water available to the CVP can be made available to contractor in addition to the contract total, in accordance with applicable statutes, regulations, guidelines, and policies.	
	Existing long-term contract: No similar provision. Interim renewal contract: Contract may request to carry over or preuse contract supplies.	States that contractor can request to "reschedule" (i.e., to "preuse" or "carry over") water made available under the contract.	

1 Contract provisions were based on draft form contracts dated as follows: June 16, 2003 for BVWD, CCSD, City of Redding-Buckeye, City of Shasta Lake, CCCSD, and SCWA; June 26, 2003 for SCSD; and June 27, 2003 for KCSA and MGCSD. ~~The 10th contract, although informal, is a Memorandum of Agreement between two federal agencies and is not covered in this table.~~

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3 BVWD and CCWD[1] ~~Excludes the USFS Centimudi Memorandum of Understanding.~~

APPENDIX A: TABLE A-1 GENERAL SUMMARY AND COMPARISON OF ~~SELECTED DRAFT~~ DRAFT 2003 CONTRACT PROVISIONS			
Contract Provisions	**Draft General Summary of Existing Contract Provisions** (Refer to Table A-2 for unique elements by Contractor)	**General Summary of Proposed ~~Preferred Action~~ Contract Provisions**[1]	
	Generally based on ~~2003~~ personal communications (B. Holt, Reclamation, 2003)~~information;~~ ~~(pers. comm., B. Holt 2003)~~	**Common to ~~All Ten~~[1] 2003 Draft ~~RAFT Final~~ Long Term Contracts**[2]	**Elements Unique to Contracts that Include Irrigation Water**[3]
	Existing long-term contract: No similar provision. Interim renewal contract: Upon written approval by contracting officer specifying terms and conditions, water may be delivered for purposes other than irrigation or M&I.	States that CVP water furnished to the contractor "may be delivered for other than irrigation or M&I purposes" upon written approval by contracting officer in accordance with terms and conditions specified in approval.	
	Existing long-term contract: No similar provision. Interim renewal contract: No similar provision.	States that contracting officer will "make reasonable efforts to protect water rights necessary for the [CVP] and to provide the water available" under the contract Further states that contracting officer shall not object to contractor's participation in administrative proceedings related to water rights	
Time for Delivery of Water	Assumes methods for determining timing of deliveries.	Assumes methods for determining timing of water deliveries	
Point of Diversion and Responsibility for Distribution of Water	Assumes methods for determining point of diversion.	Assumes methods for determining point(s) of diversion; assumes measurement at points of delivery.	States that "the contracting officer shall make all reasonable efforts to maintain sufficient flows and levels of water in [water body specific to each contractor]."

[1] Contract provisions were based on draft form contracts dated as follows: June 16, 2003 for BVWD, CCSD, City of Redding-Buckeye, City of Shasta Lake, CCCSD, and SCWA; June 26, 2003 for SCSD; and June 27, 2003 for KCSA and MGCSD.

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APPENDIX A: TABLE A-1
GENERAL SUMMARY AND COMPARISON OF ~~SELECTED DRAFT~~ DRAFT 2003 CONTRACT PROVISIONS

Contract Provisions	Draft General Summary of Existing Contract Provisions (Refer to Table A-2 for unique elements by Contractor)	General Summary of Proposed ~~Preferred Action~~ Contract Provisions[1]	
	Generally based on ~~2003~~ personal communications (B. Holt, Reclamation, 2003)~~information;~~ ~~(pers. comm., B. Holt 2003)~~	Common to ~~All Ten~~[1] 2003 Draft ~~RAFT Final~~ Long Term Contracts[2]	Elements Unique to Contracts that Include Irrigation Water[3]
Measurement of Water within the District/Service Area	Existing long-term contract: Contractor has no similar obligation. Interim renewal contract: Assumes measurement for each agricultural turnout and M&I connection for facilities that are used for all water supplies.	Requires contractor to measure "all surface water delivered for M&I purposes [to be] measured at each municipal and industrial service connection."	Requires contractor to measure all surface water delivered for irrigation purposes at each agricultural turnout.
Rates and Method of Payment for Water	Existing long-term contract: Assumes rates fixed or determined as specified in contract; assumes semiannual payment of rates in advance of delivery; no provision for charges or tiered pricing. Interim renewal contract: Assumes payment of cost-of-service rates pursuant to rate-setting policy; payment of rates for first two months of scheduled deliveries with submission of delivery schedule each year; payment before end of month for next succeeding month=s deliveries thereafter; assumes payment for charges before end of month following delivery; tiered pricing as required by water conservation plan.	TO BE DETERMINED	TO BE DETERMINED

1 1 Contract provisions were based on draft form contracts dated as follows: June 16, 2003 for BVWD, CCSD, City of Redding-Buckeye, City of Shasta Lake, CCCSD, and SCWA; June 26, 2003 for SCSD; and June 27, 2003 for KCSA and MGCSD. ~~The 10th contract, although informal, is a Memorandum of Agreement between two federal agencies and is not covered in this table.~~

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APPENDIX A: TABLE A-1 GENERAL SUMMARY AND COMPARISON OF ~~SELECTED DRAFT~~ DRAFT 2003 CONTRACT PROVISIONS			
Contract Provisions	**Draft General Summary of Existing Contract Provisions** (Refer to Table A-2 for unique elements by Contractor)	**General Summary of Proposed ~~Preferred Action~~ Contract Provisions**[1]	
	Generally based on ~~2003~~ personal communications (B. Holt, Reclamation, 2003)~~information;~~ ~~(pers. comm., B. Holt 2003)~~	**Common to ~~All Ten~~[1] 2003 Draft ~~RAFT Final~~ Long Term Contracts**[2]	**Elements Unique to Contracts that Include Irrigation Water**[3]
	No similar provision.		Allows the contractor to request an exemption from tiered pricing components for CVP water delivered to produce a crop that will provide habitat values for waterfowl, if the habitat values are consistent with the purposes of the CVPIA.
	No similar provision.		Provides conditions and costs to the contractor for the commingling of CVP irrigation water and water acquired from another source.
Non-Interest Bearing Operation and Maintenance Deficits	Existing long-term contract: No similar provision. Interim renewal contract: Assumes either there is no non-interest-bearing deficit or that agreement is in place to retire any non-interest-bearing deficit.	Assumes the contractor has no non-interest bearing operation and maintenance deficits or, if there are deficits, that there is an agreement in place to retire the deficits.	

[1] Contract provisions were based on draft form contracts dated as follows: June 16, 2003 for BVWD, CCSD, City of Redding-Buckeye, City of Shasta Lake, CCCSD, and SCWA; June 26, 2003 for SCSD; and June 27, 2003 for KCSA and MGCSD.

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Contract Provisions	**Draft General Summary of Existing Contract Provisions** (Refer to Table A-2 for unique elements by Contractor)	**General Summary of Proposed ~~Preferred Action~~ Contract Provisions[1]**	
	Generally based on ~~2003~~ personal communications (B. Holt, Reclamation, 2003)~~information;~~ ~~(pers. comm., B. Holt 2003)~~	**Common to ~~All Ten~~[1] 2003 Draft ~~RAFT Final~~ Long Term Contracts[2]**	**Elements Unique to Contracts that Include Irrigation Water[3]**
Sales, Transfers, or Exchanges of Water	Existing long-term contract: Requires contracting officer consent for CVP water use outside contractor service area. Interim renewal contract: Assumes sales, transfers or exchanges with others in accordance with Federal and state laws, guidelines and regulations, with consent of Contracting Officer. No intent to impede transfers between districts historically approved.	Assumes right to receive CVP water provided for in contract may be sold, transferred, or exchanged. Requires prior written consent of contracting officer except for transfers of a type historically carried out among contractors in the same geographical area. Requires environmental documentation. For historic transfers, requires advance notice but not prior written approval. Contracting officer will prepare environmental documentation for historic transfers, which shall be reviewed every 5 years and updated, as necessary.	
Application of Payments and Adjustments	Assumes refund of overpayment after satisfaction of any accrued indebtedness upon contractor request	Assumes any overpayments will be applied to current liabilities under the contract. Overpayments totaling more than $1,000 will be refunded at contractor's request.	

[1] Contract provisions were based on draft form contracts dated as follows: June 16, 2003 for BVWD, CCSD, City of Redding-Buckeye, City of Shasta Lake, CCCSD, and SCWA; June 26, 2003 for SCSD; and June 27, 2003 for KCSA and MGCSD. ~~The 10th contract, although informal, is a Memorandum of Agreement between two federal agencies and is not covered in this table.~~

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APPENDIX A: TABLE A-1 GENERAL SUMMARY AND COMPARISON OF ~~SELECTED DRAFT~~ DRAFT 2003 CONTRACT PROVISIONS			
Contract Provisions	**Draft General Summary of Existing Contract Provisions** (Refer to Table A-2 for unique elements by Contractor)	**General Summary of Proposed ~~Preferred Action~~ Contract Provisions**[1]	
	Generally based on ~~2003~~ personal communications (B. Holt, Reclamation, 2003)~~information;~~ ~~(pers. comm., B. Holt 2003)~~	**Common to ~~All Ten~~[1] 2003 Draft ~~RAFT Final~~ Long Term Contracts**[2]	**Elements Unique to Contracts that Include Irrigation Water**[3]
Temporary Reductions--Return Flows	Existing long-term contract: Assumes United States reserves the right to return flows, seepage, and waste exiting contractor boundaries; assumes temporary reductions for operation, maintenance, and rehabilitation of facilities. Interim renewal contract: Substantially similar to long-term contracts; makes express existing obligation of Contracting Officer to make CVP water available, subject to authorized purposes and priorities of CVP and to obligations under existing contracts.	States that "contracting officer shall make all reasonable efforts to optimize water deliveries" from the CVP. Assumes contracting officer may temporarily discontinue or reduce water deliveries to investigate, inspect, maintain, repair, or replace CVP facilities. Reserves for the United States the right to all seepage and return flow water.	

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GENERAL SUMMARY AND COMPARISON OF ~~SELECTED DRAFT~~ DRAFT 2003 CONTRACT PROVISIONS

Contract Provisions	Draft General Summary of Existing Contract Provisions (Refer to Table A-2 for unique elements by Contractor)	General Summary of Proposed ~~Preferred Action~~ Contract Provisions[1]	
	Generally based on ~~2003~~ personal communications (B. Holt, Reclamation, 2003)~~information;~~ ~~(pers. comm., B. Holt 2003)~~	Common to ~~All Ten~~[1] 2003 Draft ~~RAFT Final~~ Long Term Contracts[2]	Elements Unique to Contracts that Include Irrigation Water[3]
Constraints on Availability of Project Water	Existing long-term contract: Assumes obligation of United States to utilize all reasonable means to guard against a condition of shortage; no liability of United States for shortages from specified causes; provides mechanism for apportionment of shortages among existing contractors. Interim renewal contract: Assumes obligation of Contracting Officer to utilize all reasonable means to guard against a condition of shortage; no liability to United States for shortages from specified causes, including actions of Contracting Officer to meet legal obligations, so long as such actions are not based upon arbitrary, capricious or unreasonable opinions or determinations; provides mechanism for apportionment of shortages among existing and future contractors, as described.	Absolves United States from liability for water shortage for causes beyond the control of the contracting officer or actions taken to meet legal obligations. Allocates CVP water "in accordance with the then-existing CVP M&I Water Shortage Policy." States that "contracting officer shall make all reasonable efforts to optimize water deliveries"; absolves U S from liability for water shortages for causes beyond the control of the contracting officer or actions taken to meet legal obligations; and allocates water "in accordance with then-existing CVP M&I Water Shortage Policy."	~~States that "Contractor shall not be deemed to have delivered irrigation water to excess lands or ineligible lands…if such lands are irrigated with groundwater" that percolates from applied CVP water.~~
Unavoidable Groundwater Percolation	Assumes that some of applied CVP water will percolate to groundwater		States that "Contractor shall not be deemed to have delivered irrigation water to excess lands or ineligible lands…if such lands are irrigated with groundwater" that percolates from applied CVP water.

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Contract Provisions	**Draft General Summary of Existing Contract Provisions** (Refer to Table A-2 for unique elements by Contractor)	**General Summary of Proposed ~~Preferred Action~~ Contract Provisions[1]**	
	Generally based on ~~2003~~ personal communications (B. Holt, Reclamation, 2003)~~information; (pers. comm., B. Holt 2003)~~	**Common to ~~All Ten~~[1] 2003 Draft ~~RAFT Final~~ Long Term Contracts[2]**	**Elements Unique to Contracts that Include Irrigation Water[3]**
Rules and Regulations	Assumes that CVP will operate in accordance with then-existing rules.	Assumes that CVP will operate in accordance with then-existing rules and regulations.	
Water and Air Pollution Control	Assumes that CVP will operate in accordance with then-existing rules.	Requires contractor to comply with state and Federal water and air pollution control laws and to obtain required permits.	
Quality of Water	Existing long-term contract: Assumes that water quality will be based on subjective standard; no warranty of quality; payment relief if water quality unsuitable. Interim renewal contract: Assumes operation and maintenance of CVP facilities to enable United States to deliver water in accordance with existing statutory quality standards; no warranty of quality.	States that CVP facilities shall be operated and maintained to enable the United States to deliver water in accordance with statutory water quality standards; does not provide warranty for water quality.	
Water Acquired by the Contractor Other Than from the United States	Existing long-term contract: Assumes that water may be commingled in district system as specified in contract. Interim renewal contract: Assumes that CVP and non-CVP water may be commingled in district system in accordance with existing rules.	Allows contractor to use CVP facilities for water not provided by the United States subject to environmental documentation and payment for such use.	

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Contract Provisions	**Draft General Summary of Existing Contract Provisions** (Refer to Table A-2 for unique elements by Contractor)	**General Summary of Proposed ~~Preferred Action~~ Contract Provisions[1]**	
	Generally based on ~~2003~~ personal communications (B. Holt, Reclamation, 2003)~~information;~~ ~~(pers. comm., B. Holt 2003)~~	**Common to ~~All Ten~~[1] 2003 Draft ~~RAFT Final~~ Long Term Contracts[2]**	**Elements Unique to Contracts that Include Irrigation Water[3]**
Opinions and Determinations	Existing long-term contract: Opinions and determinations of parties to contract not to be arbitrary, capricious, or unreasonable; adjustment of payment obligations. Interim renewal contract: Opinions and determinations not to be arbitrary, capricious, or unreasonable; parties may seek relief, adjustment, monetary damages if they are.	Expresses right to relief for actions based on "arbitrary, capricious, or unreasonable opinions or determinations."	
Coordination and Cooperation	No similar provision.	States that contracting officer and contractor "shall communicate, coordinate, and cooperate with each other, and with other affected [CVP] contractors, in order to improve the operation and management of the [CVP]."	
	No similar provision.	Provides mechanism to develop communication process.	
	No similar provision.	Allows contracting officer to assist the contractor in developing integrated resource management plans.	
	No similar provision.	Provides for the Secretary of the Interior to coordinate with contractors and the State of California to seek improved water resource management.	

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	No similar provision.	Provides for the Secretary of the Interior and contractor to work together and with others in the region of the Redding Groundwater Basin to "facilitate the better integration within the region …of all water supplies."	
Charges for Delinquent Payments	Assumes that CVP will operate in accordance with existing rules.	Assumes that CVP will operate in accordance with existing rules.	
Equal Opportunity	Assumes that CVP will operate in accordance with existing rules.	Assumes that CVP will operate in accordance with existing rules.	
General Obligation-- Benefits Conditioned upon Payment	Assumes that CVP will operate in accordance with existing rules.	Assumes that CVP will operate in accordance with existing rules.	
		Does not require contractor to obtain advance payment for water rates.	
Compliance with Civil Rights Laws and Regulations	Assumes that CVP will operate in accordance with existing rules.	Requires contractor to comply with existing laws and regulations.	
Privacy Act Compliance	Assumes that CVP will operate in accordance with existing rules.	Requires contractor to comply with existing laws and regulations.	

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Contractor to Pay Certain Miscellaneous Costs	Existing long-term contract: No similar provision. Interim renewal contract: Assumes that CVP will operate in accordance with existing rules.	Assumes that CVP will operate in accordance with existing rules.	
Water Conservation	Existing long-term contract: No explicit similar requirement. Interim renewal contract: Assumes compliance with conservation programs established by Reclamation and the state.	Requires contractor to comply with water conservation programs established by Reclamation and the State of California.	
	No similar provision.	For contracts providing more than 2,000 acre-feet per year of M&I water, requires contractor to implement best management practices issued by the California Urban Water Conservation Council.	
	No similar provision.	Requires contractor to revise its water conservation plan at 5-year intervals to reflect then-current Federal criteria for evaluating water conservation plans.	
Existing or Acquired Water or Water Rights	Assumes that contract provisions are not applicable to non-CVP water, subject to provision on commingling.	Assumes that contract provisions are not applicable to non-CVP water.	

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Operation and Maintenance by Non-Federal Entity	Existing long-term contract: No similar provision. Interim renewal contract: Assumes that non-Federal entity will operate and maintain facilities and that certain payments to be made to that entity.	Assumes that non-Federal entity (if any) will operate and maintain CVP facilities and that certain payments will be made to that entity.	
Contingent on Appropriation or Allotment of Funds	Assumes that CVP will operate in accordance with existing rules.	Assumes that CVP will operate in accordance with existing rules.	
Books, Records, and Reports	Assumes that CVP will operate in accordance with existing rules.	Assumes that CVP will operate in accordance with existing rules; clarifies that only contract-related records will be requested, and requires copies to be sent to non-Federal operating entity (if any).	
Assignment Limited	Assumes that CVP will operate in accordance with existing rules.	Assumes that CVP will operate in accordance with existing rules.	
Severability	Existing long-term contract: No similar provision. Interim renewal contract: Assumes mechanism to address correction of provision found to be invalid upon legal challenge.	Assumes mechanism to address correction of provision found to be invalid upon legal challenge.	

[1] Contract provisions were based on draft form contracts dated as follows: June 16, 2003 for BVWD, CCSD, City of Redding-Buckeye, City of Shasta Lake, CCCSD, and SCWA; June 26, 2003 for SCSD; and June 27, 2003 for KCSA and MGCSD.

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Resolution of Disputes	No similar provision.	Assumes a dispute resolution process.	
Officials Not to Benefit	Assumes that CVP will operate in accordance with existing rules.	Assumes that CVP will operate in accordance with existing rules.	
Changes in Contractor's Service Area	Assumes that CVP will operate in accordance with existing rules.	Assumes that CVP will operate in accordance with existing rules and describes administrative process.	
Notices	Assumes that CVP will operate in accordance with existing rules.	Assumes that CVP will operate in accordance with existing rules.	
Confirmation of Contract	Existing long-term contract: Assumes required validation of contract under state law. Interim renewal contract: No validation action required.	Assumes required validation of contract under state law.	

[1] Contract provisions were based on draft form contracts dated as follows: June 16, 2003 for BVWD, CCSD, City of Redding-Buckeye, City of Shasta Lake, CCCSD, and SCWA; June 26, 2003 for SCSD; and June 27, 2003 for KCSA and MGCSD. ~~The 10th contract, although informal, is a Memorandum of Agreement between two federal agencies and is not covered in this table.~~

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APPENDIX A: TABLE 2
ELEMENTS UNIQUE TO EXISTING AND INTERIM CONTRACTS: SHASTA AND TRINITY RIVER DIVISIONS[1]

Unique Elements	M&I Water Only							M&I and Irrigation	
	Centerville Community Services District	City of Redding	City of Shasta Lake	Keswick County Services Area	Mountain Gate Community Services District	Shasta Community Services District	Shasta County Water Agency	Bella Vista Water District	Clear Creek Community Services District
Water available for delivery	2,900 acre-feet	6,140 acre-feet	2,750 acre-feet	500 acre-feet	350 acre-feet	1,000 acre-feet	2,100 acre-feet	24,000 acre-feet	15,300 acre-feet
Recent historic average made available	2,668 acre-feet	5,649 acre-feet	2,530 acre-feet	460 acre-feet	322 acre-feet	920 acre-feet	1,932 acre-feet	22,080 acre-feet	14,076 acre-feet
Point(s) of Diversion	Station 376+50 of the Muletown Conduit	Meter vault on 6-inch pipeline about 3/4 mile south of intersection of Lake Blvd. and Shasta Dam Blvd.; Spring Creek Power Conduit at Buckeye Water Treatment Plant, and existing point(s) of delivery from Sacramento River below Keswick Dam	16-inch water meter at water treatment facilities adjacent to Shasta Dam visitor area	Downstream end of metering equipment approximately at Station 176+62.0 of the Spring Creek Power Conduit	Shasta Reservoir	downstream end of metering equipment at Station 98+60 of Spring Creek Power Conduit	either at CVP facilities or location(s) agreed to by contracting officer and contractor	Sacramento River at Wintu Pumping Plant	downstream side of bifurcation valve at Whiskeytown Dam outlet works
Operating non-federal entity	Clear Creek CSD	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Privacy Act compliance	Not applicable	Required	Not applicable	Not applicable	Not applicable	Not applicable	Required *[may change to Not applicable when contract is revised to remove ag water]*	Required	Required

[1] Based on existing interim or unexpired contracts/data as of July 2003. The tenth "contract" is a Memorandum of Understanding between Reclamation and U.S. Forest Service (at the Centimudi Boat Ramp)

APPENDIX A: TABLE 2
ELEMENTS UNIQUE TO EXISTING AND INTERIM CONTRACTS: SHASTA AND TRINITY RIVER DIVISIONS[1]

Unique Elements	M&I Water Only							M&I and Irrigation	
	Centerville Community Services District	City of Redding	City of Shasta Lake	Keswick County Services Area	Mountain Gate Community Services District	Shasta Community Services District	Shasta County Water Agency	Bella Vista Water District	Clear Creek Community Services District
Construction, installation, operations and maintenance (O&M), and ownership of facilities		Contractor shall operate and maintain 6-inch pipeline, which shall continued to be owned by U.S.; unless otherwise provided by Congress, U.S. will continue to own Toyon Pipeline.	Contractor shall construct, install, operate and maintain at its own expense facilities required to take, convey, and distribute water to users served by contractor.		Contractor shall construct, install, operate and maintain at its own expense facilities required to take, convey, and distribute water to users served by contractor.	Contractor shall construct, install, operate and maintain at its own expense facilities required to take, convey, and distribute water to users served by contractor.	Contractor shall construct, operate, and maintain at its own expense facilities required to take, convey, and distribute water to users served by contractor		
Other special provisions		Contractor will compensate U.S. for electricity losses resulting from water diverted at Spring Creek Power Conduit. U.S. is not obligated to furnish more than 40 acre-feet per year from Shasta Reservoir at the meter vault on the 6-inch pipeline. Contractor shall not use water furnished under the contract for power production unless it is incidental to water delivery to			U.S. shall not be responsible to maintain water levels in Shasta Reservoir to permit contractor to withdraw water from reservoir.	U.S. shall not be obligated to furnish water at point(s) of delivery in excess of 1,750 gallons per minute nor to furnish water at heads or pressures sufficient to deliver water into or through contractor's facilities.	Also receives water from Reclamation's Sacramento River Division. Water made available for direct diversion by contractor from Shasta, Keswick, and Whiskeytown have a valid claim. All surface water delivered to contractor must be measured by the contractor.	Costs associated with irrigation water distribution works constructed by U.S. separately covered by a repayment contract.	Contracting officer shall make reasonable efforts to deliver CVP water at full design head of bifurcation valve less reductions in capacity or head caused by contractor's devices or systems.

[1] Based on existing interim or unexpired contracts/data as of July 2003. The tenth "contract" is a Memorandum of Understanding between Reclamation and U.S. Forest Service (at the Centimudi Boat Ramp)

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ELEMENTS UNIQUE TO EXISTING AND INTERIM CONTRACTS: SHASTA AND TRINITY RIVER DIVISIONS[1]

Unique Elements	M&I Water Only							M&I and Irrigation	
	Centerville Community Services District	City of Redding	City of Shasta Lake	Keswick County Services Area	Mountain Gate Community Services District	Shasta Community Services District	Shasta County Water Agency	Bella Vista Water District	Clear Creek Community Services District
		individual customers and Reclamation concurs with its use for power production. Contractor may use CVP water taken from 6-inch pipeline for approved water transfers and may pressurize deliveries through the pipeline. Requirement to measure water delivered includes backwash water used to clean filters at Buckeye Water Treatment Plant. Water furnished under this contract is considered separate from water furnished under Contract No. 14-06-200-2871A-R1.							

[1] Based on existing interim or unexpired contracts/data as of July 2003. The tenth "contract" is a Memorandum of Understanding between Reclamation and U.S. Forest Service (at the Centimudi Boat Ramp)

APPENDIX B

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APPENDIX D

Updated Special-Status Species List (June 2003)

County Species List Federal Endangered and Threatened Species that may be affected by projects in Shasta County

Database Last Updated: June 5, 2003
Today's Date is: June 27, 2003

Listed Species

Invertebrates
Branchinecta lynchi - vernal pool fairy shrimp (T)
Desmocerus californicus dimorphus - valley elderberry longhorn beetle (T)
Lepidurus packardi - vernal pool tadpole shrimp (E)
Pacifastacus fortis - Shasta crayfish (E)

Fish
Hypomesus transpacificus - delta smelt (T)
Oncorhynchus mykiss - Central Valley steelhead (T) (NMFS)
Oncorhynchus tshawytscha - Central Valley spring-run chinook salmon (T) (NMFS)
Pogonichthys macrolepidotus - Sacramento splittail (T)

Amphibians
Rana aurora draytonii - California red-legged frog (T)

Birds
Haliaeetus leucocephalus - bald eagle (T)
Strix occidentalis caurina - northern spotted owl (T)

Plants
Orcuttia tenuis - slender Orcutt grass (T)
Tuctoria greenei - Greene's tuctoria (=Orcutt grass) (E)

Candidate Species

Fish
Acipenser medirostris - green sturgeon (C)
Oncorhynchus tshawytscha - Central Valley fall/late fall-run chinook salmon (C) (NMFS)

Birds
Coccyzus americanus occidentalis - Western yellow-billed cuckoo (C)

Species of Concern

Invertebrates
Anthicus antiochensis - Antioch Dunes anthicid beetle (SC)
Anthicus sacramento - Sacramento anthicid beetle (SC)

Cryptochia shasta - confusion caddisfly (SC)
Ecclisomyia bilera - King's Creek ecclisomyian caddisfly (SC)
Linderiella occidentalis - California linderiella fairy shrimp (SC)
Monadenia setosa - Trinity (=California) bristlesnail (CA)
Monadenia troglodytes - Shasta sideband snail (SC)
Nebria gebleri siskiyouensis - Siskiyou ground beetle (SC)
Nebria sahlbergii triad - Trinity Alps ground beetle (SC)
Parapsyche extensa - King's Creek parapsyche caddisfly (SC)
Rhyacophila lineata - Castle Crags rhyacophilan caddisfly (SC)
Rhyacophila mosana - bilobed rhyacophilan caddisfly (SC)

Fish
Cottus asperrimus - rough sculpin (CA)
Lampetra ayresi - river lamprey (SC)
Lavinia symmetricus mitrulus - Pit roach (SC)
Oncorhynchus (=Salmo) mykiss ssp. - McCloud River redband trout (SC)
Spirinchus thaleichthys - longfin smelt (SC)

Amphibians
Ascaphus truei - tailed frog (SC)
Hydromantes shastae - Shasta salamander (CA)
Rana boylii - foothill yellow-legged frog (SC)
Rana cascadae - Cascades frog (SC)
Spea hammondii - Western spadefoot toad (SC)

Reptiles
Clemmys marmorata marmorata - northwestern pond turtle (SC)
Phrynosoma coronatum frontale - California horned lizard (SC)

Birds
Accipiter gentilis - northern goshawk (SC)
Agelaius tricolor - tricolored blackbird (SC)
Amphispiza belli belli - Bell's sage sparrow (SC)
Athene cunicularia hypugaea - western burrowing owl (SC)
Baeolophus inornatus - oak titmouse (SLC)
Botaurus lentiginosus - American bittern (SC)
Branta canadensis leucopareia - Aleutian Canada goose (D)
Buteo regalis - ferruginous hawk (SC)
Carduelis lawrencei - Lawrence's goldfinch (SC)
Chaetura vauxi - Vaux's swift (SC)
Contopus cooperi - olive-sided flycatcher (SC)
Cypseloides niger - black swift (SC)
Empidonax traillii brewsteri - little willow flycatcher (CA)
Falco peregrinus anatum - American peregrine falcon (D)
Grus canadensis tabida - greater sandhill crane (CA)
Lanius ludovicianus - loggerhead shrike (SC)
Melanerpes lewis - Lewis' woodpecker (SC)
Numenius americanus - long-billed curlew (SC)
Otus flammeolus - flammulated owl (SC)
Picoides nuttallii - Nuttall's woodpecker (SLC)
Plegadis chihi - white-faced ibis (SC)
Riparia riparia - bank swallow (CA)
Selasphorus rufus - rufous hummingbird (SC)
Sphyrapicus ruber - red-breasted sapsucker (SC)
Strix occidentalis occidentalis - California spotted owl (SC)
Toxostoma redivivum - California thrasher (SC)

Mammals

Brachylagus idahoensis - pygmy rabbit (SC)
Corynorhinus (=Plecotus) townsendii pallescens - pale Townsend's big-eared bat (SC)
Corynorhinus (=Plecotus) townsendii townsendii - Pacific western big-eared bat (SC)
Euderma maculatum - spotted bat (SC)
Gulo gulo luteus - California wolverine (CA)
Lepus americanus tahoensis - Sierra Nevada snowshoe hare (SC)
Martes americana - American (=pine) marten (SC)
Martes pennanti - fisher (SC)
Myotis ciliolabrum - small-footed myotis bat (SC)
Myotis evotis - long-eared myotis bat (SC)
Myotis thysanodes - fringed myotis bat (SC)
Myotis volans - long-legged myotis bat (SC)
Myotis yumanensis - Yuma myotis bat (SC)
Perognathus inornatus - San Joaquin pocket mouse (SC)
Vulpes vulpes necator - Sierra Nevada red fox (CA)

Plants
Agrostis hendersonii - Henderson's bent grass (SC)
Amsinckia lunaris - bent-flowered fiddleneck (SLC)
Arctostaphylos klamathensis - Klamath manzanita (SC)
Astragalus pulsiferae var. suksdorfii - Suksdorf's milk-vetch (SC)
Calochortus longebarbatus var. longebarbatus - long-haired star-tulip (SC)
Calochortus syntrophus - Callahan's mariposa lily (SC)
Calystegia atriplicifolia ssp. buttensis - Butte County morning-glory (SC)
Campanula wilkinsiana - Wilkin's harebell (SC)
Clarkia borealis ssp. arida - arid northern clarkia (SC)
Cryptantha crinita - silky cryptantha (SC)
Cypripedium fasciculatum - clustered lady's-slipper (SC)
Epilobium oreganum - Grants Pass willowherb (SC)
Eriogonum libertini - Dubakella Mountain buckwheat (SLC)
Fritillaria eastwoodiae - Butte fritillary (SC)
Gratiola heterosepala - Boggs Lake hedge-hyssop (CA)
Iliamna bakeri - Baker's globe mallow (=Baker's wild hollyhock) (SLC)
Legenere limosa - legenere (SC)
Lewisia cantelowii - Cantelow's lewisia (SC)
Lewisia cotyledon var. howellii - Howell's lewisia (SC)
Limnanthes floccosa ssp. bellingeriana - Bellinger's meadowfoam (SC)
Madia stebbinsii (=Harmonia stebbinssii) - Stebbins's madia (=Stebbins's harmonia) (SC)
Minuartia decumbens - The Lassics sandwort (SC)
Neviusia cliftonii - Shasta snow wreath (SC)
Paronychia ahartii - Ahart's whitlow-wort (=Ahart's paronychia) (SC)
Penstemon filiformis - thread-leaved penstemon (=beardtongue) (SLC)
Phacelia dalesiana - Trinity (Scott Mountain) phacelia (SC)
Pogogyne floribunda - propuse-flowering (=Devil's Garden) pogogyne (SC)
Puccinellia howellii - Howell's alkali grass (SC)
Sagittaria sanfordii - valley sagittaria (=Sanford's arrowhead) (SC)
Sedum paradisum - Canyon Creek stonecrop (SC)
Silene campanulata ssp. campanulata - Red Mountain catchfly (=campion) (CA)
Silene occidentalis ssp. longistipitata - Butte County catchfly (=long-stiped campion) (SC)
Smelowskia ovalis ssp. congesta - Mt. Lassen (=Lassen Peak) smelowskia (SC)
Streptanthus sp. nov. /ined. (Shasta Co.) - Pit River jewelflower (SC)
Thelypodium howellii ssp howellii - Howell's thelypodium (SLC)
Trillium ovatum ssp. oettingeri - Salmon Mountains wakerobin (SLC)

Species with Critical Habitat Proposed or Designated in this County

Central Valley fall/late fall-run chinook (C)
northern spotted owl (T)
vernal pool invertebrates (PX)
vernal pool plants (PX)
winter-run chinook salmon (E)

Key:

(E) Endangered - Listed (in the Federal Register) as being in danger of extinction.
(T) Threatened - Listed as likely to become endangered within the foreseeable future.
(P) Proposed - Officially proposed (in the Federal Register) for listing as endangered or threatened.
(NMFS) Species under the Jurisdiction of the National Marine Fisheries Service. Consult with them directly about these species.
Critical Habitat - Area essential to the conservation of a species.
(PX) Proposed Critical Habitat - The species is already listed. Critical habitat is being proposed for it.
(C) Candidate - Candidate to become a proposed species.
(CA) Listed by the State of California but not by the Fish & Wildlife Service.
(D) Delisted - Species will be monitored for 5 years.
(SC) Species of Concern/(SLC) Species of Local Concern - Other species of concern to the Sacramento Fish & Wildlife Office.

Our database was developed primarily to assist Federal agencies that are consulting with us. Therefore, our lists include all of the sensitive species that have been found in a certain area and also ones that may be affected by projects in the area. For example, a fish may be on the list for a quad if it lives somewhere downstream from that quad. Birds are included even if they only migrate through an area. In other words, we include all of the species we want people to consider when they do something that affects the environment.

This is not an official list for formal consultation under the Endangered Species Act. However, it may be used to update official lists.

If you have a project that may affect endangered species, please contact the Endangered Species Division, Sacramento Fish and Wildlife Office, U.S. Fish and Wildlife Service.

ATTACHMENT A

Endangered and Threatened Species that May Occur In or be Affected by

PROJECTS IN SHASTA COUNTY

Reference File No. 00-SP-2414

July 18, 2000

Listed Species

Birds

Aleutian Canada goose, *Branta canadensis leucopareia* (T)

bald eagle, *Haliaeetus leucocephalus* (T)

Critical habitat, northern spotted owl, *Strix occidentalis caurina* (T)

northern spotted owl, *Strix occidentalis caurina* (T)

Amphibians

California red-legged frog, *Rana aurora draytonii* (T)

Fish

Critical habitat, winter-run chinook salmon, *Oncorhynchus tshawytscha* (E)

winter-run chinook salmon, *Oncorhynchus tshawytscha* (E)

delta smelt, *Hypomesus transpacificus* (T)

Central Valley steelhead, *Oncorhynchus mykiss* (T)

Central Valley spring-run chinook salmon, *Oncorhynchus tshawytscha* (T)

Sacramento splittail, *Pogonichthys macrolepidotus* (T)

Invertebrates

vernal pool tadpole shrimp, *Lepidurus packardi* (E)

Shasta crayfish, *Pacifastacus fortis* (E)

vernal pool fairy shrimp, *Branchinecta lynchi* (T)

valley elderberry longhorn beetle, *Desmocerus californicus dimorphus* (T)

Plants

Greene's tuctoria, *Tuctoria greenei* (E)

slender Orcutt grass, *Orcuttia tenuis* (T)

Proposed Species

Fish

Critical Habitat, Central Valley spring-run chinook, *Oncorhynchus tshawytscha* (PX)

Candidate Species

Fish

McCloud River redband trout, *Oncorhynchus (=Salmo) mykiss ssp.* (C)

Klamath Mts. Province steelhead, *Oncorhynchus mykiss* (C)

Central Valley fall/late fall-run chinook salmon, *Oncorhynchus tshawytscha* (C)

Species of Concern

Mammals

California wolverine, *Gulo gulo luteus* (CA)

pygmy rabbit, *Brachylagus idahoensis* (SC)
pale Townsend's big-eared bat, *Corynorhinus (=Plecotus) townsendii pallescens* (SC)
Pacific western big-eared bat, *Corynorhinus (=Plecotus) townsendii townsendii* (SC)
spotted bat, *Euderma maculatum* (SC)
Sierra Nevada snowshoe hare, *Lepus americanus tahoensis* (SC)
American (=pine) marten, *Martes americana* (SC)
Pacific fisher, *Martes pennanti pacifica* (SC)
small-footed myotis bat, *Myotis ciliolabrum* (SC)
long-eared myotis bat, *Myotis evotis* (SC)
fringed myotis bat, *Myotis thysanodes* (SC)
long-legged myotis bat, *Myotis volans* (SC)
Yuma myotis bat, *Myotis yumanensis* (SC)
San Joaquin pocket mouse, *Perognathus inornatus* (SC)

Birds

little willow flycatcher, *Empidonax traillii brewsteri* (CA)
greater sandhill crane, *Grus canadensis tabida* (CA)
bank swallow, *Riparia riparia* (CA)
American peregrine falcon, *Falco peregrinus anatum* (D)
Black-Crowned Night Heron, *Nycticorax nycticorax* (MB)
northern goshawk, *Accipiter gentilis* (SC)
tricolored blackbird, *Agelaius tricolor* (SC)
grasshopper sparrow, *Ammodramus savannarum* (SC)
Bell's sage sparrow, *Amphispiza belli belli* (SC)
short-eared owl, *Asio flammeus* (SC)
western burrowing owl, *Athene cunicularia hypugea* (SC)
American bittern, *Botaurus lentiginosus* (SC)
ferruginous hawk, *Buteo regalis* (SC)
Lawrence's goldfinch, *Carduelis lawrencei* (SC)
Vaux's swift, *Chaetura vauxi* (SC)
black tern, *Chlidonias niger* (SC)
lark sparrow, *Chondestes grammacus* (SC)
olive-sided flycatcher, *Contopus cooperi* (SC)
black swift, *Cypseloides niger* (SC)
hermit warbler, *Dendroica occidentalis* (SC)
common loon, *Gavia immer* (SC)
loggerhead shrike, *Lanius ludovicianus* (SC)
Lewis' woodpecker, *Melanerpes lewis* (SC)
long-billed curlew, *Numenius americanus* (SC)
white-faced ibis, *Plegadis chihi* (SC)
rufous hummingbird, *Selasphorus rufus* (SC)

red-breasted sapsucker, *Sphyrapicus ruber* (SC)
Brewer's sparrow, *Spizella breweri* (SC)
California spotted owl, *Strix occidentalis occidentalis* (SC)
Bewick's wren, *Thryomanes bewickii* (SC)

Reptiles

northwestern pond turtle, *Clemmys marmorata marmorata* (SC)
California horned lizard, *Phrynosoma coronatum frontale* (SC)

Amphibians

Shasta salamander, *Hydromantes shastae* (CA)
tailed frog, *Ascaphus truei* (SC)
foothill yellow-legged frog, *Rana boylii* (SC)
Cascades frog, *Rana cascadae* (SC)
western spadefoot toad, *Scaphiopus hammondii* (SC)

Fish

rough sculpin, *Cottus asperrimus* (CA)
green sturgeon, *Acipenser medirostris* (SC)
river lamprey, *Lampetra ayresi* (SC)
Pit roach, *Lavinia symmetricus mitrulus* (SC)
longfin smelt, *Spirinchus thaleichthys* (SC)

Invertebrates

Trinity (=California) brisllesnail, *Monadenia setosa* (CA)
Antioch Dunes anthicid beetle, *Anthicus antiochensis* (SC)
Sacramento anthicid beetle, *Anthicus sacramento* (SC)
confusion caddisfly, *Cryptochia shasta* (SC)
King's Creek ecclisomyian caddisfly, *Ecclisomyia bilara* (SC)
California linderiella fairy shrimp, *Linderiella occidentalis* (SC)
Shasta sideband snail, *Monadenia troglodytes* (SC)
Siskiyou ground beetle, *Nebria gebleri siskiyouensis* (SC)
Trinity Alps ground beetle, *Nebria sahlbergii triad* (SC)
King's Creek parapsyche caddisfly, *Parapsyche elsensa* (SC)
Castle Crags rhyacophilan caddisfly, *Rhyacophila lineata* (SC)
bilobed rhyacophilan caddisfly, *Rhyacophila mosana* (SC)

Plants

Klamath manzanita, *Arctostaphylos klamathensis* (SC)
Suksdorf's milk-vetch, *Astragalus pulsiferae* var. *suksdorfii* (SC)
long-haired star-tulip, *Calochortus longebarbatus* var. *longebarbatus* (SC)
Wiffins' harebell, *Campanula wilkinsiana* (SC)
arid northern clarkia, *Clarkia borealis* ssp. *arida* (SC)
silky cryptantha, *Cryptantha crinita* (SC)

clustered lady's-slipper, *Cypripedium fasciculatum* (SC)
Oregon fireweed, *Epilobium oreganum* (SC)
Butte fritillary, *Fritillaria eastwoodiae* (SC)
Howell's lewisia, *Lewisia cotyledon* var. *howellii* (SC)
Bellinger's meadowfoam, *Limnanthes floccosa ssp. bellingeriana* (SC)
Stebbins' madia, *Madia stebbinsii* (SC)
The Lassics sandwort, *Minuartia decumbens* (SC)
Ahart's whitlow-wort, *Paronychia ahartii* (SC)
thread-leaved penstemon, *Penstemon filiformis* (SC)
Trinity (Scott Mountain) phacelia, *Phacelia delesiana* (SC)
Devil's Garden pogogyne, *Pogogyne floribunda* (SC)
Howell's alkali grass, *Puccinellia howellii* (SC)
valley sagittaria, *Sagittaria sanfordii* (SC)
Canyon Creek stonecrop, *Sedum paradisum* (SC)
Butte County (western) catchfly, *Silene occidentalis ssp. longistipitata* (SC)
Mt. Lassen smelowskia, *Smelowskia ovalis ssp. congesta* (SC)
Pit River jewelflower, *Streptanthus sp. nov. ined. (Shasta Co.)* (SC)

KEY:

(E)	*Endangered*	Listed (in the Federal Register) as being in danger of extinction.
(T)	*Threatened*	Listed as likely to become endangered within the foreseeable future.
(P)	*Proposed*	Officially proposed (in the Federal Register) for listing as endangered or threatened.
(PX)	*Proposed Critical Habitat*	Proposed as an area essential to the conservation of the species.
(C)	*Candidate*	Candidate to become a *proposed* species.
(SC)	*Species of Concern*	Other species of concern to the Service.
(D)	*Delisted*	Delisted. Status to be monitored for 5 years.
(CA)	*State-Listed*	Listed as threatened or endangered by the State of California.
*	*Extirpated*	Possibly extirpated from the area.
**	*Extinct*	Possibly extinct
	Critical Habitat	Area essential to the conservation of a species.

APPENDIX E

Technical Memorandum-Economic Analysis (October 2000)

Economic Analysis of November 1999 Tiered Pricing Proposal for PEIS Preferred Alternative

Date: October 2, 2000

This submittal presents the results of an Economic Analysis of the application to the PEIS Preferred Alternative of the November 1999 unit rates for CVP water and Tiered Pricing Proposal.

The PEIS Preferred Alternative included assumptions for the tiered pricing of CVP water that were developed during the preparation of the Draft PEIS. Subsequent to completion of the Final PEIS, a different tiered pricing proposal was developed. In addition, the PEIS assumed 1992 CVP water rates. This analysis includes the 1999 water rates. This submittal applies the new water rates and the November 1999 proposal to the Preferred Alternative and compares the results to the impact analysis of the PEIS Preferred Alternative. The level of detail presented in this submittal is consistent with the level of detail presented in the main PEIS document and the technical appendices. Tables are presented in the same format as used in the PEIS.

The economic analysis includes an evaluation of agricultural economics using Central Valley Production Model (CVPM), municipal and industrial water use economics for CVP water using the spreadsheet presented with the PEIS, and regional economics using IMPLAN. This memorandum discusses the new assumptions in the November 1999 proposal. However, this memorandum does not discuss the basic assumptions used in the PEIS models and analytical tools. This memorandum must be used in conjunction with the Draft PEIS and Final PEIS, including the methodology and modeling technical appendices, to explain the overall assumptions for evaluating the Preferred Alternative in the PEIS.

For the Agricultural Land Use and Economics analysis, the methodology used for applying CVP water rates was modified to allow for the new tiered pricing and the use of blended rates to determine a total water rate for all CVP water applied by an irrigation district or agency. These changes result in changes in water use due to the affordability of CVP water supplies, not a change in reliability.

For the Municipal and Industrial Water Use Economics analysis, blended rates had been used in the PEIS analysis. In addition, this analysis assumes that the municipal and industrial users will be able to afford the calculated water costs, as described in the PEIS. Therefore, CVP water deliveries do not change for the municipal and industrial analysis. The Regional Economics analysis reflects only changes to agricultural and municipal and industrial sectors, but not recreation sectors.

Table of Contents for Technical Memorandum

Section 1 Agricultural Land Use and Economics

SECTION 1
AGRICULTURAL LAND USE AND ECONOMICS

CONTRACT RENEWAL PROPOSAL WITH BLENDED WATER RATES

In the November 1999 proposal, Reclamation has proposed that water sold to CVP water service contractors be sold according to tiered water rates as required by CVPIA section 3404. Reclamation has also proposed that two categories of water be identified. Category 1 water would be calculated as the average delivery of the previous five years, and would be split into three tiers according to the 80-10-10 quantities defined in the CVPIA. Category 2 water would be any water available in excess of the 5-year rolling average, up to the total contract amount as defined by the Needs Analysis.

Tier 1 water rates include the cost-of-service component and any applicable Restoration charges and surcharges. Both the Restoration Charge and the capital component of the cost-of-service rate are subject to ability-to-pay limits. These limits are in effect for Bella Vista WD and Clear Creek CSD, contractors on the Corning and Tehama-Colusa Canals, and contractors receiving water from New Melones.

Tier 3 water rates include the full-cost rate (as defined in the Reclamation Reform Act) and any applicable Restoration Charges. No ability-to-pay relief is provided in this Tier. The Tier 2 water rate is the average of the applicable Tier 1 and Tier 3 rates. Category 2 water has the same rate as Tier 3.

For this proposal, it is assumed that water conservation guidelines allow contractors to blend the rate of CVP water delivered in any tier or Category, and that they do blend the rates. This is different from the assumption used to assess alternatives in the PEIS, in which contractors were assumed to sell CVP water to growers at tiered rates. Differences between PEIS pricing assumptions and this analysis are:

- This analysis assumes that contractors blend the price of all CVP water received at tiered rates into a single rate. Tiered rates to growers are assumed in the PEIS.
- The project water portion of Sacramento River water rights settlement contracts are not subject to the new pricing policy in this analysis. In the PEIS it was assumed that it was subject to tiered rates.
- Rates are based on the Irrigation Water Rates spreadsheets provided by Reclamation in November 1999. PEIS rates used the 1994 Irrigation Water Rates manual.
- Ability-to-pay relief is incorporated using the current payment capacity studies for Shasta County irrigation contractors, Corning Canal contractors, Tehama Colusa Canal contractors, and New Melones contractors. In the PEIS, payment capacity was based on a 1992 regional study (PEIS, 1999).

- In this analysis, ability to pay relief is provided in Tier 1, with none in Tier 3 - Tier 2 is the average of Tiers 1 and 3, and so provides 50% relief. In the PEIS, the same dollar amount of ability to pay relief is applied in all pricing tiers.

- A $7.00 per acre-foot Restoration Charge is assumed in this analysis. A $6.50 per acre-foot charge was used in the PEIS. The Friant surcharge was $7.00 per acre-foot in both studies.

- There is no lower bound on the usage of CVP water. In the PEIS each subregion was restricted to using at least the Tier 1 quantity of CVP supplies.

METHODOLOGY

Other than the differences listed above, the modeling approach and underlying data were the same as used for the PEIS. The Central Valley Production Model (CVPM) was used in this analysis, with modifications needed to assess the specific water pricing conditions proposed. Table 1 shows the regions of the CVPM and the corresponding service areas. Groundwater hydrology was not assessed as it was in the PEIS alternatives. Therefore, for purposes of analysis, most regions were assumed to have access to replacement groundwater if needed. Based on groundwater hydrology as described in the PEIS, the following subregions are assumed to be unable to replace any CVP water with groundwater on a long term basis: Shasta County irrigation contractors (subregion 1), Corning Canal contractors (subregion 2), and the Tehama-Colusa service area (subregion 3B).

