DELTA-MENDOTA CANAL UNIT

ENVIRONMENTAL ASSESSMENT
LONG-TERM CONTRACT RENEWAL

Chapter 5
Consultation and Coordination/Public Involvement

February 2005

CHAPTER 5

CONSULTATION AND COORDINATION/ PUBLIC INVOLVEMENT

Both prior to and during the preparation of this EA, input was solicited and incorporated from a broad range of cooperating and consulting agencies and the public. This chapter summarizes the public involvement program and key issues raised by the public and special interest groups. This chapter also addresses the manner in which federal statutes, implementing regulations, and executive orders potentially applicable to implementation of the CVPIA have been addressed. The conclusions of compliance are based on the environmental consequences presented in Chapter 3. The compliance summaries apply only to the alternatives discussed in this EA and not to the development of concurrent CVPIA implementation programs.

PUBLIC INVOLVEMENT

Section 226 of the Reclamation Reform Act of 1982 amends Section 9 of the Reclamation Project Act of 1939 (43 USC 485h) by adding the following new subsection:

> *(f) No less than sixty days before entering into or amending any repayment contract or any contract for the delivery of irrigation water (except any contract for the delivery of surplus or interim irrigation water whose durations is for one year or less) the Secretary shall—*
>
> *(1) publish notice of the proposed contract or amendment in newspapers of general circulation in the affected area and shall make reasonable efforts to otherwise notify interested parties which may be affected by such contract amendment, together with information indicating to whom comments or inquiries concerning the proposed actions can be addressed; and*
>
> *(2) provide an opportunity for submission of written data, views and arguments so received (96 Stat. 1273; 43 USC 485h).*

Reclamation started the preparation of this EA with scoping meetings. Scoping served as a fact-finding process to identify public concerns and recommendations about the long-term water service contract renewal issues that would be addressed in this EA and the scope and

level of detail for analyses. Scoping activities began in October 1998 after a Notice of Intent to prepare environmental documentation for long-term contract renewals was filed in the Federal Register. The scoping period formally ended in January 1999. The Scoping Report was released in the summer of 1999.

Public input continued during long-term water service contract negotiations to define the contract language. Discussions also were held with the DMC Unit contractors during the preparation of this document.

At public scoping meetings, Reclamation provided information about the long-term water service contract renewal process and solicited public comments, questions, and concerns. At these meetings, participants had numerous comments and questions about how important issues would be considered both in the CVPIA PEIS and the long-term contract renewal process. The majority of the comments received during the scoping process addressed the Water Needs Assessment methodology to be used as part of the long-term contract renewal process. Contract renewal negotiation issues also were addressed. The least number of comments addressed environmental review issues.

Reclamation received numerous comments about issues to be considered in the CVPIA PEIS and methodologies for analyzing impacts. Comments regarding the development of alternatives were considered in the formation of the alternatives. However, it was determined to focus the description of alternatives on the contract proposals and address issues related to water supply improvements to be addressed by CALFED and the Least Cost Yield study. Consideration of comments on methods to address impacts was considered in the development of Chapter 3, Environmental Consequences of this EA.

Based upon the comments received and the determination to focus the alternatives on the language in the proposed contracts, the level of detail for this EA was determined. It was also determined that based upon the minimal number of differences between Alternatives 1 and 2, an environmental impact statement would not be necessary.

All contract negotiation sessions for the DMC Unit contractors have been open to the public, with the time and location posted on Reclamation's website. Draft versions of the contracts have been available on Reclamation's Mid-Pacific Region website since 2000. The final versions of the negotiated contracts will be made available on the same website for a 60-day public review and comment period.

COORDINATION WITH DELTA-MENDOTA CANAL UNIT CONTRACTORS

This EA was prepared with the assistance of information collected from each of the 20 DMC Unit contractors. On June 1, 2000, Reclamation met with representatives of the San Luis and Delta-Mendota Water Authority and representatives of several member water service contractors. Reclamation, through its contractor, also committed to scheduling field visits and interviews with contractors to exchange information and to discuss special circumstances applicable to individual districts. Meetings with contractors or their representatives were held from July 2000 through June 2003. Site visits were not conducted for small or single-landowner districts. For these districts, information was obtained through phone interviews and a review of Reclamation project files. The 20 DMC Unit contractors are included as agencies contacted as part of the long-term water service contract renewal process.

