## Final Environmental Assessment

Long-Term Renewal of Water Service Contracts in the Black Butte Unit, Corning Canal Unit, and Tehama-Colusa Canal Unit of the Sacramento River Division Central Valley Project, California



February 2005

Bureau of Reclamation Mid-Pacific Region 2800 Cottage Way Sacramento, California 95825-1898



## ES. EXECUTIVE SUMMARY

## **EXECUTIVE SUMMARY**

#### **ES.1** Introduction

In accordance with Section 3404(c) of the Central Valley Project Improvement Act (CVPIA), the Bureau of Reclamation (Reclamation) proposes to renew the long-term water service contracts for water contractors in the western Sacramento Valley for a period of 25 years or 40 years, depending on water use. These contractors currently receive water under an interim contract that will expire on February 28, 2006. By renewing these contracts in early 2005, Reclamation would continue delivering approximately a maximum of 322,000 acre-feet of Central Valley Project (CVP) water to the contractors from March 2005 for 25 years to the year 2030 or 40 years to 2045.

The CVP is divided into nine divisions, of which the Sacramento River Division is one. The Sacramento River Division, authorized on September 29, 1950, includes the Corning Canal Unit and the Tehama-Colusa Canal Unit; the Black Butte Unit was incorporated in 1963. The Sacramento River Division contains 18 water contractors served primarily by the Tehama-Colusa Canal (TCC) and the Corning Canal, in Tehama, Glenn, Colusa, and Yolo Counties, although additional districts west of the TCC that receive CVP water from Black Butte Reservoir are also included. Water contractors covered in this document are listed in Table ES-1.

The previous long-term CVP water service and repayment contracts in the Corning Canal and the Tehama-Colusa Canal Units expired in 1994. These CVP contractors have continued to deliver CVP water since 1994 under a series of five interim renewal contracts (IRC). The existing IRCs for the Corning Canal and Tehama-Colusa Canal Unit contractors are scheduled to expire in 2006. The five CVP contracts in the Black Butte Unit are Binding Agreement Contracts and are scheduled to expire in 2020, 2024, or 2010. Under the proposed action the Agricultural or Agricultural/Municipal and Industrial (M&I) contracts would be renewed in 2005 as long term contracts for a period of 25 years. The M&I contracts would be renewed for 40 years.

Table ES-1
Water Contractors in West Sacramento Valley/Sacramento River Division

Tehama-Colusa Canal Unit	
Colusa County WD	62,200
Colusa, County of	See Subcontractors below
Colusa County WD	5,965
Cortina WD	1,700
Four-M WD	5,700
Glenn Valley WD	1,730
Holthouse WD	2,450
La Grande WD	2,200
Myers Marsh Mutual Water Company	255
Davis WD	4,000
Dunnigan WD	19,000
Glide WD	10,500
Kanawha WD	45,000
Kirkwood WD	2,100
La Grande WD	5,000
Orland-Artois WD	53,000
Westside WD (1 and 2)	65,000
Corning Canal	
Corning WD	23,000
Proberta WD	3,500
Thomes Creek WD	6,400
Other	
Stony Creek WD	2,920
Stonyford	40
Whitney Construction	25
4-E WD	20
US Forest Service	55

Note: WD = Water District

Two alternatives that would accomplish the purpose and need of the proposed action, as well as a no action alternative, are evaluated in this environmental assessment (EA).

## ES.2 PURPOSE AND NEED FOR ACTION

The CVPIA, Title XXXIV of the Reclamation Projects Authorization and Adjustment Act of 1992 (Public Law 102-575), amended the previous authorizations of the CVP to include fish and wildlife protection, restoration, and mitigation as project purposes having equal priority with irrigation and domestic uses and fish and wildlife

enhancement as a project purpose equal to power generation. Section 3404(c) of the CVPIA directs the Secretary of Interior to:

"... upon request, renew any existing long-term repayment or water service contract for the delivery of water for a period of 25 years and may renew such contracts for successive periods of up to 25 years each ... (after) appropriate environmental review, including preparation of the environmental impact statement required in section 3409 ...."