Water deliveries from the CVPIA Preferred Alternative were used (Reclamation CVPIA PEIS, 1999). These deliveries were allocated on a yearly basis into pricing tiers and categories according to the rules described above. Weighted average (i.e., blended) prices were calculated for each year, with quantities in each tier and category based on the previous five years of delivery. In any given year, the quantity and blended price of water depends on the 6-year sequence leading up to and including the current year. Throughout this report the following conventions are use: an Average year represents the average 1922-1990 water delivery from the CVPIA Preferred Alternative (Reclamation CVPIA PEIS, 1999); a Wet year represents the average delivery for the period of 1967-1971 from the CVPIA Preferred Alternative; and a Dry year is the average 1928-1934 delivery from The CVPIA Preferred Alternative.

A total of nine water supply sequences are assessed in this analysis and compared to the CVPIA Preferred Alternative:

Average-Average:	An average water year following a 5-year sequence of average years.
Wet-Average:	An average water year following a 5-year sequence of wet years.
Dry-Average:	An average water year following a 5-year sequence of dry years.
Average-Wet:	A wet water year following a 5-year sequence of average years.
Wet-Wet:	A wet water year following a 5-year sequence of wet years.
Dry-Wet:	A wet water year following a 5-year sequence of dry years.
Average-Dry:	A dry water year following a 5-year sequence of average years.
Wet-Dry:	A dry water year following a 5-year sequence of wet years.
Dry-Dry:	A dry water year following a 5-year sequence of dry years.

The CVP water rates used for each of the nine sequences described above and the CVPIA Preferred Alternative tiered prices are shown in Table 3. Tables 4-12 show the available CVP water service contract supplies by tier and the blended price for each of the 22 subregions under the nine sequences proposed for the Long-Term Contract Renewal analysis.

Results are shown for each of the nine sequences presented as differences compared to the CVPIA Preferred Alternative. When calculating differences from the CVPIA Preferred Alternative, sequences ending in an Average, Wet and Dry years are compared to the Average, Wet and Dry year CVPIA Preferred Alternative results respectively.

IRRIGATED ACRES

Changes in irrigated acres from the Preferred Alternative are summarized by region in Table 13. A complete list of changes by crop and subregion is provided as Table 17.

Both the Average-Average and Wet-Average scenarios show little difference from the Preferred Alternative under the Average hydrology conditions. The Dry-Average sequence shows a larger reduction in irrigated acres almost all of which comes from the Sacramento River region. Compared to the Wet year Preferred Alternative results, there is a similar pattern for the three Long-Term Contract Renewal sequences ending with Wet years. For all three of the Long Term Contract Renewal Sequences ending in a dry year there minimal increases in irrigated acreage compared to the Dry year CPVIA Preferred Alternative results. Irrigated acres remain unchanged under all nine sequences in the San Felipe Division.

The reduction in acreage in Average and Wet years preceded by a series of Dry years is a result of higher CVP water costs. Since the quantity of Category 1 water is based on the average deliveries of the preceding five years, the quantity of water eligible for Category 1 classification shrinks when a sustained drought is experienced. In an average or wet year follows a drought period, water becomes available however a large portion is classified as Category 2 and is priced at the full cost rate. This can be seen in Tables 6 and 9. When this relatively large block of full cost water is incorporated into the blended water price, all CVP supplies become more expensive, and sometimes unaffordable. This result is not seen in the dry-dry sequence because there is not excess water that gets classified as Category 2.

GROSS AND NET REVENUE

Gross revenue (value of production) impacts follow acreage impacts quite closely, and are shown by region in Table 14. Compared to the Average Preferred Alternative, a small reduction of less than $1 million is estimated for the Average-Average and Wet-Average scenarios, and a $39 million reduction is estimated in Dry-Average scenario. Gross revenue also declines compared to the Wet Preferred Alternative with approximately $5 million reductions in Average and Wet years and a larger reduction of $29 million in the Dry-Wet scenario. In dry years preceded by all three hydrologic conditions, gross revenue is slightly higher when compared to the Preferred Alternative Dry year results. There were no changes in gross revenue for the San Felipe Division since there were no changes in irrigated acres compared to the CVPIA preferred Alternative. A complete list of changes in gross revenue by crop and subregion is provided as Table 18.

Net revenue impacts are separated into five components; Fallowed land, Groundwater pumping costs, Irrigation Costs, CVP water costs and higher crop prices. The CVP water cost component represents the impact to net revenue from changes in both the quantity of CVP water used and the price of CVP water. Therefore when the blended CVP water price increases, farmers frequently use less, and the net impact to the CVP water cost component can be positive even when the water price is higher. Table 15 summarizes the net income impacts by component. A negative entry in the table indicates a reduction in net revenue. A complete list of changes in net income by component for each subregion is provided as Table 19.

Relatively small net income impacts are seen in all water supply sequences at the State level. The Average-Average sequence compared to the Average year Preferred Alternative shows a decline of $2 million in net revenue for all of California. The Wet-Average scenario is estimated to have a net increase of approximately $4 million and the Dry-Average sequence a decrease of $12 million.

The net revenue impact in wet years relative to the Preferred Alternative wet results show a pattern similar to the Average year results. Dry years preceded by a series of Average and Wet years both show net decrease in revenue of about $12 million while the Dry-Dry sequence results in a $15 million decrease in State wide net revenue relative the Preferred Alternative Dry results.

Notice that following a series of dry years, the net revenue component associated with crop prices often results in a positive impact to net revenue. This occurs because some subregions are forced to reduce acreage because of higher blended CVP water prices, resulting in higher crop prices received for acreage that remains in production.

There is a negative impact to net revenue from irrigation costs in the Sacramento and San Joaquin River regions in each of the nine Long-Term Contract Renewal sequences. This impact is derived from the irrigation efficiency improvements induced by higher CVP water prices in the Average year sequences. The change in irrigation efficiency is carries through to the Wet and dry year sequences because they are short run analyses and irrigation technology is fixed in the short run. The increase in irrigation efficiency results in a reduction in the total water used in some subregions while irrigated acreage remains constant.

WATER USE

Table 16 summarizes water use changes by region. A complete list of changes in CVP water use and groundwater use by subregion is provided as Table 20. Water supplies other than CVP project water and groundwater are unaffected and not shown. The San Joaquin River region and most of the sequences for the Sacramento River region show the typical response represented by a shift away from CVP supplies to groundwater as CVP water becomes more expensive under the new pricing schemes. The Tulare Lake region and the Sacramento River region during wet years proceeded by a series of Average and Wet years show what would be considered an atypical response.

In the Sacramento River region when five years of Wet and Average conditions are followed by a wet year, the model predicts that both groundwater and CVP water use will decline relative to the Preferred Alternative Wet condition. The decrease in groundwater use is mostly attributed to subregion 3b. In this subregion in a wet year coming out of a series of Average or Wet years the blended price is cheaper than the Preferred Alternative Tier 2 water cost as well as the cost of pumping groundwater. Therefore there is a shift away from groundwater to CVP supplies. In Average years preceded by Average or Wet years, the subregion is prevented from shifting to CVP because they are already using their full CVP supply.

In the Tulare Lake region there is a pattern of shifting from groundwater to CVP water that can be attributed to subregions 17. This subregion shifts because under the blended pricing scheme the CVP water becomes cheaper than pumping groundwater, therefore they maximize their CVP water use.

In average and wet years preceded by a series of dry years, there is a large decrease in CVP water use in both the Sacramento and San Joaquin River regions. This is driven by the relatively high cost of CVP supplies under these conditions. Since many subregions receive less water in dry years, or the water falls into the higher tiers and it becomes unaffordable, and the base from which the blended price tier quantities is calculated shrinks. This sets up a condition where when an Average or Wet year comes along, the additional water is classified as Category 2 and assessed the full cost price. The CVP blended price is a weighted average of all CVP supplies therefore the cost for all CVP water increases and the supplies often become unaffordable.

LOCALIZED IMPACTS

Certain subregions are substantially affected by the proposed water pricing.

- The Tehama-Colusa service area is the most-affected region. Limited groundwater availability and very high full-cost price relative to the value of water in agricultural production result in almost 60,000 acres out of production in the Dry-Average sequence and substantially higher cost for lands remaining in production. This analysis shows a one-year snapshot. Because water pricing is based on historic delivery, a region (such as the Tehama-Colusa region) may never be able to "buy its way" back out from a drought. Looked at over a sequence of dry years such as 1928-34 or 1987-92, many or most of the districts in this area could not survive as CVP contractors.

- The analysis predicts that the Delta subregion will make a complete switch to groundwater supplies in all nine hydrologic sequences, assuming groundwater is available in all parts of the service area.

- The analysis estimates that the once an extended drought is experienced the Delta-Mendota service area would switch from its CVP water service supply to groundwater, assuming groundwater is available in all parts of the service area.

- Westlands Water District and many of the Friant Unit contractors would likely continue purchasing CVP water. Since these areas continue to purchase CVP supplies in all years coming out of drought conditions, they would eventually build their base deliveries up or "buy their way" back to pre-drought tier quantities and prices.

TABLE 1

CVPM SUBREGIONS AND DESCRIPTIONS

CVPM Subregion	Description of Major Water Users
1	CVP Users: Anderson Cottonwood, Clear Creek, Bella Vista, Sacramento River miscellaneous users.
2	CVP Users: Corning Canal, Kirkwood, Tehema, Sacramento River, miscellaneous users.
3	CVP Users: Glenn Colusa ID, Provident, Princeton-Codora, Maxwell, and Colusa Basin Drain MWC.
3B	Tehama Colusa Canal Service Area. CVP Users: Orland-Artois WD, most of County of Colusa, Davis, Dunnigan, Glido Kanawha, La Grande, Westside WD.
4	CVP Users: Princeton-Codora-Glenn, Colusa Irrigation Co., Meridian Farm WC, Pelger Mutual WC, Recl. Dist. 1004, Recl. Dist. 108, Robers Ditch, Sartain M.D., Sutter MWC, Swinford Tract IC, Tisdale Irrigation, Sacramento River miscellaneous users.
5	Most Feather River Region riparian and appropriative users.
6	Yolo, Solano Counties. CVP Users: Conaway Ranch, Sacramento River miscellaneous users.
7	Sacramento Co. north of American River. CVP Users: Natomas Central MWC, Sacramento River miscellaneous users, Pheasant Grove-Verona, San Juan Suburban.
8	Sacramento Co. south of American River, San Joaquin Co.
9	Delta Regions. CVP Users: Banta Carbona, West Side, Plainview.
10	Delta Mendota Canal. CVP Users: Pacheco, Del Puerto, Hospital, Sunflower, West Stanislaus, Mustang, Orestimba, Patterson, Foothill, San Luis WD, Broadview, Eagle Field, Mercy Springs, Pool Exchange Contractors, Schedule II water rights, more.
11	Stanislaus River water rights: Modesto ID, Oakdale ID, South San Joaquin ID.
12	Turlock ID.
13	Merced ID. CVP Users: Madera, Chowchilla, Gravely Ford.
14	CVP Users: Westlands WD.
15	Tulare Lake Bed. CVP Users: Fresno Slough, James, Tranquility, Traction Ranch, Laguna, Real. Dist. 1606.
16	Eastern Fresno Co. CVP Users: Friant-Kern Canal. Fresno ID, Garfield, International.
17	CVP Users: Friant-Kern Canal. Hills Valley, Tri-Valley Orange Cove.
18	CVP Users: Friant-Kern Canal, County of Fresno, Lower Tule River ID, Pixley ID, portion of Rag Gulch, Ducor, County of Tulare, most of Delano Earlimart, Exeter, Ivanhoe, Lewis Cr., Lindmore, Lindsay-Strathmore, Porterville, Sausalito, Stone Corral, Tea Pot Dome, Terra Bella, Tulare.
19	Kern Co. SWP Service Area.
20	CVP Users: Friant-Kern Canal. Shafter-Wasco, S. San Joaquin.
21	CVP Users: Cross Valley Canal, Friant-Kern Canal, Arvin Edison.

TABLE 2

CVP WATER RATES USED FOR LONG TERM CONTRACT RENEWAL ANALYSIS ($)

CVPM Subregion	Tiered Water Rates Used for LTCR analysis			Proposed Blended Water Rates for Water Service Contracts								
				Average	Wet	Dry	Average	Wet	Dry	Average	Wet	Dry
	Tier 1	Tier 2	Tier 3	Followed by Average			Followed by Wet			Followed by Dry		
1	12.01	37.56	63.12	19.67	14.98	14.14	23.91	19.67	18.20	25.19	21.09	19.67
2	10.71	36.40	62.09	18.42	10.71	49.66	29.55	18.42	52.89	10.71	10.71	18.42
3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3B	10.25	40.73	71.21	19.39	10.25	58.15	32.35	19.39	61.42	10.25	10.25	19.39
4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
5	20.65	23.01	25.36	21.35	21.16	21.77	21.52	21.35	21.92	20.90	20.81	21.35
6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
7	11.77	12.07	12.37	11.86	11.86	11.86	11.86	11.86	11.86	11.86	11.86	11.86
8	10.00	27.46	44.92	15.24	10.00	30.36	25.64	15.24	35.47	10.00	10.00	15.24
9	24.79	55.14	85.50	33.89	24.79	64.53	55.27	33.89	73.22	24.79	24.79	33.89
10	31.15	40.16	49.16	33.85	31.15	42.94	38.01	33.85	44.63	31.15	31.15	33.85
11	0.00	0.00	0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA
12	0.00	0.00	0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA
13	32.16	38.41	44.65	34.04	33.25	37.44	34.77	34.04	37.94	32.16	32.16	34.04
14	32.62	46.48	60.33	36.78	32.62	50.76	43.17	36.78	53.36	32.62	32.62	36.78
15	32.71	41.91	51.10	35.47	34.55	38.10	36.34	35.47	38.82	33.07	32.71	35.47
16	40.48	46.78	53.06	42.37	41.22	45.32	43.40	42.37	46.07	40.48	40.48	42.37
17	34.18	40.49	46.79	36.07	35.15	39.28	36.92	36.07	39.88	34.18	34.18	36.07
18	33.63	40.48	47.33	35.69	34.73	39.16	36.57	35.69	39.78	33.63	33.63	35.69
19	34.58	42.16	49.73	36.86	35.00	41.21	38.84	36.86	42.52	34.58	34.58	36.86
20	34.58	42.16	49.73	36.86	35.70	40.85	37.92	36.86	41.58	34.58	34.58	36.86
21	32.70	39.00	45.31	34.59	32.98	39.01	36.33	34.59	40.03	32.70	32.70	34.59

NOTES:

1. Blended rates used pricing components from the November, 1999 Irrigation Water Rates spreadsheets, Restoration Charge of $7.00
2. PEIS rates used regional estimates of payment capacity and allowed the same ATP relief in all tiers.
3. Blended rates use most recent available payment capacity studies from Reclamation, and allow ATP relief in Tier 1 but not in Tier 3.
4. Only Class 1 rates are shown for Friant Division. Friant surcharge is $7.00 in all rates.

TABLE 3

CVP WATER RATES USED IN PREFERRED ALTERNATIVE ($)

CVPM Subregion	Tiered Water Rates Used in the PEIS Preferred Alternative ($)		
	Tier 1	Tier 2	Tier 3
1	5.91	14.63	23.35
2	11.83	24.7	37.57
3	2.83	5.27	7.71
3B	17.16	36.225	55.29
4	5.32	7.625	9.93
5	4.53	6.965	9.4
6	4.53	6.82	9.11
7	6.63	8.83	11.03
8	4.53	7.095	9.66
9	28.54	35.245	41.95
10	33.46	40.015	46.57
11	0	0	0
12	0	0	0
13	33.65	39.395	45.14
14	39.31	54.385	69.46
15	28.16	34.875	41.59
16	38.25	44.255	50.26
17	35.58	41.905	48.23
18	35.01	41.255	47.5
19	36.68	42.885	49.09
20	36.68	42.885	49.09
21	35.4	42.01	48.62

NOTES:

1. PEIS rates used pricing components from the 1994 Irrigation Water Rates Manual, Restoration Charge of $6.50
2. PEIS rates used regional estimates of payment capacity and allowed the same ATP relief in all tiers.
3. Only Class 1 rates are shown for Friant Division. Friant surcharge is $7.00 in all rates.

TABLE 4

PROJECT WATER APPLIED BY PRICING TIERS
AVERAGE YEAR FOLLOWING AVERAGE 5-YEAR BASE CONDITION

CVPM Subregion	Tier 1	Tier 2	Tier 3	Category 2	Blended Price ($/AF)
	(1000 AF)				
1	9.4	1.2	1.2	-	$ 19.67
2	21.9	2.7	2.7	-	$ 18.42
3	-	-	-	-	NA
3B	159.7	20.0	20.0	-	$ 19.39
4	-	-	-	-	NA
5	16.0	2.0	2.0	-	$ 21.35
6	-	-	-	-	NA
7	12.0	1.5	1.5	-	$ 11.66
8	41.3	5.2	5.2	-	$ 15.24
9	22.5	2.8	2.8	-	$ 33.89
10	231.4	28.9	28.9	-	$ 33.85
11	-	-	-	-	
12	-	-	-	-	
13	153.6	19.2	19.2	-	$ 34.04
14	539.1	67.4	67.4	-	$ 36.78
15	32.3	4.0	4.0	-	$ 35.47
16	18.9	2.4	2.4	-	$ 42.37
17	34.9	4.4	4.4	-	$ 36.07
18	484.2	60.5	60.5	-	$ 35.69
19	13.1	1.6	1.6	-	$ 36.86
20	194.2	24.3	24.3	-	$ 36.86
21	129.7	16.2	16.2	-	$ 34.59

Table 5

PROJECT WATER APPLIED BY PRICING TIERS
AVERAGE YEAR FOLLOWING WET 6-YEAR BASE CONDITION

CVPM Subregion	Tier 1	Tier 2	Tier 3	Category 2	Blended Price ($/AF)
	(1000 AF)				
1	10.4	1.3	0.0	-	$ 14.98
2	27.3	-	-	-	$ 10.71
3	-	-	-	-	NA
3B	199.6	-	-	-	$ 10.25
4	-	-	-	-	NA
5	16.6	2.1	1.2	-	$ 21.18
6	-	-	-	-	NA
7	12.0	1.5	1.5	-	$ 11.86
8	51.6	-	-	-	$ 10.00
9	28.2	-	-	-	$ 24.79
10	289.2	-	-	-	$ 31.15
11	-	-	-	-	NA
12	-	-	-	-	NA
13	165.0	20.6	6.3	-	$ 33.25
14	673.8	-	-	-	$ 32.62
15	34.2	4.3	1.9	-	$ 34.55
16	21.0	2.6	0.1	-	$ 41.22
17	37.9	4.7	1.0	-	$ 35.15
18	523.8	65.5	15.9	-	$ 34.73
19	15.5	0.9	-	-	$ 35.00
20	211.7	26.5	4.6	-	$ 35.70
21	154.9	7.2	-	-	$ 92.98

Table 6

PROJECT WATER APPLIED BY PRICING TIERS
AVERAGE YEAR FOLLOWING DRY 5-YEAR BASE CONDITION

CVPM Subregion	Tier 1	Tier 2	Tier 3	Category 2	Blended Price ($/AF)
	(1000 AF)				
1	10.8	1.0	-	-	$ 14.14
2	6.2	0.8	0.8	19.6	$ 49.66
3	-	-	-	-	NA
3B	40.2	5.0	5.0	149.3	$ 58.15
4	-	-	-	-	NA
5	14.3	1.8	1.8	2.1	$ 21.77
6	-	-	-	-	NA
7	12.0	1.5	1.5	-	$ 11.86
8	20.2	2.5	2.5	26.3	$ 30.36
9	9.2	1.1	1.1	16.7	$ 64.53
10	94.0	11.8	11.8	171.7	$ 42.94
11	-	-	-	-	NA
12	-	-	-	-	NA
13	104.4	13.0	13.0	61.6	$ 37.44
14	219.1	27.4	27.4	400.0	$ 50.76
15	26.8	3.4	3.4	6.8	$ 38.10
16	13.7	1.7	1.7	6.5	$ 45.32
17	24.5	3.1	3.1	13.1	$ 39.28
18	339.7	42.5	42.5	180.6	$ 39.16
19	8.7	1.1	1.1	5.6	$ 41.21
20	133.9	16.7	16.7	75.3	$ 40.85
21	76.2	9.5	9.5	66.8	$ 39.01

Table 7

PROJECT WATER APPLIED BY PRICING TIERS
WET YEAR FOLLOWING AVERAGE 5-YEAR BASE CONDITION

CVPM Subregion	Tier 1	Tier 2	Tier 3	Category 2	Blended Price ($/AF)
	(1000 AF)				
1	9.4	1.2	1.2	1.3	$ 23.91
2	21.9	2.7	2.7	9.4	$ 29.55
3	-	-	-	-	NA
3B	159.7	20.0	20.0	66.6	$ 32.35
4	-	-	-	-	NA
5	16.0	2.0	2.0	0.9	$ 21.52
6	-	-	-	-	NA
7	12.0	1.5	1.5	-	$ 11.86
8	41.3	5.2	5.2	27.8	$ 25.64
9	22.5	2.8	2.8	19.9	$ 55.27
10	231.4	28.9	28.9	107.8	$ 38.01
11	-	-	-	-	NA
12	-	-	-	-	NA
13	153.6	19.2	19.2	14.3	$ 34.77
14	599.1	67.4	67.4	251.2	$ 43.17
15	32.3	4.0	4.0	2.4	$ 36.34
16	18.9	2.4	2.4	2.5	$ 43.40
17	34.9	4.4	4.4	3.8	$ 36.92
18	484.2	60.5	60.5	49.6	$ 36.57
19	13.1	1.6	1.6	3.0	$ 38.84
20	194.2	24.3	24.3	21.9	$ 37.92
21	129.7	16.2	16.2	31.5	$ 36.39

Table B

PROJECT WATER BY PRICING TIERS
WET YEAR FOLLOWING WET 5-YEAR BASE CONDITION

CVPM Subregion	Tier 1	Tier 2	Tier 3	Category 2	Blended Price ($/AF)
	(1000 AF)				
1	10.4	1.3	1.3	-	$ 19.67
2	29.4	3.7	3.7	-	$ 18.42
3	-	-	-	-	NA
3B	212.9	26.6	26.6	-	$ 19.39
4	-	-	-	-	NA
5	16.6	2.1	2.1	-	$ 21.35
6	-	-	-	-	NA
7	12.0	1.5	1.5	-	$ 11.86
8	63.5	7.9	7.9	-	$ 15.24
9	38.5	4.8	4.8	-	$ 33.89
10	317.6	39.7	39.7	-	$ 33.85
11	-	-	-	-	NA
12	-	-	-	-	NA
13	165.0	20.6	20.6	-	$ 34.04
14	740.0	92.5	92.5	-	$ 36.78
15	34.2	4.3	4.3	-	$ 35.47
16	21.0	2.6	2.6	-	$ 42.97
17	37.9	4.7	4.7	-	$ 36.07
18	523.8	65.5	65.5	-	$ 35.69
19	15.5	1.9	1.9	-	$ 36.86
20	211.7	26.5	26.5	-	$ 36.66
21	154.9	19.4	19.4	-	$ 34.59

Table 9

PROJECT WATER APPLIED BY PRICING TIERS
WET YEAR FOLLOWING DRY 5-YEAR BASE CONDITION

CVPM Subregion	Tier 1	Tier 2	Tier 3	Category 2	Blended Price ($/AF)
	(1000 AF)				
1	10.8	1.3	0.9	-	$ 18.20
2	6.2	0.8	0.8	28.9	$ 52.83
3	-	-	-	-	NA
3B	40.2	5.0	5.0	215.9	$ 61.42
4	-	-	-	-	NA
5	14.3	1.8	1.8	2.9	$ 21.92
6	-	-	-	-	NA
7	12.0	1.5	1.5	-	$ 11.86
8	20.2	2.5	2.5	54.1	$ 35.47
9	9.2	1.1	1.1	36.7	$ 79.22
10	94.0	11.8	11.8	279.5	$ 44.63
11	-	-	-	-	NA
12	-	-	-	-	NA
13	104.4	13.0	13.0	75.9	$ 37.94
14	219.1	27.4	27.4	651.1	$ 53.36
15	26.8	3.4	3.4	9.1	$ 38.62
16	13.7	1.7	1.7	9.1	$ 46.07
17	24.5	3.1	3.1	16.8	$ 39.88
18	339.7	42.5	42.5	290.2	$ 39.78
19	8.7	1.1	1.1	8.5	$ 42.52
20	133.9	16.7	16.7	97.2	$ 41.58
21	76.2	9.5	9.5	98.3	$ 40.03

Table 10

PROJECT WATER APPLIED BY PRICING TIERS
DRY YEAR FOLLOWING AVERAGE 5-YEAR BASE CONDITION

CVPM Subregion	Tier 1	Tier 2	Tier 3	Category 2	Blended Price ($/AF)
	(1000 AF)				
1	9.4	1.2	1.2	1.7	$ 25.19
2	7.8	-	-	-	$ 10.71
3	-	-	-	-	NA
3B	50.3	-	-	-	$ 10.25
4	-	-	-	-	NA
5	16.0	1.9	-	-	$ 20.90
6	-	-	-	-	NA
7	12.0	1.5	1.5	-	$ 11.86
8	25.3	-	-	-	$ 10.00
9	11.5	-	-	-	$ 24.79
10	117.5	-	-	-	$ 31.15
11	-	-	-	-	NA
12	-	-	-	-	NA
13	130.4	-	-	-	$ 32.16
14	273.9	-	-	-	$ 32.62
15	32.3	1.3	-	-	$ 33.07
16	17.1	-	-	-	$ 40.48
17	30.6	-	-	-	$ 34.18
18	424.5	-	-	-	$ 33.53
19	10.9	-	-	-	$ 34.58
20	167.4	-	-	-	$ 34.58
21	95.3	-	-	-	$ 32.70

Table 11

PROJECT WATER APPLIED BY PRICING TIERS
DRY YEAR FOLLOWING WET 5-YEAR BASE CONDITION

CVPM Subregion	Tier 1	Tier 2	Tier 3	Category 2	Blended Price ($/AF)
	(1000 AF)				
1	10.4	1.3	1.3	0.4	$ 21.09
2	7.8	-	-	-	$ 10.71
3	-	-	-	-	NA
3B	50.3	-	-	-	$ 10.25
4	-	-	-	-	NA
5	16.6	1.2	-	-	$ 20.81
6	-	-	-	-	NA
7	12.0	1.5	1.5	-	$ 11.86
8	25.3	-	-	-	$ 10.00
9	11.5	-	-	-	$ 24.79
10	117.5	-	-	-	$ 31.15
11	-	-	-	-	NA
12	-	-	-	-	NA
13	130.4	-	-	-	$ 32.16
14	273.9	-	-	-	$ 32.62
15	33.6	-	-	-	$ 32.71
16	17.1	-	-	-	$ 40.48
17	30.6	-	-	-	$ 34.19
18	424.6	-	-	-	$ 33.63
19	10.9	-	-	-	$ 34.58
20	167.4	-	-	-	$ 34.58
21	95.3	-	-	-	$ 32.70

Table 12

PROJECT WATER BY PRICING TIERS
DRY YEAR FOLLOWING DRY 5-YEAR BASE CONDITION

CVPM Subregion	Tier 1	Tier 2	Tier 3	Category 2	Blended Price ($/AF)
	(1000 AF)				
1	10.8	1.3	1.3	-	$ 19.67
2	6.2	0.8	0.8	-	$ 18.42
3	-	-	-	-	NA
3B	40.2	5.0	5.0	-	$ 19.39
4	-	-	-	-	NA
5	14.3	1.8	1.8	-	$ 21.35
6	-	-	-	-	NA
7	12.0	1.5	1.5	-	$ 11.86
8	20.2	2.5	2.5	-	$ 15.24
9	9.2	1.1	1.1	-	$ 33.89
10	94.0	11.8	11.8	-	$ 33.85
11	-	-	-	-	NA
12	-	-	-	-	NA
13	104.4	13.0	13.0	-	$ 34.04
14	219.1	27.4	27.4	-	$ 36.78
15	26.8	3.4	3.4	-	$ 35.47
16	13.7	1.7	1.7	-	$ 42.37
17	24.5	3.1	3.1	-	$ 36.07
18	339.7	42.5	42.5	-	$ 35.69
19	8.7	1.1	1.1	-	$ 36.86
20	133.9	16.7	16.7	-	$ 36.86
21	76.2	9.5	9.5	-	$ 34.59

TABLE 13

IRRIGATED ACRES BY SUBREGION (1000 ACRES)

CVPM Subregion	Average Preferred Alternative	Change Compared to (Average followed by Average)			Wet Preferred Alternative	Change Compared to (Average followed by Wet)			Dry Preferred Alternative	Change Compared to (Average followed by Dry)		
		Average	Wet	Dry		Average	Wet	Dry		Average	Wet	Dry
Sacramento River	2075.5	-1.7	-0.8	-65.3	2020.0	-4.4	-4.4	-53.0	1934.6	0.1	0.1	0.0
San Joaquin River	2526.6	-0.2	-0.2	-1.2	2529.1	-1.7	-1.6	-1.9	2505.9	-0.1	-0.1	-0.1
Tulare Lake	1902.4	0.0	0.0	-0.2	1998.2	-1.2	-1.2	-1.3	1953.7	0.1	0.1	0.1
San Felipe	50.7	0.0	0.0	0.0	69.5	0.0	0.0	0.0	22.2	0.0	0.0	0.0
California Total	6585.2	-1.9	-1.0	-66.7	6614.8	-7.3	-7.3	-56.2	6466.6	0.1	0.1	0.1

TABLE 14

VALUE OF PRODUCTION BY SUBREGION (Million $)

CVPM Subregion	Average Preferred Alternative	Change Compared to Average followed by Average: Average	Wet	Dry	Wet Preferred Alternative	Change Compared to Wet PA followed by Wet: Average	Wet	Dry	Dry Preferred Alternative	Change Compared to Dry PA followed by Dry: Average	Wet	Dry
Sacramento River	1,825.3	-0.4	-0.2	-37.6	1,829.0	-1.6	-1.6	-26.8	1,810.0	0.4	0.4	0.3
San Joaquin River	4,402.3	-0.1	-0.1	-1.0	4,403.8	-0.9	-0.9	-1.1	4,384.2	-0.2	-0.2	-0.2
Tulare Lake	3,976.3	0.0	0.0	-0.3	3,979.4	-1.0	-1.0	-1.1	3,842.7	0.1	0.1	0.1
San Felipe	68.0	0.0	0.0	0.0	70.0	0.0	0.0	0.0	44.0	0.0	0.0	0.0
California Total	10,172.0	-0.5	-0.4	-38.6	10,181.2	-3.6	-3.6	-29.9	10,080.8	0.3	0.3	0.3

TABLE 15

NET REVENUE CHANGES BY REGION (Million $)

Cause of Net Revenue Change	Compared to Average Year PA			Compared to Wet Year PA			Compared to Dry Year PA		
	Average followed by Average	Wet followed by Average	Dry followed by Average	Average followed by Wet	Wet followed by Wet	Dry followed by Wet	Average followed by Dry	Wet followed by Dry	Dry followed by Dry
Sacramento River									
Fallowed Land	-0.1	0.0	-6.7	-0.3	-0.3	-4.6	0.0	0.0	0.0
Groundwater Pumping Cost	-0.3	-0.3	-0.4	1.0	1.0	-4.5	-0.2	-0.2	-0.2
Irrigation Cost	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4
CVP Water Cost	-0.3	1.7	3.6	-5.1	-1.0	4.8	-0.1	-0.1	-0.7
Higher Crop Prices	0.0	0.0	1.9	0.1	0.1	1.0	0.0	0.0	0.0
Net Change	**-1.0**	**1.0**	**-1.9**	**-4.6**	**-0.5**	**-3.8**	**-0.6**	**-0.6**	**-1.2**
San Joaquin River									
Fallowed Land	0.0	0.0	-0.1	-0.2	-0.2	-0.2	0.0	0.0	0.0
Groundwater Pumping Cost	0.0	0.0	-10.3	-7.4	0.2	-14.1	-1.0	-1.0	-1.0
Irrigation Cost	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
CVP Water Cost	1.0	4.0	2.2	7.9	6.1	6.2	-5.9	-5.9	-7.5
Higher Crop Prices	0.1	0.0	2.0	0.2	0.2	1.0	0.0	0.0	0.0
Net Change	**0.9**	**3.9**	**-5.7**	**0.4**	**6.1**	**-7.3**	**-7.0**	**-7.0**	**-8.8**
Tulare Lake									
Fallowed Land	0.0	0.0	0.0	-0.1	-0.1	-0.1	0.0	0.0	0.0
Groundwater Pumping Cost	0.1	0.1	0.1	1.0	1.0	1.0	-3.2	-3.2	-3.2
Irrigation Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CVP Water Cost	-2.3	-1.2	-5.7	-2.1	-2.1	-6.4	-0.9	-0.9	-2.3
Higher Crop Prices	0.0	0.0	1.4	0.1	0.1	0.4	0.0	0.0	0.0
Net Change	**-2.1**	**-1.1**	**-4.2**	**-2.1**	**-1.1**	**-5.1**	**-4.1**	**-4.1**	**-5.5**
San Felipe									
Fallowed Land	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Groundwater Pumping Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Irrigation Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CVP Water Cost	-0.2	0.0	-0.6	-0.5	-0.2	-0.9	0.0	0.0	-0.1
Higher Crop Prices	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net Change	**-0.2**	**0.0**	**-0.6**	**-0.5**	**-0.2**	**-0.9**	**0.0**	**0.0**	**-0.1**
Total									
Fallowed Land	-0.1	-0.1	-6.9	-0.6	-0.6	-4.9	0.0	0.0	0.0
Groundwater Pumping Cost	-0.2	-0.2	-10.5	-5.3	2.2	-17.6	-4.4	-4.4	-4.4
Irrigation Cost	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
CVP Water Cost	-1.6	4.5	0.2	-0.3	3.1	4.5	-6.8	-6.8	-10.5
Higher Crop Prices	0.1	0.1	5.8	0.4	0.4	2.3	0.0	0.0	0.0
Net Change	**-2.3**	**3.7**	**-11.9**	**-6.3**	**4.5**	**-15.1**	**-11.7**	**-11.7**	**-15.9**

Note: A negative value in a cost category represents an increase in cost that produces a decrease in net revenue

TABLE 16
IRRIGATION WATER APPLIED BY REGION (1000 AF)

Region	Average Preferred Alternative	Change Compared to Average PA followed by Average: Average	Wet	Dry	Wet Preferred Alternative	Change Compared to Wet PA followed by Wet: Average	Wet	Dry	Dry Preferred Alternative	Change Compared to Dry PA followed by Dry: Average	Wet	Dry
Sacramento River												
CVP Water*	825.9	-27.6	-23.4	-243.5	994.3	-2.4	-2.6	-305.5	402.1	-20.3	-20.3	-20.4
Groundwater	2,621.3	10.5	10.7	11.2	2,456.9	-24.5	-24.3	114.7	3,261.6	4.1	4.2	4.0
San Joaquin River												
CVP Water*	950.2	-8.7	-9.0	-269.0	1,226.6	-226.3	-21.0	-378.7	606	-17.5	-17.5	-17.5
Groundwater	3,606.2	3.3	3.5	260.0	2,974.2	215.1	10.3	366.8	4729	12.0	12.0	12.0
Tulare Lake												
CVP Water*	919.5	1.9	2.0	2.0	957.3	3.7	3.8	3.6	685.3	0.1	0.1	0.0
Groundwater	3,369.0	-1.9	-2.0	-2.0	2,683.5	-7.7	-7.7	-7.5	4,542.9	0.0	0.0	0.0
San Felipe												
CVP Water*	71.0	0.0	0.0	0.0	71.0	0.0	0.0	0.0	71.0	0.0	0.0	0.0
Groundwater	na	na	na	na	na	na	na	na	na	na	na	na
Total												
CVP Water*	2,505.5	-34.4	-30.4	-510.5	2,989.2	-224.9	-19.9	-680.6	1,593.9	-37.7	-37.8	-37.8
Groundwater	9,596.5	11.9	12.3	269.2	8,114.6	182.6	-21.6	474.0	12,527.1	16.1	16.2	16.1

*CVP water applied is project water only. It excludes exchange contract delivery and the base supply portion of settlement contracts

TABLE 17 IRRIGATED ACREAGE BY SUBREGION

CVPM Subregion	Crop Category	Preferred Alternative Average	Changes Compared to Average PA			Preferred Alternative Wet	Changes Compared to Wet PA			Preferred Alternative Dry	Changes Compared to Dry PA		
			Average	Wet	Dry		Average	Wet	Dry		Average	Wet	Dry
			Followed by Average				Followed by Wet				Followed by Dry		
1	Pasture	18.9	-1.2	-0.3	-0.1	18.3	-1.5	-1.5	-1.5	18.1	-1.8	-1.8	-1.8
	Alfalfa	0.9	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.9	0.0	0.0	0.0
	Other Field Crops	1.2	0.0	0.0	0.0	1.2	0.0	0.0	0.0	1.2	0.0	0.0	0.0
	Deciduous Orchard	3.8	0.0	0.0	0.0	3.8	0.0	0.0	0.0	3.8	0.0	0.0	0.0
	Small Grain	2.4	0.0	0.0	0.0	2.4	0.0	0.0	0.0	2.4	0.0	0.0	0.0
	Subtotal	25.6	-1.3	-0.3	-0.1	26.5	-1.5	-1.5	-1.5	26.3	-1.8	-1.8	-1.8
2	Pasture	34.1	0.0	0.0	-0.5	33.9	0.0	0.0	-0.9	33.1	0.0	0.0	0.0
	Alfalfa	9.5	0.0	0.0	-0.3	9.5	0.0	0.0	-0.6	9.4	0.0	0.0	0.0
	Sugar Beets	4.0	0.0	0.0	0.0	4.0	0.0	0.0	-0.1	4.0	0.0	0.0	0.0
	Other Field Crops	17.3	0.0	0.0	-0.5	17.2	0.0	0.0	-0.7	17.1	0.0	0.0	0.0
	Rice	4.5	0.0	0.0	-0.2	4.5	0.0	0.0	-0.3	4.5	0.0	0.0	0.0
	Truck Crops	15.5	0.0	0.0	0.0	15.5	0.0	0.0	0.0	15.5	0.0	0.0	0.0
	Deciduous Orchard	86.0	0.0	0.0	-0.1	86.0	0.0	0.0	0.0	86.0	0.0	0.0	0.0
	Small Grain	14.0	0.0	0.0	-0.2	13.9	0.0	0.0	-0.6	13.7	0.0	0.0	0.0
	Subtropical Orchard	10.2	0.0	0.0	0.0	10.2	0.0	0.0	0.0	10.2	0.0	0.0	0.0
	Subtotal	195.0	0.0	0.0	-4.9	194.7	0.0	0.0	-8.2	193.5	0.0	0.0	0.0
3	Pasture	7.6	0.0	0.0	0.0	7.6	0.0	0.0	0.0	7.6	0.0	0.0	0.0
	Alfalfa	18.2	0.0	0.0	0.0	18.3	0.0	0.0	0.0	18.0	0.0	0.0	0.0
	Sugar Beets	9.9	0.0	0.0	0.0	9.9	0.0	0.0	0.0	9.8	0.0	0.0	0.0
	Other Field Crops	15.7	0.0	0.0	0.0	15.6	0.0	0.0	0.0	15.5	0.0	0.0	0.0
	Rice	138.8	0.0	0.0	0.0	138.5	0.0	0.0	0.0	138.7	0.0	0.0	0.0
	Truck Crops	25.2	0.0	0.0	0.0	25.2	0.0	0.0	0.0	25.2	0.0	0.0	0.0
	Tomatoes	25.9	0.0	0.0	0.0	25.9	0.0	0.0	0.0	25.8	0.0	0.0	0.0
	Deciduous Orchard	17.8	0.0	0.0	0.0	17.8	0.0	0.0	0.0	17.8	0.0	0.0	0.0
	Small Grain	30.5	0.0	0.0	0.0	30.6	0.0	0.0	0.0	29.8	0.0	0.0	0.0
	Subtotal	289.6	0.0	0.0	0.0	290.7	0.0	0.0	0.0	288.2	0.0	0.0	0.0
3B	Pasture	5.7	0.0	0.0	-5.7	5.8	0.1	0.1	-1.5	4.3	0.0	0.0	0.0
	Alfalfa	10.1	0.0	0.0	-10.1	10.2	0.1	0.1	-2.5	7.6	0.0	0.0	0.0
	Sugar Beets	5.6	0.0	0.0	-5.6	5.6	0.0	0.0	-2.8	5.1	0.0	0.0	0.0
	Other Field Crops	13.4	0.0	0.0	-13.4	13.5	0.0	0.0	-13.5	10.4	0.0	0.0	0.0
	Rice	9.6	0.0	0.0	-9.6	9.7	0.1	0.1	-9.7	8.2	0.0	0.0	0.0
	Truck Crops	0.6	0.0	0.0	-0.1	0.6	0.0	0.0	0.0	0.6	0.0	0.0	0.0
	Tomatoes	6.1	0.0	0.0	-6.1	6.1	0.0	0.0	-1.4	5.7	0.0	0.0	0.0
	Deciduous Orchard	26.5	0.0	0.0	-3.3	26.9	0.0	0.0	0.0	26.8	0.0	0.0	0.0
	Small Grain	8.5	0.0	0.0	-8.5	8.5	0.0	0.0	-8.5	8.2	0.0	0.0	0.0
	Subtropical Orchard	1.0	0.0	0.0	-0.1	1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0
	Subtotal	87.6	0.0	0.0	-59.9	87.9	0.3	0.3	-40.4	74.0	0.0	0.0	0.0

TABLE 17 IRRIGATED ACREAGE BY SUBREGION

CVPM Subregion	Crop Category	Preferred Alternative Average	Changes Compared to Average PA			Preferred Alternative Wet	Changes Compared to Wet PA			Preferred Alternative Dry	Changes Compared to Dry PA		
			Average	Wet	Dry		Average	Wet	Dry		Average	Wet	Dry
			Followed by Average				Followed by Wet				Followed by Dry		
4	Pasture	1.2	0.0	0.0	0.0	1.2	0.0	0.0	0.0	1.1	0.0	0.0	0.0
	Alfalfa	5.5	0.0	0.0	0.0	6.6	0.0	0.0	0.0	6.6	0.0	0.0	0.0
	Sugar Beets	10.3	0.0	0.0	0.0	10.3	0.0	0.0	0.0	10.3	0.0	0.0	0.0
	Other Field Crops	40.1	0.0	0.0	0.0	40.1	0.0	0.0	0.0	39.8	0.0	0.0	0.0
	Rice	87.8	0.0	0.0	0.0	87.9	0.0	0.0	0.0	87.1	0.0	0.0	0.0
	Truck Crops	17.1	0.0	0.0	0.0	17.1	0.0	0.0	0.0	17.1	0.0	0.0	0.0
	Tomatoes	34.1	0.0	0.0	0.0	34.1	0.0	0.0	0.0	34.0	0.0	0.0	0.0
	Deciduous Orchard	30.5	0.0	0.0	0.0	30.6	0.0	0.0	0.0	30.6	0.0	0.0	0.0
	Small Grain	47.5	0.0	0.0	0.0	47.6	0.0	0.0	0.0	46.6	0.0	0.0	0.0
	Subtotal	275.3	0.0	0.0	0.0	275.7	0.0	0.0	-0.1	273.6	0.0	0.0	0.0
5	Pasture	21.4	0.0	0.0	0.0	21.5	0.0	0.0	0.0	21.0	0.0	0.0	0.0
	Alfalfa	4.7	0.0	0.0	0.0	4.7	0.0	0.0	0.0	4.7	0.0	0.0	0.0
	Sugar Beets	2.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0
	Other Field Crops	15.4	0.0	0.0	0.0	15.4	0.0	0.0	0.0	15.4	0.0	0.0	0.0
	Rice	166.0	0.0	0.0	0.0	166.5	-0.1	-0.1	-0.1	165.2	-0.1	-0.1	-0.1
	Truck Crops	6.6	0.0	0.0	0.0	6.6	0.0	0.0	0.0	6.6	0.0	0.0	0.0
	Tomatoes	1.6	0.0	0.0	0.0	1.6	0.0	0.0	0.0	1.6	0.0	0.0	0.0
	Deciduous Orchard	121.6	0.0	0.0	0.0	121.6	0.0	0.0	0.0	121.6	0.0	0.0	0.0
	Small Grain	22.3	0.0	0.0	0.0	22.4	0.0	0.0	0.0	21.9	0.0	0.0	0.0
	Subtropical Orchard	2.5	0.0	0.0	0.0	2.5	0.0	0.0	0.0	2.5	0.0	0.0	0.0
	Subtotal	364.1	0.0	0.0	0.0	364.9	-0.2	-0.2	-0.1	362.6	-0.2	-0.2	-0.2
6	Pasture	12.1	0.0	0.0	0.0	12.5	-0.4	-0.4	-0.4	11.6	0.0	0.0	0.0
	Alfalfa	28.7	0.0	0.0	0.1	29.0	-0.3	-0.3	-0.3	28.6	0.0	0.0	0.0
	Sugar Beets	21.2	0.0	0.0	0.0	21.2	-0.1	-0.1	-0.1	21.1	0.0	0.0	0.0
	Other Field Crops	59.4	0.0	0.0	0.0	59.9	-0.5	-0.5	-0.5	59.1	0.0	0.0	0.0
	Rice	12.9	0.0	0.0	0.0	13.1	-0.2	-0.2	-0.2	12.6	0.0	0.0	0.0
	Truck Crops	3.4	0.0	0.0	0.0	3.4	0.0	0.0	0.0	3.4	0.0	0.0	0.0
	Tomatoes	45.8	0.0	0.0	0.0	45.9	-0.1	-0.1	-0.1	45.7	0.0	0.0	0.0
	Deciduous Orchard	24.6	0.0	0.0	0.0	24.6	0.0	0.0	0.0	24.6	0.0	0.0	0.0
	Small Grain	64.1	0.0	0.0	0.0	64.6	-0.4	-0.4	-0.4	63.3	0.2	0.2	0.2
	Grapes	8.0	0.0	0.0	0.0	8.0	0.0	0.0	0.0	8.0	0.0	0.0	0.0
	Subtotal	280.2	0.0	0.0	0.0	282.2	-1.9	-1.9	-1.8	278.4	0.2	0.2	0.2
7	Pasture	14.5	0.0	0.0	0.0	14.5	0.0	0.0	0.0	14.2	0.0	0.0	0.0
	Alfalfa	3.1	0.0	0.0	0.0	3.1	0.0	0.0	0.0	3.1	0.0	0.0	0.0
	Sugar Beets	2.5	0.0	0.0	0.0	2.5	0.0	0.0	0.0	2.5	0.0	0.0	0.0
	Other Field Crops	3.8	0.0	0.0	0.0	3.8	0.0	0.0	0.0	3.8	0.0	0.0	0.0
	Rice	48.3	0.0	0.0	0.0	48.3	0.0	0.0	0.0	47.9	0.0	0.0	0.0
	Truck Crops	0.3	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.3	0.0	0.0	0.0
	Tomatoes	0.5	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.5	0.0	0.0	0.0
	Deciduous Orchard	8.9	0.0	0.0	0.0	8.9	0.0	0.0	0.0	8.9	0.0	0.0	0.0
	Small Grain	9.4	0.0	0.0	0.0	9.3	0.0	0.0	0.0	9.2	0.0	0.0	0.0
	Grapes	0.2	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0	0.0
	Subtotal	91.4	0.0	0.0	0.0	91.5	0.0	0.0	0.0	90.5	0.0	0.0	0.0