AGENCY CONSULTATIONS

This EA has been prepared in consultation with other federal, state, regional, and local agencies in a manner consistent with their objectives for administering applicable acts, policies, plans, and controls for the study area. Applicable laws, orders, regulations, and other policies and plans that have been considered in this EA include:

- National Environmental Policy Act
- Endangered Species Act
- Fish and Wildlife Coordination Act
- National Historic Preservation Act
- Indian Sacred Sites on Federal Land
- State, Area-Wide, and Local Plan and Program Consistency
- Floodplain Management
- Wetlands Protection
- Wild and Scenic Rivers Act
- Farmland Protection Policy Act and Farmland Preservation
- Clean Air Act

- Safe Drinking Water Act
- Clean Water Act

NATIONAL ENVIRONMENTAL POLICY ACT

This EA was prepared pursuant to regulations implementing NEPA (42 USC 4321 *et seq.*). NEPA provides a commitment that federal agencies will consider the environmental effects of their actions. This EA provides information regarding the No-Action Alternative and alternatives, a discussion of the environmental impacts of the alternatives, and potential mitigation measures as appropriate. No unavoidable adverse environmental impacts were identified.

ENVIRONMENTAL ASSESSMENT PUBLIC COMMENTS

A draft EA was prepared in September 2000 and 250 copies delivered to Reclamation for distribution. Twenty-four separate comment "letters," including internal e-mails, were received and separated into approximately 151 comments. The majority of the comments were provided by the San Luis and Delta-Mendota Water Authority, districts, and their legal representatives, Save the Bay, the Bay Institute of San Francisco, USEPA, National Resources Defense Council, the Golden Gate Audubon Society, the Trinity County Board of Supervisors, the Big Bar Community Development Group, the Friends of the Trinity River, the Pacific Coast Federation of Fisherman's Associations, and the U.S. Department of the Interior, Office of the Secretary. Responses to those comments have been incorporated into this revised EA. Additional responses to comments received from meetings with the DMC Unit contractors have also been incorporated since the distribution of the September 2000 draft EA.

ENDANGERED SPECIES ACT

Reclamation has prepared a biological assessment that examines whether the renewal of long-term water service contracts in the DMC Unit would have the potential to affect listed, threatened and endangered species. The biological assessment addresses listed species potentially affected by the CVP operation in the DMC Unit. The biological assessment was submitted to the Service in July 2003 as a request for formal consultation pursuant to the Endangered Species Act (Reclamation 2003). Preparation of a biological opinion by the Service is pending.

FISH AND WILDLIFE COORDINATION ACT

The Fish and Wildlife Coordination Act requires that Reclamation consult with federal and state fish and wildlife agencies on all water development projects that could affect biological resources. The implementation of the CVPIA, of which this action is a part, has

been jointly analyzed by Reclamation and the Service and is being jointly implemented. This continuous consultation and consideration of the Service's views, its review of this document, and consideration of the Service's comments satisfy any applicable requirements of the Fish and Wildlife Coordination Act.

NATIONAL HISTORIC PRESERVATION ACT

Section 106 of the National Historic Preservation Act requires that federal agencies evaluate the effects of federal undertakings on historical, archeological, and cultural resources and afford the Advisory Council on Historic Preservation opportunities to comment on the proposed undertaking. The first step in the process is to identify cultural resources eligible for inclusion on the NRHP that are located in or near the project area. The second step is to identify the possible effects of proposed federal actions. The lead agency must examine whether there are feasible alternatives that would avoid such effects. If an effect cannot reasonably be avoided, measures must be taken to minimize or mitigate potential adverse effects.