Section 3409 of the CVPIA required the Secretary to prepare a programmatic environmental impact statement (PEIS) to evaluate the direct and indirect impacts and benefits of implementing CVPIA. Reclamation and the US Fish and Wildlife Service (Service), a co-lead for the PEIS, released the final PEIS in October 1999 (Reclamation 1999a). This EA tiers off the PEIS to evaluate potential site-specific environmental impacts of renewing the long-term water service contracts for the Sacramento River Division contractors. The purpose of this project is to renew the water service contracts with the contractors consistent with the provisions of CVPIA. The project alternatives will include the terms and conditions of the contracts which include tiered water pricing.

Long-term contract renewal (LTCR) is needed to:

- Continue beneficial use of water, developed and managed as part of the CVP, with a reasonable balance among competing demands, including the needs of irrigation and domestic uses; fish and wildlife protection, restoration, and mitigation; fish and wildlife enhancement; power generation; recreation; and other water uses consistent with requirements imposed by the State Water Resources Control Board (SWRCB) and the CVPIA;
- Incorporate certain administrative conditions into the renewed contract to ensure CVP continued compliance with current federal reclamation law and other applicable statutes; and
- Allow the continued reimbursement to the federal government for costs related to CVP construction and operation.

The area of analysis for this EA is the land within each district/county of the Sacramento River Division project area and land in the vicinity of the districts that may be affected by the proposed action. The analysis for this EA was conducted for projected conditions in 2026, the originally proposed 25-year contract renewal period. Because the process was delayed and the current proposed 25-year contract renewal period is now 2030, the analysis was revisited to review the economic results as a result of extending the renewal period. It was determined that the basic assumptions of land use, cropping patterns, etc. have not changed because the future conditions were assumed at full delivery, therefore the results have not changed. The analysis that was originally completed applies to the current proposed contract period of 2030.

#### ES.3 DESCRIPTION OF ALTERNATIVES

Three alternatives were identified for the renewal of long-term contracts between Reclamation and the Sacramento River Division contractors. The alternatives present a range of water service agreement provisions that could be implemented for long-term contract renewals. The No Action Alternative consists of renewing existing water service contracts as described by the Preferred Alternative of the PEIS. In November 1999, Reclamation published a proposed long-term water service contract, which is the basis of this EA's Alternative 2. In April 2000, the CVP Contractors presented an alternative long-term water service contract, which is the basis of this EA's Alternative 1. Reclamation and the CVP Contractors continued to negotiate the CVP-wide terms and conditions with these proposals serving as "bookends." This EA also considers these proposals with the No Action Alternative as bookends to be considered for the environmental documentation to evaluate the impacts and benefits of the renewing long-term water service contracts.

## ES.4 SUMMARY OF CONCLUSIONS

Potential impacts associated with implementing the No Action Alternative, Alternative 1, and Alternative 2 are listed in Table ES-2 and described in detail in Chapter 3 of this EA. As shown in Table ES-2, no significant impacts would occur with implementation of these alternatives.

Table ES-2 Summary of Potential Impacts

Resource	No Action Alternative	Alternative 1	Alternative 2
Agricultural Economics	Colusa County and Orland-Artois water districts would have to pay the highest Full-Cost-Rate of any of the Sacramento River Division contractors if tiered pricing were adopted.	Same as under the No Action Alternative.	The Davis and Kirkwood water districts on the Tehama-Colusa Canal and the Corning Water District on the Corning Canal would have the largest dollar increases in water rates in the West Sacramento Valley.
	Total irrigated acreage within the service area in 2030 is projected to be approximately 95,000 acres in an average hydrologic year and approximately 82,000 acres in a dry hydrologic year.	Same as under the No Action Alternative.	About 65,000 acres, or approximately 68 percent of the service area in 2030, is projected to be fallowed under the worst-case scenario of an average hydrologic year following five dry hydrologic years, in response to water costs. Model runs imply that there would be no incremental impacts on irrigated acreage within the affected districts in a dry year following five years of either dry, average, or wet hydrologic conditions, when compared to the No Action Alternative in a year of dry hydrologic conditions.
	Total Gross Value of Production in 2030 is projected to be \$73 million dollars under average hydrologic conditions and \$66 million dollars in dry hydrologic conditions.	Same as under the No Action Alternative.	Under the worst-case scenario of an average hydrologic year following five dry hydrologic years, about \$40 million, or almost 55 percent of the area's total projected gross value of production of about \$73 million dollars, would be lost (in 1999 dollar terms). In addition, there would be a total decline in net farm revenue of about \$2.7 million. These impacts would derive entirely from increased CVP water rates relative to No Action.
	Total regional economic output (in 1991 terms) was approximately \$2.6 billion, with about 38,300 full-time equivalent jobs and about \$1.1 billion of income.	Same as under the No Action Alternative.	Under the worst-case scenario of a dry year following five years of dry hydrologic conditions related to the No Action Alternative in a year of dry hydrologic conditions, there would be a loss of net farm revenues of about \$400,000. These