TABLE 17 IRRIGATED ACREAGE BY SUBREGION

CVPM Subregion	Crop Category	Preferred Alternative Average	Changes Compared to Average PA: Average	Wet	Dry	Preferred Alternative Wet	Changes Compared to Wet PA: Average	Wet	Dry	Preferred Alternative Dry	Changes Compared to Dry PA: Average	Wet	Dry
			Followed by Average				Followed by Wet				Followed by Dry		
8	Pasture	47.7	0.0	0.0	0.0	47.6	0.0	0.0	0.0	46.9	0.0	0.0	0.0
	Alfalfa	12.3	0.0	0.0	0.0	12.3	0.0	0.0	0.0	12.2	0.0	0.0	0.0
	Sugar Beets	12.8	0.0	0.0	0.0	12.8	0.0	0.0	0.0	12.8	0.0	0.0	0.0
	Other Field Crops	42.7	0.0	0.0	0.0	42.7	0.0	0.0	0.0	42.5	0.0	0.0	0.0
	Rice	4.5	0.0	0.0	0.0	4.5	0.0	0.0	0.0	4.5	0.0	0.0	0.0
	Truck Crops	17.1	0.0	0.0	0.0	17.1	0.0	0.0	0.0	17.1	0.0	0.0	0.0
	Tomatoes	12.9	0.0	0.0	0.0	12.9	0.0	0.0	0.0	12.9	0.0	0.0	0.0
	Deciduous Orchard	46.9	0.0	0.0	0.0	46.9	0.0	0.0	0.0	46.9	0.0	0.0	0.0
	Small Grain	29.0	0.0	0.0	0.0	29.1	0.0	0.0	0.0	28.2	0.0	0.0	0.0
	Grapes	58.9	0.0	0.0	0.0	58.9	0.0	0.0	0.0	58.9	0.0	0.0	0.0
	Subtotal	264.9	0.0	0.0	0.0	264.9	0.0	0.0	0.0	262.6	0.0	0.0	0.0
9	Pasture	24.6	-0.2	-0.2	-0.1	24.6	-0.4	-0.4	-0.4	23.4	0.7	0.7	0.7
	Alfalfa	43.8	-0.1	-0.1	0.0	43.8	-0.2	-0.2	-0.2	43.1	0.4	0.4	0.4
	Sugar Beets	28.6	0.0	0.0	0.0	28.6	-0.1	-0.1	0.0	28.5	0.1	0.1	0.1
	Other Field Crops	114.9	-0.2	-0.2	-0.2	115.0	-0.4	-0.4	-0.4	113.6	0.7	0.7	0.7
	Rice	0.9	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.9	0.0	0.0	0.0
	Truck Crops	46.0	0.0	0.0	0.0	46.0	0.0	0.0	0.0	46.0	0.0	0.0	0.0
	Tomatoes	42.5	0.0	0.0	0.0	42.5	0.0	0.0	0.0	42.3	0.1	0.1	0.1
	Deciduous Orchard	21.3	0.0	0.0	0.0	21.3	0.0	0.0	0.0	21.3	0.0	0.0	0.0
	Small Grain	96.8	-0.1	-0.1	-0.1	97.5	-0.3	-0.3	-0.3	93.7	1.0	1.0	1.0
	Grapes	5.8	0.0	0.0	0.0	5.8	0.0	0.0	0.0	5.8	0.0	0.0	0.0
	Subtotal	425.0	-0.5	-0.6	-0.4	425.9	-1.5	-1.5	-1.4	418.4	3.0	3.0	3.0
10	Pasture	13.3	0.0	0.0	-0.2	13.3	0.0	0.0	0.0	13.3	0.0	0.0	0.0
	Alfalfa	40.8	0.0	0.0	-0.3	40.9	-0.1	0.0	-0.1	40.8	0.0	0.0	0.0
	Sugar Beets	13.9	0.0	0.0	0.0	13.9	0.0	0.0	0.0	13.8	0.0	0.0	0.0
	Other Field Crops	48.2	0.0	0.0	-0.1	48.2	0.1	0.0	0.0	48.3	0.0	0.0	0.0
	Rice	2.9	0.0	0.0	0.0	2.9	0.0	0.0	0.0	2.9	0.0	0.0	0.0
	Truck Crops	112.9	0.0	0.0	0.0	112.9	0.0	0.0	0.0	113.0	0.0	0.0	0.0
	Tomatoes	40.2	0.0	0.0	0.0	40.2	0.0	0.0	0.0	40.2	0.0	0.0	0.0
	Deciduous Orchard	36.6	0.0	0.0	0.0	36.6	0.0	0.0	0.0	36.6	0.0	0.0	0.0
	Small Grain	14.0	0.0	0.0	0.0	14.0	0.1	0.0	0.1	14.0	0.0	0.0	0.0
	Grapes	1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0
	Cotton	103.1	0.0	0.0	-0.5	103.1	-0.1	0.0	-0.1	103.1	0.0	0.0	0.0
	Subtropical Orchard	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
	Subtotal	427.1	0.0	0.0	-1.1	427.2	-0.1	0.0	-0.1	427.1	0.0	0.0	0.0

TABLE 17 IRRIGATED ACREAGE BY SUBREGION

CVPM Subregion	Crop Category	Preferred Alternative Average	Changes Compared to Average PA			Preferred Alternative Wet	Changes Compared to Wet PA			Preferred Alternative Dry	Changes Compared to Dry PA		
			Average	Wet	Dry		Average	Wet	Dry		Average	Wet	Dry
			Followed by Average				Followed by Wet				Followed by Dry		
11	Pasture	42.9	0.0	0.0	0.0	43.0	0.0	0.0	0.0	42.7	0.0	0.0	0.0
	Alfalfa	8.4	0.0	0.0	0.0	8.4	0.0	0.0	0.0	8.3	0.0	0.0	0.0
	Sugar Beets	0.4	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.4	0.0	0.0	0.0
	Other Field Crops	17.8	0.0	0.0	0.0	17.8	0.0	0.0	0.0	17.8	0.0	0.0	0.0
	Rice	4.4	0.0	0.0	0.0	4.4	0.0	0.0	0.0	4.4	0.0	0.0	0.0
	Truck Crops	6.3	0.0	0.0	0.0	6.3	0.0	0.0	0.0	6.3	0.0	0.0	0.0
	Tomatoes	0.8	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.8	0.0	0.0	0.0
	Deciduous Orchard	80.8	0.0	0.0	0.0	80.8	0.0	0.0	0.0	80.8	0.0	0.0	0.0
	Small Grain	1.8	0.0	0.0	0.0	1.8	0.0	0.0	0.0	1.8	0.0	0.0	0.0
	Grapes	10.4	0.0	0.0	0.0	10.4	0.0	0.0	0.0	10.4	0.0	0.0	0.0
	Subtotal	174.0	0.0	0.0	0.0	174.2	0.0	0.0	0.0	173.7	0.0	0.0	0.0
12	Pasture	18.0	0.0	0.0	0.0	18.0	0.0	0.0	0.0	18.0	0.0	0.0	0.0
	Alfalfa	18.2	0.0	0.0	0.0	18.1	0.0	0.0	0.0	18.1	0.0	0.0	0.0
	Sugar Beets	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
	Other Field Crops	41.2	0.0	0.0	0.0	41.0	0.0	0.0	0.0	41.0	0.0	0.0	0.0
	Truck Crops	3.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0
	Deciduous Orchard	94.0	0.0	0.0	0.0	94.0	0.0	0.0	0.0	94.0	0.0	0.0	0.0
	Small Grain	10.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0	9.9	0.0	0.0	0.0
	Grapes	14.0	0.0	0.0	0.0	14.0	0.0	0.0	0.0	14.0	0.0	0.0	0.0
	Cotton	1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0
	Subtropical Orchard	1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0
	Subtotal	200.8	0.0	0.0	0.0	200.2	0.0	0.0	0.0	200.1	0.0	0.0	0.0
13	Pasture	39.8	0.0	0.0	0.0	39.9	-0.2	-0.2	-0.3	39.5	-0.3	-0.3	-0.3
	Alfalfa	41.8	0.0	0.0	0.1	42.1	-0.2	-0.2	-0.2	41.8	-0.2	-0.2	-0.2
	Sugar Beets	5.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0
	Other Field Crops	54.8	0.0	0.0	0.0	55.0	-0.1	-0.1	-0.2	54.8	-0.1	-0.1	-0.1
	Rice	3.9	0.0	0.0	0.0	3.9	0.0	0.0	0.0	3.9	0.0	0.0	0.0
	Truck Crops	18.0	0.0	0.0	0.0	18.0	0.0	0.0	0.0	18.0	0.0	0.0	0.0
	Tomatoes	7.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0
	Deciduous Orchard	135.0	0.0	0.0	0.0	135.0	0.0	0.0	0.0	135.0	0.0	0.0	0.0
	Small Grain	46.9	0.0	0.0	0.0	47.2	-0.1	-0.1	-0.1	46.8	-0.1	-0.1	-0.1
	Grapes	99.0	0.0	0.0	0.0	99.0	0.0	0.0	0.0	99.0	0.0	0.0	0.0
	Cotton	71.8	0.0	0.0	0.0	72.1	-0.2	-0.2	-0.3	71.6	-0.2	-0.2	-0.2
	Subtropical Orchard	0.9	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.9	0.0	0.0	0.0
	Subtotal	532.5	0.0	0.0	0.0	534.1	-0.9	-0.9	-1.1	531.5	-0.9	-0.9	-0.9

TABLE 17 IRRIGATED ACREAGE BY SUBREGION

CVPM Subregion	Crop Category	Preferred Alternative Average	Changes Compared to Average PA			Preferred Alternative Wet	Changes Compared to Wet PA			Preferred Alternative Dry	Changes Compared to Dry PA		
			Average	Wet	Dry		Average	Wet	Dry		Average	Wet	Dry
			Followed by Average				Followed by Wet				Followed by Dry		
14	Pasture	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
	Alfalfa	14.0	0.0	0.0	0.0	14.0	0.0	0.0	0.0	13.4	0.0	0.0	0.0
	Sugar Beets	4.8	0.0	0.0	0.0	4.8	0.0	0.0	0.0	4.8	0.0	0.0	0.0
	Other Field Crops	18.4	0.0	0.0	0.0	18.3	0.0	0.0	0.0	17.9	0.0	0.0	0.0
	Truck Crops	136.4	0.0	0.0	0.0	136.4	0.0	0.0	0.0	136.2	0.0	0.0	0.0
	Tomatoes	77.0	0.0	0.0	0.1	77.0	0.0	0.0	0.0	76.2	0.0	0.0	0.0
	Deciduous Orchard	24.9	0.0	0.0	0.0	24.9	0.0	0.0	0.0	24.9	0.0	0.0	0.0
	Small Grain	10.4	0.0	0.0	0.0	10.4	0.0	0.0	0.0	9.7	0.0	0.0	0.0
	Grapes	7.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0
	Cotton	206.5	0.0	0.0	-0.1	206.6	0.0	0.0	0.0	198.8	0.0	0.0	0.0
	Subtropical Orchard	1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0
	Subtotal	500.4	0.0	0.0	0.0	500.5	0.0	0.0	0.0	469.8	0.0	0.0	0.0
15	Pasture	3.9	0.0	0.0	0.0	3.9	0.0	0.0	0.0	3.7	0.0	0.0	0.0
	Alfalfa	83.1	0.0	0.0	0.2	83.4	0.0	0.0	0.1	80.6	0.0	0.0	0.0
	Sugar Beets	5.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0
	Other Field Crops	66.0	0.0	0.0	0.0	66.1	0.0	0.0	0.0	64.2	0.0	0.0	0.0
	Rice	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
	Truck Crops	12.0	0.0	0.0	0.0	12.0	0.0	0.0	0.0	12.0	0.0	0.0	0.0
	Tomatoes	2.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0
	Deciduous Orchard	35.0	0.0	0.0	0.0	35.0	0.0	0.0	0.0	35.0	0.0	0.0	0.0
	Small Grain	71.0	0.0	0.0	0.0	71.6	0.0	0.0	0.0	67.9	0.0	0.0	0.0
	Grapes	56.0	0.0	0.0	0.0	56.0	0.0	0.0	0.0	56.0	0.0	0.0	0.0
	Cotton	242.1	0.0	0.0	-0.2	242.7	0.0	0.0	-0.1	235.5	0.0	0.0	0.0
	Subtropical Orchard	1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0
	Subtotal	500.1	0.0	0.0	-0.1	501.7	0.0	0.0	0.0	565.9	0.0	0.0	0.0
16	Pasture	5.2	0.0	0.0	0.0	6.3	-0.2	-0.2	-0.1	6.1	0.0	0.0	0.0
	Alfalfa	5.1	0.0	0.0	0.0	5.2	-0.1	-0.1	-0.1	5.1	0.0	0.0	0.0
	Other Field Crops	6.1	0.0	0.0	0.0	6.1	-0.1	-0.1	-0.1	6.0	0.0	0.0	0.0
	Truck Crops	5.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0
	Deciduous Orchard	16.0	0.0	0.0	0.0	16.0	0.0	0.0	0.0	16.0	0.0	0.0	0.0
	Small Grain	4.0	0.0	0.0	0.0	4.1	0.0	0.0	0.0	4.0	0.0	0.0	0.0
	Grapes	55.0	0.0	0.0	0.0	55.0	0.0	0.0	0.0	55.0	0.0	0.0	0.0
	Cotton	5.0	0.0	0.0	0.0	5.1	0.0	0.0	0.0	5.0	0.0	0.0	0.0
	Subtropical Orchard	9.0	0.0	0.0	0.0	9.0	0.0	0.0	0.0	9.0	0.0	0.0	0.0
	Subtotal*	111.4	-0.1	-0.1	0.0	111.8	-0.4	-0.4	-0.4	111.3	-0.1	-0.1	-0.1

TABLE 17 INDICATED ACREAGE BY SUBREGION

CVPM Subregion	Crop Category	Preferred Alternative Average	Changes Compared to Average PA: Average (Followed by Average)	Changes Compared to Average PA: Wet (Followed by Average)	Changes Compared to Average PA: Dry (Followed by Average)	Preferred Alternative Wet	Changes Compared to Wet PA: Average (Followed by Wet)	Changes Compared to Wet PA: Wet (Followed by Wet)	Changes Compared to Wet PA: Dry (Followed by Wet)	Preferred Alternative Dry	Changes Compared to Dry PA: Average (Followed by Dry)	Changes Compared to Dry PA: Wet (Followed by Dry)	Changes Compared to Dry PA: Dry (Followed by Dry)
17	Pasture	3.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	2.9	0.0	0.0	0.0
	Alfalfa	5.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0
	Sugar Beets	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
	Other Field Crops	8.0	0.0	0.0	0.0	8.0	0.0	0.0	0.0	7.1	0.0	0.0	0.0
	Truck Crops	10.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0
	Tomatoes	1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0
	Deciduous Orchard	73.0	0.0	0.0	0.0	73.0	0.0	0.0	0.0	73.0	0.0	0.0	0.0
	Small Grain	5.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	5.3	0.0	0.0	0.0
	Grapes	109.0	0.0	0.0	0.0	109.0	0.0	0.0	0.0	109.0	0.0	0.0	0.0
	Cotton	10.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0	8.7	0.0	0.0	0.0
	Subtropical Orchard	35.0	0.0	0.0	0.0	35.0	0.0	0.0	0.0	35.0	0.0	0.0	0.0
	Subtotal	250.1	0.0	0.0	0.0	250.3	0.0	0.0	0.0	255.3	0.0	0.0	0.0
18	Pasture	4.0	0.0	0.0	0.0	4.1	0.0	0.0	0.0	3.7	0.0	0.0	0.0
	Alfalfa	62.2	0.0	0.0	0.1	62.8	-0.3	-0.3	-0.2	59.0	0.0	0.0	0.0
	Sugar Beets	1.9	0.0	0.0	0.0	1.9	0.0	0.0	0.0	1.9	0.0	0.0	0.0
	Other Field Crops	78.1	0.0	0.0	-0.1	78.5	-0.2	-0.2	-0.2	75.3	0.0	0.0	0.0
	Truck Crops	13.0	0.0	0.0	0.0	13.0	0.0	0.0	0.0	13.0	0.0	0.0	0.0
	Tomatoes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Deciduous Orchard	59.0	0.0	0.0	0.0	59.0	0.0	0.0	0.0	59.0	0.0	0.0	0.0
	Small Grain	41.0	0.0	0.0	0.0	41.4	-0.1	-0.1	-0.1	38.8	0.1	0.1	0.1
	Grapes	56.0	0.0	0.0	0.0	56.0	0.0	0.0	0.0	56.0	0.0	0.0	0.0
	Cotton	170.3	0.0	0.0	-0.1	171.2	-0.5	-0.5	-0.5	163.7	0.0	0.0	0.1
	Subtropical Orchard	97.0	0.0	0.0	0.0	97.0	0.0	0.0	0.0	97.0	0.0	0.0	0.0
	Subtotal	592.5	0.0	0.0	-0.1	594.9	-1.2	-1.2	-1.2	577.2	0.1	0.1	0.1
19	Pasture	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Alfalfa	25.8	0.0	0.0	0.0	25.8	0.0	0.0	0.0	25.2	0.0	0.0	0.0
	Sugar Beets	4.9	0.0	0.0	0.0	5.0	0.0	0.0	0.0	4.9	0.0	0.0	0.0
	Other Field Crops	6.7	0.0	0.0	0.0	6.7	0.0	0.0	0.0	6.7	0.0	0.0	0.0
	Truck Crops	24.0	0.0	0.0	0.0	24.0	0.0	0.0	0.0	24.0	0.0	0.0	0.0
	Tomatoes	1.7	0.0	0.0	0.0	1.7	0.0	0.0	0.0	1.7	0.0	0.0	0.0
	Deciduous Orchard	50.9	0.0	0.0	0.0	50.9	0.0	0.0	0.0	50.9	0.0	0.0	0.0
	Small Grain	7.6	0.0	0.0	0.0	7.6	0.0	0.0	0.0	7.2	0.0	0.0	0.0
	Grapes	10.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0
	Cotton	117.9	0.0	0.0	-0.1	117.8	0.0	0.0	0.0	115.1	0.0	0.0	0.0
	Subtropical Orchard	4.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0
	Subtotal	253.0	0.0	0.0	0.0	253.0	0.0	0.0	0.0	249.7	0.0	0.0	0.0

TABLE 17 IRRIGATED ACREAGE BY SUBREGION

CVPM Subregion	Crop Category	Preferred Alternative Average	Changes Compared to Average PA: Average	Wet	Dry	Preferred Alternative Wet	Changes Compared to Wet PA: Average	Wet	Dry	Preferred Alternative Dry	Changes Compared to Dry PA: Average	Wet	Dry
			Followed by Average				Followed by Wet				Followed by Dry		
20	Pasture	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Alfalfa	12.0	0.0	0.0	0.0	12.1	0.0	0.0	0.0	11.0	0.0	0.0	0.0
	Sugar Beets	0.5	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.5	0.0	0.0	0.0
	Other Field Crops	3.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	2.9	0.0	0.0	0.0
	Truck Crops	41.0	0.0	0.0	0.0	41.0	0.0	0.0	0.0	40.9	0.0	0.0	0.0
	Tomatoes	0.3	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.3	0.0	0.0	0.0
	Deciduous Orchard	52.0	0.0	0.0	0.0	52.0	0.0	0.0	0.0	52.0	0.0	0.0	0.0
	Small Grain	1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0
	Grapes	33.0	0.0	0.0	0.0	33.0	0.0	0.0	0.0	33.0	0.0	0.0	0.0
	Cotton	33.0	0.0	0.0	0.0	33.1	0.0	0.0	0.0	30.8	0.0	0.0	0.0
	Subtropical Orchard	27.0	0.0	0.0	0.0	27.0	0.0	0.0	0.0	27.0	0.0	0.0	0.0
	Subtotal	202.8	0.0	0.0	0.0	203.0	0.0	0.0	0.0	199.3	0.0	0.0	0.0
21	Pasture	0.8	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.8	0.0	0.0	0.0
	Alfalfa	27.6	0.0	0.0	0.0	27.7	0.0	0.0	0.0	27.3	0.0	0.0	0.0
	Sugar Beets	7.4	0.0	0.0	0.0	7.4	0.0	0.0	0.0	7.4	0.0	0.0	0.0
	Other Field Crops	16.1	0.0	0.0	0.0	16.0	0.0	0.0	0.0	16.0	0.0	0.0	0.0
	Rice	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Truck Crops	107.9	0.0	0.0	0.0	107.8	0.0	0.0	0.0	107.8	0.0	0.0	0.0
	Tomatoes	1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0
	Deciduous Orchard	25.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0
	Small Grain	1.8	0.0	0.0	0.0	1.9	0.0	0.0	0.0	1.8	0.0	0.0	0.0
	Grapes	36.9	0.0	0.0	0.0	36.9	0.0	0.0	0.0	36.9	0.0	0.0	0.0
	Cotton	120.8	0.0	0.0	-0.1	120.8	0.0	0.0	0.0	119.3	0.0	0.0	0.0
	Subtropical Orchard	14.0	0.0	0.0	0.0	14.0	0.0	0.0	0.0	14.0	0.0	0.0	0.0
	Subtotal	359.2	0.0	0.0	0.0	359.2	0.0	0.0	0.0	357.2	0.0	0.0	0.0

NOTES:

1. All acreage values in thousands.
2. A negative value represents a lower acreage in an alternative than in the Preferred Alternative.
3. Not all 12 crops are grown in all subregions.
4. Subregions 3 and 3B should be added together to get the complete subregion 3. 3B represents the area within this subregion served by the Tehama Colusa Canal.

TABLE 18 VALUE OF PRODUCTION BY SUBREGION (Million $)

CVPM Subregion	Crop Category	Preferred Alternative Average	Changes Compared to Average PA			Preferred Alternative Wet	Changes Compared to Wet PA			Preferred Alternative Dry	Changes Compared to Dry PA		
			Average	Wet	Dry		Average	Wet	Dry		Average	Wet	Dry
			Followed by Average				Followed by Wet				Followed by Dry		
1	Pasture	2.7	-0.2	0.0	0.0	2.6	-0.2	-0.2	-0.2	2.6	-0.3	-0.3	-0.3
	Alfalfa	0.5	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.5	0.0	0.0	0.0
	Other Field Crops	0.5	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.5	0.0	0.0	0.0
	Deciduous Orchard	4.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0
	Small Grain	0.7	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.7	0.0	0.0	0.0
	Subtotal	8.4	-0.2	-0.1	0.0	8.3	-0.3	-0.3	-0.3	8.3	-0.3	-0.3	-0.3
2	Pasture	4.9	0.0	0.0	-0.5	4.9	0.0	0.0	-0.5	4.8	0.0	0.0	0.0
	Alfalfa	5.1	0.0	0.0	-0.2	5.1	0.0	0.0	-0.3	5.0	0.0	0.0	0.0
	Sugar Beets	2.9	0.0	0.0	0.0	2.9	0.0	0.0	0.0	2.9	0.0	0.0	0.0
	Other Field Crops	7.8	0.0	0.0	-0.2	7.8	0.0	0.0	-0.3	7.7	0.0	0.0	0.0
	Rice	3.8	0.0	0.0	-0.1	3.8	0.0	0.0	-0.3	3.8	0.0	0.0	0.0
	Truck Crops	55.1	0.0	0.0	-0.1	55.1	0.0	0.0	-0.1	56.1	0.0	0.0	0.0
	Deciduous Orchard	91.3	0.0	0.0	-0.1	91.3	0.0	0.0	0.0	91.3	0.0	0.0	0.0
	Small Grain	4.0	0.0	0.0	-0.1	3.9	0.0	0.0	-0.2	3.9	0.0	0.0	0.0
	Subtropical Orchard	14.6	0.0	0.0	0.0	14.6	0.0	0.0	0.0	14.6	0.0	0.0	0.0
	Subtotal	189.5	0.0	0.0	-1.3	189.4	0.0	0.0	-2.1	189.1	0.0	0.0	0.0
3	Pasture	1.1	0.0	0.0	0.0	1.1	0.0	0.0	0.0	1.1	0.0	0.0	0.0
	Alfalfa	9.7	0.0	0.0	0.0	9.7	0.0	0.0	0.0	9.8	0.0	0.0	0.0
	Sugar Beets	7.3	0.0	0.0	0.0	7.3	0.0	0.0	0.0	7.2	0.0	0.0	0.0
	Other Field Crops	7.1	0.0	0.0	0.0	7.1	0.0	0.0	0.0	7.0	0.0	0.0	0.0
	Rice	118.1	0.0	0.0	0.0	118.6	0.0	0.0	0.0	118.2	0.0	0.0	0.0
	Truck Crops	89.6	0.0	0.0	0.0	89.6	0.0	0.0	0.0	89.6	0.0	0.0	0.0
	Tomatoes	37.9	0.0	0.0	0.0	38.0	0.0	0.0	0.0	37.9	0.0	0.0	0.0
	Deciduous Orchard	18.9	0.0	0.0	0.0	18.9	0.0	0.0	0.0	18.9	0.0	0.0	0.0
	Small Grain	8.7	0.0	0.0	0.0	8.7	0.0	0.0	0.0	8.5	0.0	0.0	0.0
	Subtotal	295.4	0.0	0.0	0.0	299.0	0.0	0.0	0.0	295.9	0.0	0.0	0.0
3B	Pasture	0.9	0.0	0.0	-0.8	0.8	0.0	0.0	-0.9	0.8	0.0	0.0	0.0
	Alfalfa	5.4	0.0	0.0	-5.4	5.4	0.0	0.0	-1.4	4.1	0.0	0.0	0.0
	Sugar Beets	4.1	0.0	0.0	-3.9	4.1	0.0	0.0	-2.0	3.6	0.0	0.0	0.0
	Other Field Crops	5.1	0.0	0.0	-5.0	5.7	0.0	0.0	-5.1	4.7	0.0	0.0	0.0
	Rice	9.2	0.0	0.0	-9.2	9.2	0.0	0.0	-9.2	5.2	0.0	0.0	0.0
	Truck Crops	2.0	0.0	0.0	-0.2	2.0	0.0	0.0	-0.1	2.0	0.0	0.0	0.0
	Tomatoes	8.9	0.0	0.0	-8.6	8.9	0.0	0.0	-2.7	8.4	0.0	0.0	0.0
	Deciduous Orchard	28.6	0.0	0.0	-3.5	28.6	0.0	0.0	0.0	28.6	0.0	0.0	0.0
	Small Grain	2.4	0.0	0.0	-2.4	2.4	0.0	0.0	-2.4	1.8	0.0	0.0	0.0
	Subtropical Orchard	1.4	0.0	0.0	-0.1	1.4	0.0	0.0	0.0	1.4	0.0	0.0	0.0
	Subtotal	57.9	0.0	0.0	-38.2	60.1	0.1	0.1	-23.1	60.5	0.0	0.0	0.0

TABLE 18 VALUE OF PRODUCTION BY SUBREGION (Million $)

CVPM Subregion	Crop Category	Preferred Alternative Average	Changes Compared to Average PA			Preferred Alternative Wet	Changes Compared to Wet PA			Preferred Alternative Dry	Changes Compared to Dry PA		
			Average	Wet	Dry		Average	Wet	Dry		Average	Wet	Dry
			Followed by Average				Followed by Wet				Followed by Dry		
4	Pasture	0.2	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0	0.0
	Alfalfa	3.6	0.0	0.0	0.0	3.7	0.0	0.0	0.0	3.6	0.0	0.0	0.0
	Sugar Beets	7.5	0.0	0.0	0.0	7.5	0.0	0.0	0.0	7.5	0.0	0.0	0.0
	Other Field Crops	18.0	0.0	0.0	0.0	18.1	0.0	0.0	0.0	17.9	0.0	0.0	0.0
	Rice	74.6	0.0	0.0	0.0	74.6	0.0	0.0	0.0	74.1	0.0	0.0	0.0
	Truck Crops	60.8	0.0	0.0	0.0	60.8	0.0	0.0	0.0	60.6	0.0	0.0	0.0
	Tomatoes	49.9	0.0	0.0	0.0	49.9	0.0	0.0	0.0	49.9	0.0	0.0	0.0
	Deciduous Orchard	32.5	0.0	0.0	0.0	32.5	0.0	0.0	0.0	32.5	0.0	0.0	0.0
	Small Grain	13.5	0.0	0.0	0.0	13.5	0.0	0.0	0.0	13.3	0.0	0.0	0.0
	Subtotal	260.7	0.0	0.0	0.0	260.9	0.0	0.0	0.0	259.7	0.0	0.0	0.0
5	Pasture	3.1	0.0	0.0	0.0	3.1	0.0	0.0	0.0	3.0	0.0	0.0	0.0
	Alfalfa	2.6	0.0	0.0	0.0	2.6	0.0	0.0	0.0	2.6	0.0	0.0	0.0
	Sugar Beets	1.5	0.0	0.0	0.0	1.5	0.0	0.0	0.0	1.5	0.0	0.0	0.0
	Other Field Crops	6.9	0.0	0.0	0.0	6.9	0.0	0.0	0.0	6.9	0.0	0.0	0.0
	Rice	141.2	0.0	0.0	0.0	141.7	-0.1	-0.1	-0.1	140.5	-0.1	-0.1	-0.1
	Truck Crops	23.5	0.0	0.0	0.0	23.5	0.0	0.0	0.0	23.5	0.0	0.0	0.0
	Tomatoes	2.3	0.0	0.0	0.0	2.3	0.0	0.0	0.0	2.3	0.0	0.0	0.0
	Deciduous Orchard	129.1	0.0	0.0	0.0	129.1	0.0	0.0	0.0	129.1	0.0	0.0	0.0
	Small Grain	6.0	0.0	0.0	0.0	6.3	0.0	0.0	0.0	6.2	0.0	0.0	0.0
	Subtropical Orchard	3.6	0.0	0.0	0.0	3.6	0.0	0.0	0.0	3.6	0.0	0.0	0.0
	Subtotal	320.0	0.0	0.0	0.0	320.5	-0.1	-0.1	-0.1	319.1	-0.1	-0.1	-0.1
6	Pasture	1.7	0.0	0.0	0.0	1.8	-0.1	-0.1	-0.1	1.7	0.0	0.0	0.0
	Alfalfa	16.8	0.0	0.0	0.0	17.0	-0.2	-0.2	-0.2	16.8	0.0	0.0	0.0
	Sugar Beets	16.2	0.0	0.0	0.0	16.3	-0.1	-0.1	0.0	16.2	0.0	0.0	0.0
	Other Field Crops	28.9	0.0	0.0	0.0	29.2	-0.2	-0.2	-0.2	28.8	0.0	0.0	0.0
	Rice	10.6	0.0	0.0	0.0	10.8	-0.2	-0.2	-0.2	10.5	0.0	0.0	0.0
	Truck Crops	14.1	0.0	0.0	0.0	14.1	0.0	0.0	0.0	14.1	0.0	0.0	0.0
	Tomatoes	70.0	0.0	0.0	0.0	70.2	-0.1	-0.1	-0.1	70.0	0.0	0.0	0.0
	Deciduous Orchard	26.2	0.0	0.0	0.0	26.2	0.0	0.0	0.0	26.2	0.0	0.0	0.0
	Small Grain	21.9	0.0	0.0	0.0	22.0	-0.1	-0.1	-0.1	21.8	0.1	0.1	0.1
	Grapes	13.8	0.0	0.0	0.0	13.8	0.0	0.0	0.0	13.8	0.0	0.0	0.0
	Subtotal	220.0	0.0	0.0	0.0	221.2	-0.9	-0.9	-0.9	219.6	0.0	0.0	0.0
7	Pasture	2.1	0.0	0.0	0.0	2.1	0.0	0.0	0.0	2.1	0.0	0.0	0.0
	Alfalfa	1.8	0.0	0.0	0.0	1.8	0.0	0.0	0.0	1.8	0.0	0.0	0.0
	Sugar Beets	1.9	0.0	0.0	0.0	1.9	0.0	0.0	0.0	1.8	0.0	0.0	0.0
	Other Field Crops	1.8	0.0	0.0	0.0	1.8	0.0	0.0	0.0	1.8	0.0	0.0	0.0
	Rice	39.6	0.0	0.0	0.0	39.7	0.0	0.0	0.0	39.3	0.0	0.0	0.0
	Truck Crops	1.2	0.0	0.0	0.0	1.2	0.0	0.0	0.0	1.2	0.0	0.0	0.0
	Tomatoes	0.8	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.8	0.0	0.0	0.0
	Deciduous Orchard	9.5	0.0	0.0	0.0	9.5	0.0	0.0	0.0	9.5	0.0	0.0	0.0
	Small Grain	3.2	0.0	0.0	0.0	3.2	0.0	0.0	0.0	3.1	0.0	0.0	0.0
	Grapes	0.3	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.3	0.0	0.0	0.0
	Subtotal	62.3	0.0	0.0	0.0	62.4	0.0	0.0	0.0	61.9	0.0	0.0	0.0

TABLE 18 VALUE OF PRODUCTION BY SUBREGION (Million $)

CVPM Subregion	Crop Category	Preferred Alternative Average	Changes Compared to Average PA			Preferred Alternative Wet	Changes Compared to Wet PA			Preferred Alternative Dry	Changes Compared to Dry PA		
			Average	Wet	Dry		Average	Wet	Dry		Average	Wet	Dry
			Followed by Average				Followed by Wet				Followed by Dry		
	Pasture	6.9	0.0	0.0	0.0	6.9	0.0	0.0	0.0	6.8	0.0	0.0	0.0
	Alfalfa	7.2	0.0	0.0	0.0	7.2	0.0	0.0	0.0	7.2	0.0	0.0	0.0
	Sugar Beets	9.8	0.0	0.0	0.0	9.8	0.0	0.0	0.0	9.8	0.0	0.0	0.0
	Other Field Crops	20.6	0.0	0.0	0.0	20.6	0.0	0.0	0.0	20.7	0.0	0.0	0.0
	Rice	3.7	0.0	0.0	0.0	3.7	0.0	0.0	0.0	3.7	0.0	0.0	0.0
8	Truck Crops	70.9	0.0	0.0	0.0	70.9	0.0	0.0	0.0	70.9	0.0	0.0	0.0
	Tomatoes	19.8	0.0	0.0	0.0	19.8	0.0	0.0	0.0	19.7	0.0	0.0	0.0
	Deciduous Orchard	49.9	0.0	0.0	0.0	49.9	0.0	0.0	0.0	49.9	0.0	0.0	0.0
	Small Grain	9.2	0.0	0.0	0.0	9.2	0.0	0.0	0.0	9.9	0.0	0.0	0.0
	Grapes	101.7	0.0	0.0	0.0	101.7	0.0	0.0	0.0	101.7	0.0	0.0	0.0
	Subtotal	299.9	0.0	0.0	0.0	300.0	0.0	0.0	0.0	299.3	0.0	0.0	0.0
	Pasture	3.6	0.0	0.0	0.0	3.6	-0.1	-0.1	-0.1	3.4	0.1	0.1	0.1
	Alfalfa	25.6	-0.1	-0.1	0.0	25.7	-0.1	-0.1	-0.1	25.2	0.2	0.2	0.2
	Sugar Beets	22.0	0.0	0.0	0.0	22.0	0.0	0.0	0.0	21.9	0.1	0.1	0.1
	Other Field Crops	55.9	-0.1	-0.1	-0.1	56.0	-0.2	-0.2	-0.2	55.3	0.3	0.3	0.3
	Rice	0.7	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.7	0.0	0.0	0.0
9	Truck Crops	190.8	0.0	0.0	0.0	190.8	0.0	0.0	0.0	190.6	0.1	0.1	0.1
	Tomatoes	64.9	0.0	0.0	0.0	65.0	-0.1	-0.1	0.0	64.8	0.1	0.1	0.1
	Deciduous Orchard	22.7	0.0	0.0	0.0	22.7	0.0	0.0	0.0	22.7	0.0	0.0	0.0
	Small Grain	30.7	0.0	0.0	0.0	30.8	-0.1	-0.1	-0.1	29.7	0.3	0.3	0.3
	Grapes	10.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0
	Subtotal	426.8	-0.3	-0.3	-0.1	427.2	-0.8	-0.8	-0.8	424.2	1.2	1.2	1.2
	Pasture	3.1	0.0	0.0	0.0	3.1	0.0	0.0	0.0	3.1	0.0	0.0	0.0
	Alfalfa	23.6	0.0	0.0	-0.2	23.6	-0.1	0.0	-0.1	23.6	0.0	0.0	0.0
	Sugar Beets	12.2	0.0	0.0	0.0	12.2	0.0	0.0	0.0	12.2	0.0	0.0	0.0
	Other Field Crops	31.0	0.0	0.0	-0.1	31.0	0.0	0.0	0.0	31.0	0.0	0.0	0.0
	Rice	2.3	0.0	0.0	0.0	2.3	0.0	0.0	0.0	2.3	0.0	0.0	0.0
	Truck Crops	718.0	0.0	0.0	0.0	717.9	0.1	0.0	0.1	718.1	0.0	0.0	0.0
10	Tomatoes	60.1	0.0	0.0	0.0	60.1	0.0	0.0	0.0	60.1	0.0	0.0	0.0
	Deciduous Orchard	52.4	0.0	0.0	0.0	52.4	0.0	0.0	0.0	52.4	0.0	0.0	0.0
	Small Grain	7.6	0.0	0.0	0.0	7.5	0.1	0.0	0.1	7.6	0.0	0.0	0.0
	Grapes	1.9	0.0	0.0	0.0	1.9	0.0	0.0	0.0	1.9	0.0	0.0	0.0
	Cotton	102.6	0.0	0.0	-0.5	102.7	-0.1	0.0	-0.1	102.6	0.0	0.0	0.0
	Subtropical Orchard	0.4	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.4	0.0	0.0	0.0
	Subtotal	1015.1	0.0	0.0	-0.0	1015.1	0.0	0.0	0.0	1015.2	0.0	0.0	0.0

TABLE 15 VALUE OF PRODUCTION BY SUBREGION (Million $)

CVPM Subregion	Crop Category	Preferred Alternative Average	Changes Compared to Average PA: Average	Wet	Dry	Preferred Alternative Wet	Changes Compared to Wet PA: Average	Wet	Dry	Preferred Alternative Dry	Changes Compared to Dry PA: Average	Wet	Dry
			Followed by Average				Followed by Wet				Followed by Dry		
11	Pasture	10.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0	9.9	0.0	0.0	0.0
	Alfalfa	4.6	0.0	0.0	0.0	4.8	0.0	0.0	0.0	4.8	0.0	0.0	0.0
	Sugar Beets	0.3	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.3	0.0	0.0	0.0
	Other Field Crops	11.5	0.0	0.0	0.0	11.5	0.0	0.0	0.0	11.4	0.0	0.0	0.0
	Rice	3.5	0.0	0.0	0.0	3.6	0.0	0.0	0.0	3.5	0.0	0.0	0.0
	Truck Crops	40.1	0.0	0.0	0.0	40.1	0.0	0.0	0.0	40.0	0.0	0.0	0.0
	Tomatoes	1.2	0.0	0.0	0.0	1.2	0.0	0.0	0.0	1.2	0.0	0.0	0.0
	Deciduous Orchard	115.8	0.0	0.0	0.0	115.8	0.0	0.0	0.0	115.8	0.0	0.0	0.0
	Small Grain	1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0
	Grapes	19.4	0.0	0.0	0.0	19.4	0.0	0.0	0.0	19.4	0.0	0.0	0.0
	Subtotal	207.6	0.0	0.0	0.0	207.6	0.0	0.0	0.0	207.6	0.0	0.0	0.0
12	Pasture	4.2	0.0	0.0	0.0	4.2	0.0	0.0	0.0	4.2	0.0	0.0	0.0
	Alfalfa	10.5	0.0	0.0	0.0	10.6	0.0	0.0	0.0	10.5	0.0	0.0	0.0
	Sugar Beets	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
	Other Field Crops	26.5	0.0	0.0	0.0	26.4	0.0	0.0	0.0	26.3	0.0	0.0	0.0
	Truck Crops	19.1	0.0	0.0	0.0	19.1	0.0	0.0	0.0	19.1	0.0	0.0	0.0
	Deciduous Orchard	134.7	0.0	0.0	0.0	134.7	0.0	0.0	0.0	134.7	0.0	0.0	0.0
	Small Grain	5.4	0.0	0.0	0.0	5.4	0.0	0.0	0.0	5.3	0.0	0.0	0.0
	Grapes	28.2	0.0	0.0	0.0	28.2	0.0	0.0	0.0	28.2	0.0	0.0	0.0
	Cotton	1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0
	Subtropical Orchard	3.5	0.0	0.0	0.0	3.5	0.0	0.0	0.0	3.5	0.0	0.0	0.0
	Subtotal	231.2	0.0	0.0	0.0	230.9	0.0	0.0	0.0	230.8	0.0	0.0	0.0
13	Pasture	9.2	0.0	0.0	0.0	9.3	-0.1	-0.1	-0.1	9.2	-0.1	-0.1	-0.1
	Alfalfa	24.2	0.0	0.0	0.0	24.3	-0.1	-0.1	-0.1	24.2	-0.1	-0.1	-0.1
	Sugar Beets	4.4	0.0	0.0	0.0	4.4	0.0	0.0	0.0	4.4	0.0	0.0	0.0
	Other Field Crops	35.2	0.0	0.0	0.0	35.6	-0.1	-0.1	-0.1	35.1	-0.1	-0.1	-0.1
	Rice	3.1	0.0	0.0	0.0	3.1	0.0	0.0	0.0	3.1	0.0	0.0	0.0
	Truck Crops	114.4	0.0	0.0	0.0	116.4	0.0	0.0	0.0	114.4	0.0	0.0	0.0
	Tomatoes	10.5	0.0	0.0	0.0	10.5	0.0	0.0	0.0	10.5	0.0	0.0	0.0
	Deciduous Orchard	193.4	0.0	0.0	0.0	193.6	0.0	0.0	0.0	193.4	0.0	0.0	0.0
	Small Grain	25.3	0.0	0.0	0.0	25.6	0.0	0.0	-0.1	25.0	0.0	0.0	0.0
	Grapes	184.9	0.0	0.0	0.0	184.9	0.0	0.0	0.0	184.9	0.0	0.0	0.0
	Cotton	71.4	0.0	0.0	0.1	71.8	-0.2	-0.2	-0.3	71.2	-0.2	-0.2	-0.2
	Subtropical Orchard	34.7	0.0	0.0	0.0	34.7	0.0	0.0	0.0	34.7	0.0	0.0	0.0
	Subtotal	710.6	0.0	0.0	0.0	711.5	-0.5	-0.5	-0.7	709.9	-0.5	-0.5	-0.6

TABLE 18 VALUE OF PRODUCTION BY SUBREGION (Million $)

CVPM Subregion	Crop Category	Preferred Alternative Average	Changes Compared to Average PA: Average	Wet	Dry	Preferred Alternative Wet	Changes Compared to Wet PA: Average	Wet	Dry	Preferred Alternative Dry	Changes Compared to Dry PA: Average	Wet	Dry
			Followed by Average				Followed by Wet				Followed by Dry		
14	Pasture	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Alfalfa	8.6	0.0	0.0	0.0	8.6	0.0	0.0	0.0	8.2	0.0	0.0	0.0
	Sugar Beets	3.9	0.0	0.0	0.0	4.0	0.0	0.0	0.0	3.9	0.0	0.0	0.0
	Other Field Crops	11.0	0.0	0.0	0.0	10.9	0.0	0.0	0.0	10.7	0.0	0.0	0.0
	Truck Crops	817.9	0.0	0.0	0.0	817.8	0.0	0.0	0.0	816.9	0.0	0.0	0.0
	Tomatoes	114.8	0.0	0.0	0.1	114.8	0.0	0.0	0.0	113.3	0.0	0.0	0.0
	Deciduous Orchard	38.5	0.0	0.0	0.0	38.5	0.0	0.0	0.0	38.5	0.0	0.0	0.0
	Small Grain	5.2	0.0	0.0	0.0	5.2	0.0	0.0	0.0	4.9	0.0	0.0	0.0
	Grapes	15.1	0.0	0.0	0.0	15.1	0.0	0.0	0.0	15.1	0.0	0.0	0.0
	Cotton	234.6	0.0	0.0	-0.1	234.7	0.0	0.0	0.0	225.8	0.0	0.0	0.0
	Subtropical Orchard	3.7	0.0	0.0	0.0	3.7	0.0	0.0	0.0	3.7	0.0	0.0	0.0
	Subtotal	1253.1	0.0	0.0	0.0	1253.1	0.0	0.0	0.0	1241.1	0.0	0.0	0.0
15	Pasture	0.9	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.9	0.0	0.0	0.0
	Alfalfa	51.3	0.0	0.0	0.1	51.4	0.0	0.0	0.0	49.7	0.0	0.0	0.0
	Sugar Beets	4.1	0.0	0.0	0.0	4.1	0.0	0.0	0.0	4.0	0.0	0.0	0.0
	Other Field Crops	51.2	0.0	0.0	0.0	51.3	0.0	0.0	0.0	50.2	0.0	0.0	0.0
	Rice	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
	Truck Crops	72.0	0.0	0.0	0.0	72.0	0.0	0.0	0.0	71.9	0.0	0.0	0.0
	Tomatoes	3.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0
	Deciduous Orchard	58.7	0.0	0.0	0.0	58.7	0.0	0.0	0.0	58.7	0.0	0.0	0.0
	Small Grain	41.6	0.0	0.0	0.0	41.9	0.0	0.0	0.0	39.7	0.0	0.0	0.0
	Grapes	121.7	0.0	0.0	0.0	121.7	0.0	0.0	0.0	121.7	0.0	0.0	0.0
	Cotton	275.0	0.0	0.0	-0.2	275.7	0.0	0.0	-0.7	267.5	0.0	0.0	0.0
	Subtropical Orchard	3.7	0.0	0.0	0.0	3.7	0.0	0.0	0.0	3.7	0.0	0.0	0.0
	Subtotal	603.2	0.0	0.0	-0.1	604.5	0.0	0.0	0.0	575.1	0.0	0.0	0.0
16	Pasture	1.4	0.0	0.0	0.0	1.5	0.0	0.0	0.0	1.4	0.0	0.0	0.0
	Alfalfa	3.1	0.0	0.0	0.0	3.2	0.0	0.0	0.0	3.1	0.0	0.0	0.0
	Other Field Crops	3.6	0.0	0.0	0.0	3.6	0.0	0.0	0.0	3.6	0.0	0.0	0.0
	Truck Crops	30.0	0.0	0.0	0.0	30.0	0.0	0.0	0.0	30.0	0.0	0.0	0.0
	Deciduous Orchard	24.7	0.0	0.0	0.0	24.7	0.0	0.0	0.0	24.7	0.0	0.0	0.0
	Small Grain	2.4	0.0	0.0	0.0	2.4	0.0	0.0	0.0	2.3	0.0	0.0	0.0
	Grapes	119.6	0.0	0.0	0.0	119.6	0.0	0.0	0.0	119.6	0.0	0.0	0.0
	Cotton	5.7	0.0	0.0	0.0	5.8	-0.1	-0.1	-0.1	5.7	0.0	0.0	0.0
	Subtropical Orchard	33.7	0.0	0.0	0.0	33.7	0.0	0.0	0.0	33.7	0.0	0.0	0.0
	Subtotal	224.3	0.0	0.0	0.0	224.5	-0.2	-0.2	-0.2	224.2	0.0	0.0	0.0

TABLE 18 VALUE OF PRODUCTION BY SUBREGION (Million $)

CVPM Subregion	Crop Category	Preferred Alternative Average	Changes Compared to Average PA			Preferred Alternative Wet	Changes Compared to Wet PA			Preferred Alternative Dry	Changes Compared to Dry PA		
			Average	Wet	Dry		Average	Wet	Dry		Average	Wet	Dry
			Followed by Average				Followed by Wet				Followed by Dry		
17	Pasture	0.7	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.5	0.0	0.0	0.0
	Alfalfa	3.1	0.0	0.0	0.0	3.1	0.0	0.0	0.0	2.5	0.0	0.0	0.0
	Sugar Beets	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
	Other Field Crops	4.8	0.0	0.0	0.0	4.8	0.0	0.0	0.0	4.2	0.0	0.0	0.0
	Truck Crops	60.0	0.0	0.0	0.0	60.0	0.0	0.0	0.0	59.7	0.0	0.0	0.0
	Tomatoes	1.5	0.0	0.0	0.0	1.5	0.0	0.0	0.0	1.4	0.0	0.0	0.0
	Deciduous Orchard	112.8	0.0	0.0	0.0	112.8	0.0	0.0	0.0	112.8	0.0	0.0	0.0
	Small Grain	3.5	0.0	0.0	0.0	3.5	0.0	0.0	0.0	3.1	0.0	0.0	0.0
	Grapes	236.9	0.0	0.0	0.0	236.9	0.0	0.0	0.0	236.9	0.0	0.0	0.0
	Cotton	11.4	0.0	0.0	0.0	11.4	0.0	0.0	0.0	9.9	0.0	0.0	0.0
	Subtropical Orchard	131.0	0.0	0.0	0.0	131.0	0.0	0.0	0.0	131.0	0.0	0.0	0.0
	Subtotal	565.7	0.0	0.0	0.0	565.7	0.0	0.0	0.0	562.0	0.0	0.0	0.0
18	Pasture	0.9	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.8	0.0	0.0	0.0
	Alfalfa	38.4	0.0	0.0	0.1	38.7	-0.2	-0.2	-0.2	36.4	0.0	0.0	0.0
	Sugar Beets	1.6	0.0	0.0	0.0	1.5	0.0	0.0	0.0	1.5	0.0	0.0	0.0
	Other Field Crops	45.5	0.0	0.0	0.0	45.7	-0.1	-0.1	-0.1	44.8	0.0	0.0	0.0
	Truck Crops	78.0	0.0	0.0	0.0	78.0	0.0	0.0	0.0	77.9	0.0	0.0	0.0
	Tomatoes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Deciduous Orchard	106.8	0.0	0.0	0.0	105.8	0.0	0.0	0.0	106.6	0.0	0.0	0.0
	Small Grain	24.0	0.0	0.0	0.0	24.3	-0.1	-0.1	-0.1	22.7	0.1	0.1	0.1
	Grapes	121.7	0.0	0.0	0.0	121.7	0.0	0.0	0.0	121.7	0.0	0.0	0.0
	Cotton	193.5	0.0	0.0	-0.1	194.6	-0.5	-0.6	-0.6	188.0	0.0	0.0	0.0
	Subtropical Orchard	360.1	0.0	0.0	0.0	360.1	0.0	0.0	0.0	360.1	0.0	0.0	0.0
	Subtotal	974.2	0.0	0.0	-0.1	975.1	-1.0	-1.0	-1.0	961.5	0.1	0.1	0.1
19	Pasture	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Alfalfa	15.7	0.0	0.0	0.0	15.7	0.0	0.0	0.0	15.3	0.0	0.0	0.0
	Sugar Beets	4.3	0.0	0.0	0.0	4.3	0.0	0.0	0.0	4.2	0.0	0.0	0.0
	Other Field Crops	4.5	0.0	0.0	0.0	4.5	0.0	0.0	0.0	4.5	0.0	0.0	0.0
	Truck Crops	147.1	0.0	0.0	0.0	147.0	0.0	0.0	0.0	147.0	0.0	0.0	0.0
	Tomatoes	2.7	0.0	0.0	0.0	2.7	0.0	0.0	0.0	2.7	0.0	0.0	0.0
	Deciduous Orchard	80.2	0.0	0.0	0.0	80.2	0.0	0.0	0.0	80.2	0.0	0.0	0.0
	Small Grain	3.6	0.0	0.0	0.0	3.5	0.0	0.0	0.0	3.5	0.0	0.0	0.0
	Grapes	33.0	0.0	0.0	0.0	33.0	0.0	0.0	0.0	33.0	0.0	0.0	0.0
	Cotton	125.2	0.0	0.0	-0.1	125.1	0.0	0.0	0.0	122.2	0.0	0.0	0.0
	Subtropical Orchard	17.1	0.0	0.0	0.0	17.1	0.0	0.0	0.0	17.1	0.0	0.0	0.0
	Subtotal	433.3	0.0	0.0	0.0	433.3	0.0	0.0	0.0	429.7	0.0	0.0	0.0