During preparation of this EA, cultural resources information was collected from cultural resources records maintained by the California Historical Information System, Central California Information Center (CSU–Stanislaus), and the Southern San Joaquin Valley Information Center (CSU–Bakersfield). The results of that information collection effort and the details of needed cultural resources activities are presented in Section 3.10 of this EA. It was determined by the State Historic Preservation Office that compliance with Section 106 should be coordinated on a project-specific basis.

INDIAN SACRED SITES ON FEDERAL LAND

Executive Order 13007 provides that in managing federal lands, each federal agency with statutory or administrative responsibility for management of federal lands shall, to the extent practicable and as permitted by law, accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners and avoid adversely affecting the physical integrity of such sacred sites. No sacred sites were identified during the scoping or planning process for this EA.

STATE, AREA-WIDE, AND LOCAL PLAN AND PROGRAM CONSISTENCY

Agencies must consider the consistency of a proposed action with approved state and local plans and laws. This EA was prepared with extensive information from local planning agencies and the renewal of the long-term water service contracts is not inconsistent with their adopted plans or policies.

FLOODPLAIN MANAGEMENT

If a federal agency program will affect a floodplain, the agency must consider alternatives to avoid adverse effects in the floodplain or to minimize potential harm. Executive Order 11988 requires federal agencies to evaluate the potential effects of any actions they might take in a floodplain and to ensure that planning, programs, and budget requests reflect consideration of flood hazards and floodplain management. The alternatives would not affect floodplain management as compared to the No-Action Alternative.

WETLANDS PROTECTION

Executive Order 11990 authorizes federal agencies to take actions to minimize the destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands when undertaking federal activities and programs. Any agency considering a proposed action that might affect wetlands must evaluate factors affecting wetland quality and survival. These factors should include the proposed action's effects on the public health, safety, and welfare resulting from modifications in water supply and water quality; maintenance of natural ecosystems; conservation of flora and fauna; and other recreational, scientific, and cultural uses. The alternatives would not affect wetlands as compared to the No-Action Alternative.

WILD AND SCENIC RIVERS ACT

The Wild and Scenic Rivers Act designates qualifying free-flowing river segments as wild, scenic, or recreational. The act establishes requirements applicable to water resource projects affecting wild, scenic, or recreational rivers within the National Wild and Scenic Rivers System, as well as rivers designated on the National Rivers Inventory. Under the act, a federal agency may not assist the construction of a water resources project that would have a direct and adverse effect on the free-flowing, scenic, and natural values of a wild or scenic river. If the project would affect the free-flowing characteristics of a designated river or unreasonably diminish the scenic, recreational, and fish and wildlife values present in the area, such activities should be undertaken in a manner that would minimize adverse impacts and should be developed in consultation with the National Park Service. None of the alternatives considered in this EA would affect flows in wild and scenic portions of rivers.

FARMLAND PROTECTION POLICY ACT AND FARMLAND PRESERVATION

Two policies require federal agencies to include assessments of the potential effects of a proposed project on prime and unique farmland: the Farmland Protection Policy Act of 1981 and the Memoranda on Farmland Preservation, dated August 30, 1976, and August 11, 1980, respectively, from the U.S. Council on Environmental Quality. Under

requirements set forth in these policies, federal agencies must determine these effects before taking any action that could result in converting designated prime or unique farmland for nonagricultural purposes. If implementing a project would adversely affect farmland preservation, the agencies must consider alternatives to lessen those effects. Federal agencies also must ensure that their programs, to the extent practicable, are compatible with state, local, and private programs to protect farmland. The Natural Resources Conservation Service is the federal agency responsible for ensuring that these laws and polices are followed. The alternatives would not affect agricultural or urban lands as compared to the No-Action Alternative.

CLEAN AIR ACT

The federal Clean Air Act was enacted to protect and enhance the nation's air quality in order to promote public health and welfare and the productive capacity of the nation's population. The act requires an evaluation of any federal action to determine its potential impact on air quality in the project region. Coordination is required with the appropriate local air quality management district as well as with the USEPA. This coordination would determine whether the project conforms to the federal Implementation Plan and the State Implementation Plan.