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Table ES-2
Summary of Potential Impacts (continued)

Resource	No Action Alternative	Alternative 1	Alternative 2
			impacts would derive entirely from increased CVP water rates relative to No Action.
			The agricultural output in the Tehama-Colusa-Glenn county area could decrease by about 5 percent, while overall industrial output would be expected to decrease by about 3.2 percent from No Action levels. Overall employment in the region would be expected to decrease by about 2.6 percent, and overall income by place of work in the region would be expected to decrease by about 3.8 percent.
Water Resources	Minimal changes in average water use over time are expected, with short-term fluctuations greater in magnitude than the long-term change.  Reductions in CVP deliveries are likely to	Same as under No Action Alternative.	Under the worst-case scenario of a sequence of dry years followed by an average year, water purchases by the contractors could be greatly reduced, and might drive some districts out of business.
	lead to local, short-term increases in groundwater use. Reductions in irrigation are also likely to result in reductions in groundwater recharge, affecting down gradient farmers.		Groundwater use would be localized in areas with substantial groundwater resources.
Land Use Resources	Total irrigated acreage within the service area is projected to be approximately	Same as under No Action Alternative.	Implementing Alternative 2 would not have a direct effect on land uses.
	95,300 acres in 2030 in an average hydrologic year.		Loss of 65,000 irrigated acres under the worst-case scenario of an average hydrologic year following five dry years would be at least a substantial, temporary land use change.
Biological Resources	Winter-run, Spring-run and Fall/Late fall-run Chinook salmon and Central Valley steelhead would be negatively affected by RBDD operations and water diversion in the Sacramento River Division, although a fish screen exists at the RBDD.		Same as under No Action Alternative, plus additional impacts on species and habitat affected by a reduction in agricultural lands. Loss of 20,000 acres of rice and small grain production would reduce food and habitat sources for special status species, such as the giant garter snake,

Table ES-2
Summary of Potential Impacts (continued)

Resource	No Action Alternative	Alternative 1	Alternative 2
			Aleutian Canada goose and the sandhill crane, by about 5% in the Sacramento Valley. In some cases agricultural lands are being restored to native riparian habitat by various projects.
			The reduction of return flows associated with the loss of 65,000 irrigated acres under the worst-case scenario would have a local impact on habitat and species in wetland and riparian areas fed by these flows.
			US Fish and Wildlife Service issued a final Biological Opinion on February 15, 2005, indicating that the proposed action would not adversely affect listed species.
Social Conditions and Environmental Justice	There should be no significant impact on population, income, or employment levels or predicted growth in Colusa, Glenn, and Tehama counties from implementing the No Action Alternative.	Same as under No Action Alternative.	The precise outcome of the increase in water prices would probably vary from farm to farm; however, it is probable that agricultural employment levels in each district would drop under the worst-case
	Minority or low-income populations would not be disproportionately affected		scenario of an average hydrologic year following five dry years.
	by implementing the No Action Alternative.		Direct and indirect impacts to employment are possible, but overall impacts to the Sacramento Valley region are not likely to be large because employment levels are increasing and most of the increase is expected outside the agricultural sector.
			Any negative impact on agricultural employment would be reflected in the migrant farmworker community, which is predominately minority and low-income.
Recreational Resources	No impacts to the use or enjoyment of recreational opportunities in the project vicinity are expected under the No Action Alternative.	Same as under No Action Alternative.	Recreation opportunities in the Sacramento River Division project area and vicinity are expected to remain unchanged.