TABLE 18 VALUE OF PRODUCTION BY SUBREGION (Million $)

CVPM Subregion	Crop Category	Preferred Alternative Average	Changes Compared to Average PA: Average	Changes Compared to Average PA: Wet	Changes Compared to Average PA: Dry	Preferred Alternative Wet	Changes Compared to Wet PA: Average	Changes Compared to Wet PA: Wet	Changes Compared to Wet PA: Dry	Preferred Alternative Dry	Changes Compared to Dry PA: Average	Changes Compared to Dry PA: Wet	Changes Compared to Dry PA: Dry
			Followed by Average				Followed by Wet				Followed by Dry		
20	Pasture	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Alfalfa	7.3	0.0	0.0	0.0	7.3	0.0	0.0	0.0	6.7	0.0	0.0	0.0
	Sugar Beets	0.4	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.4	0.0	0.0	0.0
	Other Field Crops	2.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0
	Truck Crops	251.6	0.0	0.0	0.0	251.5	0.0	0.0	0.0	251.2	0.0	0.0	0.0
	Tomatoes	0.5	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.5	0.0	0.0	0.0
	Deciduous Orchard	81.8	0.0	0.0	0.0	81.8	0.0	0.0	0.0	81.6	0.0	0.0	0.0
	Small Grain	0.5	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.4	0.0	0.0	0.0
	Grapes	109.1	0.0	0.0	0.0	109.1	0.0	0.0	0.0	109.1	0.0	0.0	0.0
	Cotton	35.0	0.0	0.0	0.0	35.2	0.0	0.0	0.0	32.7	0.0	0.0	0.0
	Subregion Orchard	115.6	0.0	0.0	0.0	115.6	0.0	0.0	0.0	115.6	0.0	0.0	0.0
	Subtotal	609.9	0.0	0.0	0.0	664.1	0.0	0.0	0.0	609.4	0.0	0.0	0.0
21	Pasture	0.2	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0	0.0
	Alfalfa	16.9	0.0	0.0	0.0	16.9	0.0	0.0	0.0	16.6	0.0	0.0	0.0
	Sugar Beets	6.4	0.0	0.0	0.0	6.4	0.0	0.0	0.0	6.3	0.0	0.0	0.0
	Other Field Crops	10.9	0.0	0.0	0.0	10.9	0.0	0.0	0.0	10.8	0.0	0.0	0.0
	Rice	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Truck Crops	661.4	0.0	0.0	0.0	661.3	0.0	0.0	0.1	661.3	0.0	0.0	0.0
	Tomatoes	1.6	0.0	0.0	0.0	1.6	0.0	0.0	0.0	1.6	0.0	0.0	0.0
	Deciduous Orchard	39.3	0.0	0.0	0.0	39.3	0.0	0.0	0.0	39.3	0.0	0.0	0.0
	Small Grain	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Grapes	122.7	0.0	0.0	0.0	122.1	0.0	0.0	0.0	122.7	0.0	0.0	0.0
	Cotton	126.0	0.0	0.0	-0.1	125.9	0.0	0.0	0.0	126.7	0.0	0.0	0.0
	Subregion Orchard	59.9	0.0	0.0	0.0	59.9	0.0	0.0	0.0	59.9	0.0	0.0	0.0
	Subtotal	1047.6	0.0	0.0	0.0	1047.6	0.0	0.0	0.0	1045.7	0.0	0.0	0.0

NOTES

1. All values in millions of 1992 dollars
2. A negative value represents a lower gross revenue in an alternative than in the Preferred Alternative.
3. Not all 12 crops are grown in all subregions.
4. Subregions 3 and 39 should be added together to get the complete subregion 3. 39 represents the area within this subregion served by the Tehama Colusa Canal

TABLE 19 CHANGES IN NET REVENUE BY SUBREGION (Million $)

CVPM Subregion	Cause of Net Revenue Change	Change Compared to Average PA			Change Compared to Wet PA			Change Compared to Dry PA		
		Average	Wet	Dry	Average	Wet	Dry	Average	Wet	Dry
		Followed By Average			Followed By Wet			Followed By Dry		
1	Fallowed Land	-0.1	0.0	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
	Groundwater Pumping Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
	Irrigation Cost	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
	CVP Water Cost	0.3	0.2	0.1	0.4	0.4	0.4	0.4	0.4	0.4
	Higher Crop Prices	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Net Change	**0.1**	**0.0**	**0.0**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**
2	Fallowed Land	0.0	0.0	-0.3	0.0	0.0	-0.4	0.0	0.0	0.0
	Groundwater Pumping Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Irrigation Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	CVP Water Cost	-0.2	0.0	0.1	-0.6	-0.2	0.5	0.0	0.0	-0.1
	Higher Crop Prices	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
	Net Change	**-0.2**	**0.0**	**0.0**	**-0.6**	**-0.2**	**0.1**	**0.0**	**0.0**	**-0.1**
3	Fallowed Land	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Groundwater Pumping Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Irrigation Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	CVP Water Cost	0.0	0.0	0.0	-0.2	-0.2	-0.2	-0.3	-0.3	-0.3
	Higher Crop Prices	0.0	0.0	0.3	0.0	0.0	0.2	0.0	0.0	0.0
	Net Change	**0.0**	**0.0**	**0.3**	**-0.2**	**-0.2**	**0.0**	**-0.3**	**-0.3**	**-0.3**
39	Fallowed Land	0.0	0.0	-6.4	0.0	0.0	-3.8	0.0	0.0	0.0
	Groundwater Pumping Cost	0.0	0.0	0.0	1.4	1.4	-4.1	0.0	0.0	0.0
	Irrigation Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	CVP Water Cost	-0.4	1.4	3.7	-4.7	-1.2	4.2	0.2	0.2	-0.3
	Higher Crop Prices	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Net Change	**-0.4**	**1.4**	**-2.8**	**-3.3**	**0.2**	**-3.7**	**0.2**	**0.2**	**-0.3**
4	Fallowed Land	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Groundwater Pumping Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Irrigation Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	CVP Water Cost	0.0	0.0	0.0	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2
	Higher Crop Prices	0.0	0.0	0.3	0.0	0.0	0.1	0.0	0.0	0.0
	Net Change	**0.0**	**0.0**	**0.3**	**-0.1**	**-0.1**	**0.0**	**-0.2**	**-0.2**	**-0.2**

TABLE 19 CHANGES IN NET REVENUE BY SUBREGION (Million $)

CVPM Subregion	Cause of Net Revenue Change	Change Compared to Average PA			Change Compared to Wet PA			Change Compared to Dry PA		
		Average	Wet	Dry	Average	Wet	Dry	Average	Wet	Dry
		Followed By Average			Followed By Wet			Followed By Dry		
5	Fallowed Land	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Groundwater Pumping Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Irrigation Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	CVP Water Cost	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3
	Higher Crop Prices	0.0	0.0	0.3	0.0	0.0	0.1	0.0	0.0	0.0
	Net Change	**-0.3**	**-0.3**	**0.0**	**-0.3**	**-0.3**	**-0.2**	**-0.3**	**-0.3**	**-0.3**
6	Fallowed Land	0.0	0.0	0.0	-0.2	-0.2	-0.2	0.0	0.0	0.0
	Groundwater Pumping Cost	0.0	0.0	0.0	0.3	0.3	0.3	-0.1	-0.1	-0.1
	Irrigation Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	CVP Water Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Higher Crop Prices	0.0	0.0	0.4	0.0	0.0	0.2	0.0	0.0	0.0
	Net Change	**0.0**	**0.0**	**0.4**	**0.1**	**0.1**	**0.3**	**-0.1**	**-0.1**	**-0.1**
7	Fallowed Land	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Groundwater Pumping Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Irrigation Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	CVP Water Cost	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
	Higher Crop Prices	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0
	Net Change	**-0.1**	**-0.1**	**0.0**	**-0.1**	**-0.1**	**0.0**	**-0.1**	**-0.1**	**-0.1**
8	Fallowed Land	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Groundwater Pumping Cost	0.0	0.0	0.0	0.1	0.1	0.1	-0.1	-0.1	-0.1
	Irrigation Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	CVP Water Cost	-0.8	-0.5	-1.6	-2.0	-1.2	-2.8	-0.3	-0.3	-0.4
	Higher Crop Prices	0.0	0.0	0.2	0.0	0.0	0.1	0.0	0.0	0.0
	Net Change	**-0.8**	**-0.5**	**-1.3**	**-1.9**	**-1.0**	**-2.6**	**-0.3**	**-0.3**	**-0.5**
9	Fallowed Land	-0.1	-0.1	0.0	-0.1	-0.1	-0.1	0.2	0.2	0.2
	Groundwater Pumping Cost	-0.5	-0.5	-0.5	-1.2	-1.2	-1.2	-0.4	-0.4	-0.4
	Irrigation Cost	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3
	CVP Water Cost	1.2	1.2	1.2	2.0	2.0	2.0	0.5	0.5	0.5
	Higher Crop Prices	0.0	0.0	0.5	0.0	0.0	0.2	0.0	0.0	0.0
	Net Change	**0.3**	**0.3**	**0.7**	**0.5**	**0.5**	**0.7**	**0.0**	**0.0**	**0.0**

TABLE 19 CHANGES IN NET REVENUE BY SUBREGION (Million $)

CVPM Subregion	Cause of Net Revenue Change	Change Compared to Average PA			Change Compared to Wet PA			Change Compared to Dry PA		
		Average	Wet	Dry	Average	Wet	Dry	Average	Wet	Dry
		Followed By Average			Followed By Wet			Followed By Dry		
10	Fallowed Land	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0
	Groundwater Pumping Cost	0.0	0.0	-6.8	-8.3	-0.8	-8.6	0.0	0.0	0.0
	Irrigation Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	CVP Water Cost	-0.1	0.4	6.3	7.9	0.7	8.1	0.2	0.2	-0.1
	Higher Crop Prices	0.0	0.0	0.4	0.0	0.0	0.2	0.0	0.0	0.0
	Net Change	**-0.1**	**0.4**	**-0.1**	**-0.5**	**0.0**	**-0.3**	**0.2**	**0.2**	**-0.1**
11	Fallowed Land	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Groundwater Pumping Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Irrigation Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	CVP Water Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Higher Crop Prices	0.0	0.0	0.3	0.0	0.0	0.1	0.0	0.0	0.0
	Net Change	**0.0**	**0.0**	**0.3**	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	**0.0**
12	Fallowed Land	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Groundwater Pumping Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Irrigation Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	CVP Water Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Higher Crop Prices	0.0	0.0	0.3	0.0	0.0	0.1	0.0	0.0	0.0
	Net Change	**0.0**	**0.0**	**0.3**	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	**0.0**
13	Fallowed Land	0.0	0.0	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
	Groundwater Pumping Cost	0.8	0.7	-2.7	1.6	1.6	-4.9	0.2	0.2	0.2
	Irrigation Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	CVP Water Cost	-0.8	-0.6	2.1	-1.7	-1.5	4.3	-0.2	-0.2	-0.4
	Higher Crop Prices	0.0	0.0	0.5	0.0	0.0	0.2	0.0	0.0	0.0
	Net Change	**0.0**	**0.1**	**-0.1**	**-0.1**	**0.0**	**-0.5**	**-0.1**	**-0.1**	**-0.3**
14	Fallowed Land	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Groundwater Pumping Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Irrigation Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	CVP Water Cost	1.3	3.5	-6.0	1.8	5.4	-5.5	-6.3	-6.3	-7.3
	Higher Crop Prices	0.0	0.0	0.5	0.0	0.0	0.2	0.0	0.0	0.0
	Net Change	**1.3**	**3.5**	**-5.6**	**1.8**	**5.4**	**-5.3**	**-6.3**	**-6.3**	**-7.3**

TABLE 19 CHANGES IN NET REVENUE BY SUBREGION (Million $)

CVPM Subregion	Cause of Net Revenue Change	Change Compared to Average PA			Change Compared to Wet PA			Change Compared to Dry PA		
		Average	Wet	Dry	Average	Wet	Dry	Average	Wet	Dry
		Followed By Average			Followed By Wet			Followed By Dry		
15	Fallowed Land	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Groundwater Pumping Cost	0.0	0.0	0.0	0.3	0.3	0.3	-1.5	-1.5	-1.5
	Irrigation Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	CVP Water Cost	-0.3	-0.2	-0.4	-0.2	-0.2	-0.3	-0.4	-0.4	-0.6
	Higher Crop Prices	0.0	0.0	0.4	0.1	0.0	0.2	0.0	0.0	0.0
	Net Change	**-0.3**	**-0.2**	**0.1**	**0.2**	**0.2**	**0.2**	**-1.9**	**-1.9**	**-1.9**
16	Fallowed Land	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Groundwater Pumping Cost	-0.6	-0.6	-0.6	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	Irrigation Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	CVP Water Cost	0.7	0.7	0.7	0.7	0.7	0.7	0.5	0.5	0.5
	Higher Crop Prices	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
	Net Change	**0.0**	**0.0**	**0.1**	**0.1**	**0.1**	**0.1**	**0.0**	**0.0**	**0.0**
17	Fallowed Land	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Groundwater Pumping Cost	0.2	0.2	0.2	0.3	0.3	0.3	0.0	0.0	0.0
	Irrigation Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	CVP Water Cost	-0.1	-0.1	-0.3	-0.4	-0.3	-0.5	0.0	0.0	-0.1
	Higher Crop Prices	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
	Net Change	**0.0**	**0.1**	**0.1**	**0.0**	**0.0**	**-0.1**	**0.0**	**0.0**	**-0.1**
18	Fallowed Land	0.0	0.0	0.0	-0.1	-0.1	-0.1	0.0	0.0	0.0
	Groundwater Pumping Cost	0.0	0.0	0.0	0.2	0.2	0.2	0.0	0.0	0.0
	Irrigation Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	CVP Water Cost	-1.5	-1.0	-3.3	-2.2	-1.7	-3.9	0.8	0.8	0.0
	Higher Crop Prices	0.0	0.0	0.4	0.0	0.0	0.1	0.0	0.0	0.0
	Net Change	**-1.5**	**-1.0**	**-2.9**	**-2.1**	**-1.6**	**-3.7**	**0.8**	**0.8**	**0.0**
19	Fallowed Land	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Groundwater Pumping Cost	0.0	0.0	0.0	0.2	0.2	0.2	-1.2	-1.2	-1.2
	Irrigation Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	CVP Water Cost	-0.5	-0.5	-0.6	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
	Higher Crop Prices	0.0	0.0	0.2	0.0	0.0	0.1	0.0	0.0	0.0
	Net Change	**-0.5**	**-0.5**	**-0.3**	**-0.3**	**-0.3**	**-0.3**	**-1.8**	**-1.8**	**-1.8**

TABLE 19 CHANGES IN NET REVENUE BY SUBREGION (Million $)

CVPM Subregion	Cause of Net Revenue Change	Change Compared to Average PA			Change Compared to Wet PA			Change Compared to Dry PA		
		Average	Wet	Dry	Average	Wet	Dry	Average	Wet	Dry
		Followed By Average			Followed By Wet			Followed By Dry		
20	Fallowed Land	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Groundwater Pumping Cost	0.0	0.0	0.0	0.0	0.0	0.0	-0.2	-0.2	-0.2
	Irrigation Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	CVP Water Cost	-0.1	0.2	-0.9	-0.3	-0.1	-1.1	-0.2	-0.2	-0.5
	Higher Crop Prices	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
	Net Change	**-0.1**	**0.2**	**-0.8**	**-0.3**	**0.0**	**-1.1**	**-0.3**	**-0.3**	**-0.7**
21	Fallowed Land	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Groundwater Pumping Cost	0.0	0.0	0.0	0.2	0.2	0.2	-0.8	-0.8	-0.8
	Irrigation Cost	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	CVP Water Cost	0.1	0.3	-0.5	0.2	0.5	-0.4	-0.7	-0.7	-0.9
	Higher Crop Prices	0.0	0.0	0.2	0.0	0.0	0.1	0.0	0.0	0.0
	Net Change	**0.1**	**0.3**	**-0.3**	**0.4**	**0.7**	**-0.1**	**-1.5**	**-1.5**	**-1.7**
Total	Fallowed Land	-0.1	0.0	-6.8	-0.4	-0.3	-4.8	-0.2	-0.2	-0.2
	Groundwater Pumping	0.4	0.4	-9.9	-4.4	3.1	-16.6	-4.0	-4.0	-4.0
	Irrigation Cost	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3
	CVP Water Cost	-1.3	4.3	2.3	0.0	2.9	6.5	-8.0	-7.9	-10.7
	Higher Crop Prices	0.1	0.0	4.7	0.4	0.4	1.9	0.0	0.0	0.0
	Net Change	**-1.1**	**4.4**	**-10.0**	**-4.6**	**5.8**	**-13.2**	**-12.4**	**-12.4**	**-15.1**

Notes:
1. All values in millions of 1992 dollars
2. A negative value represents a reduction in net revenue compared to the Preferred Alternative
3. Subregions 3 and 3B should be added together to get the complete subregion 3. 3B represents the area within this subregion served by the Tehama Colusa Canal
4. PA is the Preferred Alternative

TABLE 20 IRRIGATION WATER APPLIED BY SUBREGION

CVPM Subregion	Water Source	Preferred Alternative Average	Changes Compared to Average PA			Preferred Alternative Wet	Changes Compared to Wet PA			Preferred Alternative Dry	Changes Compared to Dry PA		
			Average	Wet	Dry		Average	Wet	Dry		Average	Wet	Dry
			Followed by Average				Followed by Wet				Followed by Dry		
1	CVP Water	19.3	-10.8	-5.4	-5.4	20.5	-13.0	-13.0	-13.0	21.0	-13.5	-13.5	-13.5
	Groundwater	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	-1.5	-1.5	-1.5
2	CVP Water	21.7	0.0	0.0	-21.7	37.1	0.0	0.1	-36.7	8.2	0.0	0.0	0.0
	Groundwater	512.1	0.0	0.0	0.0	506.4	0.0	-0.1	0.0	504.7	0.0	0.0	0.0
3	CVP Water	170.4	0.0	0.0	0.0	174.2	0.0	0.0	0.0	151.3	0.0	0.0	0.0
	Groundwater	248.9	0.0	0.0	0.0	237.0	0.0	0.0	0.0	355.0	0.0	0.0	0.0
3B	CVP Water	199.6	0.1	0.0	-199.6	227.0	39.3	39.1	-227.0	50.3	0.0	0.0	-0.1
	Groundwater	76.7	-0.1	0.0	0.0	50.4	-39.4	-39.2	99.6	191.8	0.0	0.0	0.0
4	CVP Water	129.8	0.0	0.0	0.0	133.1	0.0	0.0	0.0	113.9	0.0	0.0	0.0
	Groundwater	326.5	0.0	0.0	0.0	305.1	0.0	0.0	0.0	442.6	0.0	0.0	0.0
5	CVP Water	19.9	0.1	0.0	0.1	20.8	0.1	0.0	0.0	17.9	0.0	-0.1	0.0
	Groundwater	492.5	-0.1	0.0	0.1	449.3	-1.1	-1.0	-0.4	568.7	-1.1	-1.0	-1.1
6	CVP Water	2.2	0.0	0.0	0.0	2.4	0.0	0.0	0.0	1.8	0.0	0.0	0.0
	Groundwater	452.8	0.0	0.0	0.0	447.6	-5.4	-5.4	-5.0	521.0	0.0	0.0	0.0
7	CVP Water	22.0	0.0	0.0	0.0	22.6	0.0	0.0	0.0	19.1	0.0	0.0	0.0
	Groundwater	193.2	0.0	0.0	0.0	177.9	0.0	0.0	0.0	217.5	0.0	0.0	0.0
8	CVP Water	51.6	0.1	0.0	-0.1	79.4	0.1	-0.1	-0.1	25.3	0.0	0.0	-0.1
	Groundwater	756.4	-0.1	0.0	0.1	717.0	0.0	0.0	0.0	851.3	-0.2	-0.2	-0.5
9	CVP Water	28.2	-28.2	-28.2	-28.2	48.1	-48.1	-48.1	-48.1	11.5	-11.5	-11.5	-11.5
	Groundwater	80.3	17.9	17.9	18.7	70.2	35.8	35.6	36.2	100.1	11.5	11.5	11.4
10	CVP Water	183.4	0.0	0.0	-183.4	234.4	-228.4	-22.8	-234.4	92.1	0.0	0.0	0.0
	Groundwater	486.2	0.0	0.0	179.4	414.4	227.7	22.7	233.7	632.4	0.0	0.0	-0.1
11	CVP Water	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Groundwater	34.1	0.0	0.0	0.0	28.8	0.0	0.0	0.0	34.5	0.0	0.0	0.0
12	CVP Water	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Groundwater	173.1	0.0	0.0	0.0	141.8	0.0	0.0	0.0	220.2	0.0	0.0	0.0
13	CVP Water	163.5	15.7	16.6	-60.2	159.0	33.2	33.1	-113.1	126.2	0.0	0.0	0.0
	Groundwater	912.5	-15.7	-16.6	60.3	812.0	-35.2	-36.2	109.1	1,181.4	-3.8	-3.8	-3.8
14	CVP Water	524.4	-0.1	0.0	0.1	719.0	0.1	0.0	0.0	230.2	0.0	0.0	0.0
	Groundwater	826.3	-0.1	0.0	-0.1	603.6	-0.1	0.0	0.0	1,178.4	0.0	0.0	0.0

TABLE 20 IRRIGATION WATER APPLIED BY SUBREGION

CVPM Subregion	Water Source	Preferred Alternative Average	Changes Compared to Average PA			Preferred Alternative Wet	Changes Compared to Wet PA			Preferred Alternative Dry	Changes Compared to Dry PA		
			Average	Wet	Dry		Average	Wet	Dry		Average	Wet	Dry
			Followed by Average				Followed by Wet				Followed by Dry		
15	CVP Water	35.1	0.0	0.1	0.1	36.1	0.0	0.1	0.0	28.6	0.0	0.0	0.0
	Groundwater	1,278.6	0.0	-0.1	-0.1	1,099.1	0.0	0.0	0.0	1,800.7	0.0	0.0	0.0
16	CVP Water	18.2	-16.2	-16.2	-16.2	15.7	-15.7	-15.7	-15.7	12.9	-12.9	-12.9	-12.9
	Groundwater	49.6	14.9	14.8	15.0	0.0	13.2	13.2	13.2	107.3	11.5	11.5	11.5
17	CVP Water	34.6	3.9	3.8	4.0	32.5	7.4	7.3	7.4	27.1	0.0	0.0	0.1
	Groundwater	415.1	-3.8	-3.8	-3.9	333.2	-7.4	-7.2	-7.4	577.4	0.0	0.0	0.0
18	CVP Water	517.3	0.0	0.0	0.1	526.3	0.0	0.0	0.1	399.0	0.0	0.0	0.1
	Groundwater	1,018.0	0.0	0.0	-0.1	821.8	-4.0	-4.0	-3.6	1,334.8	0.0	0.0	0.0
19	CVP Water	13.3	-0.1	0.0	0.1	15.4	-0.1	-0.1	0.0	9.4	0.0	0.0	0.0
	Groundwater	368.6	0.1	0.0	-0.1	250.7	0.0	0.0	0.0	578.4	0.0	0.0	0.0
20	CVP Water	208.7	0.1	0.1	-0.2	219.8	0.1	0.1	-0.1	154.1	0.0	0.0	-0.1
	Groundwater	303.6	-0.1	-0.1	0.1	244.8	0.0	0.0	0.0	437.3	0.0	0.0	0.0
21	CVP Water	138.3	0.0	0.0	-0.1	163.0	0.0	0.1	-0.1	89.3	0.0	0.0	-0.1
	Groundwater	579.4	0.0	0.0	0.1	445.2	0.0	-0.1	0.0	783.1	0.0	0.0	0.0
Total	CVP Water	2,505.5	-34.4	-30.4	-510.5	2,886.2	-224.9	-19.8	-660.6	1,593.9	-37.7	-37.8	-37.8
	Groundwater	9,598.5	11.9	12.3	269.2	8,114.6	182.6	-21.6	474.0	12,527.1	16.1	16.2	16.1

Notes:
1. All quantities in thousands of acre-feet
2. A negative value represents a lower quantity than in the Preferred Alternative
3. Subregions 3 and 29 should be added together to get the complete subregion 3. 3B represents the area within this subregion served by the Tehama Colusa Canal
4. PA is the Preferred Alternative

TABLE 21 SUBREGION ANALYSIS OF SIGNIFICANT CHANGES IN WATER USE

Subregion	Outcome	Explanation
1	Decrease in CVP use and no GW substitution in all sequences	Less CVP water is used than in the Preferred Alternative because the blended price is 140% to 330% higher than the Preferred Alternative Tier 1 (the only tier of water that was used for this scenario). For hydrologic reasons, subregion 1 is restricted from switching to groundwater.
2	Decrease in CVP use and no GW substitution in Dry to Average and Dry to Wet sequences	Less CVP water is used than in the Preferred Alternative because the blended prices for the Dry to Average and Dry to Wet sequences are 320% and 345% higher than the Preferred Alternative Tier 1 price (the only water tier that was used for this scenario). For hydrologic reasons, subregion 2 is restricted from switching to groundwater.
3B	Decrease CVP and no GW substitution in Dry to Average sequence	Less CVP water is used than in the Preferred Alternative because the blended price is 240% higher than the Tier 1 price from the Preferred Alternative, which is the only tier of water that was used. For hydrologic reasons the region is restricted from switching to groundwater in this long-run scenario.
3B	Decrease in CVP use and GW substitution in Dry to Wet sequence	CVP water use decreases because the blended price is 260% higher than the Preferred Alternative Tier 1 price. The model allowed a shift to groundwater on a short run basis to provide water to permanent crops during the wet year when groundwater would have been recharged.
3B	Shift from Groundwater to CVP water in Average to Wet and Wet to Wet sequences	In the Preferred Alternative wet year analysis subregion 3B has 39 TAF of water that falls in Tiers 2 or 3. Under the LTCR blended pricing mechanism all of the subregions CVP water is prices at a level that is lower than the Preferred Alternative Tier 2. This additional affordable CVP water is used resulting in a less groundwater being pumped.
9	Shift from CVP to Groundwater in all sequences	The blended price of CVP water in subregion 9 is greater than the groundwater pumping cost resulting in the shift from CVP to groundwater.
10	Shift from CVP to Groundwater in Dry to Average and Average, Wet and Dry to Wet sequences	Due to an increase in the CVP price relative to the Preferred Alternative, the depth to which groundwater can be affordable pumped increases resulting in the shift from CVP supplies to groundwater.
13	Shift from groundwater to CVP in Average to Average, Wet to Average, Average to Wet and Wet to Wet sequences	In the Preferred Alternative Average and Wet conditions subregion 13 had water classified as Tier 2 or Tier 3 which was not affordable, and pumped groundwater to supplement it's Tier 1 supply down to a depth at which it was no longer affordable. In the LTCR sequences, the blended price is less expensive than the Preferred Alternative upper Tier price, therefor a shift is made from the deepest groundwater to the now affordable CVP supply.

TABLE 21 SUBREGION ANALYSIS OF SIGNIFICANT CHANGES IN WATER USE

Subregion	Outcome	Explanation
13	Shift from CVP to Groundwater in Dry to Average and Dry to Wet sequences	Under the LTCR blended price mechanism, when coming out of a drought into a Average or Wet year the blended price increases. In these situations, shallow groundwater is less expensive than the CVP blended price. As more groundwater is pumped the cost increases as the pump lift increases and the cost eventually becomes greater than the CVP blended price. When this happens the remainder of the subregions water supply is taken from the CVP supplies.
16	Shift from CVP to Groundwater in all sequences	The blended price of CVP water in subregion 16 is greater than the groundwater pumping cost resulting in the shift from CVP to groundwater.
17	Shift from groundwater to CVP	In the Preferred Alternative Average and Wet conditions this subregion had water classified as Tier 2 or Tier 3 which was not affordable. The subregion pumped groundwater down to a depth at which it was no longer affordable to supplement the CVP water it was able to afford. In the LTCR sequences, the blended price is less expensive than the least expensive CVP tier that was not used, therefor a shift is made from the deepest groundwater to the now affordable CVP supply.
19	Shift from CVP to Groundwater in Dry to Dry sequence	The blended pricing causes the Dry to Dry CVP water cost to rise higher than the groundwater pumping cost resulting in the shift from CVP to groundwater.

SECTION 2
REGIONAL ECONOMICS

REGIONAL ECONOMICS

This analysis identifies the regional economic impacts of two out of the nine total Long Term Contract Renewal sequences; an Average year following an Average 5-year base condition, and a Average year following a Dry 5-year base condition. The regional economic analysis is restricted to these sequences because they are the only sequences that represent long-run conditions. The Input-Output model used in the regional economic analysis assumes a long run equilibrium is reached, therefore it is inappropriate to model short run responses represented by the Wet and Dry year conditions. While the Average year following the Dry 5-year base condition is not strictly a long-run scenario, as described in the Agricultural and Land Use and Economics section, there are some regions that will be permanently impacted by a five year series of drought years. Because of this, the results can be considered long run.

The assumptions and baseline data used in this analysis are the same as what was used in the Preferred Alternative. Tables 23 and 24 show the results of the Average year following an Average 5-year base condition, Tables 25 and 26 the Average year following an Wet 5-year base condition, and Tables 27 and 28 the Average year following an Dry 5-year base condition. Tables 23, 25, and 27 present the impacts by economic sectors that are aggregations of SIC industries. Tables 24, 26, and 28 present the regional economic impacts broken out by the source of the impact including reduced agricultural output, changes in net farm income, and changes in M&I water costs. Note that regional economic impacts are not reported for the North Coast or the Central and South Coast regions because the rolling five year average tiered pricing mechanism has no impact on these regions.

AVERAGE YEAR FOLLOWING AVERAGE 5-YEAR BASE CONDITION

Table 23 shows the employment, output and income effects on all sectors in each regional economy of the long-term contract renewals. Most of the impacts are felt in the Manufacturing, Trade and Services sectors. These impacts are derived from the impact to net income. The economic impacts by region from each source can be seen in Table 24. Reduction in net income resulting from changes in CVP water cost, groundwater pumping, irrigation costs and changes in crop prices have the greatest impact at the statewide level.

AVERAGE YEAR FOLLOWING DRY 5-YEAR BASE CONDITION

Table 27 shows the employment, output and income effects for each regional economy and the State as a whole broken out by the impacted sectors. Table 28 shows how each of the impact sources contribute to the total impact. The reduction in agricultural output in the Sacramento River region relative to the Preferred Alternative dominates the Statewide impact.

TABLE 22

REGIONAL ECONOMIC IMPACTS ON ALL SECTORS: AVERAGE YEAR FOLLOWING AVERAGE 5-YEAR BASE CONDITION COMPARED TO THE PREFERRED ALTERNATIVE AVERAGE YEAR CONDITION

	Impacts on all Sectors					
	Employment (# of jobs)		Output ($MM)		PoW Income ($MM)	
Region Directly Impacted	Direct	Total	Direct	Total	Direct	Total
Sacramento River						
Agriculture						
Reduced Output	-10	-20	-0.5	-1.2	-0.2	-0.6
Reduced Net Income	-20	-50	-0.9	-2.3	-0.5	-1.3
Total Agriculture	-30	-60	-1.4	-3.5	-0.7	-1.9
M&I Water Costs	-60	-130	-3.9	-8.5	-2.0	-4.7
TOTAL 1/	-90	-190	-5.3	-12.0	-2.8	-6.6
San Joaquin River						
Agriculture						
Reduced Output	0	0	-0.2	-0.3	-0.1	-0.2
Reduced Net Income	20	40	0.8	1.8	0.5	1.0
Total Agriculture	20	30	0.7	1.5	0.4	0.9
M&I Water Costs	-80	-150	-5.0	-9.4	-2.6	-5.1
TOTAL 1/	-60	-120	-4.3	-7.9	-2.2	-4.2
Tulare Lake						
Agriculture						
Reduced Output	0	0	0.0	0.0	0.0	0.0
Reduced Net Income	-50	-80	-2.1	-4.1	-1.1	-2.2
Total Agriculture	-50	-80	-2.1	-4.1	-1.1	-2.2
M&I Water Costs	0	0	0.0	0.0	0.0	0.0
TOTAL 1/	-50	-80	-2.1	-4.1	-1.1	-2.2
Bay Area						
Agriculture						
Reduced Output	0	0	0.0	0.0	0.0	0.0
Reduced Net Income	0	-10	-0.2	-0.4	-0.1	-0.2
Total Agriculture	0	-10	-0.2	-0.4	-0.1	-0.2
M&I Water Costs	-60	-130	-4.4	-9.4	-2.4	-5.4
TOTAL 1/	-60	-130	-4.6	-9.8	-2.5	-5.6
California Total						
Agriculture						
Reduced Output	-10	-20	-0.7	-1.5	-0.3	-0.8
Reduced Net Income	-50	-100	-2.0	-5.0	-1.2	-2.7
Total Agriculture	-60	-120	-3.0	-6.5	-1.6	-3.5
M&I Water Costs	-200	-410	-13.3	-27.4	-7.0	-15.1
TOTAL 1/	-260	-530	-16.3	-33.9	-8.6	-18.6

Note: (a) May differ from sum of elements due to rounding

TABLE 23

REGIONAL ECONOMIC IMPACT: AVERAGE YEAR FOLLOWING AVERAGE 6-YEAR BASE CONDITION COMPARED TO THE PREFERRED ALTERNATIVE AVERAGE YEAR CONDITION

Region and Affected Sector	Employment (# of Jobs)		Output ($MM)		PoW Income ($MM)	
	Direct	Total	Direct	Total	Direct	Total
Sacramento River						
Agric., Frst., Fish.	-10	-10	-0.4	-0.5	-0.2	-0.3
Mining	0	0	0.0	0.0	0.0	0.0
Construction	0	0	0.0	-0.2	0.0	-0.1
Manufacturing	-10	-20	-1.5	-2.2	-0.6	-0.8
TCU	0	-10	-0.2	-0.9	-0.1	-0.5
Trade	-40	-70	-1.1	-2.1	-0.7	-1.3
FIRE	-10	-20	-0.8	-2.6	-0.5	-1.7
Services	-20	-60	-0.9	-2.9	-0.6	-1.7
Government	0	-10	-0.2	-0.7	-0.1	-0.3
Misc	0	0	0.0	0.0	0.0	0.0
TOTAL/1	-90	-190	-5.3	-12.0	-2.8	-6.5
San Joaquin River						
Agric., Frst., Fish.	0	-10	-0.2	-0.3	-0.1	-0.1
Mining	0	0	-0.1	-0.1	0.0	0.0
Construction	0	0	0.0	-0.1	0.0	-0.1
Manufacturing	-10	-10	-0.8	-1.1	-0.2	-0.3
TCU	0	-10	-0.3	-0.9	-0.2	-0.3
Trade	-10	-30	-0.4	-1.1	-0.2	-0.6
FIRE	-10	-20	-1.1	-2.1	-0.7	-1.3
Services	-30	-50	-1.2	-2.2	-0.7	-1.3
Government	0	0	-0.2	-0.3	-0.1	-0.1
Misc	0	0	0.0	0.0	0.0	0.0
TOTAL/1	-60	-120	-4.3	-7.9	-2.2	-4.2
Tulare Lake						
Agric., Frst., Fish.	0	0	0.0	0.0	0.0	0.0
Mining	0	0	0.0	0.0	0.0	0.0
Construction	0	0	0.0	0.0	0.0	0.0
Manufacturing	-10	-10	-1.0	-1.3	-0.4	-1.0
TCU	0	0	0.0	-0.2	0.0	-0.2
Trade	-40	-50	-1.0	-1.4	-0.7	-1.4
FIRE	0	0	0.0	-0.4	0.0	-0.4
Services	0	-10	0.0	-0.6	0.0	-0.6
Government	0	0	0.0	-0.1	0.0	-0.1
Misc	0	0	0.0	0.0	0.0	0.0
TOTAL/1	-50	-80	-2.1	-4.1	-1.1	-4.1
Bay Area						
Agric., Frst., Fish.	0	0	0.0	-0.1	0.0	0.0
Mining	0	0	0.0	0.0	0.0	0.0
Construction	0	0	0.0	-0.1	0.0	-0.1
Manufacturing	-10	-10	-1.2	-1.5	-0.4	-0.7
TCU	0	-10	-0.3	-0.8	-0.2	-0.4
Trade	-20	-40	-0.9	-1.7	-0.5	-1.0
FIRE	-10	-20	-1.0	-2.3	-0.6	-1.5
Services	-20	-50	-1.1	-2.6	-0.7	-1.6
Government	0	0	-0.2	-0.3	-0.1	-0.1
Misc	0	0	0.0	0.0	0.0	0.0
TOTAL/1	-60	-130	-4.6	-9.8	-2.5	-5.6
California Total						
Agric., Frst., Fish.	-10	-20	-0.8	-0.9	-0.3	-0.5
Mining	0	0	-0.1	-0.1	0.0	0.0
Construction	0	-10	0.0	-0.5	0.0	-0.3
Manufacturing	-30	-50	-4.7	-6.5	-1.5	-3.1
TCU	-10	-20	-0.8	-2.5	-0.4	-1.4
Trade	-110	-190	-3.4	-6.3	-2.2	-4.4
FIRE	-20	-60	-2.9	-7.4	-1.8	-4.5
Services	-70	-180	-3.2	-8.1	-1.9	-5.2
Government	0	-10	-0.6	-1.4	-0.3	-0.7
Misc	0	0	-0.1	-0.1	-0.1	-0.1
TOTAL/1	-260	-530	-16.3	-33.9	-8.6	-20.5

Note:(1) May differ from sum of elements due to rounding.

Table 24

REGIONAL ECONOMIC IMPACTS ON ALL SECTORS: AVERAGE YEAR FOLLOWING WET 5-YEAR BASE CONDITION COMPARED TO THE PREFERRED ALTERNATIVE AVERAGE YEAR CONDITION

	Impacts on all Sectors					
	Employment (# of jobs)		Output ($MM)		PoW Income ($MM)	
Region Directly Impacted	Direct	Total	Direct	Total	Direct	Total
Sacramento River						
Agriculture						
Reduced Output	0	-10	-0.4	-0.9	-0.2	-0.4
Reduced Net Income	30	50	1.0	2.6	0.5	1.4
Total Agriculture	20	40	0.6	1.8	0.4	1.0
M&I Water Costs	-60	-130	-3.9	-8.5	-2.0	-4.7
TOTAL 1/	-40	-90	-3.3	-6.7	-1.6	-3.8
San Joaquin River						
Agriculture						
Reduced Output	0	0	-0.2	-0.3	-0.1	-0.2
Reduced Net Income	100	170	3.7	8.1	2.1	4.5
Total Agriculture	90	160	3.6	7.8	2.0	4.4
M&I Water Costs	-80	-150	-5.0	-9.4	-2.0	-5.1
TOTAL 1/	20	10	-1.4	-1.5	-0.5	-0.7
Tulare Lake						
Agriculture						
Reduced Output	0	0	0.0	0.0	0.0	0.0
Reduced Net Income	-30	-40	-1.1	-2.1	-0.6	-1.1
Total Agriculture	-30	-40	-1.1	-2.1	-0.6	-1.1
M&I Water Costs	0	0	0.0	0.0	0.0	0.0
TOTAL 1/	-30	-40	-1.1	-2.1	-0.6	-1.1
Bay Area						
Agriculture						
Reduced Output	0	0	0.0	0.0	0.0	0.0
Reduced Net Income	0	0	-0.1	-0.2	0.0	-0.1
Total Agriculture	0	0	-0.1	-0.2	0.0	-0.1
M&I Water Costs	-60	-130	-4.4	-9.4	-2.4	-5.4
TOTAL 1/	-60	-130	-4.5	-9.6	-2.5	-5.5
California Total						
Agriculture						
Reduced Output	0	-10	-0.5	-1.1	-0.2	-0.6
Reduced Net Income	100	180	3.6	8.4	2.0	4.7
Total Agriculture	100	170	3.0	7.3	1.7	4.2
M&I Water Costs	-200	-410	-13.3	-27.4	-7.0	-15.1
TOTAL 1/	-100	-240	-10.3	-20.1	-5.3	-11.0

Note: [1] May differ from sum of elements due to rounding.

TABLE 25

REGIONAL ECONOMIC IMPACT: AVERAGE YEAR FOLLOWING WET 5-YEAR BASE CONDITION COMPARED TO THE PREFERRED ALTERNATIVE AVERAGE YEAR CONDITION

	Employment (# of Jobs)		Output ($MM)		POW Income ($MM)	
Region and Affected Sector	Direct	Total	Direct	Total	Direct	Total
Sacramento River						
Agric., Frst., Fish.	0	-10	-0.2	-0.3	-0.1	-0.2
Mining	0	0	0.0	0.0	0.0	0.0
Construction	0	0	0.0	-0.1	0.0	-0.1
Manufacturing	0	-10	-0.7	-0.9	-0.2	-0.3
TCU	0	0	-0.2	-0.6	-0.1	-0.3
Trade	0	-10	-0.2	-0.7	0.0	-0.3
FIRE	-10	-20	-0.8	-1.6	-0.5	-1.1
Services	-20	-40	-0.9	-1.9	-0.6	-1.1
Government	0	0	-0.2	-0.5	-0.1	-0.2
Misc	0	0	0.0	0.0	0.0	0.0
TOTAL(1)	-40	-90	-3.3	-6.2	-1.6	-3.6
San Joaquin River						
Agric., Frst., Fish.	0	0	-0.1	-0.2	-0.1	-0.1
Mining	0	0	-0.1	-0.1	0.0	0.0
Construction	0	0	0.0	-0.1	0.0	0.0
Manufacturing	10	10	0.6	0.8	0.3	0.4
TCU	0	0	-0.3	-0.4	-0.2	-0.2
Trade	60	60	1.0	1.1	0.8	0.9
FIRE	-10	-10	-1.1	-1.2	-0.7	-0.8
Services	-30	-30	-1.2	-1.2	-0.7	-0.7
Government	0	0	-0.2	-0.2	-0.1	-0.1
Misc	0	0	0.0	0.0	0.0	0.0
TOTAL(1)	20	10	-1.4	-1.6	-0.6	-0.7
Tulare Lake						
Agric., Frst., Fish.	0	0	0.0	0.0	0.0	0.0
Mining	0	0	0.0	0.0	0.0	0.0
Construction	0	0	0.0	0.0	0.0	0.0
Manufacturing	0	-10	-0.5	-0.7	-0.7	-0.7
TCU	0	0	0.0	-0.1	0.0	-0.1
Trade	-20	-30	-0.5	-0.7	-0.4	-0.7
FIRE	0	0	0.0	-0.2	0.0	-0.2
Services	0	-10	0.0	-0.3	0.0	-0.3
Government	0	0	0.0	0.0	0.0	0.0
Misc	0	0	0.0	0.0	0.0	0.0
TOTAL(1)	-30	-40	-1.1	-2.1	-0.6	-2.1
Bay Area						
Agric., Frst., Fish.	0	0	0.0	-0.1	0.0	0.0
Mining	0	0	0.0	0.0	0.0	0.0
Construction	0	0	0.0	-0.1	0.0	-0.1
Manufacturing	-10	-10	-1.2	-1.9	-0.4	-0.7
TCU	0	-10	-0.3	-0.8	-0.2	-0.4
Trade	-20	-40	-0.8	-1.6	-0.5	-1.0
FIRE	-10	-10	-1.0	-2.2	-0.8	-1.5
Services	-20	-50	-1.1	-2.6	-0.7	-1.6
Government	0	0	-0.2	-0.3	-0.1	-0.1
Misc	0	0	0.0	0.0	0.0	0.0
TOTAL(1)	-60	-130	-4.5	-9.6	-2.5	-5.5
California Total						
Agric., Frst., Fish.	-10	-10	-0.4	-0.7	-0.2	-0.3
Mining	0	0	-0.1	-0.1	0.0	0.0
Construction	0	0	0.0	-0.3	0.0	-0.2
Manufacturing	-10	-70	-1.7	-2.7	-0.5	-1.2
TCU	-10	-10	-0.8	-1.0	-0.4	-1.0
Trade	-20	-20	-0.5	-1.9	-0.1	-1.2
FIRE	-20	-40	-2.9	-5.5	-1.8	-3.6
Services	-70	-130	-3.2	-5.9	-1.9	-3.8
Government	0	-10	0.8	-1.0	-0.3	-0.5
Misc	0	0	-0.1	-0.1	-0.1	-0.1
TOTAL(1)	-160	-250	-10.3	-20.1	-5.3	-12.0

Note:(1) May differ from sum of elements due to rounding

TABLE 26

REGIONAL ECONOMIC IMPACTS ON ALL SECTORS: AVERAGE YEAR FOLLOWING DRY 5-YEAR BASE CONDITION COMPARED TO THE PREFERRED ALTERNATIVE AVERAGE YEAR CONDITION

	Impacts on all Sectors					
	Employment (# of jobs)		Output ($MM)		PoW Income ($MM)	
Region Directly Impacted	Direct	Total	Direct	Total	Direct	Total
Sacramento River						
Agriculture						
Reduced Output	-700	-2240	-92.1	-194.5	-30.8	-86.9
Reduced Net Income	130	240	4.7	12.4	2.6	6.9
Total Agriculture	-570	-2000	-87.4	-182.1	-28.2	-80.0
M&I Water Costs	-60	-140	0.4	-0.9	-0.2	-0.5
TOTAL 1/	-630	-2140	-91.8	-191.6	-30.5	-85.2
San Joaquin River						
Agriculture						
Reduced Output	-10	-20	-0.7	-1.5	-0.3	-0.7
Reduced Net Income	-140	-240	-5.4	-11.7	-3.0	-6.5
Total Agriculture	-150	-270	-6.1	-13.2	-3.3	-7.3
M&I Water Costs	-80	-150	0.0	0.0	0.0	0.0
TOTAL 1/	-230	-420	-11.0	-22.7	-5.9	-12.4
Tulare Lake						
Agriculture						
Reduced Output	0	-10	-0.2	-0.5	-0.1	-0.2
Reduced Net Income	-100	-170	-3.6	-7.1	-1.9	-3.8
Total Agriculture	-100	-170	-3.8	-7.6	-2.0	-4.0
M&I Water Costs	0	0	0.0	0.0	0.0	0.0
TOTAL 1/	-100	-170	-4.4	-8.8	-2.3	-4.6
Bay Area						
Agriculture						
Reduced Output	0	0	0.0	0.0	0.0	0.0
Reduced Net Income	-10	-20	-0.6	-1.4	-0.3	-0.8
Total Agriculture	-10	-20	-0.6	-1.4	-0.3	-0.8
M&I Water Costs	-60	-130	-0.5	-1.1	-0.5	-0.6
TOTAL 1/	-70	-150	-5.0	-10.8	-2.8	-5.2
California Total						
Agriculture						
Reduced Output	-710	-2270	-93.0	-196.5	-31.2	-87.9
Reduced Net Income	-120	-190	-4.8	-7.8	-2.0	-4.1
Total Agriculture	-830	-2460	-97.8	-204.3	-33.8	-92.0
M&I Water Costs	-200	-420	-0.1	-1.9	-0.5	-1.1
TOTAL 1/	-1030	-2880	-112.2	-233.9	-41.4	-108.3

Note: (1) May differ from sum of elements due to rounding.