Section 176 of the act (42 USC 7506(c)) prohibits federal agencies from engaging in or supporting in any way an action or activity that does not conform to an applicable State Implementation Plan. Actions and activities must conform to a State Implementation Plan's purpose of eliminating or reducing the severity and number of violations of the national ambient air quality standards and in attaining those standards expeditiously. The USEPA has promulgated conformity regulations (codified in 40 CFR 93.150, *et seq.*).

The alternatives assume that current practices to control dust and soil erosion on lands that are seasonally fallowed would continue and the land use agencies would continue to work with the air quality districts. Therefore, it assumed that no air quality impacts would occur as a result of the alternatives as compared to the No-Action Alternative.

SAFE DRINKING WATER ACT

The Safe Drinking Water Act (PL 99-339) became law in 1974 and was reauthorized in 1986 and again in 1996. Through the act, Congress gave the USEPA the authority to set standards for contaminants in drinking water supplies. Amendments to the act provide more flexibility, more state responsibility, and more problem prevention approaches. The law changes the standard-setting procedure for drinking water and establishes a State Revolving Loan Fund to help public water systems improve their facilities, to ensure

compliance with drinking water regulations, and to support state drinking water program activities.

Under the provisions of the act, the California Department of Health Services has the primary enforcement responsibility. The California Health and Safety Code establishes this authority and stipulates drinking water quality and monitoring standards. To maintain primacy, a state's drinking water regulations cannot be less stringent than the federal standards. The analysis of the EA alternatives as compared to the act's requirements indicated that there would be no impacts to water quality from the action of renewing long-term contracts, and therefore there would be no changes in compliance as compared to the No-Action Alternative.

CLEAN WATER ACT

The Clean Water Act gave the USEPA the authority to develop a program to make all waters of the United States "fishable and swimmable." This program has included identifying current and proposed beneficial uses and methods to protect and/or restore those beneficial uses. The act contains many provisions, including those that regulate the discharge of pollutants into water bodies. The discharges may be direct flows from point sources, such as an effluent from a wastewater treatment plant, or a non-point source, such as eroded soil particles from a construction site. The analysis of the EA alternatives as compared to the act's requirements indicates that there are no changes in compliance as compared to the No-Action Alternative.

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Volume II
Appendices

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ENVIRONMENTAL ASSESSMENT
LONG-TERM CONTRACT RENEWAL

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

February 2005

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

Date: April 24, 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

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 rear 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 $29.6 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 $11 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 $4 million while the Dry-Dry sequence results in a $8 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. Note also the positive impacts to net revenue due to CVP water cost following the dry condition. This occurs because large amounts of CVP water are no longer affordable and are not purchased. Frequently this increase in net revenue is offset by increases in groundwater pumping costs or reduction in net revenue from land fallowing.

There is a negative impact to net revenue from irrigation costs in all three of the Central Valley 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 wet years proceeded by a series of Average and Wet years show what would be considered an atypical responses. 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 and 18. These subregions shift 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 as 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 for two conditions. 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, but agricultural net revenue would decline substantially due to higher cost. Since these areas continue to purchase CVP supplies in all 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
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, Glide 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
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	52.83	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	21.18	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	53.08	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	24.70	37.57
3	2.83	5.27	7.71
3B	17.16	36.23	55.29
4	5.32	7.63	9.93
5	4.53	6.97	9.40
6	4.53	6.82	9.11
7	6.63	8.83	11.03
8	4.53	7.10	9.66
9	28.54	35.25	41.95
10	33.46	40.02	46.57
11	NA	NA	NA
12	NA	NA	NA
13	33.65	39.40	45.14
14	39.31	54.39	69.46
15	28.16	34.88	41.59
16	38.25	44.26	50.26
17	35.58	41.91	48.23
18	35.01	41.26	47.50
19	36.68	42.89	49.09
20	36.68	42.89	49.09
21	35.40	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 surchage 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	-	$ 11.86
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 (1967-71) 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	-	-	$ 32.98