Table ES-2
Summary of Potential Impacts (continued)

Resource	No Action Alternative	Alternative 1	Alternative 2
Indian Trust Assets	No impacts to Indian Trust Assets would occur.	Same as under No Action Alternative.	Same as under No Action Alternative.
Cultural Resources	No direct impacts to cultural resources would be expected under the No Action Alternative.	Same as under No Action Alternative.	Anticipated changes to cultural resources could result from removing land from agricultural production.
	Indirect impacts could result if it were to lead to changes in agricultural practices or land use. However, the No Action Alternative would be expected to have a small potential for influencing decisions on future agricultural practices and land use.		If land currently planted is left fallow, there may be a beneficial effect to preserving archaeological resources; however, if this land is not managed to prevent erosion, there could be impacts to archaeological resources. If land taken out of agricultural use is developed for commercial, industrial, or residential uses, there could be impacts related to ground-disturbing activities.
Geology and Soils	Under prolonged dry conditions, some of the marginally productive lands might be permanently withdrawn from irrigation. Fallowing and permanent withdrawal of land that has been cultivated could result in increased potential for soil erosion, if the land were not managed to prevent it.	Same as under No Action Alternative.	If approximately 65,000 acres were taken out of irrigation, it would likely have a severe effect on soils. If large tracts of land were taken out of irrigation relatively rapidly, it would be difficult to manage the land to prevent erosion.
Air Quality	There would be no net increase in emissions and therefore No Action would not be subject to the Clean Air Act conformity rule.	Same as under No Action Alternative.	The predicted change in cropping patterns is anticipated to result in increases in ozone precursor emissions (from fugitive dust). However, the indirect effects of altered crop patterns on air pollutant emissions are not expected to have a noticeable impact on overall air quality conditions in the Sacramento Valley.
Visual Resources	Anticipated changes to agricultural viewsheds under the No Action Alternative would be minimal.	Same as under No Action Alternative.	Agricultural viewsheds under Alternative 2 would be similar to existing conditions and the impact would be minimal.

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1. PURPOSE AND NEED

# CHAPTER 1 PURPOSE AND NEED

#### 1.1 INTRODUCTION

In accordance with Section 3404(c) of the Central Valley Project Improvement Act (CVPIA), the Bureau of Reclamation (Reclamation) proposes to renew the long-term water service contracts for water contractors in the western Sacramento Valley for a period of 25 or 40 years, depending on water use. These contractors currently receive water under an interim contract that will expire on February 28, 2006. By renewing the long-term contracts in early 2005, Reclamation would continue delivering Central Valley Project (CVP) water to the contractors for 25 years for agricultural and municipal/industrial (M&I) purposes of use, or 40 years for M&I purposes of use only, from March 1, 2005, through February 28, 2030

The CVP was authorized in 1935 and is the largest water storage and delivery system in California, covering 35 of the state's 58 counties. The CVP is divided into nine divisions, of which the Sacramento River Division is one. The Sacramento River Division, authorized on September 29, 1950, is further divided into the Tehama-Colusa Canal Unit and the Corning Canal Unit; the Black Butte Unit was incorporated in 1963. The Sacramento River Division contains 18 contractors served primarily by the Tehama-Colusa Canal (TCC) and the Corning Canal, in Tehama, Glenn, Colusa, and Yolo Counties, although additional districts west of the TCC that receive CVP water from Black Butte Reservoir are also included. Water contractors in the Sacramento River Division covered in this document are listed in Table 1-1 and locations of those contractors receiving more than 100 acre-feet (af) of water are shown in Figure 1-1. Appendix F provides a copy of a representative water service contract; Appendix G provides maps of all the applicable service areas.

Two alternatives that would accomplish the purpose and need of the proposed action, as well as a no action alternative, are evaluated in this environmental assessment (EA). Reclamation has prepared this EA to determine if renewing the Sacramento River Division long-term water service contracts would result in any site-specific significant

Table 1-1
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Whitney Construction	25
4-E WD	20
US Forest Service	55

Note: WD = Water District

1-1	Sacramento River Division - Regional Location

impacts to the natural or human environment. This EA has been prepared pursuant to and in accordance with the National Environmental Policy Act (NEPA) of 1969 (42 USC§ 4321-4370d), the Council on Environmental Quality (CEQ) regulations on implementing NEPA (40 CFR Parts 1500-1508), and Reclamation's NEPA handbook (Bureau of Reclamation 1990).

#### 1.2 PURPOSE AND NEED FOR ACTION

The CVPIA, Title XXXIV of the Reclamation Projects Authorization and Adjustment Act of 1992 (Public Law 102-575), amended the previous authorizations of the CVP to include fish and wildlife protection, restoration, and mitigation as project purposes having equal priority with irrigation and domestic uses, and fish and wildlife enhancement as a project purpose equal to power generation. Section 3404(c) of the CVPIA directs the Secretary of Interior to:

"... upon request, renew any existing long-term repayment or water service contract for the delivery of water for a period of 25 years and may renew such contracts for successive periods of up to 25 years each ... (after) appropriate environmental review, including preparation of the environmental impact statement required in section 3409 ..."