TABLE 27

REGIONAL ECONOMIC IMPACT: AVERAGE YEAR FOLLOWING DRY 6-YEAR BASE CONDITION COMPARED TO THE PREFERRED ALTERNATIVE AVERAGE YEAR CONDITION

Region and Affected Sector	Employment (# of jobs)		Output ($MM)		PoW Income ($MM)	
	Direct	Total	Direct	Total	Direct	Total
Sacramento River						
Agric., Frst., Fish.	-450	-630	-26.1	-33.0	-13.4	-16.8
Mining	0	0	0.0	-0.1	0.0	0.0
Construction	0	-90	0.0	-2.1	0.0	-1.2
Manufacturing	-230	-290	-64.9	-73.1	-16.6	-19.8
TCU	0	-120	-0.2	-16.8	-0.1	-7.5
Trade	90	-310	1.6	-13.8	1.2	-8.1
FIRE	-10	-200	-0.9	-22.2	-0.5	-14.6
Services	-20	-500	-1.0	-22.8	-0.6	-13.8
Government	0	-50	-0.2	-7.2	-0.1	-3.5
Misc	0	0	0.0	0.0	0.0	0.0
TOTAL/1	-630	-2100	-91.6	-191.6	-30.5	-85.2
San Joaquin River						
Agric., Frst., Fish.	-10	-20	-0.8	-1.2	-0.4	-0.5
Mining	0	0	-0.1	-0.1	0.0	0.0
Construction	0	0	0.0	-0.2	0.0	-0.1
Manufacturing	-30	-40	-3.8	-5.1	-1.4	-1.9
TCU	0	-10	-0.3	-1.2	-0.2	-0.6
Trade	-140	-250	-3.6	-5.8	-2.4	-3.7
FIRE	-10	-30	-1.1	-4.2	-0.7	-2.7
Services	-30	-100	-1.2	-4.3	-0.7	-2.6
Government	0	-10	-0.2	-0.5	-0.1	-0.2
Misc	0	0	0.0	0.0	0.0	0.0
TOTAL/1	-230	-420	-11.0	-22.7	-5.9	-12.4
Tulare Lake						
Agric., Frst., Fish.	0	-10	-0.3	-0.4	-0.1	-0.4
Mining	0	0	0.0	0.0	0.0	0.0
Construction	0	0	0.0	-0.1	0.0	-0.1
Manufacturing	-20	-20	-2.1	-2.7	-0.7	-2.7
TCU	0	0	0.0	-0.4	0.0	-0.4
Trade	-40	-110	-2.1	-2.9	-1.5	-2.9
FIRE	0	-10	0.0	-0.9	0.0	-0.9
Services	0	-30	0.0	-1.2	0.0	-1.2
Government	0	0	0.0	-0.2	0.0	-0.2
Misc	0	0	0.0	0.0	0.0	0.0
TOTAL/1	-100	-170	-4.4	-8.8	-2.3	-8.6
Bay Area						
Agric., Frst., Fish	0	0	0.0	-0.1	0.0	0.0
Mining	0	0	0.0	0.0	0.0	0.0
Construction	0	0	0.0	-0.1	0.0	-0.1
Manufacturing	-10	-10	-1.4	-2.2	-0.5	-0.8
TCU	0	-10	-0.3	-0.8	-0.2	-0.4
Trade	-30	-50	-1.1	-2.0	-0.7	-1.3
FIRE	-10	-20	-1.0	-2.4	-0.6	-1.6
Services	-20	-60	-1.1	-2.8	-0.7	-1.8
Government	0	0	-0.2	-0.3	-0.1	-0.2
Misc	0	0	0.0	0.0	0.0	0.0
TOTAL/1	-70	-150	-5.0	-10.8	-2.8	-5.2
California Total						
Agric., Frst., Fish	-470	-650	-27.2	-34.6	-13.9	-17.5
Mining	0	0	-0.1	-0.2	0.0	-0.1
Construction	0	-40	0.0	-2.5	0.0	-1.5
Manufacturing	-290	-370	-72.2	-83.1	-18.6	-25.2
TCU	-10	-140	-0.8	-18.3	-0.4	-8.5
Trade	-170	-680	-5.0	-24.5	-3.3	-16.0
FIRE	-20	-260	-2.8	-30.2	-1.8	-19.8
Services	-70	-680	-3.3	-31.1	-2.0	-19.3
Government	0	-60	-0.5	-8.2	-0.3	-4.1
Misc	0	0	-0.1	-0.1	-0.1	-0.1
TOTAL/1	-1000	-2880	-112.2	-233.9	-41.4	-112.5

Note:(1) May differ from sum of elements due to rounding

SECTION 3
MUNICIPAL AND INDUSTRIAL WATER USE ECONOMICS

MUNICIPAL AND INDUSTRIAL ECONOMICS

The municipal and industrial economics analysis is based upon the Average-Average tiered pricing scenario. This analysis is based upon the impacts to CVP contractors. This is different than the municipal and industrial economic analysis that was included in the PEIS.

The PEIS municipal and industrial water cost analysis primarily evaluated the impacts on the need and cost to transfer water to non-CVP municipalities. Therefore, the analysis included water costs for many non-CVP water users. For example, the municipality in the San Joaquin River Basin was based upon the Cities of Stockton and Fresno water costs which are not based on CVP water, as described in the Municipal Water Costs Methodology and Modeling Technical Appendix to the PEIS.

The analysis included in the following table is based only on CVP contractors in order to define the cost of CVP water under the Tiered Water Pricing proposal.

TABLE 28

SUMMARY OF M&I ECONOMICS ANALYSIS FOR AVERAGE YEAR CONDITIONS FOR REGIONAL ECONOMICS

Result	Preferred Alternative Average	Change from the Preferred Alternative Average		
		Average-Average	Dry-Average	Wet-Average
Average Condition				
Supplies, 1,000 acre-feet (1)				
Sacramento Valley	929.0	0.0	0.0	0.0
Bay Area	1024.0	0.0	0.0	0.0
San Joaquin Valley	704.0	0.0	0.0	0.0
Central and South Coast	5921.0	0.0	0.0	0.0
Average Condition				
Economic Costs, Million $ (2)				
Sacramento Valley	1.1	4.1	4.3	4.1
Bay Area	3.5	4.6	4.6	4.6
San Joaquin Valley	0.3	5.2	5.2	5.2
Central and South Coast	649.0	0.0	0.0	0.0

NOTES:

Water transfers not considered as replacement supplies in this comparison.

(1) After purchase or development of non-transfer replacement supplies to make supply equal demand.

(2) Total costs include replacement supplies, restoration payments and metering. A negative cost means a net gain is estimated.

APPENDIX F

Comment Letters on EA and Responses to Comments

Appendix F

Comment Letters on EA and Responses to Comments

Letters commenting on the Draft EA and the Updated Draft EA are reproduced on the following pages. Each comment letter has been assigned a number (e.g., Comment Letter 7) and each specific comment has also been assigned a number (e.g., Comment 7-4), as shown in the margins of the letters. Immediately following each comment letter are Reclamation's responses to the comments in that letter. The responses are numbered to correspond to the numbers assigned to the comments. Where changes to the EA text result from the responses, those changes are indicated with revision marks in the text of the Final EA (underline for new text, ~~strike-out~~ for deleted text). Comments that present opinions about the project or that raise issues not directly related to the substance of the EA are noted without a detailed response.

The Draft EA was distributed in 2000. The Updated Draft EA was distributed in 2004 to those who submitted comments on the Draft EA. Most (15 out of 18) of the comment letters commented on the Draft EA. In 2003, the Biological Assessment/Essential Fish Habitat Assessment (BA/EFHA) was prepared for the Endangered Species Act consultation for these contract renewals.

No significant environmental issues beyond those already covered in the EA were raised during the 30-day comment period for the Draft EA and the 30-day comment period for the Updated Draft EA. Comments received on the EA did not indicate new significant impacts or significant new information that would require recirculation of the EA pursuant to the National Environmental Policy Act (NEPA).

LETTER 1

BELLA VISTA WATER DISTRICT

11368 E. STILLWATER WAY • REDDING, CALIFORNIA 96003-9510
TELEPHONE (530) 241-1085 • FAX (530) 241-8354

November 15, 2000

Mr. Al Candlish
Bureau of Reclamation
Mid-Pacific Region
2800 Cottage Way
Sacramento, CA 95825-1898

Re: Comments on Draft Environmental Assessment for the Long-Term Contract Renewal, Shasta and Trinity Divisions

Dear Mr. Candlish:

Attached are the comments of the Board of Directors of Bella Vista Water District regarding the draft Environmental Assessment (EA) for the Long-Term Contract Renewal, Shasta and Trinity Divisions. The Board feels very strongly that the EA is [illegible] premature. The EA needs to be redone after the terms of the contract have been agreed upon.

Sincerely,

Robert W. Dietz, P.E.
General Manager

[illegible]

Encl.

cc: Congressman Wally Herger, [illegible]

BELLA VISTA WATER DISTRICT COMMENTS ON
DRAFT ENVIRONMENTAL ASSESSMENT FOR THE
LONG TERM CONTRACT RENEWAL - SHASTA AND TRINITY DIVISIONS

Prepared by the U.S. Bureau of Reclamation

OCTOBER 2000

These comments are prepared on behalf of the Board of Directors of the Bella Vista Water District.

The Bella Vista Water District (District) appreciates the opportunity to comment on this important document which evaluates the impacts and benefits of long term renewal of water service and repayment contracts. The District is in the process of renewing its contract for 24,578 acre feet of water from the Sacramento River and will also benefit from the renewal of the Shasta County Water Agency Contract [illegible] the District [illegible] acre feet of water. We should point out that the terms of the renewal contract have not yet been finalized.

Process

1. The process for preparation of the Environmental Assessment described as a [illegible] approach should be abandoned. The only reason this approach was adopted by Reclamation was the United States insistence that long-term contracts be negotiated with a nine month period. Thus, the Environmental Assessment is also to be prepared and ready for review concurrently with completion of contract negotiations. Rather, the negotiated contract should be completed and the Environmental Assessment performed on [illegible] effects. The result of [illegible] is that [illegible] approach [illegible] analyzes issues and potential impacts of contract 1-1

Letter 1

[illegible] land types and [illegible] water rights. [illegible] Valley [illegible]. The [illegible] were not [illegible] on what impacts [illegible] water rights would [illegible] in the future and they should be considered.

Minimum Parcel Size

9. The Environmental Assessment [illegible] that a change [illegible] acreage for [illegible] water eligibility from 2 to 5 acres will have [illegible] on the cost of water for those with parcels between 2 and 5 acres. ([illegible] page 4-1-10) The [illegible] were not [illegible] detail about this issue and do not share Reclamation's opinion.

10. Small [illegible] parcels [illegible] of [illegible] largest [illegible] Shasta and [illegible] Counties. Most parcels [illegible] 2 to 5 acres [illegible] being available for pasture and agricultural production. The Environmental Assessment fails to analyze the effects of [illegible] of these parcels for agricultural water [illegible] impacts [illegible].

11. Land value and [illegible] of affected parcels will be seriously impacted if agricultural water [illegible] available. The consequences of that included not only [illegible] land sales, but a lower property tax base which impacts the districts and the county in which they are located.

12. Contrary to [illegible] conclusion reached in the Environmental Assessment with regard to water rates, the increased costs for imposing M&I rates on smaller parcels will not necessarily [illegible] by each customer. [illegible] adopting standard rates

[illegible] with a [illegible] and [illegible]. These impacts [illegible] considered.

Transfers

13. The Environmental Assessment recognizes that transfers [illegible] contractors to manage [illegible] and improve water management. The Environmental Assessment fails to discuss or [illegible] use of CVP facilities for these transfers and [illegible] potential for [illegible]. [illegible] Reclamation [illegible] agreeing that CVP facilities can be used to transfer and convey non-project water, as proposed [illegible] conveyance [illegible] renders it [illegible] today. [illegible] of water [illegible] transfer and conveyance of non-project water through CVP facilities may [illegible] when [illegible] are completed. The Environmental Assessment [illegible] opportunities.

14. The Environmental Assessment fails to [illegible] CVPIA [illegible] Area of Origin laws in its transfer [illegible].

15. [illegible] that will occur [illegible] the future should be covered by the Environmental Assessment rather than simply declaring that no additional analysis was suggested. There is ample data available to review historic transfers that are repeated annually and no additional analysis should be required to update the Environmental Assessment for both NEPA and CEQA compliance.

Letter 1

Keynesian Economics Today

1. The Keynesian approach to economics is based on the idea that the government can stimulate the economy by increasing its spending or reducing taxes. This is known as fiscal policy. The government can also use monetary policy, which involves changing the money supply and interest rates.

   The Keynesian approach to economics is based on the idea that the government can stimulate the economy by increasing its spending or reducing taxes. This is known as fiscal policy. The government can also use monetary policy, which involves changing the money supply and interest rates.

2. The Keynesian approach to economics is based on the idea that the government can stimulate the economy by increasing its spending or reducing taxes. This is known as fiscal policy. The government can also use monetary policy, which involves changing the money supply and interest rates.

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10. The Keynesian approach to economics is based on the idea that the government can stimulate the economy by increasing its spending or reducing taxes. This is known as fiscal policy. The government can also use monetary policy, which involves changing the money supply and interest rates.

LETTER 2

COUNTY OF SHASTA CALIFORNIA

SHASTA COUNTY

WATER AGENCY

[illegible]

LETTER 2

[illegible]
[illegible]
[illegible]

[illegible]

[illegible]

Responses to Comments Letter 2 – Shasta County Water Agency (2008)

2-1 [illegible]

2-2 [illegible]

2-3 [illegible]

2-4 [illegible]

2-5 [illegible]

2-6 [illegible]

2-7 [illegible]

2-8 [illegible]

2-9 [illegible]

2-10 [illegible]

LETTER 3

BELLA VISTA WATER DISTRICT

11368 E. STILLWATER WAY • REDDING, CALIFORNIA 96003-9510
TELEPHONE (530) 241-1085 • FAX (530) 241-8354

November 24, 2000

Lester A. Snow, Regional Director
Bureau of Reclamation
2800 Cottage Way, E-1604
Sacramento, CA 95825

Subject: Comments of Bella Vista Water District on the Proposed CVP M&I Shortage Policy

Dear Mr. Snow:

These comments are submitted on behalf of the Bella Vista Water District.

Section 1-4 of the policy as proposed is [illegible]. The proposal would severely impact the financial and physical existence of our District. We are a growing District which has gradually shifted from predominately agricultural water use to predominately municipal and industrial use. [illegible] water is our primary source of water.

The proposal that limits municipal and industrial water [illegible] agricultural water that is converted after 1994 to M & I use, together with the agricultural shortage provisions which may be reduced to zero during shortages, will prevent the District from supplying any of this water to new M&I customers. Under this proposal, the District cannot meet its minimum health and safety requirements without jeopardizing established rights of existing customers. This is [illegible] use of CVPIA by the federal government that was never contemplated by the federal lawmakers.

Under this policy the only way water could be supplied to new M&I customers during a severe drought when 75% of pre-1994 M&I water and 0% of agricultural water is available from the CVP would be to:

1. Provide water from a non-federal source. The District does not have an established non-federal source that it can rely on and cannot withstand the expense of providing such a source. The proposed provision in the new contract to price non-federal water that is wheeled through a federal facility further prohibits this concept and is contrary to the spirit and intent of CVPIA to encourage contractors to develop alternative sources.

2. Provide water from a portion of the water supplied to pre 1994 M&I customers. This would have serious consequences because the Bureau has already established that a supply of less than 75% to M&I customers will not meet health and safety requirements and may place Bella Vista Water District in jeopardy of violating state law.

3. Provide water from groundwater. This is not a viable solution for the Bella Vista Water District as the portion of the Redding groundwater basin [illegible] is non productive and which was the primary reason the District's system was originally developed.

If we are not allowed to make new connections for municipal and industrial water to our system we will be unable to repay several million dollars in debt incurred to provide new infrastructure for the District. Is it the intent of the Bureau to put us out of business?

The policy is unfair to those districts that are just in the development stage as opposed to those districts that have essentially completed their build out.

I urge you to reconsider this draconian policy and rework the policy provision addressing conversion from agriculture to M&I to allow the District to continue to be a viable entity which can serve the needs of its landowners.

We also concur in the comments submitted by Mr. Walt McNeil, counsel to the Clear Creek CSD.

Sincerely,

Robert W. Dietz P.E.
General Manager

cc: Congressman Wally Herger
Senator Dianne Feinstein
Bruce [illegible]
Walt McNeil

FAX TRANSMITTAL # of pages 2
To: Mike Ryan From: Beth Bailey

DEC 2 8 2000

LETTER 3

STATE OF CALIFORNIA

Governor's Office of Planning and Research

State Clearinghouse

LETTER 4

[illegible]

Subject: [illegible] Long-Term Contract Renewal

SCH#: [illegible]

[illegible]

[illegible]

[illegible]

Sincerely,

Terry Roberts

Senior Planner, State Clearinghouse

[illegible]

Document Details Report
State Clearinghouse Data Base

SCH# [illegible]
Project Title [illegible]
Lead Agency U.S. Bureau of Reclamation

Type EA [illegible]

Description [illegible]

Lead Agency Contact
Name [illegible]
Agency U.S. Bureau of Reclamation
Phone [illegible] Fax
email
Address [illegible]
City Sacramento State CA Zip [illegible]

Project Location
County [illegible]
City Redding
Region
Cross Streets
Parcel No.
Township Range Section Base

Proximity to:
Highways
Airports
Railways
Waterways [illegible]
Schools
Land Use [illegible]

Project Issues [illegible]

Reviewing Agencies [illegible]

Date Received [illegible] Start of Review [illegible] End of Review [illegible]

[illegible]

LETTER 4

LETTER 5 CITY OF REDDING

[illegible]

December 4, 2000
W-030-050-300

DEC 12 2000

Mr. A. Candlish
Bureau of Reclamation
Mid-Pacific Region
2800 Cottage Way
Sacramento, CA 95825-1898

Dear Mr. Candlish:

Subject: Draft Environmental Assessment for the Long-Term Contract Renewal Shasta and Trinity Divisions

Thank you for the opportunity to review and comment on the Draft Environmental Assessment for the Long-Term Contract Renewal for the Shasta and Trinity Divisions. The Shasta and Trinity Division contractors are at the head works of a very reliable water supply with good quality water, and our local economy has much at stake in a successful solution to the state's pressing water needs.

The City of Redding (City) is in the process of renegotiating its Central Valley Project (CVP) water contract, which has not been completed at this time, for 6,140 acre-feet of water from the Spring Creek Conduit, Sacramento River, and the Toyon Pipeline. The City has concerns about the timeliness of the Environmental Assessment, especially in the absence of a completed contract. The City suggests that the completion of the Draft Environmental Assessment be postponed until the completion of the contract negotiations. The City believes that there are critical issues that have to be addressed and evaluated for the Shasta and Trinity Division contractors before a final Environmental Assessment can be completed.

Obtaining accurate data is essential in preparing an accurate Environmental Assessment. After the Shasta and Trinity Division contractors met with North State Resources (NSR) on September 11, 2000, it was determined that NSR had been supplied with incorrect data, and the water contractors were not adequately consulted prior to the preparation of the Environmental Assessment.

The Environmental Assessment should address the future water demand beyond 25 years for all the Shasta and Trinity Division contractors. The Environmental Assessment should consider the effect of the total supply of the contract program, whether it comes through the existing water contract, water transfers, or the acquisition of non-CVP water. The City, as well as other Shasta and Trinity Division contractors, strongly feel the Bureau of Reclamation (Bureau) should preserve the water supply that will be required to meet present and future beneficial uses in the watershed of origin. The Redding area will continue to grow and it does not make sense to make long-term water commitments to areas outside the Redding basin and then have to acquire CVP water to the area to make up the shortfall. If the Bureau is not able to provide adequate water supplies for long-term demand for the Shasta and Trinity Division contractors, this should be taken into consideration in the Environmental Assessment.

[illegible]

Mr. A. Candlish
December ?, 2000
Page 2

Important contractual issues concerning M&I water have not been resolved by the Bureau with the CVP contractors. Unresolved contract provisions concerning M&I water reliability, M&I water shortages, M&I water quality, and the M&I rate setting policy have not been determined. According to the Bureau, the rate setting policy will not be completed until sometime next year. The M&I [illegible] is expected to be [illegible] within the next year. The Environmental Assessment should have addressed these factors or at least taken them into consideration.

The Environmental Assessment should analyze in further detail the impacts on the water contractors taking water from Whiskeytown Lake when this is their only source of supply. This would occur in conjunction with the Bureau's Trinity River flow decision and corresponding change in the amount of water diverted to the Sacramento River system. The potential risk for decreased flows through Whiskeytown Lake could change the operation of Whiskeytown Lake and change water temperatures, increase organics in the water, increase water turbidity, and degrade water quality. All these potential risks could significantly impact water treatment operations and treatment expenses for the water contractors taking water from Whiskeytown Lake. Also the effects to the Sacramento River water quality should be addressed. The decrease in water diversions from the Trinity River have the potential to increase loading of chemicals and other constituents which could alter water quality for both the environment and M&I users. The Environmental Assessment should have also addressed the fact that 80% of the City's contract water that is diverted, is used and returned to the Sacramento River system with no credit of return water given to the City.

The California Department of Health Services, Division of Drinking Water (DOHS-DDW) which has primary enforcement responsibility that enforces the drinking water quality and monitoring standards in the Shasta and Trinity Division area should have had the opportunity to review and comment on the Draft Environmental Assessment. The DOHS-DDW has the authority of enforcement over the Shasta and Trinity Division contractors to ensure compliance with drinking water regulations.

The Bureau's proposal for tiered pricing should promote, not discourage, good water management tools such as conjunctive use, water transfers, and water conservation. The Bureau's approach to the implementation of tiered pricing in Category 1 and Category 2 water in Alternative 2 is yet to be an item in the contract negotiations and should have been deleted from the Environmental Assessment.

The following inconsistencies were noticed during the Draft Environmental Assessment review:

Section 4.2 WATER SUPPLIES AND FACILITIES OPERATIONS

In the City of Redding section it is stated "The Summit City Zone is primarily within the unincorporated area of Shasta County." This statement is incorrect. Three-quarters of the Summit City Zone is within the city limits of the City of Shasta Lake. Also the statement "The City's CVP long-term water service contract provides 6,250 acre-feet according to [illegible] data sources" this statement is incorrect. The City of Redding has never received more than 4,500 acre-feet of the 6,140 acre-feet obligated in the Bureau's contract [illegible].

Section 4.3 SOCIOECONOMICS

Is the Draft Environmental Assessment assuming the entire service area of the City which includes both the Buckeye and Redding water contracts, or is the Environmental Assessment to cover Buckeye CVP contract service area only? The Draft Environmental Assessment document [illegible]

back and forth from the Buckeye contract area to the rest of the City area.

Table 4.3-4 M&I SERVICE CONTRACTORS WITHIN SELECTED SHASTA AND TRINITY DIVISIONS BY M&I CATEGORY (1994)

The Service Connection Category has the entire City service area counted on this table and not the Buckeye contract service area. There are only 4,237 service connections in the Buckeye contract service area.

Table 4.3-5 DELIVERIES OF TREATED WATER TO M&I CUSTOMERS BY M&I CATEGORY (ACRE FEET PER YEAR)

The Service Connection Category also has the entire City service area treated water deliveries and not the Buckeye contract service area water deliveries. All the City totals listed in this table are incorrect except for the Industrial category. The information that the City submitted to the Department of Water Resources (DWR) in 1994 is not the information listed on this table. Landscape irrigation was listed in the DWR report as 0 acre feet not 21,0[illegible] acre-feet as listed in the table. The total listed on the bottom of the table is 22,14[illegible] acre-feet higher than the information the City submitted to the DWR in 1994.

Table 4.3-6 CVP CONTRACT MAXIMUM, M&I DELIVERIES AND ESTIMATED COST (1994)

The CVP Contract Maximum (acre-feet) listed in this table is incorrect; the City's Buckeye contract total is 6,140 acre feet not the 9,250 acre feet as listed in the table. There is no Buckeye contract settlement water used in the Buckeye contract area as indicated in the table.

The text contained in the last paragraph on page 4-3[illegible] is not very clear. "A comparison of the two tables also reveals that only a relatively small portion of the City of Redding's M&I water comes from its contract water." This statement comparing the numbers for the City category in Table 4.3-5 and Table 4.3-6 is incorrect. All the water delivered to the Buckeye contract area is CVP M&I contract water.

The City of Redding believes that being in the area of origin of a monumental water supply, the Bureau, through the Environmental Assessment, should make it a priority to assure a continuous and permanent supply of water for the City and the Shasta and Trinity Division contractors as a fundamental, necessary and critical component of the Long-Term Contract Renewals.

If you have any questions or need additional information please contact me at (530) 224-[illegible].

Sincerely,

Mike Robertson
Public Works Manager - Water

c: Jim Perry, Assistant City Manager
[illegible]

LETTER 6

[illegible]

WALTER P. McNEILL

[illegible]
[illegible]
[illegible]

[illegible]
[illegible]
[illegible]

December 5, 2005

Laura Kish
North State Resources, Inc.
5000 Bechelli, Suite 203
Redding, California 96002

Via Email [illegible]

Russell Holt
U.S. Bureau Of Reclamation
16349 Shasta Dam Blvd.
Shasta Lake, CA 96019-8400

Via U.S. Mail

Al Candlish
U.S. Bureau of Reclamation
2800 Cottage Way
Sacramento, CA 95825-1898

Via Federal Express

Re: Response and Comments of Clear Creek Community Services District to the "Draft Environmental Assessment for the Long-Term Contract Renewal – Shasta and Trinity Divisions"

Dear Ms. Kish and Messrs. Holt and Candlish:

This letter contains the response and comments of Clear Creek Community Services District to the "Draft Environmental Assessment for the Long-Term Contract Renewal – Shasta and Trinity Divisions" prepared for the United States Bureau of Reclamation by North State Resources, Inc. dated October 2005. Because the Draft EA is of general application to the Shasta and Trinity Divisions with sporadic references to Clear Creek CSD as an individual District, these comments are directed to the entire EA as a document pertinent to all Shasta/Trinity water service Contractors (inclusive of Clear Creek CSD), except where these comments specifically mention Clear Creek CSD by name. Other CVP Contractors within the Shasta and Trinity Divisions have or will be submitting their own comments to the Draft EA, and, to the extent applicable, Clear Creek hereby incorporates by reference their comments as well.

[illegible]

GENERAL COMMENTS

A general observation and inescapable conclusion that must be made after reviewing this Draft EA, is that it is so seriously flawed as to both form and factual content that it falls far short of NEPA requirements for environmental review. Though Clear Creek CSD is only a tiny part of the overall Central Valley Project, Clear Creek takes very seriously the necessity for adequate environmental review of the major federal action for long term renewal of its contract and the long term contracts of the other water service providers in the Shasta and Trinity Divisions. Unfortunately, this Draft EA is no more than a superficial treatment of Reclamation's general proposal to renew long term contracts under the Central Valley Project Improvement Act (CVPIA) without any substantive analysis or meaningful information that would disclose to Clear Creek, its customers, or the public, the true nature and extent of potential environmental impacts arising from the long term renewal of Clear Creek's water service contract or those of other water service Contractors in the Shasta/Trinity divisions.

A. The Process

The preparation process for this Draft EA was inherently designed to fail in light of Reclamation's inordinate delay in completing the Programmatic Environmental Impact Statement (PEIS), coupled with Reclamation's failure to reach agreement with the CVP Contractors on a CVP wide form of contract in accelerated but unsuccessful negotiations. While North State Resources (NSR) was hired to prepare an environmental document under Reclamation's self-imposed imperative that long term renewal contracts "must be ready in time to be signed by this presidential (Clinton) Administration." At what amounts to the "11th hour" NSR was directed by Reclamation to prepare a Draft EA, even though there was no CVP wide form of contract, nor a divisional form of contract for the Shasta/Trinity Divisions, much less any individual form of contract for the individual water service Contractors. Using faulty information (or that made known to NSR and Reclamation early on) NSR spent several weeks preparing a document which conforms to the time constraints and negotiating positions presented by Reclamation, at the expense of providing adequate substantive environmental review.

In the meantime, even after Reclamation unilaterally terminated CVP-wide negotiations without agreement on September 29, 2000, the Shasta/Trinity Divisions convened with "technical working group" sessions with Reclamation representatives on September 27, October 2 and October 12, 2000 as well as formal negotiating sessions on October 20, October 27 and November 2, 2000, as part of the Sacramento Valley Division. This was a good faith effort by the Contractors to cooperate with Reclamation's late request to keeping the CVP-wide process and try to iron out CVP wide issues at the same time that divisional issues were negotiated. November 2, 2000 had been declared by Reclamation to be the "drop dead" date for completing an agreement on form of contract in time for a 60 day public review prior

its execution by the Clinton Administration. At the conclusion of the Sacramento Valley Division negotiations on November 7, 2000, although both sides remain committed to continue with negotiations on an uncertain future timetable, there was no agreement on a final negotiated form of contract, and a variety of CVP wide issues remain outstanding.

Now that the "drop dead" date has passed, it is clear that interim renewal contracts will be needed for water service in 2001, and long term renewal contracts will have to be executed with a new, yet unnamed Administration. (See the District's November 7, 2000 letter to Reclamation Regional Director Lester Snow requesting a new interim renewal contract, copy attached hereto as Exhibit "A".) We are now called upon to comment upon a Draft EA that was put together in slapdash fashion to meet a time deadline that is no longer relevant. The rational approach, under the current circumstances, would be for Reclamation to withdraw the Draft EA, and when the parties finally do reach an agreed upon form of contract in 2001 then rewrite or substantially revise the EA to bring it current and cure its numerous deficiencies. It is hereby suggested that Reclamation and NSS do exactly that.

B. Circular and Unlawful Incorporation of Environmental Documents

Regardless of whether Reclamation takes the responsible step to defer final environmental review until actual negotiation of an agreed upon form of contract, or Reclamation continues with the current document and process, the circular linkage of the Draft Contract and environmental documents will have to be discontinued in order to achieve final and adequate environmental review. As noted in Clear Creek's November 7, 2000 letter to Mr. Snow, both the federal environmental documents and the CEQA document for long term contract renewal should not be prepared until after there is an agreed upon form of contract. Unfortunately, in the contract negotiations Reclamation has persisted in rigid and uncompromising insistence upon a contract provision (Article 3(e)) that explicitly incorporates the environmental documents as contract terms. The environmental documents and constraints they impose are enforceable outside of the contract pursuant to the relevant environmental laws (i.e. NEPA, ESA, and CEQA) without morphing the environmental documents into contract terms. It perverts the relationship between contracts (as major federal actions) and environmental documents when you convert those environmental documents to express contractual covenants. The effect is twofold: (1) it allows Reclamation and (particularly) the U.S. Fish & Wildlife Service to unilaterally craft detailed restrictions, conditions, and promises for Contractors to follow, as contract covenants, even though there is no negotiation of this portion of the contract; and (2) it allows Reclamation and Fish & Wildlife Service to threaten Contractors with the "death sentence" of contract termination if the Contractor fails to obey the directives unilaterally placed in the environmental documents. Further, as we have seen from the Biological Opinion for the interim renewal contracts, there is not the slightest hesitation by the U.S. Fish & Wildlife Service and Reclamation to use this "blank check" to incorporate in the environmental documents a multitude

of highly specific directives aimed at exercising broad ranging contractual control over water service Contractors.

Putting aside for the moment the Contractors' position that Reclamation and Fish and Wildlife Service have no legal authority to bootstrap environmental documents into contract terms or usurp local government agency powers, the resulting contract structure becomes a never ending "feedback loop" for environmental review. That is: (1) a tentatively agreed upon form of contract is negotiated by the parties, with a provision that incorporates the environmental documents as contract terms; (2) environmental review is carried out on the agreed upon form of contract, with environmental documents prepared by Reclamation and Fish & Wildlife Service which unilaterally inject numerous new and detailed contractual covenants by virtue of the various directives incorporated into the environmental documents; (3) the parties no longer have an agreed upon form of contract, because Reclamation and Fish & Wildlife Service have unilaterally drafted or revised major portions of "the contract" by crafting the environmental documents section of "the contract"; (4) though the parties no longer have an agreed upon form of contract, they are free to renegotiate "the contract" including the terms unilaterally drafted and inserted by Reclamation and Fish & Wildlife Service through preparation of the environmental documents; (5) renegotiation of "the contract" is a virtual certainty, particularly since the Fish & Wildlife Service has been given the best opportunity [illegible] unilaterally insert sweeping, arbitrary and overreaching contract directives; (6) the new and revised agreed upon form of contract, after a second round of negotiations, will require new environmental review; (7) we begin again.

To put this in context, for example, Reclamation has published a form of contract for the CVP (even though it hasn't been agreed to by the CVP Contractors) which purports to incorporate the future environmental documents as contract terms. The Site Specific Biological Opinion has not even been prepared yet, though that is getting underway, again with NSS as consultant. Assuming past indications hold true, it is likely that the Biological Opinion will include a directive that automatically requires prior review and approval by Reclamation and Fish & Wildlife Service before Clear Creek CSD provides water to land in the District that previously has not received water service. Such a contractual provision would be an unlawful usurpation of Clear Creek's local government agency powers, and it would place the District in legal jeopardy to landowners who could sue the District for failure to promptly perform its nondiscretionary ministerial duty to provide water service. Clear Creek's interest is that there is an agreed upon form of contract with Reclamation until after negotiation of the contract and after it has an opportunity to review, react and renegotiate terms unilaterally inserted into the contract by a Site Specific Biological Opinion. If the above described provision is inserted in the Biological Opinion for Clear Creek's draft contract, the District will certainly insist upon removal and renegotiation of that term and any other similarly overreaching terms. Another round of negotiations would follow, to be followed again by new or revised environmental review.

LETTER 6

Another example, this time provided by actual experience with the interim renewal contracts, concerns the directive by Reclamation and Fish & Wildlife Service that permission be obtained before applying irrigation water to lands which laid fallow for three years. In a letter to Contractors dated July 6, 2000 Reclamation demanded compliance with this directive. After a storm of angry protest from irrigation Contractors, Reclamation withdrew its demand in a letter dated November 15, 2000. All the while, the Contractors' compliance with their interim renewal contracts — which incorporate the interim contract Biological Opinion as contract terms — hangs in the balance. Thus the Contractors and Reclamation no longer have a true contractual relationship so much as one of rule by [illegible] administrative fiat.

Reclamation suggests that the Contractors ignore the illegalities in this process and essentially provide Reclamation and Fish & Wildlife Service carte blanche to unilaterally draft major portions of the contract through drafting of the environmental documents. This, Clear Creek CSD is unwilling to do. The District fully reserves its rights to reject and negotiate any contract terms created through the drafting of environmental documents. Further, it has been and remains the District's position that Article 3(e) of Reclamation's "proposal for CVP contracts" is unnecessary, unlawful, and unacceptable — a matter to be resolved in further negotiations with Reclamation.

SPECIFIC COMMENTS

The following comments are submitted with the expectation that Reclamation will act in good faith and actually consider and respond to these comments with appropriate revisions/rescoping of the environmental document (including preparation of an Environmental Impact Statement), even if final preparation of the environmental document must be deferred to a later date. It should be noted that Clear Creek CSD provided Reclamation and NSR with a detailed list of issues/concerns while preparation of the Draft EA was in progress (see letter of October 3, 2000 attached hereto as Exhibit "B") to respond to the points raised. Accordingly, as the first comment on the Draft EA, Clear Creek CSD asks that Reclamation respond to each and every point raised in the letter, referring by page number and text to any information in the Draft EA, if any, which Reclamation feels is responsive. Next, Clear Creek's comments are referenced below to page numbers and text (or subject) in the Draft EA pertaining to the substantive comments which follow. Finally, comments are submitted relating to the failure of Reclamation and NSR to follow the Scope of Work for preparation of the EA.

Comment No.	Draft EA Page No.	Comment
1	N/A	Please respond to each and every point raised in Clear Creek CSD's letter of October 3, 2000, attached hereto as Exhibit "B," referencing by page number and text any information in the Draft EA which Reclamation feels is responsive.
2	1-1	Under "Introduction" the Draft EA purports to assess "the impacts and benefits of long-term renewal of water service and repayment contracts with the nine CVP water service contractors that comprise the Shasta and Trinity Divisions." This misstates the purpose of the environmental review document insofar as it references purported renewal of "repayment contracts." Though some of the Shasta/Trinity Division Contractors have repayment contracts with Reclamation, none of those repayment contracts have expired or are subject to renewal. In particular, Clear Creek CSD's repayment contract has not expired and is not up for renewal. There is no provision in CVPIA that compels early renewal or renegotiation of repayment contracts. Only water service contracts are subject to compulsory renewal under CVPIA. The water service contracts, not the repayment contracts, are the subject of the ongoing negotiations with Reclamation, and they are the only proper subject of environmental review. A major flaw that runs throughout the Draft EA is the failure to distinguish between contract provisions that are part of the repayment contracts held by the Contractors and provisions which are being negotiated in the water service contracts held by Contractors. For example, the five acre threshold allowing application of agricultural water as a part of Clear Creek CSD's repayment contract also is not a term to be negotiated in the water service contract. Adequate environmental review cannot be carried out until Reclamation recognizes the proper scope of environmental review (the water service contracts) and differentiates between the terms being negotiated in the water service contracts and the terms that already exist in ongoing repayment contracts.
3	1-1	The Introduction references "nine water service Contractors" and proceeds to list them. However, only eight legal entities are actually listed, because the Shasta County Water Agency and the Keswick County Service Area are only one legal entity – the County of Shasta. (Notwithstanding the fact that there are two contracts with the County, which the County administers in two different ways.) In addition, a very important legal entity has been completely omitted from the list and from the analyses in the Draft EA altogether — that is Centerville Community Services District.

LETTER 6

COMMENT NO.	ISSUE/PAGE NO.	COMMENT
3 [illegible]	1.1	Centerville CSD is a 100% M&I water supply provider to suburban residents in a geographic area in between Clear Creek CSD and the City of Redding. Centerville CSD has over 1,050 M&I service connections, around 10,590 in acres roughly in its service area, 1,570 +/- acre feet of annual usage, a new 900 acre foot exchange contract with USBR, and 25% dedicated capacity by contract in Clear Creek's expanded filtration plant. Historically Centerville CSD has been entirely dependent upon CVP water supplied by either or both of Clear Creek CSD and the Shasta County Water Agency. All of Centerville's CVP water is filtered and treated through Clear Creek's filtration plant, from water delivered through the Muletown Conduit operated and maintained by Clear Creek CSD. Though Centerville has recently obtained a contract with Reclamation for a portion of its water supply, as a result of the removal of Saeltzer Dam and settlement of Townsend Flat Water Ditch Rights, Centerville will continue to require additional CVP water supplied either through Shasta County and/or Clear Creek CSD. Clear Creek CSD's existing water service contract expressly provides for sales of CVP water outside of Clear Creek's boundary to provide water to Centerville, without those sales being considered a "transfer" or a prohibited extra-contractual water service — a rather unique feature among CVP contracts. (See Article 27 of Clear Creek's existing Interim Renewal Contract.) Centerville is the fastest growing water service agency among CVP water, due to residential expansion and growth from the Redding urban area. Because Centerville CSD has been and will continue to be dependent upon CVP water supplies derived from the contracts reviewed in this Draft EA, the impacts associated with renewal of the long term contracts for the Shasta County Water Service Agency and Clear Creek CSD are passed through also to Centerville CSD. Thus the Draft EA has a huge "blind spot" in failing to provide any discussion or analysis of the environmental impacts that will occur in the Centerville CSD water service territory.

COMMENT NO.	ISSUE/PAGE NO.	COMMENT
4	1.1	Section 1.2 of the Draft EA makes reference to Section 3404(c) of the CVPIA pertaining to renewals of long term contracts, as if this section governed the entirety of the water service contracts being renewed. In fact, the quoted section of CVPIA covers the water service contracts only insofar as the contracts provide for agricultural water service. Section 3404(c) of the CVPIA is not applicable to the water service contracts insofar as they provide for M&I water service. Renewal of the water service contracts insofar as they provide for M&I water is governed by the 1963 Act, the pertinent portions of which are set out in Exhibit "C" attached hereto. Reclamation has acknowledged and agreed to this distinction. The different treatment accorded M&I service and Ag service is of critical importance in evaluating the long term renewal of the water service contracts. For M&I service, Reclamation acknowledges that the Contractors have an absolute legal right to successive long term renewal, and the legal limit for contractual renewal of M&I water service is 40 years. For Ag service, Reclamation contends that the quoted section of CVPIA requires only one 25 year renewal, with future renewals subject to the discretion of the Secretary of Interior, and a cap of 25 years on the duration of the contract. The Ag water service Contractors dispute Reclamation's position, and the issue is not yet fully resolved. Without attempting to argue or resolve the dispute between Reclamation and Ag service contractors as to the renewal rights for Ag water service, it is clear that the acknowledged legal distinction between renewals for M&I and Ag water service result in a permanent reliable water supply for M&I service as contrasted with a disputed and potentially unreliable source of supply for Ag water service. Long term capital investments are necessary to sustain either Ag or M&I water service. The differential treatment of Ag vs. M&I water service is a major disincentive for investment in facilities which support Ag service, contrasted with a favorable incentive for investment in relatively reliable future M&I water supplies. This incentive to "transitional Ag/M&I districts" — Clear Creek CSD and Bella Vista WD — results in a huge incentive to accelerate the transition from agricultural water service to M&I service. The Draft EA's failure to discuss the above described distinctions between long term renewal of Ag service and M&I service is a major deficiency of this environmental document.

LETTER 6

Comment No.	Draft EA Page No.	Comment
5	1.1	A glaring omission in this EA is its failure to address the unique status of Clear Creek CSD and Bella Vista WD as what might be called "transitional Ag/M&I districts." Clear Creek, for example, currently uses about two-thirds of its CVP water as Ag water, and about one-third as M&I water; by quantity, about two-thirds of Clear Creek's customers are M&I customers, and about one-third are Ag customers. Bella Vista WD has similar proportions. Both Clear Creek and Bella Vista have contracts which allow 100% of the contract total to be used for M&I water service, and no consent or special permission is required from Reclamation to allocate the water between Ag and M&I uses. Both Clear Creek and Bella Vista anticipate that over the long term (25 years to 50 years) M&I usage will become the dominant (if not exclusive) form of usage of their CVP water. Both Clear Creek and Bella Vista have made major capital investments in their water treatment, storage and distribution facilities to accommodate the increasing future demands for M&I water service. Both Clear Creek and Bella Vista provide 100% potable water to their customers, regardless of whether the water is currently put to Ag or M&I usage. Further, though about 80% of the 112 CVP contractors up for renewal have some [illegible] mixture of Ag and M&I service, none of those contractors (other than Clear Creek and Bella Vista) have a pattern of water usage in which the dominant form of usage is less than 90% or the subordinate form of usage is greater than 10%; none of the other 112 Contractors have made substantial capital investments in facilities for increasing future M&I usage of water that currently is characterized as Ag usage; none of the other 112 CVP Contractors would describe themselves as a "transitional Ag/M&I District." Out of approximately 112 CVP Contractors currently negotiating long term contract renewals, only Clear Creek CSD and Bella Vista WD meet this profile. The Draft EA says absolutely nothing about the unique water usage profile of Clear Creek CSD and Bella Vista WD, which together account for over 71% of the CVP contract quantity for contracts subject to renewal in the Shasta and Trinity Divisions. The unique water usage profile of Clear Creek and Bella Vista is well known both to Reclamation and NSR. The Draft EA's failure to account for the unique water usage profile of Clear Creek and Bella Vista is an enormous and inexcusable omission which undercuts the validity of the EA.

Comment No.	Draft EA Page No.	Comment
6	1.2	In Table 1.1, the reference to City of Shasta Lake shows a contract number of W1151R3; this should be W0C38165. The quantity shown for City of Shasta Lake is 2,750 acre feet; that should be approximately 4,800 acre feet, since City of Shasta Lake is seeking renewal of the combined contract quantities under contract number 14-1825 and contract number 14-3229. Insofar as the table purports to reflect water currently available under interim renewal contracts, the correct number for City of Shasta Lake should be 2,[illegible] (with an option to request the balance up to 2,750 acre feet on approval by USBR). The reference for City of Shasta Lake showing that the contracts for Shasta Dam Area PUD and Summit City PUD are "included" is false to the extent that the table represents that the two former contracts are "included" in the existing interim renewal contract; the intention of the City of Shasta Lake and Reclamation is to include renewal of both former long term contracts in one long term contract for about 4,8[illegible] acre feet.
7	1.2	The reference to a contract number for Clear Creek Community Services District in Table 1.1 should be 4SSA1285 (effective Dec. 1, 2000).
8	1.2	Again the reference to "Keswick County Service Area" is misleading insofar as it is represented to be a separate entity from the County of Shasta or the Shasta County Water Agency.
9	1.3	A major omission under Section 1.3 "Basis of Central Valley Project Water Service Contract Renewals" is the failure to cite the 1963 Act for M&I water service. (See Exhibit "C" attached hereto.)
10	1.3	The following statement under Section 1.3 contains assertions which are misleading, false and disputed: "The CVPIA included a right of renewal of long term repayment or water service contracts for a term not to exceed 25 years but the Secretary may or may not renew such contracts for successive periods for terms not to exceed 25 years." The reference to "repayment contracts" is misleading in that CVPIA does not compel renegotiation of repayment contracts, and no long term repayment contracts are currently being negotiated with Reclamation in the Shasta and Trinity Divisions. Only water service contracts are subject to the current negotiations. The assertion that "The Secretary may or may not renew such contracts" is false insofar as it references M&I usage allowed under the contracts (see 1963 Act and previous comment). Insofar as the assertion references agricultural water service, it is disputed by the Contractors.

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COMMENT NO.	DRAFT EA PAGE NO.	COMMENT
11	1-5	In reference to the City of Shasta Lake it is stated that "In 1978, the SDAPUD and SCPUD contracts were merged into one long term contract." This is false. Actually, the Summit City Public Utilities District (SCPUD) was absorbed by the Shasta Dam Area Public Utilities District (SDAPUD), and the water service contract held by SCPUD was assumed by SDAPUD by assignment. For purposes of administration, two contracts remained outstanding, jointly administered by SDAPUD. The two long term contracts did not expire in 1988. They were renewed and continued by a series of temporary contracts numbered 8-07-20-W0715, then 8-07-20-W0985, then 2-07-20-W1024. At the time that these temporary contracts were executed, it was expected that the City of Shasta Lake would receive a long term contract of approximately 4,500 acre feet (not 4,400 acre feet as represented in the Draft EA). The statement in the Draft EA that "There was no right to renewal available" is patently false; there was in fact an absolute legal right to successive future renewals pursuant to the 1956 Act. At the time these short term renewal contracts were executed (which was prior to CVPIA) California was experiencing severe drought conditions and drastic shortages were being imposed by Reclamation on all CVP water service contractors. For these short term extensions of these water service, the SDAPUD agreed to contract quantities totaling about 2,400 acre feet (during the drought restriction) to assist the USBR in meeting the 1990 crisis. It appears that a draft EIS had been prepared in or around 1988-89 which allocated 5,000 acre feet to SDAPUD based on its demonstrated future needs for water service. Nowhere in this Draft EA is there appropriate attention or reference to the earlier EIS. In 1993 the City of Shasta Lake was incorporated, and the water service contracts rights of SDAPUD and SCPUD were assumed by the City. At no time did either SDAPUD (or SCPUD) or the City agree that 2,790 acre feet was an appropriate contract amount for long term contract renewal. The City (and SDAPUD) had allowed for a reduced quantity during the drought only as an accommodation to Reclamation during the drought, while a long term contract of 4,500 acre feet was expected when environmental review under the draft EIS was completed. CVPIA was enacted in 1992, and even though the interim renewal contracts have carried forward the reduced quantity, the City has continued to demand and expects the long term renewal contract to provide approximately 4,500 acre feet of water.
12	1-5	The reference to Clear Creek Community Services District inaccurately represents that it is an agency formed "under County Water District Act of 1955." Clear Creek CSD is a local governmental agency formed under the Community Services District Law, sections 61000 through 61850 of the Government Code of the State of California.

COMMENT NO.	DRAFT EA PAGE NO.	COMMENT
13	1-5	It is stated that Clear Creek CSD's initial contract with the federal government provided for delivery of "up to" 15,300 acre feet of CVP water. This is not accurate. In truth, Clear Creek CSD was required to "accept and pay" for 17,000 -- later adjusted to 15,300 -- acre feet of CVP water under its long term contract, whether Clear Creek used the water or not, up until the execution of an interim renewal contract effective January 1, 1995. (CVPIA effectively prohibited "accept and pay" contract requirements like those which governed Clear Creek for 32 years.) Though the District did not relish paying for water which it did not use for 32 years, the payments were regarded as an "investment" in the future availability of that water for both M&I and Ag purposes to meet the demands of future growth.
14	1-5	As noted under the reference to the Shasta County Water Agency, this contract provides water that supplies not only Centerville CSD, but also a number of County Service Areas such as Jones Valley CSA, Crag View CSA and Castella CSA. Why does the Draft EA contain no analysis whatsoever of the impacts to these small service areas located in some of the more remote areas of Shasta County?
15	1-5	As noted in earlier comments, the "Keswick County Service Area" is not a separate legal entity from the County of Shasta. A "County Service Area" is a subunit of county government, with a board of directors appointed by (and removable by) the county board of supervisors, given limited local authority to provide public services in a specified geographic area.
16	Fig. 1-2 Map of Service Areas	This map is noteworthy for its omissions. The glaring and obvious omission is the absence of Centerville CSD. Attached hereto as Exhibit "G" is a map from Reclamation's EA for the Shasta Dam raise, depicting the location of the Centerville CSD service area. Also depicted on Exhibit "G" is the service area for Jones Valley CSA No. 6 -- which does not appear on Figure 1-2. Also missing from Figure 1-2 are the service areas for Crag View CSA No. 25 and Castella CSA No. 3.
17	1-5	The Draft EA reference to "study period" anticipates that the next 25 year long term water service contract will expire in the year 2026. Given that long term renewal contracts will not be executed until sometime in 2003, the new expiration date should be changed to 2029.