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	539.1	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	$ 36.33

Table 8

PROJECT WATER BY PRICING TIERS
WET YEAR FOLLOWING WET (1967-71) 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	-	$ 42.37
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	-	$ 36.86
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	$ 73.22
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	$ 38.82
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	230.2	$ 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	424.6	-	-	-	$ 33.63
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 (1967-71) 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	-	-	-	$ 34.18
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 (1928-34) 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	2015.5	-1.7	-0.8	-65.3	2020.0	-5.9	-5.9	-54.1	1984.8	0.3	0.3	0.3
San Joaquin River	2526.6	-0.2	-0.2	-1.2	2529.1	-1.7	-1.7	-1.9	2505.9	0.0	0.0	0.0
Tulare Lake	1992.4	0.0	0.0	-0.2	1996.2	-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	-8.8	-8.8	-57.3	6466.6	0.4	0.4	0.3

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	1,828.0	-2.5	-2.5	-27.5	1,810.0	0.5	0.5	0.5
San Joaquin River	4,402.3	-0.1	-0.1	-1.0	4,403.8	-0.9	-1.0	-1.1	4,384.2	-0.2	-0.2	-0.2
Tulare Lake	3,876.3	0.0	0.0	-0.3	3,879.4	-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	-38.8	10,181.2	-4.5	-4.5	-29.6	10,080.8	0.4	0.4	0.4

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	Wet	Dry	Average	Wet	Dry	Average	Wet	Dry
	followed by Average			followed by Wet			followed by Dry		
Sacramento River									
Fallowed Land	-0.1	0.0	-6.7	-0.4	-0.4	-4.7	0.1	0.0	0.0
Groundwater Pumping	-0.3	-0.3	-0.4	-0.1	-0.1	-5.8	3.7	3.7	3.7
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	4.6	-0.1	-0.1	-0.7
Higher Crop Prices	0.0	0.0	1.9	0.2	0.2	1.0	0.0	0.0	0.0
Net Change	**-1.0**	**1.0**	**-1.9**	**-5.9**	**-1.7**	**-5.2**	**3.3**	**3.3**	**2.8**
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	0.0	0.0	-10.3	-7.4	0.1	-14.2	-0.3	-0.3	-0.3
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	2.3	7.9	6.1	6.2	-5.9	-5.9	-7.5
Higher Crop Prices	0.1	0.0	2.5	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**	**-6.4**	**-6.4**	**-7.9**
Tulare Lake									
Fallowed Land	0.0	0.0	0.0	-0.1	-0.1	-0.1	0.0	0.0	0.0
Groundwater Pumping	0.1	0.1	0.1	1.0	1.0	1.0	-0.5	-0.5	-1.4
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	-3.1	-2.1	-6.4	-0.9	-0.9	-1.4
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**	**-1.3**	**-1.3**	**-2.8**
San Felipe									
Fallowed Land	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Groundwater Pumping	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	-0.8	-0.8	-5.0	0.0	0.0	0.0
Groundwater Pumping	-0.2	-0.2	-10.5	-6.5	1.0	-19.0	2.9	2.9	2.0
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	-6.9	-6.8	-9.5
Higher Crop Prices	0.1	0.1	5.8	0.5	0.5	2.4	0.0	0.0	0.0
Net Change	**-2.3**	**3.7**	**-11.9**	**-7.6**	**3.3**	**-17.6**	**-4.4**	**-4.3**	**-7.9**