Section 3409 of the CVPIA required the Secretary to prepare a programmatic environmental impact statement (PEIS) to evaluate the direct and indirect impacts and benefits of implementing the CVPIA. Reclamation and the US Fish and Wildlife Service (Service), a co-lead for the PEIS, released the final PEIS in October 1999 (Reclamation 1999a). This EA tiers off the PEIS to evaluate potential site-specific environmental impacts of renewing the long-term water service contracts for the Sacramento River Division contractors.

The purpose of this project is to renew the Sacramento River Division water service contracts, consistent with the provisions of CVPIA. The project alternatives will include the terms and conditions of the contracts and tiered water pricing.

Long-term contract renewal (LTCR) is needed to:

- Continue beneficial use of water, developed and managed as part of the CVP, with a reasonable balance among competing demands, including the needs of irrigation and domestic uses; fish and wildlife protection, restoration, and mitigation; fish and wildlife enhancement; power generation; recreation; and other water uses consistent with requirements imposed by the State Water Resources Control Board (SWRCB) and the CVPIA;
- Incorporate certain administrative conditions into the renewed contracts to ensure CVP continued compliance with current federal reclamation law and other applicable statutes; and

 Allow the continued reimbursement to the federal government for costs related to CVP construction and operation.

The area of analysis for this EA includes portions of Tehama, Glenn, Colusa and Yolo Counties within the boundaries of the Sacramento River Division contractors that may be affected by the proposed action. The analysis for this EA was conducted for projected conditions in 2026, the initially proposed 25-year contract renewal period. Because the process was delayed and the current proposed 25-year contract renewal period is now 2030, the analysis was revisited to review the economic impacts as a result of extending the renewal period. It was determined that the basic assumptions of land use, cropping patterns, etc. have not changed because the future conditions were assumed at full delivery, therefore the results have not changed. The analysis that was originally completed applies to the current proposed contract period of 2030.

#### 1.3 PUBLIC INVOLVEMENT

On October 15, 1998, Reclamation published a notice of intent (NOI) in the Federal Register to announce the preparation of environmental documents for long-term renewal of CVP water service contracts. Interested parties were encouraged to attend scoping meetings and informational workshops to comment on the environmental documents. Scoping meetings were held at eight locations throughout the CVP service area. Reclamation prepared a scoping report, documenting the process, in April 1999 (Reclamation 1999b).

The Draft EA was circulated for public and agency review for 30 days. This public comment period provided an opportunity for the public to review the issues addressed in the impact analysis and to offer comments on any aspect of the process. Comments on the Draft EA have been responded to and appropriate revisions were made in the Final EA. The Draft EA was revised and recirculated for public comment for a 30-day period in September 2003, and again in July 2004 following negotiations of the draft contract and finalization of the Biological Assessment.

### 1.4 RELATED ACTIVITIES

There are several activities being implemented by Reclamation as part of the obligation to manage and operate the CVP. The following discussion identifies these activities and describes their relation to the renewal of the Sacramento River Division water service contracts. Related studies and projects that have been conducted recently or are currently being completed are summarized in Table 1-2.

## Table 1-2 Related Activities

Project or Study and Lead Agency	Summary
Long-Term Contract Renewal of Other Existing CVP Water Service Contracts – Reclamation	Reclamation is in negotiation with other CVP water contractors for renewal of long-term contracts.
Renewal of Sacramento River Settlement Contracts - Reclamation	
CALFED Bay-Delta Program – CALFED	Established in May 1995, the consortium of federal and state agencies is charged with the development of a long-term solution to the Delta water concerns. CALFED is completing an EIR/EIS as part of this process. Renewal of Long-Term CVP Contracts is assumed within the CALFED EIR/EIS.
Coordinated Operating Agreement (COA) and Operations Criteria and Plan (OCAP) Update – US Bureau of Reclamation and California Department of Water Resources	Provisions and requirements of the CVPIA, SWRCB Order 1641, the CALFED Bay-Delta Program, and other agency mandates require that the existing operational roles and responsibilities of the SWP and CVP be reviewed and updated to provide appropriate long-term operating criteria and procedures for the two primary water storage and delivery projects affecting waterways of the Central Valley. The OCAP Biological Opinion (BO) was completed in August of 2004.