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Comment No.	Draft EA Page	Comment
18	1-9	The discussion of "related activities" is grossly inadequate. In addition to the activities listed in Table 1-2, Reclamation is also carrying out several other related activities which directly impact water supply to these Contractors under their renewed long-term water service contracts: (1) the Trinity River Flow decision which will decrease water exports from the Trinity River than otherwise would be available to these contractors, and also substantially alter the operations of Whiskeytown Lake; (2) removal of Saeltzer Dam and restoration of approximately ten miles of critical salmon spawning habitat, which will require increased surface water releases from Whiskeytown Dam; (3) Anadromous Fish Restoration Program (AFRP) which will establish increased flows necessary for salmon spawning habitat in Clear Creek, using the same surface water supply from Whiskeytown Lake that is used for most of the water service contractors covered by this Draft EA; (4) new water service contracts by Reclamation with the McConnell Foundation and Centerville CSD, as part of the water rights settlement arising from the removal of Saeltzer Dam, not discussed at all in this Draft EA; (5) changed operations of Whiskeytown Lake which is the surface water supply for most of the Contractors covered in this Draft EA. Under "Long-Term Water Service Contract Negotiations Process" the Draft EA repeats earlier stated legal opinions about the effect of CVPIA that are either inaccurate or disputed by the Contractors (and which are addressed by earlier comments herein). In addition, it is stated that M&I contracts are to be renewed "under terms and conditions that are mutually agreeable." Your attention is directed to the 1956 Act provisions (Section 1([illegible])) which state that Reclamation may only renegotiate: "(1) the charges set forth in the contract in the light of circumstances prevailing at the time of renewal and (2) any other matters with respect to which the right to renegotiate is reserved in the contract." While the Contractors acknowledge that water rates and charges may be renegotiated, the contracts do not specify any other matters with respect to which the right to renegotiate is reserved.

Comment No.	Draft EA Page	Comment
19	2-1	The Draft EA makes note of the three phase negotiation process that was contemplated by Reclamation and the Contractors. The "Scope of Work" between Reclamation and North State Resources for preparation of this Draft EA also described the three phase process (under "Development of Alternatives") as follows: "Negotiations will be carried out in a three phase process: Phase I -- CVP wide terms; Phase II -- Division/Unit Level Terms; and Phase III -- District Specific Terms." As noted earlier in the General Comments, this three phase negotiating process was abandoned by Reclamation when it unilaterally terminated CVP-wide negotiations before closure had been reached on a CVP-wide form of contract. Subsequently, division/unit level negotiations were pursued for the Sacramento Valley Division, while CVP-wide issues continued to be addressed on an ad hoc basis in different divisional negotiations around the state. The divisional negotiations for the Sacramento Valley Contractors did not come to closure either, leaving us with no Sacramento Valley divisional agreed upon form of contract. Negotiations have not even started on the district specific level for any of the Shasta/Trinity Contractors. While both sides are committed to continuing negotiations, it is not anticipated that significant progress will be made on all three of these levels until after a new presidential administration takes office, simply due to our current time constraints. The status of the negotiations at this point in time can only be said to be "unresolved," particularly since the negotiations have been pursued as "package deal" negotiations from the outset. In "package deal" negotiations the parties propose an entire contract (rather than negotiating terms of a contract item by item). Such negotiations require trade-offs of favorable and unfavorable versions of different terms within the total contract, seeking compromise through a balance of these trade-offs in the total contract, rather than incrementally negotiating each individual contract term to a mutually acceptable form as a stand-alone term. In theory, Reclamation or the Contractor might accept an unfavorable version of a contract term in return for a favorable version of a different contract term, and so on throughout the contract, as long as the parties feel the contract as a whole represents a balanced, acceptable compromise.

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COMMENT NO.	PAGE/PARA NO.	COMMENT
19	2-1	The "package deal" approach is a pragmatic method of negotiating contracts which contain numerous highly contentious terms that otherwise might cause the negotiations to stalemate if the parties were required to fully agree on each individual term. One drawback to "package deal" negotiations is that if they are interrupted before an agreement is reached, it cannot necessarily be said that there is measurable "progress" by way of agreement to portions of the contract or specific terms short of an entire package. When negotiations resume, the past effort in negotiations will not have been wasted, because both sides have developed a better understanding of what the other is looking for in a "package deal" and we certainly are closer to structuring a "package" that could be mutually acceptable. However, given the absence of an agreed upon CVP-wide form of contract, and the absence of a divisional agreed upon form of contract, and no individual district negotiations, technically all provisions of the contract remain open to negotiation. The Draft EA is entirely premature, when there are no actual agreed upon contract provisions at this point in the negotiations.

COMMENT NO.	PAGE/PARA NO.	COMMENT
20	2-2	At the top of Page 2-2 there is a brief description of Reclamation's bizarre and legally unfounded "bookends" approach to environmental review. First, a single contract proposal by Reclamation and a single contract proposal by the Contractors' group are arbitrarily selected as "bookends" for the respective negotiating positions of the parties, even though each of these proposals is only one of many proposals made by Reclamation or the Contractors' group, with no special significance attached to these particular proposals. Secondly, it is falsely assumed that these are polar opposite proposals by the respective parties that represent the extremes of their bargaining positions, when in fact they are nothing more than "package deal" proposals for which that type of comparison is not applicable. (See previous comment.) Third, it is falsely assumed that all subsequent proposals will fall somewhere on a linear continuum stretching between these two "bookends," when in fact there is no such linear continuum for comparison. Conceptually, "package deal" negotiation is like throwing darts at a dart board; it's pointless to compare the relative positions of the darts on the dart board, you keep throwing until you hit a "bulls-eye" by reaching agreement. Finally, there is no legal foundation for the notion that realistic environmental review can be focused on an amorphous continuum of possibilities for the project (the actual contract) which is supposed to be subject to environmental review. Both NEPA and CEQA require a stable and finite project description. While it is possible to study several alternatives without designating the preferred alternative, each alternative must have specifically designated characteristics that allow for evaluation as if any one of them could be the preferred alternative. The amorphous continuum of possibilities put forward by the "bookends" approach provides no definable project capable of environmental evaluation. This approach is fundamentally incompetent and unlawful as a means of environmental review.

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COMMENT NO.	PAGE/PARA.	COMMENT
21	2-2	Under Section 2.3.1 "Needs Analysis" it is stated that "Beneficial and efficient future water demands were identified for each district." These calculations of future water demands are extremely important and necessary to evaluating the future water usage patterns of the districts. They should be identified and listed in the Draft EA. Additionally, if the Draft EA assumes that future water demands greater than the existing CVP contract quantity will not be met by increasing the CVP contract quantity, then there should be environmental evaluation of the resulting creation of "unsatisfied demand." That is, "unsatisfied demand" may cause districts to turn extensively to other water sources, such as groundwater pumping, resulting in significant indirect environmental effects. Significant "unsatisfied demand" may also induce Contractors to file and pursue "area of origin" applications that preferentially increase total water supply to the Contractor applicants while reducing available supply to other CVP Contractors. (With the pending Westlands WD application in progress, Reclamation cannot deny that area of origin applications are a foreseeable response to unsatisfied demand.) Analysis of unsatisfied future M&I demand relative to unsatisfied future Ag demand also could lend greater predictability to conversion of land use from Ag to M&I purposes. The magnitude of unsatisfied demand may additionally indicate the probability of future rationing or price increases. The Draft EA's failure to discuss these issues, despite having the relevant information at hand, is a serious defect in the environmental analysis.
22	2-2	Under "Needs Analysis" the Draft EA characterizes CVP water as a "supplemental water supply" to be used to the extent that non-CVP water supplies cannot meet future water demands. This position is directly contrary to the stated Reclamation policy and positions, stated repeatedly by Reclamation throughout the negotiations, that Contractors were not to be penalized for developing non-CVP water supply sources by treating CVP water as merely "supplemental water" to be reduced when demand can be satisfied from alternate supplies. In responding to this comment, Reclamation should either correct the statement in the Draft EA to reflect its true policy and position, or affirm the statement in the Draft EA (even though it is contrary to the reported representations of policy by Reclamation) if honesty requires it. Assuming that the statement in the Draft EA is inaccurate, and that Reclamation did not intend to reverse its policy/position of the recent negotiations, then the Draft EA should be amended to consider the probability that aggregate water supplies for each district will increase in the future as those districts develop additional non-CVP supplies. This would result in the growth of future aggregate water supplies to keep pace with the projected future water demands, accompanied by growth of both M&I and Ag water uses. The environmental effects of increased aggregate water usage should be considered and addressed in the environmental document.

COMMENT NO.	PAGE/PARA.	COMMENT
23	2-2	Under "Needs Analysis" it is blankly stated that "This environmental analysis does not include increases [in] total contract amounts." No fact-based explanation or rationale is given for this arbitrary limitation of environmental review. There is nothing in CVPIA which prohibits increases in contract quantities. There is nothing in CVPIA or other relevant law, which prohibits Reclamation from redistributing water quantities based on projected future water demands or any other relevant factors. This arbitrary limitation adopted by the Draft EA is merely an example of one of many instances in which the Draft EA conforms its parameters to the negotiating position of Reclamation, rather than a fact-based or legal foundation on the scope of good faith environmental review. This arbitrary limitation to existing contract quantity was Reclamation's negotiating position at the time the Draft EA was prepared. Subsequently, Reclamation reviewed a proposal by Sacramento Valley Division Contractors to increase potential CVP water quantities under Article 3(f) of the contract, based on very recent engineering analyses which indicated the availability of supplemental CVP water available to Sacramento Valley Division Contractors (without negatively impacting deliveries to other CVP contractors). As a result, Reclamation has indicated a willingness and desire to revise the contract language to allow for such supplemental supplies that could potentially increase deliveries of CVP water above the present contract quantity. Reclamation has represented that it will request NSR to revise its environmental evaluation to consider these increased CVP water supplies. While Clear Creek CSD and the other Sacramento Valley Contractors applaud Reclamation's cooperation in exploring the possible usage of these additional CVP supplies, the fact that the environmental review must now be modified demonstrates the error of the Draft EA relegating an arbitrary restriction on environmental review merely because it conformed to Reclamation's then current negotiating position.
24	2-3	Table 2-1 uses an improper assumption and definition for the "No Action Alternative." This Alternative should be based on an assumption that the long term water service contracts (not the interim contracts) are renewed under the same terms, subject only to changes mandated by CVPIA – not changes merely requested or supported by Reclamation's bargaining position. For example, CVPIA mandates that the length of a renewed agricultural water service contract be limited to 25 years. CVPIA does not mandate that certain environmental commitments be explicitly incorporated into the contract as additional contract terms. The Draft EA erroneously frames the "No Action" Alternative as a completely new contract with new terms which fully implement CVPIA.

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COMMENT NO.	DRAFT EA PAGE NO.	COMMENT
25	2-3	On the "Explanatory Results" for Alternative 1, it is indicated that "it assumes implementation of yield increase projects per 3406e study." However, the Draft EA does not evaluate increased contract quantities that would result from the yield increase.
26	2-3	Under "Explanatory Results" for Alternative 1, it "assumes that loss of water supply reliability would have significant adverse socioeconomic and environmental impacts." Where is the discussion/analysis in the Draft EA of the significant adverse impacts?
27	2-3	The "Category 1 and Category 2" concept was discarded and abandoned before the Draft EA was prepared. This was a central feature of the "Reclamation" used in the Draft EA. The Bureau should explain why they believe this "rejected" proposal still serves a valid basis for comparison of the effects of contract provisions.
28	2-3	For "M&I water" the "No Action" Alternative should assume a [illegible] threshold rather than a five acre threshold. Alternative 2, the Reclamation proposal, would utilize a five acre threshold.
29	2-4	For "Terms of Contract — Right to Use Contract", the "No Action" Alternative and Alternative 2 should state that water service contracts, insofar as they allow for M&I service, shall be renewed (per the 1963 Act).
30	2-5	For "Sales, Transfers or Exchanges of Water" none of the alternatives is consistent with Reclamation's current policy and negotiating position in effect when the draft EA was put out — that transfer water should be paid for at the rate paid by the transferor.
31	2-6	For "Quality Of Water" all of the alternatives indicate that Reclamation would have no contractual obligation to operate towards water quality goals. In fact, Reclamation has made a commitment to specific water quality goals and targets as part of the CALFED process, which carry over as operational water quality goals for these water service contracts. In negotiations with the M&I Contractors, Reclamation has stated its willingness to include contract provisions which acknowledge Reclamation's commitment to work toward these water quality goals.
32	2-9	Under "Development of Alternatives" it states that "The No Action Alternative consists of renewing existing water service contracts as described by the Preferred Alternative of the PEIS." This is an improper definition of the "No Action Alternative." See comment #21 and comment #31, and comment #35.
33	2-9	Under "Development of Alternatives," the November 1999 Reclamation proposal and the April 2000 CVP Contractor's proposal are described. One or both of Reclamation and the CVP Contractors considered these proposals to be "rejected" for negotiations. This inference or statement is false.

COMMENT NO.	DRAFT EA PAGE NO.	COMMENT
34	3-9	There is no description, analysis, or treatment of the required Existing Conditions scenario. The scope of work for NEPA requires development of an Existing Conditions scenario but none appears in this Draft EA. The Existing Conditions evaluation and scenario is necessary to provide a benchmark for the EA reader to compare with the "No Action" alternative (which is set in the year 2026), and to compare the projected incremental differences between alternatives with the existing setting. The Draft EA does nothing more than describe existing water service facilities operated by the Districts in the Shasta/Trinity divisions (see Chapter 3 of the Draft EA). There is no evaluation or data on the existing environmental resources or environmental conditions in the District service areas.
35	2-9	Here again the "No Action Alternative" is equated with the PEIS "Preferred Alternative," rather than a true and accurate "No Action Alternative." The equivalent or real future in CEQA for the "No Action Alternative" is the "No Project" Alternative. The following quote from Planning and Conservation League v. DWR (Sept. 15, 2000) 83 C.A. 4th 892, 912 & 917-925, is instructive: "CEQA requires that the no project alternative discussed in an EIR address "existing conditions" as well as "what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services." (Guidelines, former § 15126, subd. (d)(4), now § 15126.6, subd. (e)(2).) The existing conditions, supplemented by a reasonable forecast, are characterized as the no project alternative. The description must be straightforward and intelligible, assisting the decision maker and the public in ascertaining the environmental consequences of doing nothing; requiring the reader to painstakingly ferret out the information from the reports is not enough. (Environmental Planning & Information Council v. County of El Dorado (1982) 131 Cal.App.3d 350, 357; Dusek v. Redevelopment Agency (1985) 173 Cal.App.3d 1029, 1041.) A no project description is nonevaluative. It provides the decision makers and the public with specific information about the environment if the project is not approved. It is a factually based forecast of the environmental impacts of preserving the status quo. It thus provides the decision makers with a base line against which they can measure the environmental advantages and disadvantages of the project and alternatives to the project."

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COMMENT NO.	PAGE/SECTION	COMMENT
26	2-10	Under "Definition of Municipal and Industrial Users" it states that "The definition of municipal and industrial users was established in portions of a 1982 Reclamation policy memorandum." This statement is false. The referenced 1982 Reclamation policy memorandum is applicable only to repayment contracts. The policy memorandum is not pertinent to water service contracts, nor is it pertinent to the analysis for the Draft EA. The two districts interested in the definition of municipal and industrial water use -- Clear Creek CSD and Bella Vista WD -- have existing long-term repayment contracts which specify a two acre threshold. These repayment contracts are not being renewed or renegotiated. The 1982 policy memorandum was for application to new or renegotiated repayment contracts, and therefore has no application to Clear Creek CSD or Bella Vista WD at all. As for water service contracts, Reclamation has no policy applying an acreage threshold for defining municipal and industrial water. Clear Creek CSD and Bella Vista WD, which make up more than 72% of the water usage in the Shasta/Trinity divisions, will continue to employ a two acre threshold for the definition of M&I water. The Draft EA is fatally flawed in failing to properly address this issue.
27	2-20	Under the "Definition of Municipal and Industrial Users" there is a misleading and inappropriate statement that "The CVP has generally applied a definition of five acres or less for municipal and industrial uses in the CVP for many years." This MAY be true for the Shasta/Trinity divisions -- not for the CVP as a whole. In the Shasta/Trinity divisions this contract provision is pertinent only to Clear Creek CSD and Bella Vista WD whose combined water usage comprises more than 72% of the total water usage for the Shasta/Trinity divisions. For close to 40 years both Clear Creek CSD and Bella Vista WD have operated using a two acre threshold, not a five acre threshold. A five acre threshold for the definition of M&I water has never been used in the Shasta/Trinity divisions.

COMMENT NO.	PAGE/SECTION	COMMENT
28	2-11	Under Section 2.4.2 it is stated that the Draft EA does not consider "terms and conditions to provide a highly reliable water supply and provisions to improve the water supply capabilities of the CVP facilities and operations" purportedly because separate environmental documentation would be required for future actions and it would "limit the Secretary's obligations to achieve a reasonable balance among competing demands as required by the CVPIA." The potential for future environmental studies of future federal actions is not an excuse for refusing to consider reasonably foreseeable future federal actions that would enhance water supply reliability and/or increase CVP yields (for example, raising Shasta Dam by several feet -- a proposal currently under serious consideration). The fact that future environmental documents may be necessary to study the environmental effects of future federal actions does not allow Reclamation to abdicate its responsibility to consider those reasonably foreseeable actions based upon the current information available. Secondly, the deference to maintaining the Secretary's freedom to administer the CVPIA is nonsensical and unwarranted. The purpose of entering a contract is to require the Secretary to accept binding contractual obligations which do in fact limit his/her freedom to administer the CVPIA to the extent required to comply with those contractual commitments. Nothing in the Contractors' proposal (described as Alternative 1) requires or causes the Secretary to violate his/her duties under CVPIA or any federal law. The Draft EA's refusal to consider the actual parameters of the CVP Contractors' proposal is another example of the Draft EA restraining the parameters of environmental review to Reclamation's negotiating position, rather than performing fact-based objective evaluation.
29	2-11	Under Section 2.4.2 the statement concerning contractual "Provisions For Compliance With Biological Opinions" is inaccurate and misleading (see General Comments, B. Circular and Unlawful Incorporation of Environmental Documents). Though it may be true that biological consultations are required for certain Reclamation activities, there is no legal requirement by Executive Order or otherwise, that Reclamation water service contracts contain a contract term making a contractual promise of compliance with Biological Opinions (and other environmental documentation). Please provide a citation to the Executive Order and a photocopy of the Executive Order relied upon by Reclamation and NSR for this statement. As noted in the General Comments, the attempt by Reclamation to impose such a contractual provision makes the environmental review process illogical, circular, and unlawful.

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COMMENT NO.	DRAFT EA PAGE NO.	COMMENT
40	2-12	The Draft EA states that the "Definitions of Municipal Users in Alternative 1 would be the same as in the No Action Alternative." This statement is untrue, as shown by Table 2-1 at page 2-10 of the Draft EA, where the "M&I water" definition shows a five acre threshold under the "No Action Alternative" and then shows a two acre threshold under "Alternative 1."
41	2-14	Under the heading of "Selection of the Preferred Alternative," the Draft EA gives no definition or form to a Preferred Alternative. Rather, it is stated that the final contract language will be found somewhere in the amorphous continuum between Alternative 1 and Alternative 2. As noted in previous comments, this is an invalid methodology that provides no meaningful basis for public review/comment on the characteristics/environmental effects of the federal action that is likely to eventually emerge from this still ongoing contract negotiations process.
42	2-15	Comments related to Table 2-2 are deferred to the particular section of the Draft EA that are referenced within the table, though it should be noted that the table inaccurately refers to CCCWD instead of CCCSD (p. 2-15 and 2-17).
43	3-1	Under Section 3.1 there is no reference to the recent Shasta Dam Removal Environmental Assessment, or to the Trinity River Flow Environmental Impact Statement, or to the draft EIS from about 1998-99 pertaining to water supplies for the City of Shasta Lake (Shasta Dam Area PUD) area.
44	3-1	Under Section 3.0 "Focus of the Environmental Assessment," the scope of this Draft EA is narrowly and unlawfully circumscribed to a review of "socioeconomic resources." There is no Existing Conditions Analysis. There is no Biological Assessment or analysis of biological resources, either current or as impacted by the Alternatives.
45	4.2.2	Under Table 4.1-1, the correct contract number for Clear Creek CSD is 14-06-200-1859A-IR1 [illegible]. Also, the service boundary area for Clear Creek CSD stated at 14,514 is inaccurate; the current area is 1[illegible] acres, with an additional 1,927 acres in pending inclusion requests with USBR.
46	4.2-1	The reference to Clear Creek CSD's service area should be amended as noted in comment no. 45. Similarly, the breakdown of territory devoted to agriculture, rural residential, and undeveloped land, will have to be revised. The District is not aware of any factual basis for the breakdown by the consultant; for example the 1,0[illegible] acres assigned to "rural residential receiving M&I water," which appears to be nothing more than a guess. It is mysterious that Reclamation and NSR would attempt to prepare a Draft EA without accurate factual information, and without contacting Clear Creek CSD to obtain and verify the accuracy of basic factual information. The Draft EA is factually unreliable and therefore fundamentally flawed as an environmental document.

COMMENT NO.	DRAFT EA PAGE NO.	COMMENT
47	4.2-4	It is stated that Clear Creek's wells "are intended for use only when surface supplies are inadequate to meet demand." This statement is unclear insofar as it implies that the wells may be turned on "when surface supplies are inadequate to meet demand." This matter was the subject of litigation in the Shasta County Superior Court. As it now stands, Clear Creek's wells are for "emergency use" only. If Clear Creek desires to use the wells "when surface supplies are inadequate to meet demand" or as a future supplemental primary water supply, the District would have to first prepare new and extensive environmental documentation before even considering using the wells for that purpose. In order to prepare such environmental documentation, additional major groundwater studies (which are beyond the District's capabilities) would have to be performed and completed. Only one of the wells is connected to a permanent electric power supply line for its pump motor, whereas the other two wells must be powered for any temporary usage by truck-mounted diesel generators. At this juncture Clear Creek CSD cannot say that the groundwater wells will ever be available for any use other than to meet emergencies.
48	4.2.4	The text inaccurately represents that "the majority of the developed agricultural property in the district is ditch or flood irrigated." In fact all water to Ag parcels is piped and metered, and the vast majority of applied water is by sprinkler or drip system.
49	4.2-4	There is a reference to the population increase in Clear Creek CSD's service area, with a population of about 8,000 people in 1995. The actual population at the time of release of this Draft EA was in excess of 9,500 people.
50	4.2-4	The text states that "The District is situated on a plateau which rises from the floor of the Sacramento valley." This statement is true, but it is unaccompanied by the additional information necessary to give it meaningful context. The "plateau" that the District is situated on has land which is suitable for agriculture, but because of the hydrogeologic conditions of this plateau there is no access to groundwater for wells. The three emergency wells referenced at the top of page 4.2-4 are located outside the District boundaries and are connected by pipeline to the District's distribution system. The inaccessibility of groundwater in the Clear Creek CSD service area was confirmed by a Bureau of Reclamation study and report prepared prior to the formation of the District and construction of the federal facilities which bring water to the District. This was the express justification for construction of the "Clear Creek South Unit" – i.e., to bring CVP water to irrigable lands that otherwise would not have access to groundwater. Thus, Clear Creek CSD is totally dependent upon its contractual CVP water supply, and any shortages against demand, present or future, cannot be ameliorated by resort to groundwater.

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COMMENT NO.	SECTION/PAGE NO.	COMMENT
51	4.2.5	The text states that there are "75 miles of pipe" in the distribution system, when in fact there are 120 miles of distribution line. The text also neglects to mention the 4 million gallon storage tank at the head of the District.
52	4.3.7	The one sentence discussion of "Cumulative Effects" is grossly inadequate. There is no evaluation of the cumulative effects of long term contract renewals and changes in water quantity expected in Whiskeytown Lake due to the Trinity River Flow decision, together with the removal of Saeltzer Dam and restoration of [illegible] salmon spawning habitat requiring increased releases to Clear Creek from Whiskeytown Lake, coupled with the Anadromous Fish Restoration Program (AFRP) which recommends doubling or tripling flow releases to Clear Creek to enhance the salmon spawning habitat. As stated in Clear Creek's letter of October 3, 2000 (attached hereto), there are potentially serious cumulative effects on the surface water supply drawn from Whiskeytown Lake to provide surface water deliveries under the long term contracts for Clear Creek CSD, Shasta County, City of Redding and Shasta CSD. The combination of seasonally decreased inflows to Whiskeytown Lake from Trinity River exports coupled with seasonally increased releases to Clear Creek for salmon spawning habitat may very well increase surface water temperatures. Potential seasonal fluctuations in the lake level may also increase the organic load in the water. Water quality may be significantly impacted by increased turbidity — which greatly increases Clear Creek's water treatment costs and decreases the water treatment capacity of Clear Creek's filtration plant. In severe instances of drawdown of Whiskeytown Lake, one or both of Clear Creek's water intakes on Whiskeytown Dam may be uncovered causing reduction or cutoff of the surface water supply. Centerville CSD, which receives all of its water through the same facilities as Clear Creek CSD, and which treats its water (by contract) through Clear Creek's filtration plant, would experience the same impacts. The other CVP Contractors which draw their surface water from Whiskeytown Lake would also be subject to these potentially significant adverse impacts on water quality.
53	4.3.7	There is no discussion of the new water service contracts with the McConnell Foundation, and with Centerville CSD under the section on "Cumulative Effects."
54	4.3.2 and 4.3.3	The Draft EA looks at M&I water usage based upon 1994 statistics. No rationale or explanation is offered for using information that is six years out of date. An accurate environmental evaluation should be based upon the most current information available.

COMMENT NO.	SECTION/PAGE NO.	COMMENT
55	4.3.3	The information shown in Table 4.3-5 for Clear Creek's 1994 deliveries of treated water to M&I customers as 474 acre feet is inaccurate. In addition, the statement below Table 4.3-5 that "The disparity between Clear Creek's 1994 CVP deliveries (1,724 acre feet) and the District's treated deliveries to its M&I customers (474 acre feet) may be explained by the fact that Clear Creek WD sells some of its M&I water to other districts, including BVWD," is inaccurate. Clear Creek CSD (and WD) does not and never has sold treated M&I water to Bella Vista WD. In 1994 Clear Creek delivered [illegible] acre feet of M&I water within the District and sold 49[illegible] acre feet of water to Centerville CSD. The source of these fundamental errors in the Draft EA is unclear, but suffice it to say that the preparers of the Draft EA have not consulted with Clear Creek CSD to attempt to verify the accuracy of this information. The inadequate information is indicative of a systemic deficiency of accurate factual information throughout the entire Draft EA.
56	4.3.5	The information shown in Table 4.3-[illegible] for the 1994 Cost of Service Rate is inaccurate. The 1994 Cost of Service Rate was $35.85 (not $26.09), and the contract rate was $18.50.

COMMENT NO.	DRAFT EA PAGE NO.	COMMENT
57	4.3-3 and 4.3-4	The text of the paragraph starting at the bottom of page 4.3-3 and extending to the top of page 4.3-4 provides some observations and analysis of the cost of M&I water in the City of Shasta Lake, which is then extrapolated to "the other Shasta and Trinity Divisions water districts." First, it is observed that the average City of Shasta Lake water bill for 1,000 cubic feet of water was approximately $15.40. To arrive at a water cost per acre foot, the drafter of the EA merely multiplied $15.40 by 43.560 since one acre foot of water equals 43,560 cubic feet of water. "This translates to about $670 per acre foot." Then, because the CVP cost-of-service rate for M&I water in City of Shasta Lake is about $15.00 per acre foot, the drafter of the EA concluded that residential customers paid a rate in 1999 that "was almost 45 times the cost of service rate that they paid for that water." ($670 divided by $15.00 equals 44.90). This leads to the erroneous conclusion by the drafter that "the M&I district's cost of untreated water is usually a relatively small component of its cost to treat, store, and deliver water to its customers (and thus the rates charged to its customers)." There follows an unfounded leap of logic that "Similar findings would be expected for the other Shasta and Trinity Divisions water districts." Later in the Draft EA the findings are used to support the conclusion that increases in CVP M&I water rates will have little or no impacts on M&I water usage and consumption (page 4.3-13). This analysis in the Draft EA is incomplete, and [illegible] then the erroneous conclusion is improperly applied to dissimilar districts in the Shasta/Trinity division. First, it is falsely assumed that the $15.40 average household water bill per 1,000 cubic feet is made up entirely of the cost of water delivered (commodity charge), when in fact most of that monthly charge is comprised of a fixed monthly fee for capital costs, capacity and equipment. Monthly fixed fees are only charged once per month while the water cost (commodity charge) increases proportionately with increased delivered quantity. Average M&I household usage is close to two and one half times that of the amount used for this analysis in the EA. In addition, the EA completely overlooks restoration fund payments, which are a significant component of the overall cost of water for a contractor like the City of Shasta Lake. An actual analysis of the monthly charges by City of Shasta Lake, with a breakdown of the component charges, along with average monthly water usage quantities, would be necessary to determine the true "delivered cost" of treated M&I water in the City. Preliminarily, it appears that the true cost would be less than half of what is estimated in the Draft EA. The burden is on the drafters of the EA to perform a competent analysis. Commenters are not required to do it for them.

COMMENT NO.	DRAFT EA PAGE NO.	COMMENT
57 cont'd	4.3-3 and 4.3-4 cont'd	Secondly, the costs of "delivered water" cannot be transposed from the City of Shasta Lake to other highly dissimilar water service contractors like Clear Creek CSD. Clear Creek's M&I water usage is very different from the "average" usage in an urban environment like City of Shasta Lake or City of Redding. Clear Creek's M&I water usage is predominantly on large lot "ranchette" rural residences, which typically apply water to horse pasture, domestic animals, landscaping, etc. The water usage for these "ranchette" style residences is nearly four times the average usage for standard urban residences. Because of the high degree of M&I water usage associated with this type of land use, the effect of rate increases is magnified four fold. Water usage also is much more sensitive to rate increases in contrast to smaller urban residences with [illegible] demand – because much of the water is applied outside the house, and the customer may reduce or terminate those uses in response to escalating prices. The effect is compounded by the fact that Clear Creek CSD's prices are far higher to begin with, as one can see from Table 4.3-14 on page 4.3-22, where Clear Creek's current rate is shown as $12.[illegible] per acre foot and City of Shasta Lake is at $[illegible]. Alternative 2 in Table 4.3-[illegible] shows that M&I rates are projected to increase to $1[illegible], $1[illegible].41, and $[illegible].22 for Clear Creek. Currently, Clear Creek charges a little over $[illegible] for M&I "delivered water" – consisting of about $[illegible] cost of CVP water and about $[illegible] cost to deliver the water. Thus with the projected CVP M&I water rate increases, Clear Creek's charges to its customers will more than double. The conclusion stated in the Draft EA that the cost of CVP water is a minor or insignificant component of charges for "delivered water" to customers is wrong [illegible]. A real analysis of M&I water rates and their impacts on M&I customers is necessary for an adequate environmental document.
58	4.3-4	The Ag acreage shown in the text for CCCSD at 3,[illegible] is roughly accurate, but the figures in Table 4.3-[illegible] are wrong, and the total shown as 3,081 is in conflict with both the text and the correct numbers. The actual 1999 cropping pattern is: pasture 2,[illegible] misc. field crops 174 vegetables 1[illegible] nursery 3[illegible] fruit/vines [illegible]20 nuts 115 gardens/orchards [illegible]48 [illegible]
59	4.3-5	Table 4.3-[illegible] showing 1999 Ag water deliveries as [illegible] acre feet is incorrect. The number is 3,4[illegible].

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COMMENT NO.	DRAFT EA PAGE NO.	COMMENT
60	4.1-5	Table 4.1-9 incorrectly shows Ag water delivery at 1,295 acre feet but the number is 3,196. Also, the 1994 cost of service rate is incorrectly shown as $15.79. The correct 1994 cost of service rate was $21.78, and the contract rate was $4.57.
61	4.3-7	The paragraph at the top of page 4.3-7 indicates that future CVP M&I and agricultural water use for Clear Creek CSD is based upon projections reported in the Shasta County General Plan, while water and land use projections indicated in other planning documents, such the future water needs assessment relied upon by the Bureau of Reclamation, are ignored. One would think that Reclamation would rely on its own current documentation (Reclamation's water needs analysis for Clear Creek CSD is dated October 3, 2000) for preparation of its own environmental document, rather than the Shasta County General Plan — which is an inferior tool for water use planning and out of date. The EA should state specifically (by chapter and page reference) the documentation relied upon, and justify the use of any documentation that is less accurate and less reliable than other readily available sources.
62	4.3-7	Under the heading for "Municipal and Industrial Water" the EA refers to the M&I water demand models developed for the CVPIA PEIS. It has been admitted that these models are inaccurate as predictors of water demand and water usage in the Shasta/Trinity divisions. For example, the models show water usage increasing as water price increases — a result that is inexplicable. Further, all M&I usage under these models is patterned after small lot (or condominiums/apartments) urban residential usage, which bears no resemblance to the large lot (one to four acres) "ranchette" residential M&I usage prevalent in Clear Creek CSD and Bella Vista WD. To the extent that the CVPIA models are inappropriate for application to the specific circumstances being studied, the divisional EA is supposed to make corrections or use alternative approaches to arrive at accurate environmental evaluation. (That's what the Contractors were told by Reclamation about the use of divisional EAs to "tier off" from the Programmatic EIS.) Why then does this divisional EA blindly apply models which Reclamation has already admitted to be inaccurate?

COMMENT NO.	DRAFT EA PAGE NO.	COMMENT
63	4.3-8	By blindly applying the inaccurate models (along with its own erroneous analysis — see comment no. 59) the EA arrives at the conclusion that M&I water usage is "extremely price inelastic within a fairly large range of prices for water. Accordingly, no incremental change in future M&I demand for CVP water is anticipated under either Alternatives 1 or 2 when compared to the No Action Alternative." This observation may be accurate for Sacramento or the City of Redding urban areas, but it has no application to the M&I water usage in Clear Creek CSD and Bella Vista WD. The Draft EA fails to consider or evaluate the actual impacts of increased M&I water prices on the unique M&I land use pattern prevalent in Clear Creek CSD and Bella Vista WD. Table 4.3-4 indicates 1,881 single family residential M&I connections, and the land use data on page 4.2-3 indicates 4,946 acres for rural residential connections receiving M&I water, which results in an average parcel size of 2.6 acres for these rural residential "ranchettes." Table 4.3-9 indicates the average amount of land per agricultural service connection is 5.5 acres in Clear Creek CSD. The extremely large service area for Clear Creek CSD (see Table 4.1-2) also accommodates at least 4,497 acres (see page 4.2-3) still open for development. Clear Creek's mixture of small farms and large "ranchette" style residences is (for now) a very stable land use pattern because it is widely dispersed, and consistently low-density and low-impact environmentally. The District service area does not have typical urban infrastructure: there is no sewer system (all sanitation is through septic systems), there are no curbs, gutters, or sidewalks, the minor roads are relatively narrow two lane high speed "country roads," and except for a couple of traffic signals, there generally are no urban traffic controls, law enforcement is provided by the county sheriff and fire protection is provided by a volunteer fire company. There are no commercial or retail centers in the District service territory. Additional growth within the District service territory can be easily accommodated by this limited infrastructure of public facilities, provided that growth follows the existing pattern of residential "ranchettes" and/or small farms. Growth is certain to occur in the form of spillover from the growing population of nearby City of Redding, and as a bedroom community for workers in the City of Redding. Under the current land use pattern, the pattern least resistant for future growth is simply to expand upon and extend the current land use pattern into the undeveloped areas. There is an economic disincentive to the dense consolidation of large acreage into [illegible] higher density residential housing because of the disproportionate expense of infrastructure requirements needed in comparison to development within an area of established urban infrastructure like the City of Redding.

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Comment No.	Section / Page No.	Comment
63	4.3-9	As noted in earlier comments, M&I water usage for residential "ranchettes" is in fact quite price sensitive. For example, when the price of watering horse pasture exceeds the price of purchasing hay, the residents will either alter that use or purchase hay. M&I price increases of the magnitude shown in Table 4.3-11 would cause significant changes in M&I water usage and land use. Residential development to accommodate growth would no longer follow the low density path of "ranchettes" because the lifestyle amenities associated with "ranchettes" would not longer be affordable with high priced water. Without any economic return for large size residential parcels, new development will take place on smaller lots. In particular "ranchettes" no longer using large quantities of M&I water would be divided into smaller more "typical" size residential lots (.25 to .5 acres) and new development on the open areas would take the form of standard tract subdivisions. As high density residential development becomes profitable on a speculative basis, mounting economic pressure will be placed on the small parcel farms to subdivide and convert to M&I usage to achieve a higher economic return. Light retail, commercial and food service businesses will immediately follow the establishment of higher density residential development, further burdening the limited Happy Valley public services infrastructure. Though Happy Valley could absorb the beginnings of this type of development, the current public facilities infrastructure would quickly be overwhelmed as higher density growth continues. In sum, the proposed CVP M&I rate increases for Clear Creek CSD are likely to be a catalyst for rapid transformation of this area of Shasta County, accompanied by major impacts on land and water use, public facilities, and biological resources. These environmental impacts should be studied, rather than ignored, preferably in an Environmental Impact Statement.
64	4.3-9	At the top of the page it is stated that "It is not anticipated there will be any M&I water related demographic or land use impacts of the contract renewal system." Accordingly, demographic and land use impacts are not addressed in the contract terms of M&I impact analysis. As noted by the previous comment, this is a major error of omission in the EA.

Comment No.	Section / Page No.	Comment
65	4.3-10	The paragraph at the top of page 4.3-10 states that changing the Ag/M&I acreage threshold from two to five acres would have little or no effect on the delivery and cost of CVP water for agricultural irrigators on parcels less than five acres. This statement is patently erroneous, disingenuous, and another example of shaping the environmental review to conform to Reclamation's bargaining position rather than objective/unbiased analysis. Changing the definition of M&I water to a five acre threshold would instantly reclassify over 350 parcels in Clear Creek CSD currently receiving Ag water to M&I usage at M&I rates. This would be an immediate, substantial, and adverse environmental impact. The only way for reclassified individual parcel owners to retrieve their Ag water status would be for them to individually apply to the Bureau of Reclamation to request a reclassification of their land on an individual basis, upon demonstrating that they intend to use water for agricultural purposes to the "satisfaction of the Contracting Officer." It is no secret that the Bureau of Reclamation is openly hostile to the provision of agricultural water to small farms, especially farms less than five acres in size. In past contract negotiations for the current renewal contracts, Reclamation attempted to completely eliminate agricultural water service to farms of less than five acres in size. Further, there are no true standards or criteria for retrieving the lost agricultural water designation other than the totally subjective requirement of meeting the "satisfaction of the contracting officer" — a virtual impossibility in light of Reclamation's ongoing campaign to eliminate what it considers to be "inefficient" farms under five acres in size. The environmental analysis must focus on the actual, immediate, unavoidable impact of the change in the Ag/M&I threshold, which is to convert 350+ parcels and over 1,100 acres of farm land to M&I usage at M&I rates. At best it would be sheer speculation for the preparer of this EA to assume that Reclamation would approve future requests for reclassification of two to five acre farms to agricultural usage, and at worst it would be complicity in a coverup of Reclamation's agenda to eliminate these small farms. Legitimate environmental analysis of a contractual provision which increases the Ag/M&I threshold to five acres requires preparation of an Environmental Impact Statement.

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COMMENT NO.	DRAFT EA PAGE NO.	COMMENT
66	4.3-12 and 4.3-13	The text on 4.3-12 makes note of the large projected rate increase for M&I water for Clear Creek CSD as indicated in Table 4.3-14. Then the text on page 4.3-13 indicates that "However, the percentage increases in residential water bills would be much smaller than the percentage increase in the Contractor's cost of untreated CVP water since the cost of treated water is only a small part of the individual's total residential M&I water bill." This statement and apparent assumption that rate increases to individual customers would be insignificant is both untrue and unsupported by any factual analysis. As indicated in previous comments by Clear Creek CSD the projected rate increases would cause the customer rates for "delivered water" to range from slightly less to slightly more than double the previous cost. (See comment no. 57.)
67	4.3-13	The text indicates that "Any increase in residential water rates would have a particularly severe impact on individuals and families with limited income and ability to pay more for their water." Clear Creek CSD agrees with this statement. But where is the follow-up analysis of the income and ability to pay for increased M&I water rates? The data in Table 4.3-15 immediately following that statement merely shows the total increase in the amount paid by Clear Creek to Reclamation for Clear Creek's annual aggregate supply of water. There is no factual analysis of the increased amounts paid by individual customers or the impact on persons with limited income and ability to pay. As Reclamation well knows, Clear Creek has consistently qualified for Reclamation Act "ability-to-pay" relief for CVP water rates, and it is a matter of common knowledge (which could be established by further investigation) that there is a substantial population of low income residents in the Happy Valley area served by Clear Creek CSD.
68	4.3-16	Table 4.3-20 shows projected year 2026 agricultural, economic, and land use impacts for Clear Creek CSD, comparing the No Action Alternative and Alternative 2 under average and dry hydrologic conditions. The data (if I interpret the table correctly) shows that under average hydrological conditions Alternative 2 would cause a reduction of about two thirds of agricultural water use, and under dry hydrologic conditions Alternative 2 would cause reduction of about [illegible] of agricultural water use. If this is true, is this not a significant adverse impact that needs to be further evaluated and addressed?
69	[illegible]	The actual service territory encompassed by Clear Creek CSD is 14,[illegible] acres, with service provided to 2,[illegible] total service connections, divided between 258 connections for agricultural use and 1,7[illegible] connections for M&I use.
70	4.4-5	Under "No Action Alternative" there is reference to changing the Ag/M&I threshold from two acres to five acres. Please see comment 65.
71	4.4-6	Under Alternative 2 there is reference to the change in the Ag/M&I threshold from two acres to five acres and a statement that "There are no incremental indirect effects due to rewording under this Alternative." Please see comment 65.
72	4.4-7	Under Cumulative Effects, it is noted that Clear Creek CSD would likely fallow about 760 acres of pasture land under dry conditions. The EA then notes that this land, together with land fallowed in Bella Vista WD, would be "less than 5% of pasture in Shasta County. Therefore, implementation of either Alternative 1 or 2 would result in minor changes to land use." (Emphasis added.) The comparison to Shasta County to determine the relative significance of the impacts is inappropriate. The significance of land use changes must be considered at the District level because the effects relate to the District contract and water prices at the District level. Also the land use changes and water usage within the District determine the ability of the individual District to generate revenue for debt repayment on capital facilities and provide for water system improvements. In this regard the removal of 760 acres from the agricultural rate base for Clear Creek CSD would have a significant impact on the District. A comparison to the general geographic region of Shasta County is not relevant to the renewal of the Clear Creek CSD contract, nor a proper method for evaluating the contracts of the CVP Contractors in the Shasta/Trinity divisions.
73	5.5-1	The analysis of biological resources cannot be effectively done without a Biological Assessment and full development of the Existing Conditions scenario.
74	4.5-6 and 4.5-7	Under the No Action Alternative and Alternative 2 there is discussion of increase in the Ag/M&I threshold from two acres to five acres. Please see comment 65.
75	4.6-3	Under Environmental Justice there is a conclusory statement that renewal of the long term water service contract would not disproportionately affect low income populations. However, with respect to Alternative 2, the Draft EA stated on page 4.3-13 that "Any increase in residential water rates would have a particularly severe impact on individuals and families with limited income and ability to pay more for their water." (See comment 67.) There is no evidence or factual analysis in the EA showing that there is no low income population in the Clear Creek CSD service area. This issue needs to be addressed by factual investigation.

LETTER 6

Comment No.	Page/Para. No.	Comment
76	5.1	The discussion in Chapter 5 of "Other Activities" is little more than a generic and partial list of other activities occurring in the CVP, without any actual analysis of the manner in which these other activities interrelate with the Shasta/Trinity division CVP Contractors' long term water service contracts. The list of "Other Activities" fails to include activities related to the removal of Saeltzer Dam and restoration of the [illegible] stretch of salmon spawning habitat, the Anadromous Fish Restoration Program (AFRP) which tentatively recommends substantially increased releases of water from Whiskeytown Dam to Clear Creek for enhancement of salmon spawning habitat, the new water service contracts executed with the McConnell Foundation and Centerville CSD, the Area of Origin application filed by Westlands Water District, and probable future Area of Origin applications by water service Contractors in the Sacramento Valley. Further, there is no discussion of Reclamation's proposed M&I shortage policy, which treats all M&I water "converted" from Ag water as subject to continuing Ag water periodic reductions in supply; this policy has serious and substantial health/safety and economic consequences for Clear Creek CSD. Most importantly, there is no discussion of certain future changes in operation of Whiskeytown Lake, resulting from the combined effect of the Trinity River flow requirements, restoration of salmon spawning habitat following removal of Saeltzer Dam, and increased releases to Clear Creek in accordance with the Anadromous Fish Restoration Program (AFRP).
77	6.3	Under "California Environmental Quality Act" it is stated that "This EA could be used as a basis for preparation of a CEQA document." In fact, based on all of the comments submitted, this EA would not be adequate either as a NEPA document or as a basis for preparation of a CEQA document. If a new, or completely revised, NEPA environmental document is prepared its adequacy could be evaluated at that time.
78	6.5	Under "Safe Drinking Water Act" the Draft EA again fails to address the concerns previously expressed by the CVP Contractors taking surface water from Whiskeytown Lake that the combined/cumulative impacts of ongoing Reclamation actions and programs could cause deterioration of the Whiskeytown Lake surface water supply. There is no factual analysis to support the assertion that there would be no changes in compliance with State Drinking Water Act requirements.

Very truly yours,

LAW OFFICES OF WALTER P. MCNEILL

WALTER P. MCNEILL

WPM:[illegible]
Encs.
cc: Senator Dianne Feinstein (Washington Office via U.S. Mail)
Congressman Wally Herger (Washington Office via U.S. Mail)
[illegible], Clear Creek CSD (Via Facsimile)

LETTER 6

[illegible]

Mailing address [illegible]
[illegible]

Clear Creek
Community Services District

Fax [illegible]
Telephone [illegible]

November 7, 2000

Mr. Lester Snow, Regional Director
Bureau of Reclamation
2800 Cottage Way, [illegible]
Sacramento, CA [illegible]

Re: Extension of Interim Renewal Contract

Dear Mr. Snow:

Unfortunately, we have arrived at the point of the [illegible] addressed in Article [illegible] of the District's interim renewal contract. Despite diligent efforts on both sides, we have not yet completed negotiations. As a consequence, this means that all of the environmental documentation required both under NEPA and CEQA cannot realistically be completed in time for long-term contracts to be executed to be effective by March 1, 2001, the expiration date of the current interim renewal contract. We have been working on the final stages of negotiations on a few remaining issues, and, based upon [illegible] Lester Snow and [illegible] CVP contractors' regional negotiations on November 2, 2000, we believe that further negotiations would be beneficial. We are committed to continuing that process.

In the last few weeks, we have heard the United States announce at least two "drop-dead" dates for completing negotiations: October 27, 2000, and then November 3, 2000. These statements were tied to the requirement that an agreed upon form of contract [illegible] not later than January 20, 2001, the last possible date for action by the Clinton Administration. As a practical matter, that can not be accomplished now, especially since the contracts with individual contractors must be [illegible], and Reclamation has not [illegible] individual contractor negotiations with Clear Creek CSD or any other of the Sacramento Valley Contractors. We don't dispute that November 3, 2000 was a realistic deadline for an agreed upon form of contract, but we are extremely disappointed that the failure to meet this deadline [illegible] from the actions of some individuals in Reclamation and/or the Department. Despite frequent assurances to the contrary, the government's representatives at the negotiating table have not had full authority to make binding commitments on behalf of the United States or engage in true negotiations with the contractors. For [illegible] regarding the right approach of the

[illegible]

Mr. Lester Snow
November 7, 2000
page 2

[illegible] water year, it is imperative that Reclamation immediately prepare and send us the one year extension of the existing interim renewal contract, to February 28, 2002, that is expressly provided for under Article [illegible].

Again, in an effort to be able to plan for the next water year, we would appreciate a response to this letter, no later than November 17, 2000, advising when we can expect to receive the one year extension. Thank you for your continuing efforts to complete the long-term contract renewal negotiations.