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*	625.9	-27.6	-23.4	-243.5	694.3	-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	-31.5	-31.3	109.3	3,261.6	5.3	5.3	5.2
San Joaquin River												
CVP Water*	960.2	-8.7	-9.0	-269.0	1,226.6	-226.3	-21.0	-378.7	506	-17.5	-17.5	-17.5
Groundwater	3,606.2	3.3	3.5	260.0	2,974.2	214.9	10.2	366.7	4723	12.2	12.2	12.1
Tulare Lake												
CVP Water*	919.5	1.9	2.0	2.0	967.3	3.7	3.8	3.6	685.3	0.1	0.1	-9.4
Groundwater	3,369.0	-1.8	-2.0	-2.0	2,683.5	-7.7	-7.7	-7.5	4,542.9	0.0	0.0	9.4
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	2,888.2	-224.9	-19.9	-680.6	1,593.9	-37.7	-37.8	-47.2
Groundwater	9,596.5	11.9	12.3	269.2	8,114.6	175.7	-28.8	468.6	12,527.1	17.5	17.5	26.8

*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	18.3	-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	**26.6**	**-1.3**	**-0.3**	**-0.1**	**26.5**	**-1.6**	**-1.6**	**-1.6**	**26.3**	**-1.9**	**-1.9**	**-1.9**
2	Pasture	34.1	0.0	0.0	-3.6	33.9	0.0	0.0	-5.9	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**	**-0.1**	**-0.1**	**-8.2**	**193.5**	**0.0**	**0.0**	**0.0**
3	Pasture	7.8	0.0	0.0	0.0	7.9	0.0	0.0	0.0	7.5	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	15.8	0.0	0.0	0.0	15.5	0.0	0.0	0.0
	Rice	138.9	0.0	0.0	0.0	139.5	-0.3	-0.3	-0.2	136.7	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	**289.8**	**0.0**	**0.0**	**0.0**	**290.7**	**-0.4**	**-0.4**	**-0.3**	**286.2**	**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	0.0	0.0	-2.6	7.6	0.0	0.0	0.0
	Sugar Beets	5.6	0.0	0.0	-5.3	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	0.0	0.0	-9.7	6.2	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	-3.8	6.1	0.0	0.0	-1.8	5.7	0.0	0.0	0.0
	Deciduous Orchard	26.9	0.0	0.0	-3.3	26.9	0.0	0.0	0.0	26.9	0.0	0.0	0.0
	Small Grain	8.5	0.0	0.0	-8.5	8.6	0.0	0.0	-8.6	6.2	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**	**0.1**	**0.1**	**-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	6.8	0.0	0.0	0.0	6.8	0.0	0.0	0.0	6.8	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	-0.1	-0.1	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	30.6	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	46.8	0.0	0.0	0.0
	Subtotal	**275.3**	**0.0**	**0.0**	**0.0**	**275.7**	**-0.2**	**-0.2**	**-0.1**	**273.6**	**0.0**	**0.0**	**0.0**
5	Pasture	21.4	0.0	0.0	0.0	21.5	-0.1	-0.1	-0.1	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	166.6	-0.5	-0.5	-0.4	165.2	0.0	0.0	0.0
	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**	**-0.7**	**-0.7**	**-0.6**	**362.4**	**0.0**	**0.0**	**0.0**
6	Pasture	12.1	0.0	0.0	0.0	12.5	-0.4	-0.4	-0.4	11.8	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	12.8	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	64.3	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**	**-2.1**	**-2.1**	**-2.0**	**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	-0.1	-0.1	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**	**-0.1**	**-0.1**	**-0.1**	**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			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	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
8	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	**284.8**	**0.0**	**0.0**	**0.0**	**284.9**	**0.0**	**0.0**	**0.0**	**282.8**	**0.0**	**0.0**	**0.0**
	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	-0.3	-0.3	-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	-0.5	-0.5	-0.5	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
9	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**	**-0.6**	**-0.6**	**-0.4**	**425.9**	**-1.6**	**-1.6**	**-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	13.9	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
10	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	17.9	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	18.3	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	39.6	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	54.6	-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	46.4	-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	9.9	0.0	0.0	0.0	9.9	0.0	0.0	0.0	9.9	0.0	0.0	0.0
	Subtotal	**532.5**	**0.0**	**0.0**	**0.0**	**534.1**	**-0.8**	**-0.8**	**-1.1**	**531.6**	**-0.9**	**-0.9**	**-0.9**