Sincerely,

Lawrence A. Russell
Chairman of the Board

[illegible]

LETTER 6

WALTER P McNEILL

October 3, 2000

Via E-mail & First-Class Mail

Laura Kuh
North State Resources, Inc
5000 Bechelli, Suite 203
Redding, California 96002

Re: Environmental Assessment for Shasta/Trinity Long Term Renewal Contracts

Dear Ms. Kuh:

As you know, I represent Clear Creek CSD in the long term contract renewal negotiations process that has been underway with the Bureau of Reclamation. The meeting that you had with Shasta Trinity Contractors on 9/13/00 was helpful in eliminating the status of the Environmental Assessment (EA) for the long term contract renewals, but also disconcerting in revealing problems with obtaining adequate environmental review on the Shasta-Trinity long term contract renewals. I understand that an administrative draft of the EA has now been produced, which has not been reviewed by any of the Contractors -- so we can't be certain what it does or does not contain. To encourage early review and, if needed, reassessment of your approach, Clear Creek CSD would like to submit the following points which ought to be considered in preparing the EA. These points are not exhaustive nor listed in order of priority:

- Accurate data on the contracts is needed to prepare an accurate EA. That may seem almost too basic to need to be mentioned, but after our meeting of 9/13/00 we had some reason for concern: (a) NSR had been supplied with inaccurate data for contract water quantities for the Shasta-Trinity CVP Contractors, (b) NSR had been supplied with inaccurate data as to the Ag/M&I water breakdown for Contractors with mixed usage, (c) the CVPIA Programmatic EIS, from which you are "tiering" the Shasta-Trinity EA, uses the City of Redding as the "representative" water user in the Shasta-Trinity group, though Redding accounts for only about 20% of the water and is less than "representative" of most usage; (d) modeling from the CVPIA Programmatic EIS uses models for the entire Sacramento Valley region to predict impacts/effects in Shasta-Trinity, despite dissimilarities between Shasta-Trinity and the region as a whole; and (e) Water Bulletin 98 assumptions are used, showing that increased rates for M&I water don't decrease consumption, reflecting a large metropolitan area water usage bias as applied to the actual M&I water usage found in this mixed rural/urban area. It was our understanding that NSR would obtain corrected or revised data from Reclamation. We would hope that accurate data has been obtained, since that is the fundamental starting point for accurate/defensible environmental analysis.

- The EA should consider the large number of two- to five-acre parcels receiving Ag water, and the potential impacts of efforts by Reclamation to convert those parcels to M&I usage. There are about 350 such parcels in Clear Creek CSD, and about 338 such parcels in Bella Vista WD. Additional information concerning these small parcels should you wish to inquire about them.

- The potential impact of water rate increases through the adoption of current Reclamation proposed rate policies should be examined in the EA. For Clear Creek, the M&I contract rate would increase from $42.31 per acre foot to $157.59. For Bella Vista the M&I contract rate would increase from $57.62 per acre foot to $74.37; the Ag cost of service rate would increase from $22.89 to $33.02; and the Ag full cost rate would increase from $53.32 to $75.07.

- The effects of tiered pricing on water rates should be taken in to account in determining rate impacts in the EA. To my knowledge there is no agreement, rule, or policy for application of tiered pricing to mixed Ag/M&I contracts. This raises a question as to how the EA will address the effects of rate impacts without direction on how tiered pricing is to be applied to mixed Ag/M&I contracts. To my knowledge Reclamation has not even thought of this question though the answer may have dramatic impacts on water costs and water consumption patterns.

- The EA should consider the full demand for water over 25 years, for Clear Creek as well as all the other Sacramento Valley Contractors. Clear Creek's needs analysis (like that of other Sacramento Valley Contractors) shows ultimate demand to be in excess of total contract quantity. The EA should consider the effect of full supply of this amount, whether it comes through the contract itself, or through transfers or the acquisition of non-CVP water for use in conjunction with contract Project water. If there are any questions about the needs analysis or ultimate demand we would be glad to address them. As far as we know, Reclamation has accepted Clear Creek's needs analysis, and there have been no inquiries, questions, or objections to the needs analysis submitted to Reclamation many months ago.

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- The EA should include analysis of the income levels of water users, the relationship of land use and water use to income levels, and the sensitivity of land use changes to changes in water rates based on the income levels of water users. There is a strong likelihood that you will find that the water users -- due to their relatively low income levels -- are highly sensitive to water price increases, and therefore land use changes (eg. conversion from Ag to M&I land use) will be strongly influenced by water pricing.

- To my knowledge we do not yet have a site-specific Biological Assessment or a site-specific Biological Opinion, and the EA being prepared by NSR does not include a comprehensive review of environmental conditions on the ground. Analysis of the affected environment and existing environmental conditions would be essential to an EA.

- Though I understand the rationale for the "bookends" approach being used for contract terms in the absence of a negotiated contract, I have concerns about it meeting the functional requirements of an EA, especially in the absence of an agreed upon CVP wide form of contract. Environmental review requires a "stable and finite project description." The "project description" will come into sharper focus when we are at or near agreement with Reclamation on an actual contract.

- The EA should analyze the cumulative impacts of renewal of the long term water contracts for Contractors taking water from Whiskeytown Lake as their source of supply in conjunction with Interior's other activities an programs affecting the Whiskeytown Lake water supply. It is expected that in the next couple of months we will receive Interior's Trinity River Flow Decision, which will in all probability severely reduce inflows of Trinity River water to Whiskeytown Lake. It also is highly probable that there will be substantially increased flow releases from Whiskeytown Lake to Clear Creek, to make full use of the 18 miles of salmon spawning habitat that will be made accessible by the removal of Saeltzer Dam. At the same time releases will continue to be made from Whiskeytown Lake to provide cold water for fish habitat in the Sacramento River, along with releases to dilute heavy metal concentrations in spillage from the Spring Creek Debris Dam. And, of course, the Contractors drawing water from Whiskeytown Lake will continue with their demands for water, with Clear Creek experiencing peak demands for Ag water in summer months at or around the same time flow releases for fish habitat in Clear Creek and the Trinity River are likely to be highest. There is a real potential risk that decreased volumes of water moving through Whiskeytown Lake may cause water temperatures to increase, that competing

demands for water releases could result in temporary impacts on supply, or temporary lowering of lake levels, or both, that changes in the operation of Whiskeytown Lake could result in increased organic load, and/or turbidity, and other impacts on water quality, that decreased water quality could adversely impact water treatment capacity and treatment costs for Contractors taking their water from Whiskeytown Lake. Though there will clearly be material changes in the future operation of Whiskeytown Lake, I am not aware of any environmental study by Reclamation that considers the cumulative impacts on water service providers using Whiskeytown Lake as their source of supply. This would be the time to address that environmental issue.

- In the contract negotiations to this point Reclamation has stressed that future water supply needs and demands by water service Contractors are not likely even to be satisfied by CVP water supplies. In essence, there will be long term pent up demand for additional water. The natural consequence of long term demand that can't be satisfied by Reclamation should be considered in the EA. Because all of the Sacramento Valley Contractors are within "areas of origin" and "counties of origin" that could provide adequate water supplies to meet 100% of future demands, the likely long term consequence would be individual Contractor "area of origin" water rights applications that may benefit individual Contractors but preempt and reduce overall CVP water supply. Successful area of origin applications will further reduce Reclamation's ability to meet future demand in the area of origin, forcing additional Contractors to follow with their own area of origin applications. A spiraling effect would occur until area of origin Contractors are able to meet full water needs through a combination of area of origin water rights and remaining CVP contract supplies. There will be disproportionate impacts among water service providers, because the overall CVP water supply will be diminished for all Contractors but different individual Contractors will be better positioned or worse positioned to file area of origin applications. This effect should be considered in the environmental analysis applied to contracts in the area of origin.

- Aside from the fact that there is no CVP-wide contract, various important contract provisions concerning M&I water have not been resolved by Reclamation with the CVP Contractors (as a whole) or with the M&I "critical division" group. These unresolved contract provisions concern the following matters, among others: M&I water reliability, M&I water shortages, M&I water quality, and M&I contract renewal. In addition, an M&I rate-setting policy has not been determined, and may not be concluded until the fall of next year. Another important M&I issue on the horizon is probable settlement of the M&I deficit, which could greatly influence M&I rates and

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capital repayment. It is reasonable to expect all of these matters to be resolved in the next 12 months and there is adequate information to discuss the parameters of possible outcomes. Therefore the environmental analysis should take these factors into consideration.

We believe the above points should be considered in the environmental analysis for long term contract renewal. We would be glad to discuss any of these points in greater detail with you. Should you desire to do so. Thank you for your consideration.

Very truly yours,

LAW OFFICES OF WALTER P. McNEILL

Walter P McNeill

WALTER P. McNEILL

WPM/p
cc: Clear Creek CSD
CSUR Area Manager, Mike Ryan

Pub.L. 88-44, June 21, 1963, 77 Stat. 68:

"That the Secretary of the Interior shall, upon request of the other party to any long-term contract for municipal, domestic, or industrial water supply hereafter entered into under clause (2) of the proviso to the first sentence of section 9, subsection (c), of the Reclamation Project Act of 1939 (53 Stat. 1195, 43 U.S.C. 485h) [subsec. (c) of this section], include provision for renewal thereof subject to renegotiation of (1) the charges set forth in the contract in the light of circumstances prevailing at the time of renewal and (2) any other matters with respect to which the right to renegotiate is reserved in the contract. Any right of renewal shall be exercised within such reasonable time prior to the expiration of the contract as the parties shall have agreed upon and set forth therein.

"Sec. 2. The Secretary shall also, upon like request, provide in any such long-term contract or in any contract entered into under clause (1) of the proviso aforesaid that the other party to the contract shall, during the term of the contract and of any renewal thereof and subject to fulfillment of all obligations thereunder, have a first right for the purposes stated in the contract (to which right the holders of any other type of contract for municipal, domestic, or industrial water supply shall be subordinate) to a stated share or quantity of the project's water supply available for municipal, domestic, or industrial use.

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programs that are designed to experimentally compare selected policies or practices, by evaluating alternative hypotheses about the system being managed.

We recommend that Reclamation refer to the Grand Canyon Dam Adaptive Management Program, administered by Reclamation's Upper Colorado Regional Office in Salt Lake City, Utah, for guidance, as this program is the most detailed and comprehensive illustration of the adaptive management techniques in use today to manage fish and wildlife resources and overall health of these ecosystems. Note also that the CALFED Bay-Delta Program utilizes an adaptive management approach, which can provide guidance for the language of the program within the joint CVPIA Long Term Contract Renewal drafts, and to which the CVPIA funds may already be legally bound under the programs of CALFED. The affected CVPIA areas will benefit greatly by the inclusion of an adaptive management process that will increase the overall health of the Central Valley, its ecosystems, and its natural resources.

WEST SACRAMENTO CANALS

Reviewing the overall goals of alternatives for the West Sacramento Canals EA, the No Action Alternative and Alternative 1 apparently will have the same impacts. We are concerned about the reductions in CVP deliveries that may lead to increases in ground water use. This may have an adverse effect on nearby projects where their use of surface water, rather than ground water, may affect water quality or biological resources. As mentioned above, a more detailed system of water use and water transfer monitoring may help alleviate adverse water quality and biological resource impacts by balancing the use of surface and ground waters.

Under Alternative 2, it is determined that it would bring a lower Total Gross Value Production as projected for Alternative 1. The region's agricultural output could decrease by 5%, further lowering potential incomes and could decrease employment by 2.5%. If the biological species, the Giant garter of the Aleutian Canada goose and the sandhill crane are threatened under this alternative. Consequently, there is a greater potential for removing land from agricultural production, which may negatively impact the preservation of cultural resources and possibly lead to increased land erosion. From a biological resource perspective, however, this option should seriously be considered in any Preferred Alternative to decrease water usage in the District and allow for more water storage and to limit the effects of agriculture runoff in the District.

FEATHER WATER DISTRICT

Concerning the Feather Water District, the main considerations for other agencies, such as biological considerations, water transfers, and the balance of water distribution among competing demands by CVPIA are not addressed, in that EA since they require further discussions. FWS and others should be kept advised of the preparation of these materials. The PEIS earmarked CVP water deliveries from the Feather for fish and wildlife purposes. Thus, Feather's supply of water from CVP may decrease. The EA makes no mention of how the water demand is currently being met.

DELTA-MENDOTA CANAL

In the Delta-Mendota Canal EA, Alternative 1 refers to significantly different impacts from a "no action" alternative with the exception of geology, groundwater levels, and biological resources. Under Alternative 1 increased groundwater pumping could increase land subsidence, depending on the amount of surface water utilized. The report does not, however, acknowledge the presence of the threatened or endangered species that exist within the Delta-Mendota project area or their critical habitats in the area.

Impacts of Alternative 2 are essentially similar to those in Alternative 1 (including impacts noted above). Additionally, Alternative 2 has a more noticeable effect on agriculture value of production ranges from -$10 million on an average year (following a dry, five-year period) to a +$12 million during a dry year. There is also a potential increase in unemployment for the area ranging from 120–420 jobs being lost in the region.

CROSS VALLEY CONTRACTORS

Pertaining to the Cross Valley Contractors EA, the impacts are stated from Alternative 1 and the No Action Alternative are similar. Water quality and supply will remain relatively unchanged. Potential differences in supply due to conditions in a dry year as compared to a wet year are less than 3% of the current levels. Water quality, however, is questionable. Because the acreage delivery south of the Delta is projected to decline, this may increase ground water demands and may result in application of water of inferior quality than surface water. Although existing fisheries and biological habitat are likely to experience minimal direct and indirect impacts under these alternatives, more explanation is suggested in this EA to focus on improving water quality for biological resources and municipal uses. It really appears that the socio-economic situation in the region will be unaffected by these alternatives.

Under Alternative 2, less ground water pumping may allow farmers to switch to better-quality surface water. More significant changes under Alternative 2 involve biological "remediation," where additional water uses could result in an increase in the amount of land left fallow, thereby improving vegetation potential on the area and the ability to return fallowed lands to their natural non-agricultural condition. However, that could also diminish opportunity to increase wetland habitat in the affected area. Total pesticide constituent changes are less than 1%, which provides ample opportunity to increase critical habitat without adversely affecting the regional economy.

FRIANT DIVISION

The Friant Division EA is particularly critical of the analysis of impacts upon its region's contaminants, economy and natural resources. We note the painstaking detail used to describe the impacted environments of the Friant area and that well-planned alternatives to address direct and indirect environmental impacts are included. We particularly note Section 3 of this document,

pertaining to Affected Environment and Environmental Consequences of the Friant area. We are pleased to note the burgeoning programs in place for biological resource conservation and habitat restoration, specifically the Anadromous Fish Restoration Program. There are concerns, however, about how issues of water quality, drastically fluctuating water levels, excessive harvesting of fish, limited cover and spawning habitats will be addressed throughout the 25 year contract term. Data on the potential for adverse and positive impacts on these fish populations are provided, but we recommend including more detailed comment on active alternatives to address these natural resource concerns.

In Section 5, Ground Water Resources, there is analysis on possible recharging of already depleted and overdrafted ground water sources, but no concrete programs to ensure that ground water will be replenished throughout the Friant Division area. We suggest greater emphasis on recharging and limiting draw on ground water supplies. Further, this section should emphasize what can be done to abstain from excessive groundwater use, including limiting use in wet years, among Friant Division agricultural and industrial water users, particularly when attempting to implement riparian habitat restoration programs that will require additional water resources.

In the section on the Environmental Consequences of the Fisheries Resources commentary in this EA, adverse consequences upon the fisheries are likely to occur whenever CVP water is purchased. We are concerned that these purchases will occur randomly and intermittently, and will likely harm the regeneration and maintenance of the fish populations discussed in this section. We would like to see more attention on how the water purchasing and corresponding flow increases or decreases can be "controlled" or monitored to give the greatest opportunity for these fish populations to regenerate.

Overall, Friant water usage policies, especially those related to ground water levels and usage (Section 5) need to ensure that Friant usage will not interfere with Cross Valley Canal Unit or Delta-Mendota Canal supplies and usage.

SAN FELIPE DIVISION

The San Felipe EA addresses the topic of adaptive management, referring to the [illegible] Adaptive Management Plan, taking into account protective measures for fall-run Chinook salmon. In Chapter 4, Reclamation notes that the existing and projected water demands assume implementation of long-term water conservation programs, thus during periods of drought, the ability to reduce demand for water is limited. San Felipe is not the only project that includes water conservation measures. The hardening of demand especially during dry years is an important consideration for all the projects and for their interrelatedness. We are also concerned that threatened and endangered species in the area will encounter adverse direct and indirect environmental impacts from the project as currently drafted.

CONTRA COSTA CANAL

Contra Costa County's demand for water is expected to grow with continued development particularly in the eastern portion of the county. The Future Water Supply Study prepared in 1996 calls for the purchase of water transfers, which require separate environmental documentation and therefore were not included in Alternative 1 or Alternative 2. Further analysis of water transfers should be included in the overview assessment of these eight EAs. Moreover, the main difference between alternative 1 and alternative 2 lies in the pricing of water for agricultural needs, while development in the county is mostly coming from the redevelopment of farmland into residential and commercial districts.

SHASTA/TRINITY DIVISIONS

Regarding commentary to specific provisions of the Shasta and Trinity Divisions EA, our analysis primarily focused on Chapter 4, dealing with environmental effects and consequences; however, we have a brief comment on earlier sections of this document. In Chapter 2, it is stated that the dispute resolution provisions in the Shasta/Trinity Contract Renewal are only included in Alternative 1. Noting the currently contentious state of California water policy, we suggest this be a provision included within the final Contract Renewals, and not simply limited to Alternative 1. Regarding Chapter 4, Reclamation has completed a thorough and well-planned assessment of the impacts to this region, particularly in the areas of water usage, pricing, costs, and the effects upon the local economies.

Among the given contract renewal alternatives, it appears alternative 2 provides greater opportunity to allow for land fallowing to divert water to other municipal and industrial uses that are expected to increase in the evaluated area for the next 25 years as agriculture will decline. Consequently, options for use of the water saved from land fallowing for habitat and ecosystem restoration should be clearly delineated within Sections 4.4 and 4.5.

In 4.5.1, Affected Environment, the EA explains that there are "vegetation and wildlife resources that potentially may be affected by" the CVPIA within the Redding Basin area involved in the Shasta and Trinity Divisions. Exactly how these natural resources are affected by the project is not clear in this EA's analysis. The species affected are well detailed in the EA, but how their habitats are impacted by the project is not sufficiently detailed in this section or in the following Environmental Consequences section.

Thus, we recommend more detail on how the CVPIA Contract Renewals impact these flora and fauna. Pertaining to drafting edits in the same section, Table 4.5-1 repeats the Woodland Habitat Type three times, and the explanation of the Aquatic Habitat Type is cut off in mid-sentence (page 4.5-3). Otherwise, Chapters 4 and 5 appear to have complete analyses of the potential impacts the CVPIA Contract Renewals may have upon Shasta and Trinity Division area resources.

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We again thank Reclamation for the opportunity to provide comment on the eight CVPIA Long-Term Contract Renewal EAs, and urge Reclamation to seriously consider the suggestions made above and include them with in the Final CVPIA Contracts. Please feel free to contact us at (415) 427-1477 if you have any questions or require clarification on the above comments to the CVPIA Long-Term Contract Renewal Environmental Assessments.

Sincerely,

Patricia Sanderson Port
Regional Environmental Officer

cc:
Lorena Fuji, U.S. Environmental Protection Agency, Federal Activities Office
Dr. Theresa Presser, U.S. Geological Survey, Western Regional Office
Jay Weaver, U.S. Fish and Wildlife Service, Sacramento Office

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NRDC

Natural Resources Defense Council

December 7, 2000

Bureau of Reclamation
Attention: Ms. [illegible]
2800 Cottage Way
Sacramento, CA 95825-1898

Dear Ms. [illegible]:

On behalf of its more than 400,000 members, the Natural Resources Defense Council ("NRDC") hereby files its comments on the draft environmental assessment ("EA") on long-term renewal of Central Valley Project water service contracts prepared by the Bureau of Reclamation ("the Bureau").

We are deeply disappointed by the Bureau's inadequate attempt to comply with the National Environmental Policy Act ("NEPA"), 42 U.S.C. § 4321 et seq., in its proposed long-term renewal of CVP contracts. First, we strongly object to the Bureau's failure to prepare an environmental impact statement on these proposed agency actions that would have significant, far-reaching and fundamental effects. Second, the EA in itself fails to meet the requirements of NEPA and cannot possibly support a finding of no significant impact by the Bureau. We urge the Bureau in the strongest possible terms to prepare NEPA documentation on long-term contract renewal which comports with the law; as these EAs emphatically do not.

I. The Bureau Must Prepare an Environmental Impact Statement on the Proposed Long-Term Contract Renewals

NEPA requires federal agencies to prepare a detailed environmental impact statement ("EIS") on all "major Federal actions significantly affecting the quality of the human environment." 42 U.S.C. § 4332(2)(C). The purpose of this mandatory requirement is to ensure that detailed information concerning potential environmental impacts is made available to agency decisionmakers and the public before the agency makes a decision. Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 349 (1989).

Under NEPA's procedures, an agency may prepare an EA in order to decide whether the environmental impacts of a proposed agency action are significant

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enough to warrant preparation of an EIS. 40 C.F.R. § 1508.9(a)(1). An EA must "provide sufficient evidence and analysis for determining whether to prepare an [EIS]." 40 C.F.R. § 1508.9(a)(1). The U.S. Court of Appeals for the Ninth Circuit has repeatedly cautioned that "[i]f an agency decides not to prepare an EIS, it must supply a convincing statement of reasons to explain why a project's impacts are insignificant." Save the Yaak [illegible] Biodiversity Project v. [illegible], [illegible] F.3d [illegible] (9th Cir. 1998) (internal quotation marks omitted), cert. denied, 527 U.S. 1003 (1999). To successfully challenge an agency decision not to prepare an EIS, a plaintiff need not show that significant effects will in fact occur. "So long as the plaintiff raises substantial questions whether a project may have a significant effect on the environment, an EIS must be prepared." Id. (emphasis added; internal quotation marks omitted).

The long-term renewal contracts proposed by the Bureau are virtually certain to have a significant effect on the environment if they are executed. Collectively they authorize the diversion of millions of acre-feet of water each year from the natural environment to [illegible] agricultural water users in the Central Valley, for use [illegible] in irrigated agriculture that itself has significant environmental impacts. The Bureau simply cannot, consistent with NEPA, allow these environmental impacts to escape full analysis in an EIS on long-term contract renewal.

A. There is Ample Evidence That Long-Term Renewal Contracts Would Have Significant Environmental Effects

The Bureau has failed to meet its duty under governing Ninth Circuit precedent to supply a convincing statement of reasons why the execution of long-term renewal contracts would have insignificant environmental effects. By contrast, there is ample reason to believe that executing contracts for delivery of millions of acre-feet of water annually for an effective term of 25 years would have a significant impact on the environment.

The U.S. Fish and Wildlife Service has recently completed a biological opinion on, among other things, the continued operation and maintenance of the Central Valley Project ("CVP"). U.S. Fish and Wildlife Service, Biological Opinion on Implementation of the CVPIA and Continued Operation of the CVP (November 2000).[1] That biological opinion [illegible] the adverse environmental consequences that have been caused by the Central Valley Project, consequences that include losses to fish and wildlife from [illegible]

[1] We incorporate by reference that biological opinion in these comments. We also incorporate [illegible] the biological opinion [illegible] Central Valley Project [illegible] the November 2000 biological opinion.

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in water diversion, increased groundwater pumping and consequent land subsidence; from the effects of agricultural drainage; and from [illegible]. All of these effects constitute effects of CVP water service contracts, since they are the consequences of the provision of water under these contracts. See 40 C.F.R. § 1508.8 (defining effects required to be analyzed under NEPA to include indirect as well as direct effects). Because these effects on the environment are significant, they and other effects of signing long-term renewal contracts for the provision of CVP water must be analyzed in an EIS.

Other evidence of significant environmental effects from long-term water service contracts include the evidence submitted by the plaintiffs in NRDC v. Patterson, No. Civ. S-88-1658 LKK (E.D. Cal.), which we also incorporate in these comments by reference. The main point here is an obvious one. Through the proposed contracts, the Bureau is proposing to commit to the diversion of millions of acre-feet of water from the natural environment and to the delivery of that water to farms and cities for a nominal period of 25 years and an effective period of 50 years (given the right of renewal contained in the contracts). Activities of this scale and type cannot help but have significant environmental impacts, particularly in light of the significant impacts that have occurred to date under the current and previous CVP water service contracts. Moreover, the scale and duration of the activities that would be committed to under the proposed contracts threaten to cause a deterioration in the current state of the environment, as the environmental effects of the activities mandated under the proposed contracts are added to the environmental harm that has been caused to date under the current and previous contracts. For all these reasons, the Bureau must prepare an EIS on long-term contract renewal.

B. NEPA's Regulations Make Clear That an EIS Must Be Prepared Here

NEPA's implementing regulations list a variety of factors that federal agencies are required to consider in determining whether a proposed action may significantly affect the environment, and hence must be the subject of an EIS. 40 C.F.R. § 1508.27. While the Bureau has failed to undertake an adequate evaluation of these factors here, many (if not all) of the factors (any one of which is sufficient to require preparation of an EIS) are present in the case of the proposed long-term contracts. For example:

- Water pollution from agricultural drainwater, which is triggered and would be made possible by the delivery of water under the proposed contracts, "affects public health or safety" in a substantial way. See 40 C.F.R. § 1508.27(b)(2).

- The areas to be served under the proposed contracts are in proximity to "[illegible] prime farmlands, [illegible] wetlands (including riparian wetlands), and ecologically critical areas" (such as the Sacramento-San Joaquin Delta). See id. at 1508.27(b)(3).
- The effects of the water diversions, groundwater pumping and drainage required under the proposed contracts, and the consequences of the irrigated agriculture made possible by diversions pursuant to the contracts, "are likely to be highly controversial." See id. at 1508.27(b)(4).
- The "possible effects" of the diversions and actions made possible by the proposed contracts "are highly uncertain or involve unique or unknown risks," especially in light of the long-term duration of the contracts. See id. at § 1508.27(b)(5).
- Since numerous CVP contractors are not prepared to sign long-term renewal contracts at the present time and will negotiate such contracts in the future, executing the proposed contracts would "establish a precedent for future actions with significant effects or represent a decision in principle about a future consideration." See id. at § 1508.27(b)(6).
- In light of the environmental effects that have occurred from CVP operations to date, and in light of the long duration of the proposed contracts (during which many additional actions will necessarily be taken), the proposed contracts are "related to other actions with cumulatively significant impacts." See id. at § 1508.27(b)(7).
- In light of the well established adverse effects of CVP activities on threatened and endangered species and their habitat, as shown by the biological opinions cited previously in this letter, the proposed contracts "may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973." See id. at § 1508.27(b)(9).

The evidence in favor of an EIS being required here is overwhelming – particularly since "the threshold for requiring an EIS is quite low." NRDC v. Duvall, 777 F. Supp. 1533, 1538 (E.D. Cal. 1991). In that same case, Chief Judge Lawrence Karlton further held that:

> only in those obvious circumstances where no effect on the environment is possible, will an EA be sufficient for the environmental review required by NEPA. Under such circumstances, the conclusion reached must be close to self-evident.

Id. We urge the Bureau in the strongest terms to prepare the required EIS on the proposed long-term contract renewals, in order to comply with the requirements of NEPA.

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II. The EAs' Analyses Are Inadequate and Fail to Meet the Requirements of NEPA

Based on the foregoing, [illegible] that the EAs prepared by the Bureau are inadequate to satisfy NEPA's requirements. They fall far short of the analyses that is necessary to meet NEPA's requirements and to support a finding of no significant impact.

A. The EAs Fail to Consider a Reasonable Range of Alternatives

NEPA's implementing regulations call analysis of alternatives the "heart of the environmental impact statement." 40 C.F.R. § 1502.14. And they specifically require an alternatives analysis within an EA, id. at § 1508.9. The statute itself specifically requires federal agencies to:

> study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources.

42 U.S.C. § 4332(2)(E). Because the Bureau's EAs on long-term contract renewals look only at a narrow range of alternatives and fail to evaluate numerous reasonable alternatives, the EAs violate NEPA.

The caselaw makes clear that an adequate alternatives analysis is an essential element of an EA, in order to allow the decisionmaker and the public to compare the environmental consequences of the proposed action with the environmental effects of other options for accomplishing the agency's purpose. In a leading NEPA case in which a court rejected an EA for failure to consider alternatives adequately, the Ninth Circuit pointedly held that "the informed and meaningful consideration of alternatives ... is ... an integral part of the statutory scheme." Bob Marshall Alliance v. Hodel, 852 F.2d 1223, 1228 (9th Cir. 1988), cert. denied, 489 U.S. 1066 (1989). To meet NEPA's requirements, an EA must consider a reasonable range of alternatives, and courts have not hesitated to overturn EAs that omit consideration of a reasonable and feasible alternative. See People ex rel. Van de Kamp v. Marsh, 687 F. Supp. 495, 499 (N.D. Cal. 1988); Sierra Club v. Watkins, 808 F. Supp. 852, 870-75 (D.D.C. 1991).

Each of the contract renewal EAs considers only two alternatives, in addition to the no-action alternative. Given the scope and importance of the proposed agency action under review, this small number of alternatives is by itself a violation of NEPA's requirement to consider a reasonable range of alternatives. What makes it even worse is that there are few

differences between the alternatives that the EAs do consider. For example, in each of the alternatives, the two action alternatives and the no-action alternative typically contain the same quantities of water under contract. The differences between the alternatives, though, do not deal with water quantity. The narrative tables that compare the alternatives repeatedly use the phrases "Same as NAA [No Action Alternative]," "Similar to NAA" and "minor changes" to describe the components of the alternatives. See, e.g., Draft Delta Division Long-Term Contract Renewal Environmental Assessment ("Delta EA"), at Table DA-1.[1] See also id. at 3-50 ("The impacts of EA Alternative 1 are assumed to be identical to the impacts under the NAA because the water supply and pricing conditions are identical in both alternatives. The only differences in the alternatives are administrative."); 3-58 ("the NAA and Alternative 1 are assumed to have the same environmental consequences because of these similarities and the fact that the only differences are contractual arrangements among the parties to the contracts").

In addition to considering very few alternatives that are too similar to each other, the EAs reject or ignore several obvious and reasonable alternatives. These unexamined or rejected reasonable alternatives include:

- Alternatives that decrease the water quantities under contract. Each of the alternatives in the EAs contains the exact same water quantities that are currently under contract. It is plainly reasonable for the Bureau to consider and evaluate the option of changing these quantities. The Bureau should consider changing the contract quantities to (a) a level that matches the actual level of deliveries in a recent, normal water year, and (b) a level that would leave a meaningfully larger amount of water in the environment compared with current usage, so that the EAs can illuminate the choices and consequences between consumptive and non-consumptive uses of water. The EAs' rejection of the alternative of reducing water quantities, see, e.g., Delta-Mendota Canal Unit Environmental Assessment, Long-Term Contract Renewal, at 2-9, ignores the fact that such an alternative is reasonable and accords with the purpose and need for the agency action under evaluation. See also 40 C.F.R. § 1502.14(a) (agencies must "[r]igorously explore and objectively evaluate all reasonable alternatives").
- An alternative that increases the cost of water to full market rates. Each of the action alternatives in the EAs charges the minimum price for water under the contract. The Bureau should evaluate at least one alternative that prices water at the level the water

[1] The EAs are all very similar. Thus, each of the comments concerning the Delta EA applies equally to each of the EAs. [illegible]

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would receive on the open market." At a minimum, the Bureau must consider price increases that would "encourage the full consideration and incorporation of prudent and responsible water conservation measures." Reclamation Reform Act of 1982, Sec. 210(b); 43 U.S.C. 390jj(b).

- An alternative that does not give the contractor a specific right to renew the contract. (While it is possible that there is no right of renewal contained in Alternative 2, the EAs do not make this clear and do not analyze the environmental consequences of this difference, if it does exist in the alternative.)
- Alternatives that alternatively mandate or encourage increased water conservation by water users through (a) aggressive, prescriptive requirements for water conservation and (b) through financial incentives for water conservation.

Each of the above reasonable alternatives can and should be analyzed and considered for contracts in each of the CVP divisions. In addition, for contracts in each individual division, the Bureau should consider at least one strongly environmentally protective alternative that is tailored to the leading environmental problem relating to the operation of that division. So, for example, the Bureau's NEPA analysis for long-term renewal contracts for the Friant Division should consider at least one alternative that conditions the provision of water service on effective restoration of the San Joaquin River and/or creates specific incentives in the contract for restoration of the river.[1] As a further example, the NEPA analysis for the Delta Mendota Canal Unit should consider at least one alternative that conditions the provision of water service on discrete improvements in protection and restoration of the Sacramento-San Joaquin Delta and/or creates specific incentives in the contract for such increased environmental protection and restoration of the Delta.

The EAs prepared by the Bureau fail to evaluate a reasonable range of alternatives and hence violate NEPA. We urge the Bureau to prepare NEPA documentation for long-term contract renewals that meets NEPA's requirements for alternatives analysis and that, at a minimum, fully analyzes the alternatives described above.

[illegible] The Bureau [illegible] consider higher prices. See, e.g., Reclamation Project Act of 1939, [illegible] (43 U.S.C. 485h(c)) [illegible] shall be "at such rates as [illegible] an appropriate share of the annual operation and maintenance cost"); Reclamation Reform Act of 1982, Sec. 208(a) 43 U.S.C. 390hh(a) [illegible] to recover all operation and maintenance charges [illegible] see also NRDC v. Houston, 146 F.3d 1118, 1125-26 (9th Cir. 1998) (Bureau has discretion over terms of renewal contracts, including price and quantity).

[illegible] The Friant EA fails to consider an adequate range [illegible] of the proposed [illegible] on the San Joaquin River and its restoration [illegible].

II. The EAs Fail to Disclose and Analyze Adequately the Environmental Impacts of the Proposed Action.

NEPA's implementing regulations require that an EA "provide sufficient evidence and analysis for determining whether to prepare an [EIS]." 40 C.F.R. § 1508.9(a). For the reasons discussed above, the EAs fail to discuss and analyze adequately the environmental effects of long-term contract renewals. Courts have not hesitated to overturn EAs that fail to contain an adequate discussion of the environmental consequences of a proposed agency action, e.g., Foundation on Economic Trends v. Heckler, 756 F.2d 143 (D.C. Cir. 1985), and the EAs prepared by the Bureau here deserve that same fate.

The discussion and analysis of environmental impacts contained in the EAs are cursory and inadequate, and fall far short of NEPA's requirements. As an example, the discussion of water quality impacts contained in the Friant EA shows the cursory and conclusory "analysis" contained in all of the EAs. First, the analysis is remarkably brief, occupying a single page with considerable space between the short paragraphs -- a plainly inadequate treatment in light of the great importance of water quality to public health and the environment. Friant EA at 3-59. Second, the analysis essentially says that there will be no change in water quality impacts under the No Action Alternative and Alternative 1, without describing in any meaningful way what the qualitative impacts of existing water quality is on human health and the environment, and why these impacts will not change for better or for worse. Id. The conclusory analysis of the effects of Alternative 2 appears to say that this alternative would cause some changes, but the EA fails to describe what those changes would mean for human health and environment. Id.

This plainly inadequate discussion of environmental impacts is, sadly, far from an isolated example. For example, the same document's discussion of fishery impacts occupies approximately a page and a half and concludes (with no analysis), for the no action alternative and for Alternative 1, that there would be "no impacts to fishery resources" -- a conclusion based apparently on the "no" [illegible] changes in environmental impacts from the current effects equals no environmental impacts at all. Id. at 3-47. On the next page, the EA presents the amazing -- thoroughly unsupported statement that "Alternatives 1 and 2 have little or no effect on surface water quantity and flows," id. at 3-48, despite the fact that both alternatives would result in the diversion and delivery to irrigated agriculture of more than a million acre feet of water each year for 25 or 40 years. Elsewhere in the same document, the Bureau presents the astonishing and unsupported statement that "Alternative 1 is expected to have similar effects as the NAA. Therefore, there are no impacts to biological resources under this alternative." Id. at 3-[illegible].

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In addition to failing to analyze or to analyze adequately the environmental effects of the proposed contracts, the EAs also improperly restrict the timeframe of their analyses. None of the study periods extends forward more than 25 years, e.g., Friant EA at 1-8, despite the fact that each of the contracts contains an express unilateral conditional right of renewal that means that the likely and effective duration of these contracts would be 50 years. By failing to analyze the environmental effects of the contracts over the likely term that they are renewed under the right of renewal contained in the contracts, the Bureau has violated NEPA.

We urge the Bureau to prepare NEPA documentation that adequately discloses and analyzes the environmental effects of the contracts over the full lifetime of the contracts, including the renewal periods, as the draft EAs do not.

D. The EAs Fail to Analyze Cumulative Impacts Adequately

These proposed long-term renewal contracts do not exist in a vacuum but instead add on more than half a century of environmental impacts from the construction, operation and management of the CVP. The fact that these contracts would operate for at least a quarter century, and likely that they would be renewed for another quarter century, means that their environmental effects will also be added to additional actions that will take place over the next 50 years. These facts make an adequate analysis of cumulative impacts especially important for these proposed contracts.

The Ninth Circuit has made clear that NEPA mandates "a useful analysis of the cumulative impacts of past, present and future projects." Muckleshoot Indian Tribe v. U.S. Forest Service, 177 F.3d 800, 810 (9th Cir. 1999). That Court has further stressed that "[d]etail is required in describing the cumulative effects of a proposed action with other proposed actions." Id. The very cursory cumulative effects discussions contained in the EAs plainly fail to meet these standards of adequacy.

The cumulative effects discussions contained in the EAs are cursory, unrevealing and, [illegible] alleged. Here, in full, is the Friant EA's cumulative effects analysis of the proposed contracts' cumulative effects on surface water:

> The cumulative effects of all foreseeable projects will be to place additional demands on the available water supply. Also, the restoration program may result in additional losses of [illegible] water for habitat restoration. Implementation of Alternative 1 or 2 will not influence the cumulative effects of other projects on surface water resources.

Friant EA, at 3-12. In addition to being almost entirely uninformative, this three sentence discussion asks more questions than it answers. What are the foreseeable projects, and what are the additional demands likely to be? What impact would the proposed contracts have on the opportunities to restore the San Joaquin River? What other cumulative impacts might occur over the life of the project? How is it possible to conclude that the diversion of more than a million acre feet of water every year, for 25 or 50 years, "will not influence cumulative effects" on surface water?

The Ninth Circuit has not hesitated to reject cumulative impact statements that are "too general and conclusory to meet the NEPA requirements" and that fail to provide the "useful analysis" mandated by the caselaw. Muckleshoot, 177 F.3d at 811. The inadequate cumulative effects discussions contained in the contract renewal EAs fail these tests and deserve rejection here.

III. Conclusion

The contract renewal EAs prepared by the Bureau fall well short of NEPA's established requirements. We urge the Bureau to prepare NEPA documentation on the proposed contracting actions which complies with all requirements of the law.

Sincerely,

Drew Caputo
Senior Attorney

Hamilton Candee
Senior Attorney

cc: Hon. David Bayer, Deputy Secretary of the Interior
Hon. John Keys, [illegible]
Hon. George Frampton, Chairman, CEQ

LETTER 9

LETTER 10

Golden Gate Audubon Society
[illegible]
[illegible]
[illegible]

December 8, 2000

Al Candlish
Bureau of Reclamation
2800 Cottage Way
Sacramento, CA 95825
Sent by FAX 916 978-5094

Dear Mr. Candlish:

The Golden Gate Audubon Society appreciates the opportunity to comment on the Bureau of Reclamation's draft Environmental Assessments (EAs) on the proposed long-term renewal of Central Valley Project (CVP) water service contracts.

We believe the draft EAs are inadequate and violate NEPA. We believe the long-term renewal contracts for the CVP demand/require an Environmental Impact Statement (EIS) that fully analyzes a feasible range of alternatives. We also wish to incorporate by reference the comments dated December 7, 2000 filed by the Natural Resources Defense Council on the draft EAs.

Thank you for considering our comments.

Sincerely yours,

Arthur Feinstein
Executive Director

FAX TRANSMITTAL

DATE 12/8/00

TO Al Candlish

COMPANY Bureau of Reclamation

PHONE

FAX 916-978-5094

FROM Cynthia Koehler, Legal Director

PAGES TO FOLLOW 1

COMMENTS

LETTER 11

SAVE THE BAY

Save San Francisco Bay Association
1600 Broadway, Suite 300
Oakland, CA 94612
www.savesfbay.org savebay@savesfbay.org
510/452-9261 FAX: 510/452-9266

RECEIVED DEC 13 2000 [illegible] RESOURCES INC

1600 Broadway, Suite 300
Oakland, CA 94612
[illegible]
[illegible]
www.savesfbay.org

December [illegible] 2000

Al Candlish
Bureau of Reclamation
2800 Cottage Way
Sacramento, CA 95825

RE: Environmental Assessment for CVP Water Service Contract Renewals

Dear Mr. Candlish:

I write on behalf of Save San Francisco Bay Association's thousands of members to inform you of our objection to the draft environmental assessment (EA) on long-term renewal of Central Valley Project water service contracts prepared by the Bureau of Reclamation. The draft EA is inadequate and violates NEPA on several grounds. [illegible] the contracts are virtually certain to significantly affect the environment. [illegible] they would result in the diversion of millions of acre-feet of water each year from the natural environment. The Bureau's [illegible] fail to adequately review a reasonable range of alternatives, and fails to analyze and disclose to the public and decision makers the environmental impacts [illegible] and cumulative [illegible] of the proposed action.

We incorporate here by reference the extensive comments prepared by [illegible] with the Natural Resources Defense Council [illegible] with your office [illegible].

Thank you for your consideration of our views on this important matter.

Sincerely,

Cynthia Koehler /sk

Cynthia Koehler
Legal Director

cc: Hon. David Hayes, Deputy Secretary of the Interior
Hon. John Leshy, Solicitor
Hon. George Frampton, Chairman, CEQ

SAVE THE BAY

[illegible]

LETTER 11

LETTER 12

The Bay Institute

FAX COVER SHEET

DATE: 12-8-00

TO: Mr. Al Candlish

Phone #

FAX # (916) 978-5094

FROM: Grant Davis

OF PAGES (including cover sheet): 2

Comments: Here are TBI's comments on the long-term contract renewal. Thanks. Comments are due today.

The Bay Institute

December 8, 2000

Bureau of Reclamation
Attention: Mr. Al Candlish
2800 Cottage Way
Sacramento, CA 95825-1898

Dear Mr. Candlish:

On the behalf of the Board and staff of The Bay Institute (TBI), I am hereby filing our brief comments on the draft environmental assessments ("EAs") on long-term renewal of Central Valley Project water service contracts prepared by the Bureau of Reclamation.

We are deeply disappointed by the Bureau's inadequate attempts to comply with the National Environmental Policy Act (NEPA), 42 U.S.C. § 4321 et seq., in the proposed long-term renewal of CVP contracts. We are also very concerned about the Bureau's failure to prepare an environmental impact statement on proposed agency actions that would have significant, far reaching and fundamental effects. We believe the contract renewal EAs prepared by the Bureau fall well short of NEPA's established requirements and we strongly urge the Bureau to prepare NEPA documentation on the proposed contracting actions that comply with all requirements of the law.

Thank you for your consideration of TBI's comments.

Sincerely,

Grant Davis
Executive Director

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LETTER 13

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX

Cross Media Division (CMD-2)
Federal Activities Office 75 Hawthorne St., San Francisco, CA 94105

FACSIMILE
TRANSMITTAL

TO: Al Candlish

Organization: Central California Area Office, BOR

Subject: EPA Comments on Long Term Contract Renewals

Ph #:

Fax #: 916-978-5094

FROM: Laura Fujii

Ph #: 415 744 1601

Fax #:

E-Mail Address:

Date Sent: December 8, 2000

Number of pages including cover sheet: 12

Comments:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

Al Candlish
Bureau of Reclamation
2800 Cottage Way
Sacramento, California 95825

December 8, 2000

Bill Luce
Bureau of Reclamation
South-Central California Area Office
1243 N Street
Fresno, CA 93721

RE: Proposed Long Term Contracts and Associated Environmental Assessment

Gentlemen:

This letter responds to your concurrent request for comments on several draft long-term Central Valley Project water contracts and the associated Environmental Assessment (EA) that analyzes the environmental effects of these draft contracts as part of the Bureau's compliance with the National Environmental Policy Act (NEPA).

As you know, EPA has had a long institutional interest in these renewal contracts. In 1989, EPA made a rare formal referral of these contracts to the Council on Environmental Quality when the Department of the Interior proposed signing long term renewals without any environmental review. After passage of the Central Valley Project Improvement Act (CVPIA) in 1992, our office has worked closely with Interior as it has implemented the many complex new provisions of that Act, including those calling for the CVPIA Programmatic Environmental Impact Statement (PEIS). The PEIS has been a massive undertaking, and it serves as the foundation of NEPA compliance for these contracts as well as other provisions of the CVPIA.

EPA filed detailed formal scoping comments when Interior began the process of negotiating the long-term renewal contracts. Since many of our earlier comments are still relevant to the proposed contracts and Environmental Assessment, we are attaching a copy of our scoping comments to this letter. In this comment letter, we will only briefly discuss the following issues.

LETTER 13

NEPA Issues

Interior proposes to rely solely on Environmental Assessments for most of its CVP contract renewals [illegible]. As indicated in our scoping letter, EPA is concerned that no Final Environmental Impact Statements (EIS) will be prepared, tiering off of the PEIS, rather than relying on Environmental Assessments. We appreciate that the Environmental Assessments are [illegible], but believe that the unaddressed nature of the issues raised in the contracts would benefit from the full public disclosure and full public comment provisions that are part of the Environmental Impact Statement process. We are also concerned that the Environmental Assessments do not articulate a clear rationale or standard for differentiating between Contractors that will prepare EISs (American River and San Luis) and those relying on only Environmental Assessments.

EPA is also concerned that the Environmental Assessments have been prepared in advance of the execution of the Record of Decision on the PEIS. As required by NEPA [illegible], the Environmental Assessments would benefit from the completion of the analysis being evaluated in the first tier document (the PEIS), as those decisions directly affect the range of alternatives and range of potential effects that must be evaluated at the CVP unit level.

Finally, EPA is concerned that the analyses in the Environmental Assessments do not fully take into account the site specific environmental issues of the different CVP units. These Environmental Assessments lack granularity in the analysis of pricing alternatives, but do not evaluate different potential effects on, for example, groundwater overdraft or water quality impacts of contract deliveries.

EPA recommends that Interior reevaluate its overall NEPA compliance approach when it completes its Record of Decision on the PEIS, which we understand will be in the immediate future. At that time, Interior should reconsider its rationale for deciding between Environmental Assessments and Environmental Impact Statements at the unit level, and reconsider whether some or all of these Environmental Assessments should be revised and expanded as Environmental Impact Statements.

Contract Issues

EPA has reviewed and appreciates the proposed contracts, as well as the standard form of contract. We recognize that individual contracts are the result of multiple party negotiations, and that each contract can be and has been tailored somewhat to account for local conditions. Our comments are therefore limited to the major issues raised by long-term contracts. In our view these major issues are as follows:

1. Contract Quantities. EPA has frequently expressed its concern that the contract quantities included in the current long-term contracts do not accurately reflect the delivery capability of the CVP, especially after regulatory protections under the Clean Water Act, the CVPIA and the Endangered Species Act are considered. In some years, virtually all CVP contractors receive all the water called for in their contracts. However, in many years, and for some districts in most years, the CVP is unable to deliver the full amount of water called for in the current contracts. In other words, the current contracts "oversubscribe" the CVP. The analysis in the PEIS suggests that this problem will become more acute in the future as senior water rights holders upstream develop their water supplies. See PEIS, Figures IV-19 and IV-60 and accompanying text.

EPA recognizes that the contract quantity issue does not affect all CVP contractors uniformly, and that it is primarily a problem in the westside of the San Joaquin Valley. Calling this a "problem" is not, however, to imply any kind of value judgement on those particular districts and farmers. EPA acknowledges that many of these westside districts are leaders in water use efficiency and in addressing water quality issues. Nonetheless, the complex combination of California water rights, contracts, and operating constraints means that certain CVP units and CVP contractors consistently bear the shortages in CVP delivery capabilities.

EPA is concerned that this overcommitment of CVP supplies has the potential to adversely affect Interior's ability to effectively assist in addressing California water needs and environmental needs. The Bureau and Interior will not be able to continue their strong leadership role in CALFED and other broad based efforts if they are chronically trapped by unrealistic water delivery targets.

In its contract negotiations with westside contractors, Interior has attempted to deal with this contract quantity issue directly by dividing contractual quantities into "base" amounts and "supplemental" amounts. See, for example, the draft Broadview Water District contract at Section 3(a). We strongly support this approach to the overall CVP renewals. We suggest that Interior develop a consistent process for determining, on a contract by contract basis, the proper allocations of "base" and "supplemental" quantities. We believe the "base" amount should reflect recent historical deliveries but also factor in the anticipated future limitations on CVP supply as noted and evaluated in the PEIS.

Although we are supportive of Interior's approach to the contract quantity issue, we are concerned about proposed contract language that arguably requires the Secretary to pursue additional water supply for these contractors. See Section 3(c). We appreciate that this is only a statement of intent, but it raises the same concerns noted above about maintaining Interior's objectivity in the broader debate over California water resources. Further, that language is premature under the CVPIA. The CVPIA required Interior to develop alternatives for increasing yield enhancement, but reserved for Congress the decision about whether to pursue those yield enhancement options and which options to pursue. See CVPIA Section 3408(j).

2. Right to Renew. Since commencement of renewal of these contracts in [illegible], EPA has argued that long-term water service contracts are not and should not be permanent commitments, but rather that they should be subject to review at the end of each contract period to reevaluate water supply and environmental conditions in a rapidly changing state. The CVPIA itself is a [illegible] conclusion which requires for the Secretary the discretion as to whether to renew these contracts at the end of the first long-term renewal. See CVPIA Section 3404(c).

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Given its historical position, EPA is generally supportive of the contract renewal provisions in proposed contract Section 2(b). In particular, we support the strong statement in Section 2(b)(2) requiring that any subsequent renewal must include a reevaluation of the contract in light of conditions at that time.

At the same time, however, we believe that the provisions of Section 2(b) should be clarified or supplemented. Section 2(b)(2) embraces a concept that [illegible] during the stakeholder discussions referred to as the Garamendi Process. The concept is that contractors can "earn" a second renewal by meeting certain requirements of water conservation, water measurement, etc. EPA supports this approach theoretically, but believes the requirements described in proposed contract Section 2(b)(3) do not provide clear objectives or standards for triggering a second renewal. In particular, we believe that the contract needs to define, either in Section 2 or in Section 26, the definite, [illegible] objectives that must be met. Deferring this definition to later is inappropriate given that the contractual agreement for renewal is being made now. In addition, we believe that renewal should be conditioned on compliance with water quality improvements required under the state and/or federal Clean Water Acts.

3. **Tiered Pricing**. EPA has frequently expressed its support for the concept of tiered pricing as a mechanism for encouraging economically efficient water use in both the agricultural and urban sectors. The CVPIA requirements for tiered pricing were an expression of broader support for this idea. EPA appreciates that implementing tiered pricing in the real world is difficult, given the vastly different circumstances of different districts and the different approaches to managing water supplies in different hydrologies. Nevertheless, we are concerned that the new interpretation of tiered pricing as applying to the "contract base" and "supplemental" contract amounts has the net impact of making the effect of tiered pricing in many districts [illegible]. This is, once again, a problem caused partially by unrealistic contract quantities, but it seriously erodes the usefulness of the tiered pricing tool. We recommend that Interior reconsider this issue and perhaps develop more carefully tailored, district-by-district approaches to tiered pricing that can effectively meet the goals/purposes of the tiered pricing mechanism.

Conclusion

EPA would like to acknowledge the significant effort made by Interior staff over the past several years in developing an approach to long-term CVP contracts. [illegible] to [illegible] and implement the reforms envisioned by the CVPIA. We stand ready to offer our support in working through issues raised in our comments or for other issues raised during the comment period. If you have any questions about these comments, please call [illegible] at (415) 744-1601 or Carolyn Yale at (415) 744-2026.

Sincerely,

Deanna Wieman
Deputy Director
Cross Media Division

cc: Lester Snow
David Nawi
[illegible] Schneider

LETTER 13

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

January 8, 1991

Mr. Alan P. Candlish
Bureau of Reclamation
2800 Cottage Way
Attn: MP-120
Sacramento, CA 95825

Dear Mr. Candlish:

The Environmental Protection Agency (EPA) has reviewed the Notice of Intent for Long-term Contract Renewal, Central Valley Project, California. Our review was pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1505), and Section 309 of the Clean Air Act. We have also addressed the proposed water need methodologies which will be used in association with the contract renewals.

The Bureau of Reclamation (Bureau) proposes to prepare environmental documents for the purpose of renewing existing long term and interim water supply contracts for the Central Valley Project (CVP) in California. Specific quantities of water to be in the renewal contracts will be subject to a needs assessment. At this time, the Bureau is proceeding as if the project impacts would require preparation of an EIS. Section 3404(c) of the Central Valley Project Improvement Act (CVPIA) authorizes renewal of existing long-term water service contracts for 25 years after appropriate environmental review including the completion of a Programmatic Environmental Impact Statement (PEIS) on the CVP required under Section 3402. The final PEIS is scheduled for release in June 1999. The additional environmental document(s) for contract renewal will tier off of the final PEIS. The long-term contract renewal environmental document(s) will be prepared on a regional basis. The specific regions will be determined following scoping. Furthermore, individual service areas may be combined together in one document if they have related issues.

Over the last 10 years, EPA has worked with the Bureau and other resource agencies on issues which should be addressed when considering long-term water supply contract renewals for the CVP. In fact, between February 1989 (EPA Referral of Friant Unit Contract Renewals to Council on Environmental Quality (CEQ)) and passage of CVPIA in October 1992, EPA and the Bureau worked rather closely on developing the issues, scope, and alternatives for a proposed EIS on the Friant Water Service Contract Renewals (Friant EIS). The following materials are incorporated by reference: EPA Comments on Environmental Review Process for CVP Contract Renewals, March 1990; Friant Contract Renewal EIS EPA/BOR Agreements, 1990; EPA Comments on Friant Contract Renewal EIS Scoping Report, May 1991; and EPA Scoping Comments, Friant Contract Renewal EIS, January 1991. Copies are attached.

While we acknowledge the remarkable shift in policy, management, and planning for water resources in California which have occurred, we believe that many of the issues and agreements made with the Bureau in 1990 are still relevant to the current contract renewal effort. Key points are highlighted below.

We have long supported tiering contract renewals from a programmatic, system-wide analysis of CVP operations and hydrologic effects, and, with some reservations, believe that the Programmatic CVPIA EIS (CVPIA PEIS) serves this function well. However, considering the many regional and localized concerns which are not covered in the CVPIA PEIS, we suggest that an EIS should be assumed the appropriate level of analysis for contract renewals unless a close screening of issues and potential impacts conducted with ample public participation, supports a different conclusion. We note that the programmatic EIS for the CVPIA did not address or evaluate water quantity, water quality, or specific terms and conditions for contract renewals.

The Scoping Notice states that the long term contract renewal environmental document(s) will be prepared on a regional basis and tiered to the final CVPIA PEIS. The CVPIA PEIS evaluated options for operational criteria, water management (for instance, pricing and transfers), and ecosystem restoration priorities for the CVP. The contract renewal EISs should clearly link proposed contract renewal actions with the management direction established by the CVPIA PEIS Record of Decision and to currently planned or reasonably foreseeable rulemaking and regulations.

Alternatives should evaluate ways in which renewed contracts can provide adequate supply reliability for contractors and flexibility to implement all CVPIA provisions. There must also be flexibility to accommodate future shifts in water policy which may affect the CVP. We urge the Bureau to structure the renewed contracts to fully reflect the restoration of the CVP, pursuant to CVPIA, to provide ecosystem restoration and a reliable water supply. EPA firmly believes that long-term water supply contract renewals should focus on determination of available supplies and bringing contract commitments into alignment with these supplies. The water needs analyses which support contract renewals should evaluate both the supply and demand sides of water management in the contract areas. Reclamation should work with contractors to consider all available tools for enhancing water management flexibility and reliability. These tools could include water transfers, conservation, pricing, irrigation efficiencies, operational flexibilities, market-based incentives, water acquisition, conjunctive use, voluntary temporary or permanent land fallowing, and wastewater reclamation and recycling. Information on the needs methodologies and results of the assessments should be incorporated into the contract renewal environmental impact documents.

Our detailed comments (attached) discuss a number of issues which we believe must be addressed in contract renewals. Among the most important is identifying the gap between CVP supplies and current levels of CVP contract commitments. The CVPIA PEIS documents that under all implementation alternatives the amount of water which Reclamation could reliably deliver in average long-term and dry period conditions is less than the total contract quantities.

LETTER 13

We appreciate the opportunity to review this NOI. Please send four copies of the Draft environmental impact statement to this office at the same time it is officially filed with our HQ Office of Federal Activities. If you have any questions, please call me at (415) 744-1566, or contact David J. Farrel, Chief, Federal Activities Office at 415-744-1584.

Sincerely,

Deanna Wieman, Deputy Director
Cross Media Division

Enclosures: Detailed comments
EPA Comments on CVPIA Draft PEIS, April 1998
EPA Comments on Environmental Review Process for CVP Contract Renewals, March 1992
Friant Contract Renewal EIS EPA/BOR Agreements, 1992
EPA Comments on Friant Contract Renewal EIS Scoping Report, May 1991
EPA Scoping Comments, Friant Contract Renewal EIS, January 1991

MI003182
Filename: cvprenew.wpd

cc: Jim White, Department of Fish and Game
Nanette Engelbrite, Western Area Power Administration
Wayne White, US Fish and Wildlife Service
Victoria Whitney, State Water Resources Control Board
Mary Nichols, California Resources Agency
Gary Stern, National Marine Fisheries Service
US Corps of Engineers, San Francisco & Sacramento
Pat Port, Department of the Interior
Lester Snow, CALFED
Wendy Pulling, NRDC
Donna Tegelman, BOR MP-400

LETTER 13

DETAILED COMMENTS

Water Needs Assessment

EPA has concerns with both the assumptions and methods of the water needs analysis. The Bureau's "needs analysis" described at the Water Demands Workshop appeared to have the following steps: 1) calculating contractors' historical beneficial use of water, 2) projecting future beneficial use (for the 25 year contract horizon), 3) examining comprehensively the water sources available to the contractor and 4) determining the quantity of CVP water to be included in a renewal contract, using the supply/demand information. We urge the Bureau to clearly describe the assumptions underlying use of this methodology to project future beneficial use and to explain how this calculation will help determine contract quantity.

We are concerned that plant evapo-transpiration data used to compute crop water use (such as Bulletin 113) is open to dispute. Thus, the Bureau should take care in developing its historical documentation of beneficial use as well as any future projections. In addition to technical questions regarding water use, long-term projection (25 years) of future use by existing contractors is subject to many unforeseeable factors (technology, economics, potential water transfers, etc.). This is especially true for agricultural use. For the purpose of establishing a determination of future beneficial use, we would strongly recommend a different approach. We suggest considering a less technically detailed "certification" of expected future beneficial use, backed up by terms in the contract that monitor compliance and continued beneficial use.

Step 3, examining comprehensively the water sources available to the contractor, is very important. In fact it appears to draw on information required in the Contractor's water conservation plans. Several potential sources such as water exchanges, transfers, and groundwater, may be difficult to document and/or project. The EIS should clearly document how this step is done, disclose assumptions made regarding groundwater use, transfers, and exchanges, and discuss limitations in information which could affect conclusions regarding water supplies available to water contractors.

In regards to Step 4, we urge the Bureau to clearly state how it intends to use the water needs analysis in determining contract quantities. EPA does not regard the purpose of contract renewals as using CVP contract supplies to "fill a gap" between calculated needs and available supplies. Instead, we believe the Bureau has a number of tools to help improve water management and supply reliability and to help ensure a sustainable water balance between supply and demand. Available tools include water transfers, conservation, pricing, irrigation efficiencies, operational flexibilities, market-

based incentives, water acquisition, conjunctive use, voluntary temporary or permanent land fallowing, and waste water reclamation and recycling. We urge the Bureau to use these tools to improve water management and supply reliability and to factor the use of these tools into its evaluation of contract quantities. In this step, one might incorporate assurances that water would not go to waste, go to environmentally harmful areas, and would support water quality objectives. We suggest that short-term integrated demand/supply management be the first focus with long-term integrated demand/supply management as a goal.

In conclusion, we suggest the Bureau document historical beneficial use of CVP water; certify expected future beneficial use; help users plan and implement supply reliability measures through other programs; and equitably allocate supplies expected to be available from the existing CVP.

Shortages

EPA is concerned with contract quantities which consistently exceed available water supply, thus creating "shortages". Contract supply commitments should be tailored to reflect supplies reasonably expected to be available under varying conditions (e.g., wet versus dry years). We fear that retaining contract quantities which exceed available supplies gives the impression of unreliable commitments and may imply a "need" to develop additional supplies. Often development of "new supplies" is only reallocation of scarce water from environmental in-stream beneficial uses to consumptive uses.

EPA advocates an approach which is focused on efficient use and management of existing scarce water supplies. The quantity of allocated water in the contracts should be based on existing, developed project supplies and not on contractors' needs, demands, or anticipated additional supplies. We strongly urge the Bureau to avoid contract quantity commitments exceeding expected supplies and to avoid [illegible] shortages relative to inflated supply commitments.

From the contractors' perspective, there may be times when shortages are unavoidable and will need to be addressed. As stated above, EPA advocates the use of multiple tools by the Bureau to help contractors plan and manage for supply reliability, including during shortage periods.

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Environmental Needs

The needs assessment must include full consideration of environmental needs. EPA believes that it is inappropriate for the renewal contracts to account for environmental restrictions solely through the use of a "shortage provision." A shortage provision is an appropriate mechanism for providing flexibility in the event of future unanticipated environmental or other impositions on CVP water use. However, it should not be used to implement existing environmental obligations under the CWA or ESA. These existing obligations should be evaluated in the needs analysis and factored into the assessment of water quantities available for contracts.

Documentation of Beneficial Use

Beneficial use must be clearly defined. For instance, the needs assessment should state the dates between which the beneficial use measurement was taken, rationale for this measurement period, how beneficial use will be interpreted, and whether and how differences in seasons and type of water use will be considered.

Groundwater and water reuse is also of concern. CVP water replenishes groundwater in certain areas through a number of "paths," such as canal seepage, over-irrigation, and spreading of high flow (flood) waters. This use should be documented. We request the Bureau disclose whether this use is being counted as historical beneficial use, and if it would be counted in a contractor's future water "need." We note that there are areas, such as the San Joaquin, where this casual "conjunctive use" of surface/groundwater has not stabilized groundwater levels or acted as a beneficial use. In fact, irrigation may contribute to severe water quality problems.

The CVPIA PEIS states that the right to reuse seepage and return flows has been covered in all alternatives and would not need to be revisited in subsequent NEPA documents (Ch VI-8). EPA questions whether any real impact analysis associated with reuse has been done. There is the question of actually documenting water balance within a basin, including amounts of seepage and return flows, and amounts of on-farm and downstream reuse. We note that this detailed information appears not to be available in many cases and that this issue has been raised in CALFED, as well. Changes in on-farm and within-district efficiency may well affect other uses within a basin by altering the quantity, timing, and quality of water available. On another page (VI-10) the CVPIA PEIS admits that implementation of water conservation measures was not handled at a site specific level, and suggests possibly including this topic in the contract renewal EISs. This is an analysis which is best done at a site and case-specific level. We urge the Bureau to follow-up on the suggestion in the CVPIA PEIS to

evaluate implementation of reuse and water conservation measures and their potential effect on quantity, timing, and quality of water available.

Reservation of Rights

EPA understands that there have been ongoing discussions about a "right to renew", and/or about the meaning of and continued applicability of language in the "1956 Act." EPA's view of the 1956 Act was presented in full at the time of the CEQ referral in 1989. See Letter from Gerald Yamada to Chairman A. Alan Hill dated April 13, 1989. EPA believes the 1956 Act discussion of renewals was largely superseded by the explicit provisions in the CVPIA addressing contract renewals. See CVPIA Section 3404. Under the CVPIA, after the first 25 year contract, additional renewals or extensions are clearly at the Secretary's discretion. While recognizing the legitimate desire of all parties to reserve possible legal arguments, EPA believes it would be inappropriate for the Bureau to grant a right to renew or other legal advantage to contractors in the renewal contract greater than they are entitled to receive under the explicit language of the CVPIA.

Water Supply and Demand

We strongly believe the Bureau should utilize tools such as pricing, conservation, conjunctive use, and monitoring and accounting to help improve supply reliability and ensure a more balance between water supply and demand.

<u>Pricing</u>

It has been demonstrated over the last decade that variable pricing of water can significantly influence water demand and supply. Pricing which accurately reflects the economic and environmental costs of water increases the ability to ensure scarce supplies are used efficiently. The contract renewal EISs should include an in-depth discussion of pricing and how it will be utilized by the Bureau and within water districts. We urge the Bureau to reevaluate the tiered pricing structure which is based upon contract quantities. Although there are price incentives to avoid excessive water use at the high end, these price incentives are rarely triggered in some areas due to the infrequent use or inability to provide those large contract quantities.

The EISs should also fully evaluate the Ability-to-pay policy and the Bureau's ability to ensure project repayment. We urge the Bureau not to utilize the ability to pay subsidy, especially given the need to repay project costs.

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Conservation

Conservation can play a critical role in managing water demand and supply. We note that the Reclamation Reform Act states the Secretary of the Interior shall use all legal and equitable authorities to encourage conservation, and that CVPIA Section 3405 encourages use of variable pricing and conservation. We urge the Bureau to pursue conservation as a project goal and to describe ways to encourage conservation. The EIS should include a discussion of how Energy Policy Act requirements, how conservation affects water markets, demonstration of compliance with water conservation plans, metering methods and efforts, and improved irrigation technologies. Consistency with CALFED goals should be clearly demonstrated. Water use efficiency is a major component of the CALFED Program, thus close coordination with CALFED will be necessary to ensure consistency, where appropriate, in methodologies for computing efficiencies and benefits, and to pursue complementary objectives. We advocate use of conservation performance requirements in the contracts and strong assurances that certain levels of conservation will be attained.

As promised in the Reclamation Water Conservation Criteria – 1999, prospective renewal contractors should be required to have an adequate water management plan in place and to have demonstrated good progress in implementing that plan. Contract terms should make clear that future CVP supplies are conditioned on continuing conservation efforts, including, in the context of the operation of the [illegible] shortage management. In particular, EPA advocates full implementation of the documentation and coordinated planning of use of supplies available to the contractor, including groundwater, and the water measurement elements. We also urge incorporation of a shortage management element. Conservation and shortage management issues will vary from area to area.

Per CVPIA, water measurement devices are required for contract renewal [illegible]. We understand this requirement can be addressed in an approved, adequate conservation plan. We also note that there is a lot of debate regarding the cost of measurement or metering requirements which are appropriate. The EIS should clarify the debate and clearly state which measurement devices or metering requirements will be required by the Bureau to be appropriate for contract renewals.

Groundwater

Groundwater is a critical element in water supply and demand. Not only is it an alternative source to surface water supply, if used prudently, groundwater can provide significant flexibility in meeting demands at different times and from a number of different water sources. The EIS should fully document groundwater sources - how, when, and

by whom groundwater is used, identify information gaps and where there are no direct groundwater measurements. The EIS should document the historical and anticipated [illegible] relationship between CVP surface supplies and groundwater. There should also be documentation of long-term groundwater trends within basins. We note that portions of the Sacramento, Amquin/adjoining areas, are overdrafted, and that major areas in the San Joaquin and Tulare basins are seriously overdrafted. EPA is concerned with potential tradeoffs between surface water and groundwater use. We urge the Bureau to carefully evaluate the long-term implications of providing CVP surface water to avoid groundwater overdraft.

EPA supports the creation of groundwater management basins and institutional mechanisms to collect information, manage, and [illegible] groundwater use throughout California. The scoping materials from the Bureau suggest that one of the renewal-related actions under consideration is "conversion to conjunctive use." The Bureau may propose "conversion to conjunctive use" in some areas, which we consider a promising concept. If so the EIS should address the need for measurement and management of the combined resources of surface and groundwater supplies to stabilize supplies over the long term. Note that the appropriate management unit may not be the contracting district, unless the district is quite large (e.g. Westlands).

The conjunctive use issues flagged in the scoping materials lead us to suspect that developing an effective conjunctive use program and altering it as an [illegible] contract option could take longer than the contract renewal time frame. Perhaps the Bureau should consider making conjunctive use a separate program. For the purpose of the contract renewals, sufficient information needs to be disclosed about the objectives, requirements, and available options for conjunctive use so that it can be included as an option when the contracts

Monitoring and Accounting

Effective and sustainable management of CVP water supplies depends on an accurate knowledge of water supply availability and water use. This knowledge can only be obtained through monitoring and accounting of water supply and demand. We urge the Bureau to make a firm commitment to timely and accurate monitoring and accounting. This commitment should include dedicated funding for this effort.

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NEPA Issues

EIS versus EA

The Bureau should clearly describe the criteria for determining whether an EA or EIS is the appropriate level of NEPA analysis. These criteria should consider cumulative effects, how the Service areas or Districts are bounded, whether the potential impacts are bounded by existing environmental or programmatic analyses, and whether prior development of analytical tools provided information at a sufficient level of detail to meaningfully assess alternatives, impacts, and mitigation measures. We recommend the Bureau clearly state which contract renewals will be considered for EIS level analysis. EPA believes an EIS should be presumed the correct level for analysis of the long-term contract renewals, especially for areas with known or suspected irrigation caused water quality problems, groundwater overdraft, and incomplete information on ecosystem needs. An EIS level of evaluation is especially appropriate given the complex and controversial issues surrounding the needs assessment, reallocation of water to all CVP purposes, and management of California's scarce water supply in the context of high demand. Clearly describe whether or not de facto evaluations will be made and whether there will be contract by contract evaluations.

Purpose and Need

It is EPA's view that the central federal action in water service contract renewals is that the purpose of that action should be to set terms through these contracts through which existing CVP supplies will be distributed for beneficial use in the future. The project purpose should also embrace managing CVP purposes, by both the Bureau and contractors, in ways which will improve supply reliability and promote ecosystem protection and water quality. The concept of distribution should include allocation through contracts to specific parties and contract terms permitting exchanges and transfers in order to ensure the contracts allow use of the water for all beneficial uses recognized in State law. For example, distribution should consider avoidance of areas, such as selenium-caused areas, where the use would likely result in environmental harm or waste of the water. Supply reliability can be addressed in part by the quantities made available, scheduling and rescheduling flexibility, wheeling options, conservation practices, and other management strategies. We note that reliability of stated contract supplies would be undermined by a significant discrepancy between the contract quantity and supplies which the Bureau can reasonably expect to have available. Good management of the resource should be assured through terms requiring conservation planning, implementation, and monitoring.

In summary, the purpose and need statement should reflect the intention to renew all existing contracts to provide contractors with assurance of reliable, long-term water supply; support the Bureau's environmental protection and restoration responsibilities pursuant to CVPIA and other applicable laws; promote water conservation; support appropriate water transfers; and to promote balanced, sustainable use of ground and surface water supplies.

In 1992 EPA and the Bureau had extensive discussions regarding the purpose and need for the proposed Hunt contract renewal EIS (Hunt Contract Renewal EIS EPA/BOR Agreements, February 1992). We believe many of the issues discussed are still applicable and incorporate these discussions by reference.

Baseline

The selection of the No Action alternative is a critical step in the environmental analysis since it provides the baseline for comparison with other action alternatives. It is EPA's position that the "no action" alternative is not a no impact baseline. EPA believes strongly that to interpret the "no action" alternative as having "no impacts" is inconsistent with NEPA regulations. Continuation of the existing management situation would constitute a discretionary commitment of resources that is, effectively, an action affecting the environment. The alternatives analysis of the EIS should portray the environmental consequences of every alternative (in comparative form, thus sharply defining the issues and providing a clear basis for choice among options for the decisionmaker and the public." (40 CFR Part 1502.14).

"The EIS should document existing conditions, explain the changes which have occurred (e.g., pre project and past impacts); and describe the ecosystem restoration objectives of the CVPIA and CALFED. Furthermore, the EIS should adequately document cumulative impacts (i.e., past, present and reasonably foreseeable actions. Past cumulative effects greatly influenced the "existing condition" which should be documented in the EIS and represent deficiencies (adverse impacts) which may be perpetuated under the action and no action alternatives. Furthermore, we do not believe it is sufficient to establish compliance with certain environmental protection laws (such as the Endangered Species Act and Clean Water Act), where the status quo may reflect unacceptable conditions and trends resulting from on going activities including water diversions. Both "current conditions" provide adequate guidelines for gauging desired levels of environmental restoration and enhancement. Information in the EIS should assist in establishing the baseline deficiencies in current conditions and defining restoration and enhancement goals (EPA Scoping Comments, Final Contract Renewal EIS, January 1991). In addition, it is our position that "mitigation measures" (defined in 40 CFR 1508.20) should be addressed for adverse effects of alternatives.

LETTER 13

measured relative to current conditions, rather than relative to the expected future conditions under the action" (Friant Contract Renewal EIS EPA/BOR Agreement, February 1992)

Consistent with the CVPIA PEIS, the contract renewal action and EIS should also be premised on the supplies which may be available in the future given the existing storage and conveyance system. This configuration should be retained in all alternatives. EPA does not consider adding onto or changing the configuration of the storage and conveyance system as within the scope of the contract renewal action.

Alternatives

__Geographic Scope__

Given the potential divergent supply options, we urge the Bureau to carefully consider the geographic scope for the environmental analysis. We recommend development of criteria to help determine the appropriate scale for analysis. For example, if conversion to conjunctive use is considered, the analysis might require a basin-wide view versus a district-wide view. Regardless of the water supply option, the EIS should evaluate the potential environmental impacts wherever they may occur. If significant adverse impacts are documented, the EIS should consider ways of mitigating those impacts.

__Development of Alternatives__

The CVPIA PEIS did not describe or evaluate specific contract alternatives or strategies. Thus, we believe it is critical that the EIS on contract renewals fulfill this need by evaluating different contract strategies and alternatives. We urge the Bureau to develop alternative contract terms and conditions which provide strong incentives for water conservation, tiered pricing, conservation goals and performance requirements, water transfers, shortage clauses, flexibility, restoration goals, project repayment, and monitoring. We also recommend consideration of elements common to all alternatives.

All reasonable alternatives should be considered including those which may be beyond the Bureau's current statutory authorities or those contrary to the initial priorities for the CVP established by Congress in 1937. For example, the Bureau should consider alternatives which provide water for other CVP purposes such as fisheries. We advocate evaluation of an alternative which provides a set dedicated yield with a mechanism to provide flexibility to adapt to changes in water supply and demand. Variations could include tiered contract quantities or guaranteed lifeline amounts.

Again, we urge an approach which focuses on demand management and effective, efficient use of existing supplies.

Cumulative Impacts

Full disclosure of indirect and cumulative impacts is of specific concern. NEPA requires evaluation of indirect and cumulative effects which are caused by the action (40 CFR 1508.8(b) and 1508.7). Indirect effects may include growth inducing effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems." (40 CFR 1508.8(b)). CEQ regulations also state that the EIS should include the "means to mitigate adverse environmental effects." (40 CFR 1502.16(h)). This provision applies to indirect effects as well as direct effects. Changes in water quality or downstream effects which may be indirectly caused by Contract terms and conditions, constitute indirect effects and should be evaluated in the EISs. These indirect effects and appropriate mitigation measures for adverse impacts should be fully disclosed in the EISs.

We recommend the long-term contract renewal EISs include a full evaluation of cumulative impacts at different landscape scales, e.g., Unit-wide, District-wide. The EISs should also include a summary of the CVP-wide cumulative impact analysis provided by the CVPIA PEIS.

__Fish and Wildlife Issues__

We recognize the significant progress made through the CVPIA in addressing region-wide past and future cumulative impacts to fish and wildlife from historical operations of the CVP. However, the CVPIA and its PEIS has not addressed all local or district specific impacts. For example, fish and wildlife issues within the Upper San Joaquin River (i.e., Friant Unit) were not adequately addressed in the CVPIA. Thus, additional evaluation may be appropriate when considering direct, indirect, and cumulative impacts to fish and wildlife in the context of specific contract renewals. The contract renewal EISs should evaluate the ability to restore or enhance fish and wildlife habitat and wetlands which have been affected by water diversions and by changes in flows, timing, and water quality as a result of CVP water supplies. This evaluation should "follow the impacts" and examine the impacts that may extend beyond the contract boundary.

EPA advocates evaluating Endangered Species Act and Clean Water Act compliance, requirements, and possible reallocation of water for environmental compliance as part of the contract renewal process. To do otherwise, may result in lost

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opportunities and the inability to reallocate water for environmental requirements without offending "takings" litigation. The evaluation of environmental requirements should consider flows, temperature needs, seasonality, and other water quality components and factors of critical importance to threatened and endangered species.

Water Quality Issues

We suggest the Bureau consider the water quality standards discussions and agreements made in 1992 in regards to the Friant Contract Renewal EIS (Friant Contract Renewal EIS EPA/BOR Agreements, February 1992) which are incorporated by reference. EPA continues to believe that water requirements to meet water quality standards and protect beneficial uses established by either the EPA or the State of California (State), pursuant to the federal Clean Water Act must be satisfied before calculating water available for contract renewals. Due to the need to meet water quality standards, we wish to highlight the need for flexibility in the contracts' terms to ensure adaptability to potential changes in water policy and water quality standards.

General Water Quality Comments

1. Potential impacts to surface and ground water quality should be fully evaluated in the contract renewal EISs. The evaluation should include discussions on drainage and return flow quality, the role of agricultural chemicals (e.g., pesticides, fertilizers); management of discharges; and the impacts of water quality on biota, aquatic resources, and wildlife.

2. The EISs should discuss the proposed contract renewals compliance with State and local water quality management plans and State-adopted, EPA-approved water quality standards. EPA recommends that the project be fully coordinated with the appropriate Regional Water Quality Control Board to ensure protection of water quality and maintenance of beneficial uses.

3. Evaluate the potential of proposed contract renewals to cause adverse aquatic impacts such as increased siltation and turbidity in surface water sources; changes in water quality and quantity; changes in dissolved oxygen, and temperature; and habitat deterioration. Include a discussion on in-stream flow impacts of water diversions and return flows.

4. Identify sensitive aquatic sites such as wetlands which are currently present. Outline past and potential beneficial uses of these areas, and disclose potential impacts from the proposed project.

5. Discuss specific monitoring programs that are in place or will be implemented to determine potential impacts on surface and drinking water quality and beneficial uses. Evaluate whether maintenance and protection of water quality can be guaranteed.

General Comments

Environmental Justice

In keeping with Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (EO 12898), the EIS should describe the measures taken by the Bureau to: 1) fully analyze the environmental effects of the proposed Federal action on minority communities, e.g., Indian Tribes, and low-income populations, and 2) present opportunities for affected communities to provide input into the NEPA process. The intent and requirements of EO 12898 are clearly illustrated in the President's February 11, 1994 Memorandum for the Heads of all Departments and Agencies.

Comments on Water Demands Workshop Handouts

These comments are based upon a review of only the Handouts. The commentator was unable to attend the Workshop. Thus, we recognize the comments below may have been addressed during the Workshop and verbal presentations.

1. Demands overhead chart. The development of estimates for future use should include estimates for environmental needs. In addition, future use estimates must consider the potential effects of different pricing structures, efficiency measures and methodologies (e.g., improved irrigation methods, cropping patterns), land retirement, groundwater management (e.g., conjunctive use), water reclamation and recycling, and water transfers.

2. Why? overhead chart. Beneficial use should be clearly described, including the period used to measure beneficial use and criteria for determining what is beneficial use.

3. Process overhead chart. In addition to the principles to be considered, the process should consider modernization (e.g., improved agricultural practices), beneficial uses beyond historical agricultural use (e.g., fish and wildlife, water quality), and conservation. We urge the Bureau to take an approach which encourages a trend towards low water use, high value crops.

4. Residential Demand overhead chart. The description of residential demand should describe the underlying assumptions regarding type of appliances, water efficiency

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requirements, and type of landscaping. For instance, the requirements of the National Energy Policy Act should be described and fully integrated into the determination of residential demand.

5. Non-Residential Demand overhead chart. We urge the Bureau to consider a method of determining non-residential demand which is not based upon the historical amount of water used. Given the requirements of the National Energy Policy Act and significant advances in non-residential water use conservation, we believe a method based upon historical water use may result in an unrealistically high estimate of demand. As for residential demand, the underlying assumptions regarding appliances, water efficiency, and landscaping should be clearly described.

6. 1a. Interior Demand overhead chart. The Bureau should describe the assumptions used to determine gpcd. Conservation and requirements of the National Energy Policy Act should be fully integrated into the determination of interior demand.

7. 1b. Landscape Demand overhead chart. Assumptions regarding the type of landscaping and irrigation methods should be provided. Again, the National Energy Policy Act and conservation requirements should be integrated into the demand calculations.

8. 3. Unaccounted for beneficial uses overhead chart. Other beneficial uses which must be considered include environmental and in-stream beneficial uses. For instance, non-residential water use may supply incidental beneficial uses, e.g. settling ponds, discharges to wetlands.

Miscellaneous Comments

1. If references to previous documents are used, the DEIS should provide a summary of critical issues, assumptions and decisions complete enough to stand alone without depending upon continued referencing of the other documents.

Response to Comment Letter 15 – U.S. Environmental Protection Agency, Region IX (2020)

15-1 [illegible]

15-2 [illegible]

15-3 [illegible]

15-4 Comment noted.

15-5 [illegible]

15-6 Comment noted.

15-7 Comment noted.

LETTER 14

Pacific Coast Federation Of Fishermen's Associations

Incorporated

Old Coast Guard Building, West Crissy Field

The Presidio

P.O. Box 29370, San Francisco, California 94129-0370

USA Tel. (415)561-5080 Fax (415)561-5464

Stewards of the Fisheries

Fax Transmission

DT: Dec. 8, 2000 FX#: 916-978-5599

TO: Bureau of Reclamation Attn: Al Candlish

FM: Zeke Grader

RE: CVP

Page 1 of 3 For Info Call [illegible]

Message:

Stewards of the Fisheries

Pacific Coast Federation of Fishermen's Associations

[illegible]

BY FAX

7 December 2000

Bureau of Reclamation
Mid-Pacific Division
Attn: Al Candlish
2800 Cottage Way
Sacramento, CA 95825-1898

Re: Comments on Draft Environmental Assessment (EA) for Renewal of Existing Long-term Water Service Contracts for Central Valley Project (CVP)

Dear Mr. Candlish:

The Pacific Coast Federation of Fishermen's Associations (PCFFA) represents the men and women of the West Coast's professional fishing fleet. Our members are engaged in fisheries that depend directly on the quality of CVP-impacted rivers, estuaries, and nearshore ocean environments.

We have reviewed the 6 December letter by Congressman George Miller to Secretary Babbitt on the subject of these proposed contract renewals, including the insufficiency of their environmental review, and that of the Trinity County Board of Supervisors of the same date on the subject. We concur and echo the concerns and recommendations of Congressman Miller and Trinity County.

PCFFA has been engaged in the CVP contract renewal issue for more than 15 years. Our testimony before the Council on Environmental Quality a dozen years ago contributed to the Administration's decision that CVP contract renewals should be the subject of comprehensive environmental review. We pressed for, and secured that same comprehensive environmental review policy when Congress deliberated the Central Valley Project Improvement Act (CVPIA) four years later.

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The Bureau's current proposal to shut the door on policy developments of the past 15 years and to deliberately thwart the intent of the CVPIA by offering long-term, guaranteed-renewable water sales contracts without consideration of the effects they and their projected successors may have on California's rivers, estuaries, and nearshore environments is inexplicable, unacceptable, and will certainly lead straight back to the political turmoil and litigation which surrounded the issue in the mid-1980's.

The livelihoods of California's professional fishermen depend upon and deserve the Bureau's responsible conduct of CVP management. We view the proposal to proceed with the proposed contract renewals without adequate National Environmental Policy Act review not only as irresponsible but as a clear violation of CVPIA policy.

Sincerely,

W. F. "Zeke" Grader
Executive Director

Responses to Comment Letter 14 – Pacific Coast Federation of Fishermen's Associations (2020)

14-1 Comment noted.

14-2 Comment noted.

LETTER 15

From: Tom Stokely [illegible]
To: [illegible]
Date: [illegible]
Subject: Comments on Draft EA for CVP Contract Renewals

Dear Mr. Candlish:

Please accept this on behalf of the County of Trinity. A hard copy [illegible] the quoted letter below.

Sincerely,

Tom Stokely,
Senior Planner
Trinity County Planning Dept.
PO Box 156
Hayfork, CA 96041
530 628 5949

TRINITY COUNTY BOARD OF SUPERVISORS
P.O. BOX 1258
WEAVERVILLE, CA 96093-1258

December 5, 2000

Bureau of Reclamation
Mid-Pacific Division
Attn: Al Candlish
2800 Cottage Way
Sacramento, CA 95825-1898

Re: Draft Environmental Assessments (EAs) for Renewal of Existing Long Term Water Service Contracts for Central Valley Project (CVP)

Dear Mr. Candlish:

The Board of Supervisors recommends that the Draft Environmental Assessments for renewal of CVP long-term water service contracts not be approved. The impacts of this proposed federal action are significant and can not be addressed under a Finding of No Significant Impact. A comprehensive CVP-wide EIS for water contract renewals should be prepared.

The cumulative impacts of renewing [illegible] long term water service contracts is a significant cumulative impact which requires preparation of an EIS. 15-1

As can be seen in Table ES-1 from the "Trinity River Mainstem Fishery Restoration EIS/EIR" (USFWS, Trinity County, Hoopa Valley Tribe and BOR, November, 2000), there are significant impacts from the renewal of long term CVP water service contracts. This can be seen in the

difference between the Existing Conditions (1995 base year) and the No Action Alternative in the year 2020. In particular, renewal of contracts from the American River [illegible] increase CVP demand by 330,000 acre feet per year by the year 2020. This significant increase will manifest itself in the form of reduced carryover storage in Shasta and Trinity reservoirs, with resultant impacts to [illegible] listed species in the Trinity River such as coho and steelhead, and impacts to the Sacramento River listed species such as winter and spring chinook. This is evidenced by increased [illegible] Sacramento River temperature compliance, and Shasta Lake carryover storage requirements per the 1993 NMFS Biological Opinion.

As a result of the October 20, 2000 ESA consultation by NMFS on the Trinity River Mainstem Fishery Restoration EIS, Trinity Lake carryover storage should not go below 600,000 acre-feet. A comprehensive EIS on CVP contract renewals should evaluate impacts to this [illegible] requirement for protection of the Trinity River's fishery.

We are extremely disappointed that without adequate public review and input, the Bureau's contract negotiation position has very recently changed contract terms so that the "contract total" for water quantities would be unchanged from existing contracts even though historic deliveries have been far less. Renewal of these contracts which includes this "paper water" will continue to result in demands for water delivery well beyond available CVP supplies. As a result of [illegible] the CVP will [illegible] the interests and resources of Trinity County will be significantly harmed by the over-commitment of water. 15-2

We are also extremely disappointed that Interior reversed its position, again without adequate public review and input, on the tiered pricing provisions of the Central Valley Project Improvement Act (CVPIA) so that these provisions would apply only to the "contract total", not the "base" water supply. Such a position will not encourage water conservation, nor will it assure long term repayment by the CVP [illegible] water contractors. 15-3

The EAs do not adequately analyze the above impacts [illegible] cumulative sense with other ongoing actions CVP-wide. A Finding of No Significant Impact would not be justifiable in this case. In addition, the EAs do not analyze adequately the cumulative effects of applying these policies to remaining CVP water service delivery contracts which have not yet expired; in other words, all CVP water service contracts. 15-4

The contracts should be renegotiated to reflect the legal requirements of CVPIA, then a CVP-wide contract renewal EIS should be prepared to deal with the above issues cumulatively. A Finding of No Significant Impacts is not justified.

Sincerely,
/s/

December 5, 2000

Bureau of Reclamation
Mid Pacific Division
Attn: Al Candlish
2800 Cottage Way
Sacramento, CA 95825-1898

Re: Draft Environmental Assessments (EAs) for Renewal of Existing Long-term Water Service Contracts for Central Valley Project (CVP)

Dear Mr. Candlish:

The Board of Supervisors recommends that the Draft Environmental Assessments for renewal of CVP long term water service contracts not be approved. The impacts of this proposed federal action are significant and cannot be approved under a Finding of No Significant Impact. A comprehensive CVP-wide EIS for water contract renewals should be prepared.

The cumulative impacts of renewing 25-year long-term water service contracts is a significant cumulative impact which requires preparation of an EIS.

As demonstrated in Table [illegible] from the Trinity River Mainstem Fishery Restoration EIS/EIR (USFWS, Trinity County, Hoopa Valley Tribe and BOR, November 2000) there are significant impacts from blanket renewal of long term CVP water service contracts. This can be seen in the difference between the "Existing Conditions (1995) base year and the No Action Alternative at the year 2020. In particular, renewal of contracts from the American River Division will increase CVP demand by 330,000 acre-feet per year by the year 2020. This significant impact will in part result in reduced carryover storage in Shasta and Trinity reservoirs with resulting impacts to recreation as well as listed species in the Trinity River such as coho and steelhead, and impacts to the Sacramento River listed species such as winter and spring chinook. This is evidenced by decreases in [illegible] of Trinity and Sacramento river temperature compliance and Shasta Lake carryover storage requirements per the NMFS Biological Opinion.

As a result of the October 26, 2000 ESA consultation by NMFS on the Trinity River Mainstem Fishery Restoration EIS, Trinity Lake carryover storage should not go below 600,000 acre feet. A comprehensive EIS for CVP contract renewals should evaluate impacts to this Trinity Lake carryover storage requirement for protection of the Trinity River's fishery.

We are extremely disappointed that without adequate public review and input, Interior reversed its contract negotiation position and recently [illegible] for water [illegible] even though [illegible]. Renewal of these contracts [illegible] for water delivery well beyond available CVP supplies. As a county of origin for the CVP, we believe the citizens and resources of Trinity County will be significantly harmed by this [illegible] of water.

We are also extremely disappointed that Interior reversed its position again without adequate public review and input of the [illegible]

provisions of the Central Valley Project Improvement Act (CVPIA) so that these provisions would apply only to the [illegible] water supply. Such a position will not encourage water conservation, nor will it result in any [illegible] from the CVP by water contractors.

The EAs do not adequately analyze the above impacts singly or cumulative [illegible]. A Finding of No Significant Impact would not be justifiable in this case. In addition, the EAs do not analyze adequately the cumulative effect of approving these contracts [illegible] in other words all CVP water renewals [illegible].

The contracts should be renegotiated to reflect the [illegible] of CVPIA. Then a CVP-wide contract renewal EIS should be prepared to deal with the above issues cumulatively. A Finding of No Significant Impact is not justified.

Sincerely,

TRINITY COUNTY BOARD OF SUPERVISORS

Ralph Modine, Chairman

TRINITY COUNTY BOARD OF SUPERVISORS

LETTER 15

Responses to Comment Letter 15 - Trinity County Board of Supervisors (2000)

15-1 [illegible]

15-2 [illegible]

15-3 [illegible]

15-4 [illegible]

LETTER 16

STATE OF CALIFORNIA

Governor's Office of Planning and Research

State Clearinghouse and Planning Unit

Arnold Schwarzenegger
Governor

[illegible]

[illegible]

[illegible]
U.S. Bureau of Reclamation
16349 Shasta Dam Boulevard
Shasta Lake, CA [illegible]

Subject: Updated Draft EA for the Long-Term Contract Renewal
SCH#: [illegible]

Dear [illegible]:

[illegible]

The California Environmental Quality Act [illegible]

[illegible]

Sincerely,

Terry Roberts
[illegible], State Clearinghouse

Enclosures
cc: Resources Agency

Classification: [illegible]
Project: [illegible]
Control No.: [illegible]
Folder No.: [illegible]

[illegible]

State Clearinghouse Data Base

SCH# [illegible]
Project Title Updated Draft EA for the Long-Term Contract Renewal
Lead Agency U.S. Bureau of Reclamation

Type EA Environmental Assessment

Description [illegible]

Lead Agency Contact

Name [illegible]
Agency U.S. Bureau of Reclamation
Phone [illegible] **Fax**
email
Address 16349 Shasta Dam Boulevard
City Shasta Lake **State** CA **Zip** [illegible]

Project Location

County Shasta, Trinity
City Redding
Region
Cross Streets
Parcel No.
Township **Range** **Section** **Base**

Proximity to:

Highways
Airports
Railways
Waterways [illegible]
Schools
Land Use

Project Issues [illegible]

Reviewing Agencies [illegible]

Date Received [illegible] **Start of Review** [illegible] **End of Review** [illegible]

[illegible]

LETTER 16

DEPARTMENT OF TRANSPORTATION
P.O. BOX [illegible]
REDDING, CA [illegible]
PHONE [illegible]
FAX [illegible]

LETTER 17

[illegible]

IGR/CEQA Review
Sha-Tri-Admin
Long-Term Contracts Renewal
Draft EA FONS
SCH# 2003114307

RECEIVED
OCT [illegible]
STATE CLEARINGHOUSE

October 1, 2004

Mr. Buford Holt
U.S. Bureau of Reclamation
16349 Shasta Dam Boulevard
Shasta Lake, CA 96019

Dear Mr. Holt:

Caltrans District 2 has reviewed the Draft Environmental Assessment and Draft Finding of No Significant Impact submitted on behalf of the U.S. Bureau of Reclamation, for the proposed long-term Central Valley Project water service contract between Reclamation and Contractors within the Shasta and Trinity River Divisions.

Based on the project information submitted, approval of this project will not adversely impact facilities under our jurisdiction; therefore, we have no comment.

Thank you for providing us the opportunity to review this project. If you have any questions, or if the scope of this project changes, please call me at 225-3[illegible].

Sincerely,

MARCELINO GONZALEZ
Local Development Review
District 2

LETTER 18

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-4082
Fax (916) 657-5390

October 5, 2004

RECEIVED
OCT 1 8 2004
STATE CLEARINGHOUSE

Mr. Buford Holt
U.S. Bureau of Reclamation
16349 Shasta Dam Blvd
Shasta Lake City, CA 96019

Re: Updated Draft Environmental Assessment for the Long-Term Contract Renewal - Shasta and Trinity River Divisions
SCH# [illegible]

Dear Mr. Holt:

Thank you for the opportunity to comment on the above referenced Environmental Assessment.

Section 800.2 of the Federal Section 106 process (36 CFR Part 800) requires that agencies consult with Native American tribes in order to provide them with "a reasonable opportunity to identify [their] concerns about historic properties, advise on the identification and evaluation of historic properties, including those of traditional religious and cultural importance, articulate [their] views on the undertaking's effects on such properties, and participate in the resolution of adverse effects."

Enclosed is a list of Native American individuals/organizations who may have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. The Commission makes no recommendation of a single individual or group over another. By contacting all those listed, your organization will be better prepared to address claims of failure to consult with the appropriate tribe or group. A minimum of two weeks must be allowed for responses following notification. If there has been no response following the two week period, we recommend that you follow-up by telephone to ensure that the information was received.

Lack of surface evidence of archeological resources does not preclude the existence of archeological resources. Lead agencies should include provisions for accidentally discovered archeological resources during construction per California Environmental Quality Act (CEQA), Public Resources Code §15064.5(f). Health and Safety Code §7050.5, and Public Resources Code §5097.98 mandates the process to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery and should be included in all environmental documents. If you have any questions, please contact me at (916) 653-6251.

Sincerely,

Carol Gaubatz
Program Analyst

cc: State Clearinghouse

Native American Contacts
Shasta County
October 5, 2004

Cheryl Y. Bowen
1797 Shasta Street
Anderson, CA 96007
(530) 365-0940
Wintun

Pit River Tribe Environmental Office
Sharon Elkins, Cultural Information Officer
37014 Main Street
Burney, CA 96013
(530) 335-5062
Pit River

Atwamsini Band Cultural Resources Representative
Lola Nahor
PO Box 1253
Burney, CA 96013
Pit River

Pit River Tribe of California
Jessica Jim, Chairperson
37014 Main Street
Burney, CA 96013
(530) 335-5421
(530) 335-3140 Fax
Pit River
Achomawi - Atsugewi - Wintun

Illmawi Band Cultural Resource Representative
Cecelia Silvas
P.O. Box 48
Fall River Mills, CA 96028
(916) 336-2771
Pit River - Illmawi

Pit River Tribe of California
Virginia Sutter, Tribal Administrator
37014 Main Street
Burney, CA 96013
(530) 335-5421
(530) 335-3140 Fax
Pit River
Achomawi - Atsugewi - Wintun

Itsatawi Band Cultural Resources
Vivian Martinez
3520 Park Street
Shasta Lake, CA 96019
(530) 241-6119
Pit River

Pit River Tribe of California
Michelle Berditschevsky, Environmental Coordinator
37014 Main Street
Burney, CA 96013
(530) 335-5062
Pit River
Achomawi - Atsugewi - Wintun

Madesi Band Cultural Resource Representative
Angel Winn
PO Box 141
Montgomery Creek, CA 96065
Pit River

Redding Rancheria
Tracy Edwards, Chairperson
2000 Redding Rancheria Road
Redding, CA 96001
(530) 225-8975
Fax (530) 241-1879
Wintu
Pit River
Yana

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Updated Draft Environmental Assessment for the Long-Term Contract Renewal; NEPA [illegible]; Shasta County.

LETTER 18

Native American Contacts
Shasta County
October 5, 2004

Redding Rancheria
Barbara Murphy, Chief Executive Officer
2000 Redding Rancheria Road
Redding, CA 96001
(530) 225-8979
Fax: (530) 241-1879
Wintu
Pit River
Yana

Roaring Creek Rancheria
PO Box 52
Montgomery, CA 96065
(530) 335-5421
Pit River

Winnemem Wintu Tribe
Caleen Sisk-Franco, Tribal Chair
14840 Bear Mountain Road
Redding, CA 96003
[illegible]@msn.com
(530) 275-2737
(530) 275-4193 FAX
Wintu

Wintu Educational and Cultural Council
Robert Burns
12138 Lake Blvd
Redding, CA 96003
(530) 245-3113
Wintu

Wintu Tribe and Toyon-Wintu Center
2675 Bechelli Lane
Redding, CA 96001
[illegible]@hotmail.com
(530) 226-8698
(530) [illegible] Gene Malone
(530) 242-1374 - [illegible]
Wintu

[illegible]

[illegible]

[illegible]

Response to Comment Letter 15 – Native American Heritage Commission (2004)

[illegible]